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**The provision of epistemological access for successful
student learning at university: Towards a readiness
model for Business, Commerce and Management Sciences
learners in the Further Education and Training phase**

by

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requirements for the degree of**

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DECLARATION

I declare that, *The provision of epistemological access for successful student learning at university: Towards a readiness model for Business, Commerce and Management Sciences learners in the Further Education and Training phase*, is my own work, that it has not been submitted before for any degree or examination to any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

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KEYWORDS

South Africa

Learners

High schools

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Further Education and Training Phase

Challenges

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Epistemological access

University readiness



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ABSTRACT

This study was about the provision of epistemological access to Grade 10 to 12 learners in the business-related subjects of Accounting, Business Studies and Economics at two public high schools in the Western Cape Province. The aim of the study was twofold. Firstly, it investigated whether the Grade 10 to 12 learners had adequate subject content knowledge and skills in Accounting, Business Studies and Economics. Secondly, it wanted to identify the challenges that the learners at the two high schools were experiencing in these subjects and the reasons why. There were three objectives. The first was to identify the subject content knowledge and skills gaps, and the challenges that the learners experienced in the three subjects in order to develop appropriate intervention strategies that would assist them to overcome the challenges. The second was to implement the intervention strategies over a three-year period from 2017 to 2019 so that the learners' subject content knowledge and skills in the three subjects could be strengthened, and the last objective was to develop a readiness model that could be used in public schools in South Africa. As such, the study was about high school learners' academic achievement and their university readiness.

This study was situated in a critical education science paradigm because the researcher did not only want to investigate and understand the issues but, more importantly, she wanted to effect positive change through interventions in the form of extra academic support to the learners in the three subjects over the three-year period. Consequently, a participatory action research design was used to evaluate the effectiveness of the interventions in 2017 when the learner participants were in Grade 10, in 2018 when they were in Grade 11, and in 2019 when they were in Grade 12.

Since the third objective of the study was to develop a readiness model that could be used at schools in South Africa, the conceptual framework of the study was derived from a review of three readiness models, namely Byrd and MacDonald (2005), Conley (2007, 2014) and Lemmens (2010). Based on the dimensions and sub-dimensions discussed in these three models, the researcher developed an

augmented readiness model that could be applicable to the South African public school context.

The research participants included seven groups. The first group was a selected group of learners in each of the three subjects at the two schools. Group number two was a representative sample of the learner participants' parents at both schools. Group number three was one teacher in each of the three subjects at both schools. Group number four was one subject adviser in each of three subjects, while group number five was the two principals of the two schools. The circuit manager of the district in which the two schools resorted formed group number six, and the last group consisted of one lecturer in each of the three subjects at two universities in the Western Cape Province.

The data collection methods included the learners' control test results and the June and November examination results, one questionnaire, two reflection forms, and focus group discussions. It also included focus group discussions with the parents and individual semi-structured interviews with the teachers, the subject advisers, the principals, the circuit manager and the lecturers.

The learner participants' results in the three subjects were discussed in three cycles over the three years. All the other results were discussed and interpreted based on the dimensions and sub-dimensions of the augmented readiness model. The significance of the findings lies in the fact that the researcher could arrive at a South African university readiness model that schools could use to equip the learners with a solid subject content knowledge and skills foundation that will provide them with epistemological access for university studies. Based on the readiness model, recommendations were proposed for learners, parents, principals, school governing bodies, teachers, and local, provincial and national education authorities.

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LIST OF ACRONYMS/ABBREVIATIONS

ADHD	Attention-deficit/hyperactivity disorder
ATAR	Australian Tertiary Admission Rank
BCM	Business, Commerce and Management Sciences
B Com	Bachelor of Commerce
BECE	Basic Education Certificate Examination
BGCSE	Botswana General Certificate of Secondary Education
CAPS	Curriculum and Assessment Policy Statement
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
EAC	English across the curriculum
ECD	Early childhood development
ECP	Extended Curriculum Programme
EMS	Economic and Management Sciences
FET	Further Education and Training
FP	Foundation Phase
GAAP	Generally Accepted Accounting Practice
GCSE	General Certificate of Secondary Education
GDP	Gross domestic product
GET	General Education and Training
GNU	Government of National Unity
HE	Higher education
HEI	Higher education institution
HL	Home language
HOD	Head of department

ICT	Integrated Communication Technology
IFRS	International Financial Reporting Standards
IP	Intermediate phase
LAC	Language across the curriculum
LER	Learner-educator ratio
LoLT	Language of learning and teaching
LTSM	Learning and teaching and support material
MEO	Multiple examination opportunities
NBT	National Benchmark Tests
NCS	National Curriculum Statement
NDP	National Development Plan
NGO	Non-governmental organisation
NQF	National Qualifications Framework
NSC	National Senior Certificate
NSLP	National School Lunch Programme
NSNP	National School Nutrition Programme
OBE	Outcomes-based education
OECD	Organisation for Economic Cooperation and Development
PAR	Participatory action research
PATs	Practical assessment tasks
PD	Professional development
PEDs	Provincial Education Departments
PIRLS	Progress in International Reading Literacy Study
PLC	Professional learning community
QLTC	Quality Learning and Teaching campaign
RCL	Representative Council of Learners



SA	South Africa
SAICA	South African Institute of Chartered Accountants
SBA	School-based assessment
SES	Socioeconomic status
SGB	School governing body
SMT	School management team
SP	Senior phase
SPSS	Statistical Package for the Social Sciences
SMT	School management team
TIMSS	Trends in International Mathematics and Science Study
UK	United Kingdom
Umalusi	Council for Quality Assurance in General and Further Education and Training
US	United States
USA	United States of America
WASSCE	West African Senior Secondary Certificate Examination
WCED	Western Cape Education Department
WFP	World Food Programme



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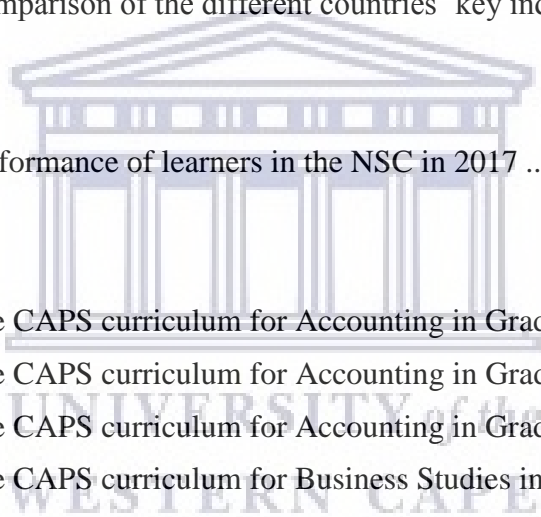
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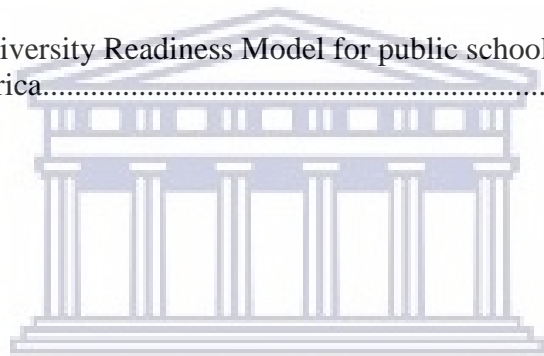
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DEFINITION OF KEY CONCEPTS USED

For clarity and better understanding, the key concepts used in the dissertation are defined and described below. These are the meanings and understandings that are upheld in the different chapters.

Academic achievement: Represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college and university (Oxford Bibliographies, 2020). In this study, academic achievement and/or performance is the extent to which a learner, student, teacher or institution has achieved their short- or long-term educational goals.

Accounting: Accounting focuses on measuring performance, and processing and communicating financial information about economic sectors, as detailed in the CAPS curriculum (Department of Basic Education, 2011(a)).

Assessment: Refers to the wide variety of methods or tools that educators use to evaluate, measure and document the academic readiness, learning progress, skill acquisition, or educational needs of learners/students (The Glossary of Education Reform, 2015).

Adequate rating: Refers to the code and percentage set by the Department of Basic Education for a learner to pass their Grade 12 National Senior Certificate with a bachelor's pass. It means that a learner should pass at least four of his/her six/seven subjects with a rating of 4, which is a final mark of 50% and above (Department of Basic Education, 2011(a)).

Bachelor's pass: As described in the previous concept, it means that learners have passed at least four of their subjects with an adequate rating of 50% and above. A bachelor's pass is the minimum entrance requirement for admission into a degree programme at universities in South Africa (Stellenbosch University, 2018(a)).

Business, Commerce and Management Sciences (BCM): The BCM learning area consists of the following: Economic and Management Sciences (EMS) from

Grades 7 – 9; and Accounting, Business Studies and Economics subjects from Grades 10 – 12 (Department of Basic Education, 2015(a)).

Business Studies: The subject Business Studies deals with the knowledge, skills, attitudes and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors as detailed in the CAPS curriculum (Department of Basic Education, 2011(b)).

CAPS: The Curriculum and Assessment Policy Statement (CAPS), which was an amendment to the National Curriculum Statement (NCS) for Grades R – 12 (Department of Basic Education, 2011(a)). There is one single comprehensive national CAPS for each subject (Du Plessis & Mbunyuza, 2014).

Codes: Seven levels of competence at the end of each school year have been described for each subject listed for Grades R – 12 (Department of Basic Education, 2011(a)). The various achievement levels and their corresponding percentage bands are shown in the table below:

Table 1: Codes and percentages for recording and reporting

Rating code	Description of competence	Percentage
7	Outstanding achievement	80 - 100
6	Meritorious achievement	70 - 79
5	Substantial achievement	60 - 69
4	Adequate achievement	50 - 59
3	Moderate achievement	40 - 49
2	Elementary achievement	30 - 39
1	Not achieved	0 - 29

(Department of Basic Education, 2011(a):46).

Cohort: A group whose members share a significant experience at a certain period of time or have one or more similar characteristics (BusinessDictionary, 2020). In this study, the cohort represents the group of learners who were originally selected as the learner participants of the study and who attended the interventions over the three-year period.

Dimension: Refers to an aspect, or feature, of a situation (Oxford Bibliographies, 2020). In this study, dimensions and sub-dimensions were discussed and arrived at based on the review of three readiness models in Section 4.5.

Dropout: A learner/student who has left school or college/university before they have finished their studies. In this study high school dropout as well as university dropout is discussed (Collins Dictionary, 2020).

Economics: Economics is the study of how individuals, businesses, governments and other organisations within our society choose to use scarce resources to satisfy their numerous needs and wants in a manner that is efficient, equitable and sustainable, as detailed in the CAPS curriculum (Department of Basic Education, 2011(c)).

Economic and Management Sciences (EMS): The subject EMS from Grade 7 – 9 (Senior Phase (SP)) is a practical subject that equips learners with entrepreneurial skills, financial knowledge and real-life skills for personal development and the development of the community (Department of Basic Education, 2011(d)).

Epistemological access: Epistemological access refers to a student's capacity to access new knowledge based on prior learning, or preparedness (the key to epistemic access), that the student needs in order to engage with the concepts, practices and ways of thinking of a discipline at post-school level (Morrow, 1994, 2009).

Further Education and Training (FET) phase: Grade 10 up to and including Grade 12, comprising further academic schooling as well as intermediate vocational education at technical colleges, community colleges and private colleges (Nuffic, 2015).

General Education and Training (GET) phase: Grade R up to and including grade 9, comprising the compulsory school-age years (Grade R, the reception year, is not part of compulsory schooling (Nuffic, 2015)).

Foundation phase (FP): Starts in Grade R (reception year, or Grade 0) and lasts four years (up to and including Grade 3) (Nuffic, 2015).

Interventions: Provide learners with the support needed to acquire the skills being taught by the educational system (Lestrud, 2013). Interventions should address functional skills, and academic, cognitive, behavioural and social skills that directly affect the learner's ability to access education (Lestrud, 2013). In this study, the interventions focused on the provision of extra academic support for the learner participants on specific sections of the content already taught by the teachers in the three subjects.

Language barrier: The absence [difficulty] of communication between people who speak different languages (Collins Dictionary, 2020). In this study, a language barrier means that learners are learning in a second or additional language and not in their home language, which makes it difficult for them to express themselves clearly and logically in verbal and written communication.

Learner: Someone who is learning about a particular subject or how to do something (Collins Dictionary, 2020). In this study, a learner refers to children who are at school, from Grade R to Grade 12.

National Senior Certificate (NSC): Learners take examinations for the NSC after completing Grade 12 and it generally indicates that a candidate meets the requirements for admission to higher education. Within the South African National Qualifications Framework (NQF) structure, the NSC is on level 4 and bears 130 credits (representative of 1 300 notional learning hours) (Nuffic, 2015).

Post-school studies: The post-school system consists of the following, which falls under the purview of the Department of Higher Education and Training (DHET): public HEIs (universities); colleges; private colleges; and private HEIs (Data Dictionary of Post-School Education and Training, 2019). In this study, it refers to any higher education institution that a learner could be admitted to after the completion of Grade 12.

Pre- and post-test: A pre- and post-test are used to measure learners’/pupils’/ students’ academic achievement and the effectiveness of an instructional programme (Oxford Bibliographies, 2020). In this study, pre-tests were conducted before the interventions took place in the three subjects to assess the learner participants’ existing subject content knowledge and skills in each year. Post-tests were conducted after the extra academic support was provided to ascertain if the learner participants’ subject knowledge and skills were enhanced and strengthened in the three subjects.

Sample: A group of learners who are taken from a larger group and studied, tested, or questioned to get information (Merriam-Webster, 2020). In this study, the sample refers to the learners who were part of the interventions over the three-year period, but they were not originally selected as the learner participants of the study.

School: An [formal] institution for educating children (Oxford Bibliographies, 2020). In this study, a school refers to a public school that enrolls learners from Grade R (reception) to Grade 12.

School-based assessments (SBA): A continuous planned process of identifying, gathering and interpreting information about the performance of a learner, using various forms of evaluation (Best Education Solutions, 2019).

Senior phase (SP): Concludes the GET phase that comprises the foundation, intermediate and senior phases. It includes Grade 7 up to and including Grade 9 (Nuffic, 2015).

Student: A person studying at a university or college (Collins Dictionary, 2020). In this study, a student refers to a person who enrolls at a higher education institution.

Sub-dimension: An under-section of certain aspects or features of a situation (Oxford Bibliographies, 2020). In this study, dimensions and sub-dimensions are used in the conceptual framework and readiness models.

Subject content knowledge: Pertains to a teacher’s “depth and breadth of understanding and conceptualisation of his or her certification area” (Lederman & Gess-Newsome, 1992:16). In this study, subject content knowledge and skills refer to the CAPS curricula of the Accounting, Business Studies and Economics subjects, and the extent to which the learners acquired these in Grades 10 – 12.

University readiness: Can be defined “operationally as the level of preparation a student needs in order to enrol and succeed – without remediation – in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate programme” (Conley, 2007:5).



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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND AND EDUCATIONAL CONTEXT TO THE STUDY

Post-1994 earmarked a new and exciting beginning for democracy in South Africa. The fragmented departments of education were demolished and a new national Department of Education was constituted, with three bands: The General Education and Training (GET) band, the Further Education and Training band (FET) band and the Higher Education and Training band (Department of Education, 1998). However, as a consequence of apartheid, the national Department of Education inherited an unequal and poorly resourced education system where the majority of the public schools do not equip the learners with the necessary subject content knowledge and skills needed to succeed in higher education (HE) (Rantsi, 2016; Spaul, 2013(a); The National Centre for Public Policy and Higher Education, 2010).

Due to the unequal education system of the past, there is a discrepancy between the skills and knowledge that learners gain in public high schools versus the skills and knowledge required by students in HE institutions. The Diagnostic Report of the Department of Basic Education (2019(a)) identifies Grade 12 learners' lack of independent or creative thought; their inability to cope with analytical, evaluative and problem-solving type questions; and poor language and reading skills as challenges in learner performance in the National Senior Certificate (NSC) examination. In addition, it was also detected that in subjects that require the use of mathematical and calculation skills, learners were severely hampered by their lack of these skills. These are the skills (in addition to subject-specific knowledge) that higher education institutions (HEIs) require prospective students to have when they are admitted to a diploma or degree programme. In the 2018 NSC examination, the bachelor's passes by quintile 1 – 3 schools were 35,09%, while

the bachelor's passes by quintile 4 – 5 schools were 54,7% (Department of Basic Education, 2019(a)).

As a consequence of the discrepancy in skills and knowledge, the Council on Higher Education (2013, 2016) states that the HE landscape in South Africa is characterised by high levels of failure and dropout rates. For example, only one in four students in contact institutions graduate in the prescribed time; 35 percent drop out at the end of the first year; 48 percent graduate within five years and an estimated 50 percent of the intake never graduate (Council on Higher Education, 2013, 2016). They further explain that access, success and completion rates continue to be racially skewed, with White students' completion rates being on average 50 percent higher than Black students' rates. The net result of the disparities in access and success is that fewer than 5 percent of Black and Coloured youth are succeeding in any form of HE (Council on Higher Education, 2013, 2016).

Moreover, the fact that so many students start with a HE qualification but do not complete it complicates matters further in that the skills shortage South Africa is faced with is not addressed (Lubbe, 2016; The National Centre for Public Policy and Higher Education, 2010). There is an urgent need for people who are adaptable and broadly skilled and who will be able to cope with challenges such as the emerging globalisation, new economic developments and the rapid advancement of technology. As such, there is not only a discrepancy between the skills and knowledge that HE requires from Grade 12 learners, but there is also a mismatch between the outcomes of HE and the needs of the economy, and persistent social and economic inequalities (Lubbe, 2016).

The discrepancy, which is referred to as the articulation gap between high school and university study, will continue as long as learners attend public schools that are ill-equipped to prepare them for HE studies (Rantsi, 2016; The National Centre for Public Policy and Higher Education, 2010). Similarly, Letseka (2014) explains that, because many public schools in South Africa are dysfunctional, it negatively affects the learners as they do not develop the necessary skills and qualities to effectively read and do well in mathematics. Consequently, the failing

and repeating rates in schools, especially in Grade 10, are high (Department of Basic Education, 2019(a); Letseka, 2014).

One could argue that the new democratic system increased and broadened formal access to HE studies for particularly learners in pre-disadvantaged schools, but the current education system in public schools does not equip the learners with epistemological access. Epistemological access refers to a student's capacity to access new knowledge based on prior learning, or preparedness (the key to epistemic access), that the student needs in order to engage with the concepts, practices, and ways of thinking of a discipline at post-school level (Morrow, 1994, 2009; Scott, 2017). Epistemology is also described as an understanding of the 'discourses of learning' (Boughey, 2002; Lewin & Mawoyo, 2014; Morrow, 1994, 2009). The quality of pedagogy, of what teachers actually do, is central to enabling epistemological access (Horsthemke, Siyakwazi, Walton, & Wolhuter, 2013). Consequently, epistemological access implies that learners in high schools should be equipped with strong (adequate) subject content knowledge and skills, which they can build on and use to construct advanced knowledge at college or university level.

The current reality is that the public schooling system and especially the pre-disadvantaged schools do not prepare the learners with the necessary subject content knowledge and skills needed to succeed at university level, more so within business-related disciplines. As such, Grade 12 learners, even though they achieved a bachelor's pass, are not ready to proceed with post-school studies because the public schooling system in South Africa did not equip them with epistemological access.

Based on the context described above, this study was about the provision of epistemological access to Grade 10 to 12 learners in the business-related subjects, Accounting, Business Studies and Economics, at two public high schools in the Western Cape Province. Thus, the study was about high school learners' academic achievement and their university readiness.

1.2 PROBLEM STATEMENT

Accessing university studies is about building on one's existing knowledge in order to construct and acquire new knowledge at a higher level. As such, university readiness requires a solid foundational knowledge base and skills that should be taught at schools. Speckman and Mandew (2014) assert that it is widely acknowledged that a combination of factors prevents access to HE for the majority of learners from previously disadvantaged schools in South Africa, some of which extend back to early childhood and through the years of primary and secondary schooling, making their impact felt well before learners reach tertiary level. In the NSC examination of 2018, the bachelor's pass rate of the quintile 1 schools was 25,02% and the quintile 4 schools was 43,5% (Department of Basic Education, 2019(a)). The system of racial discrimination institutionalised by apartheid in South Africa was particularly unfair with regard to the inequities built into the education sector. Its effects still account for low throughput rates at both school and university levels for Black and Coloured students. In particular, different and unequal resources (in relation to infrastructure, teacher training, and management), and the socio-economic backgrounds of these learners resulted in them not being prepared for HE studies (Department of Education, 2005; Organisation for Economic Cooperation and Development, 2008). This is even more evident in the business-related disciplines and degrees.

In addition to the fact that learners in these subjects do not receive the necessary subject content knowledge and required skills at high school, many of them find Accounting, Business Studies and Economics challenging, and as a result change to 'easier' subjects or drop out of school completely (Rantsi, 2016; Spaul, 2013(a)). The circle continues in that the few students who pass their Grade 12 with university endorsement find the demands of the business disciplines (Accounting, Business Studies and Economics) challenging at university. The result is that some of them take much longer to complete a three-year B Com degree for example, while some drop out or are academically excluded due to poor academic performance. The sad reality is that these students become part of the high attrition rate of higher education, and more worrisome, they become part

of the unemployment statistic and a liability to the government. Therefore, interventions to address these challenges at high school level are urgently needed. Through the implementation of intervention strategies, and the involvement of most of the role-players in the learning process, this study tested the augmented readiness model, and the researcher developed a university readiness model that could be used in public (and private) schools to provide learners with epistemological access for university studies.

1.3 AIM AND OBJECTIVES OF THE STUDY

The aim of the study was twofold. Firstly, it investigated whether Grade 10 to 12 learners who were in the Further Education and Training (FET) phase at two public high schools had adequate subject content knowledge and skills in Accounting, Business Studies and Economics. Secondly, it identified the challenges that the two high schools and the learners were experiencing in these subjects.

The study had three objectives, namely to:

- identify the subject content knowledge and skills gaps, and the challenges that Grade 10 to 12 learners in Accounting, Business Studies and Economics experience in order to develop appropriate intervention strategies that would assist them to overcome the challenges;
- implement the intervention strategies over three years (2017 – 2019) to strengthen the learners' subject content knowledge and skills so that a solid foundation could be laid in these subjects; and
- develop a readiness model based on the findings of this study that could be implemented in public high schools in South Africa.

The argument in this study was that every learner in South Africa has the right to quality education and training. Hence, they should be sufficiently equipped and supported so that they will reach their full potential in order to become skilled and productive citizens of South Africa.

1.4 RESEARCH QUESTIONS

Given the context described above, the main research question of this study was:

How should learners in Accounting, Business Studies and Economics be equipped with epistemological access so that their chances at succeeding in a business degree programme at university level are strengthened?

Three sub-questions guided the data collection and analysis process, namely:

- Which subject content knowledge and skills are learners lacking in Accounting, Business Studies and Economics in the FET phase?
- What are the challenges that learners experience in these subjects, and why?
- How should the learners and schools be assisted to overcome these challenges so that learners will acquire the necessary subject content knowledge and skills to become university ready?

1.5 FOCUS OF THE STUDY

The focus of the study was on the provision of epistemological access to Grade 10 – 12 learners at two high schools in the Western Cape Province. It sought to provide Grade 10 – 12 learners who chose Accounting, Business Studies and Economics as subjects with intervention strategies in order to strengthen their subject content knowledge and skills. The intention was to lay a solid knowledge and skills foundation for the learners so that they would be ready for further studies upon completion of Grade 12. As such, the literature that was reviewed and discussed in Chapter 2 centered on the provision of education and the challenges encountered in a global context (three developed and two developing countries were reviewed) in order to compare what was happening globally to the current state of education in South Africa.

Chapter 3 reviewed literature pertaining to the challenges in South Africa's public high schools and the reasons why so many learners do not pass their Grade 12 with a bachelor's pass. The discussions showed that the challenges could be traced back to the primary schooling of the learners, their socio-economic

circumstances, and the fact that most learners continuously ‘play catch-up’ as they do not have the necessary subject content knowledge and skills for the grade they are in. The low literacy and numeracy levels of the learners were identified as a major obstacle in the learners’ progress from one grade to another.

These discussions provided contextual background information for the discussion of Chapter 4, which focused on the Accounting, Business Studies and Economic subjects in the FET phase. The aims and objectives, subject content knowledge and skills, and assessment and examinations (the cognitive levels) that learners should have mastered at Grade 12 (as exit level) were discussed. The Mathematics curriculum was also discussed as Mathematics is a requirement for admission to business-related degree programmes at university, and it is also considered a key requirement for contemporary jobs in a technologically driven era (Alex & Juan, 2017).

These issues were central to this study because the study, as stated towards the end of the background section above, was about the provision of epistemological access to Grade 10 to 12 learners in the business-related subjects at two public high schools in the Western Cape Province. The provision of epistemological access to these learners is paramount to university readiness and successful learning. Consequently, three readiness theories and models, those of Byrd and MacDonald (2005), Conley (2007, 2014) and Lemmens (2010) were reviewed to develop the conceptual framework for this study. Based on the review of these three readiness models, the researcher developed her own augmented readiness model. The augmented readiness model incorporated some of the factors and dimensions as discussed in the three models that were reviewed, but the order and importance of the dimensions and sub-dimensions were changed to suit the South African public high schooling context. The dimensions and sub-dimensions were used as a guide to analyse the data collected and formed the basis for the discussion and interpretations in Chapter 7, the discussion chapter of this dissertation. The augmented readiness model is discussed in Section 4.5.

Therefore, as problematised in Section 1.2, South Africa’s apartheid past severely inhibited Black and Coloured learners’ chances to excel at school level in order to

obtain a bachelor's pass upon completion of Grade 12. The researcher argues that concrete steps and guidelines need to be implemented at public high schools to assist and support these learners to acquire a solid subject content knowledge and skills foundation so that they would be ready for post-school studies.

1.6 SIGNIFICANCE OF THE STUDY

Much research has been conducted on university readiness and the 'articulation gap'. While many remedies and suggestions were made, not many studies developed a university readiness model with a detailed and systematic process for each of the role-players that could be implemented in the South African public schooling sector (Lemmens, 2010). In addition, while there are studies that involved some of the role-players as research participants, not many had more than three or four stakeholder participant groups (Dos Reis, Venter, & McGhie, 2019; Einfalt & Turley, 2013; McGhie, 2012). Hence, there are at least three reasons why this study is significant. Firstly, this study had most of the stakeholders who are involved in the learning context as part of its research participants. They included the learners (who were regarded as the most important role-player), their parents, the subject teachers of the three subjects, the subject advisers of the three subjects, each school's principal, the circuit manager responsible for the school district, and lecturers from two universities in the Western Cape Province.

Secondly, it was an empirical study conducted over a three-year cycle with the learners as participants when they were in Grade 10 in 2017 until they reached Grade 12 in 2019. Interventions that focused on specific sections of the work covered in each year were implemented in the three subjects (Accounting, Business Studies and Economics), and the learners' control test, pre- and post-test and examination results of November 2017 and 2018, as well as June and November 2019 were used to determine their subject content knowledge and skills in the three subjects.

Lastly, and most importantly, the researcher designed an augmented readiness model that was used to analyse the data, and to discuss and interpret the findings

in Chapter 7. This is the theoretical contribution of the study. The inputs from the different research participants, and the discussions and interpretations thereof, assisted the researcher to validate the dimensions and sub-dimensions that she decided to include in the augmented readiness model. Consequently, based on the augmented readiness model, the researcher could develop a South African university readiness model and propose recommendations for the different role-players at each level in the learning process. As such, a detailed and systematic process of how the university readiness model could be implemented in public schools (as well as private schools) in South Africa is the most significant contribution that this study makes to the body of knowledge.

1.7 RESEARCH METHODOLOGY

1.7.1 Research design

This study was located in a critical education science paradigm because the aim of the study was to investigate whether Grade 10 to 12 learners had adequate subject content knowledge and skills in Accounting, Business Studies and Economics, and if they experienced any challenges in the subjects. In addition, because the researcher implemented intervention strategies during a three-year cycle to strengthen the learners' subject content knowledge and skills in the three subjects, she wanted to positively transform the learning experience of the learners who participated in the study. In this regard, Carr and Kemmis (1986) state that the critical education science paradigm has the aim of transforming education because it focuses on educational change. They explain that “a critical educational science has a view of educational reform that is participatory and collaborative; it envisages a form of educational research which is conducted by those involved in education themselves” (Carr & Kemmis, 1986:156).

Carr and Kemmis (1986) argue that the practice of critical educational science cannot be derived from theory alone; it also involves a commitment on the part of educational researchers inside and outside the educational process to the improvement of education. It involves teachers in researching education, and it can also involve students, parents, school administrators, and others. The

conditions of its success are in the improvement of actual educational practices, the understandings of those involved in the educational process and the situation in which those practices are carried out (Carr & Kemmis, 1986).

Moreover, Taylor (2008) goes a step further where he explains that, applied to education, critical inquiry focuses first on raising the conscious awareness of teachers about established values and beliefs that underpin their seemingly natural teacher-centred classroom roles. Once this process is under way, critical theory is introduced (critical pedagogy, cultural inclusiveness, social justice) that stimulates teachers' creative thinking about designing curricula and assessments that are more learner-centred, inquiry-oriented, culturally sensitive, community-oriented and socially responsible. (Taylor, 2008). It is therefore important that the researcher demonstrated critical self-awareness and critical understanding of the complexity of social issues in order to develop a vision of a better way of teaching and learning, and research practices, a vision based explicitly on moral principles that support the transformed professional practice (Taylor & Medina, 2013). The researcher attempted to adhere to these guidelines in this study. The critical education science paradigm is further discussed in Section 5.3.

Based on the critical education science paradigm's orientation, the study used a Participatory Action Research (PAR) research design because it was about interventions and the evaluation thereof in order to validate the augmented readiness model. McDonald (2012) and McTaggart (1997) state that the PAR is considered a sub-set of action research, which is the systematic collection and analysis of data for the purpose of acting and changing it by generating practical knowledge. They explain that the ultimate aim of PAR is the empowerment of oppressed individuals to collaborate in social change, which encourages capacity development and capacity building of all who participate (McDonald, 2012; McTaggart, 1997). These principles of PAR are in line with the critical education science research approach and assisted the researcher to realise the aim and objectives of the study (McDonald, 2012).

Moreover, the PAR research design allowed the researcher to be a co-participant (insider) and the researcher (outsider) of this study (Babbie & Mouton, 2001).

Thus, it is important that the researcher declares her dual role in the research process upfront in an attempt to explain how she mitigated possible bias on her side. Patton (2002:55) explains that the “terms objectivity and subjectivity have become ideological ammunition in the paradigm debate. The ideals of absolute objectivity and value-free science are impossible to attain in practice and of questionable desirability in the first place because they ignore the intrinsically social nature and human purposes of research”. The researcher agrees with this explanation; because, following Holliday (2001), there is no such thing as a ‘purely objective research design’.

In addition, Griffiths (1998) asserts that, whether a researcher was an insider or an outsider, it is an epistemological matter because the researcher’s position in relation to her participants had a direct impact on the knowledge that was co-created between them. The research was an insider, because she was a teacher herself, and she herself conducted the interventions with the Accounting learners at both schools. Bridges (2001) explains that, because insiders are more aware of the lives of their participants than outsiders, it places the researcher in a strong position to conduct ethical research that focuses on the research participants themselves, and that will represent their voices.

However, LaSala (2003) warns that insiders could potentially overlook parts of the data because it could be taken for granted. To overcome this risk, the researcher had two tutors (one Business Studies and one Economics teacher from nearby schools) who assisted her with the interventions. They were responsible for conducting the interventions, collecting the data and administering the pre- and post-test results of these two subjects.

The researcher also upholds the view of Henning (2004:26) who explains that it “does not mean that bias by definition is a negative notion, it means that the point of entry into the research is different and needs to be made explicit”. Therefore, an acceptable level of objectivity and validation of research findings is, according to Holliday (2001:47), “to show the workings, to reveal how [she] has managed the subjectivity inherent within [her] research”. He asserts that it “is the major way in which rigour can be maintained, and makes the writing of the research a central

element in achieving accountability” (Holliday, 2001:47). The researcher has attempted to follow these principles and guidelines throughout the discussions and interpretations in this dissertation. Both the research design and the researcher’s dual roles are further discussed in Sections 5.4 and 5.5.6.

1.7.2 Research sites and participants

Creswell (2014) explains that researchers should purposefully select participants or sites (or documents or visual material) that will best help the researcher to understand the problem and the research question or questions. As such, the research sites included two high schools in one of the school districts in the Western Cape Province. The one was a quintile 1 (no-fee) high school in a semirural African community, and the other a quintile 4 (fee-paying) high school situated in a more affluent community. The quintile 1 school was referred to as School A and the quintile 4 school was referred to as School B.

The research participants included seven groups. The first group of participants was 30 Grade 10 learners from each school who were purposively selected in 2017 from the three subjects, Accounting, Business Studies and Economics, totalling 60 learners. These learners were monitored and tracked across all three grades, and the interventions were implemented with each group per subject, per year. The first interventions took place in September 2017 when they were in Grade 10, which is referred to as Cycle 1. The second interventions took place in April and May 2018 when they were in Grade 11, which is referred to as Cycle 2. The third and last interventions took place in April and May 2019 when they were in Grade 12, which is referred to as Cycle 3.

The second research participant group consisted of a representative sample of the learners’ parents from both schools. The third group comprised three teachers per school (one from each of the three subjects), totalling six teachers. The fourth group was the three subject advisers (one from each subject). The two principals from the two schools formed group five, and one circuit manager from the district formed group six. One lecturer or coordinator in each of the three disciplines (Accounting, Business Studies and Economics) from two universities, totalling six

lecturers, formed research participant group seven. The research sites and participant selections are further discussed in Sections 5.5.2 and 5.5.3.

1.7.3 Data collection methods

The PAR research design allowed for both qualitative and quantitative data collection methods (Carr & Kemmis, 1986; McDonald, 2012). To this end, Yin (2009:16) explains that the use of multiple sources of data is advantageous because of its capacity to develop “converging lines of enquiry, a process of triangulation and corroboration”, which allows for the findings and conclusions to be more convincing and contributes to the validity and credibility of the findings. Therefore, the data collection methods included one questionnaire, six focus group discussions (one per subject per school) and two reflection forms for the learner participants.

It also included the data gathered from the interventions (the learners’ control test results, the pre- and post-test results per grade per year before and after the interventions were implemented), and the learners’ November examination results in 2017 and 2018 as well as their June and November 2019 examination results.

In addition, two focus group discussions (one per school) were held with the parent participants, and semi-structured interviews were conducted with all the other participant groups. Other data materials that were considered in the discussions were the set curricula according to the Curriculum and Assessment Policy Statement (CAPS) for the subjects Accounting, Business Studies, Economics and Mathematics. The data collection methods are further described in Section 5.5.4 and Appendix R.

1.7.4 Data analysis

The data collected were sorted and categorised according to the dimensions and sub-dimensions in the augmented readiness model. The quantitative data were analysed through the Statistical Package for the Social Sciences (SPSS) software, while the software package Atlas.ti. was used to analyse the qualitative data as a tool to code, retrieve and build theory by connecting codes to develop themes and sub-themes (Henning, 2004).

In addition, the analysis of the data was both deductive and inductive (Creswell, 2014; Polit & Beck, 2006). Inductive reasoning is the process of developing conclusions from collected data by weaving together new information into theories. The researcher analysed the data with an open mind in order to identify meaningful information that answers the research question (Creswell, 2014; Polit & Beck, 2006). Deductive reasoning is the opposite in that the researcher uses predetermined, existing knowledge or theories as a starting point to analyse data (Berg, 2001; Polit & Beck, 2006). As stated, the factors identified under the dimensions and sub-dimensions of the augmented readiness model were used as the starting point of the data analysis. The data analysis process is further described in Section 5.5.5.

1.8 DISSERTATION STRUCTURE

Chapter 1 provided contextual background to the study in terms of the discrepancy between the knowledge and skills that high school learners acquire versus the knowledge and skills that universities require. It also stated the aim and objectives, defined the problem and outlined the research questions. It explained the focus and significance of the study, and briefly described the research methodology process followed in the study.

Chapter 2 reviewed a global perspective of education in terms of the challenges in three developed and two developing countries, which was then compared to the South African education context.

In *Chapter 3*, the challenges in South Africa's primary and high school education were discussed and contextualised. The challenges discussed exemplify the fact that gaining an education is a socially embedded and complex process that requires the involvement of all the role-players.

In *Chapter 4*, literature pertaining to the South African public high school education context, with specific reference to the three business-related subjects in the Further Education and Training (FET) phase were reviewed, including the Mathematics curriculum. Furthermore, the study's conceptual framework, which was based on the review of the readiness theory and models of Byrd and

MacDonald (2005), Conley (2007, 2014) and Lemmens (2010), was discussed. The review of these three models assisted the researcher in constructing an augmented readiness model that formed the basis for the data analysis process and the discussions and interpretations of the findings in Chapter 7.

In *Chapter 5*, the research methodology process was described, explained and justified based on existing research methodology experts, procedures and practices.

Chapter 6 presented the results of the data analysis process. The results from the three cycles were presented first, followed by the results from the other data sets.

Chapter 7 presented the discussion and interpretation of the results. Similar to Chapter 6, the discussion started with the results from the three cycles, followed by the results from the other data sets according to the dimensions and sub-dimensions of the augmented readiness model. The chapter concluded with a synthesis of the observations made from the discussions and interpretations.

Chapter 8, the final chapter of this dissertation, presented a summary of the findings and related the findings to the literature that was reviewed in Chapters 2 to 4, and the dimensions and sub-dimensions of the augmented readiness model. It explained the contribution to new knowledge that the study makes, proposed recommendations for the relevant role-players in the learning process, noted the limitations of the study and made suggestions for future research. The chapter concluded the study with a personal reflection of the experiences of the researcher as an educationist and a lifelong learner.

CHAPTER 2

GLOBAL PERSPECTIVE OF EDUCATION

2.1 INTRODUCTION

The aim of this study, as stated in Section 1.3, was twofold. Firstly, it investigated whether Grade 10 to 12 learners who were in the further education and training (FET) phase at two public high schools had adequate subject content knowledge and skills in Accounting, Business Studies and Economics. Secondly, it identified the challenges that the two high schools and the learners were experiencing in these subjects. As such, this study was about formal education, and more specifically, secondary education that takes place at public high schools in South Africa. It is therefore important to first provide a definition of what education is, and to review literature pertaining to education and its challenges in a global context (developed and developing countries) in order to ascertain what is currently happening in education globally, in comparison to the current state of education in South Africa. The countries under review were Australia, the United States of America, the United Kingdom, Ghana and Botswana. The chapter concludes with a summary of what was discussed.

2.2 DEFINING EDUCATION

Education and learning are intrinsically linked because when you learn something, you educate yourself. Also, as is generally known, learning and thus, education, can take place formally and informally. Schofield (1999:2) defines formal education as the “act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing individuals intellectually for mature life”. Education helps us evolve individually and collectively into critical thinking, progressive societies (Maher, 2011). This implies, as stated by Dewey (1916), that the aim of education is to develop human beings into reflective, creative, responsible thinkers and socially competent

people. Education is therefore “...about conceptual change, not just the acquisition of information” (Biggs, 1999:60).

In addition, formal education systems are not static. They change constantly and this occurs at both ends of the education ladder – in early childhood or ‘preprimary’ education at the one end, and in higher education at the other (Van Damme, 2015). According to Biesta (2015), the point of education is that students learn something, that they learn it for a reason, and that they learn it from someone. To ensure that learners acquire the knowledge, skills, attitudes and values they need to maximise opportunities after school, school cultures need to embrace progressive teaching pedagogies, a set of authentic activities which, if planned as real-life experiences, will promote what learners need to know and be able to do (Department of Basic Education, 2018(a)). To this end, Dewey (1916, 2011) advocates that children learn best when they are actively involved in the learning environment and in that which they are learning, and when they are given the opportunities to apply that which they have learned.

Globally, there are three recognised levels/categories of formal education, namely:

- Basic education (preschool, preprimary and primary education to Grade 7);
- Secondary education (high school from Grades 8 to 12); and
- Higher education (post-school education after the completion of Grade 12).

Although these three levels/categories are separately discussed in this chapter, it is acknowledged that they are interconnected as the one builds on the other, which the discussion later in this chapter illustrates, as well as the discussions and interpretations in Chapters 3, 4 and 7.

2.3 REVIEW OF EDUCATION IN DEVELOPED AND DEVELOPING COUNTRIES

As stated in Chapter 1, the education systems of Australia, the United States of America (USA), and the United Kingdom (UK) are discussed below. The reason why these three countries’ education is reviewed is that outcomes-based education

was developed in Australia in the 1990s (Alderson & Martin, 2007) and the post-apartheid curriculum models were imported from New Zealand, the United Kingdom and the United States of America (Pinar, 2010). In addition, Ghana and Botswana's education systems, as developing countries similar to South Africa, are also discussed to ascertain the challenges faced by these countries and how they compare to the South African education system. The World Economic Forum (2019) conducted a comparative analysis of the quality of the education system of 140 countries and the results revealed the following: Australia was rated in 13th place, the United States of America 18th, United Kingdom 21st, Ghana 76th, Botswana 77th, and South Africa 138th. The huge difference between these countries on the one hand and South Africa on the other, was another reason why the researcher decided to review these countries' education systems. The three developed countries' education systems are discussed first, and thereafter, those of Ghana and Botswana.

2.3.1 Education in Australia

The Australian education system follows the categories identified in the previous section, namely primary, secondary and tertiary education. However, secondary education is divided into the two sub-sections of secondary schooling and senior secondary schooling (FutureUnlimited, 2018). School education (primary and secondary) is compulsory between the ages of six and sixteen (Year 1 to Year 9 or 10) and is spread over 13 years. Primary school runs for seven or eight years, starting at kindergarten/preparatory through to Year 6 or 7. Secondary school runs for three or four years, from Year 7 to 10 or 8 to 10; and senior secondary school runs for two years, Year 11 and 12. Tertiary education includes universities and vocational education and training (VET) colleges (FutureUnlimited, 2018). The Australian education system is similar to South Africa's, with the age of entry being six years and the age of exit being 15 years, or 16 years in some states of Australia. The Grade 12 exit age is 17 or 18 years old.

English is the official language of Australia and the main language of instruction in the education system. Many schools offer bilingual programmes or programmes in other languages. There are public schools, Catholic schools and

independent schools in Australia (De Nobile, McCormick, & Hoekman, 2013). Public schools or government schools are the largest sector in school education and are free for all Australian residents, and textbooks are provided for learners. The Catholic schools are the second sector, while independent schools comprise a smaller, third sector of schooling (De Nobile et al., 2013).

According to the Australian Bureau of Statistics (2017), 3 849 225 learners were enrolled in 9 444 schools in 2017. The distributions were 65,6% of learners enrolled in government schools, 19,9% in Catholic schools and 14,5% in independent schools. Higher education is provided by universities that are 'self-accrediting' (Australian Government, 2009; Nuffic, 2018). This means that the universities are responsible for the quality of their programmes and degrees. University education emphasises the development of critical thought and independent intellectual activities (Nuffic, 2018).

The government's two targets for the higher education (HE) sector are (i) to increase the participation of students from low socioeconomic status (SES) backgrounds to 20% of the undergraduate student population by 2020; and (ii) to increase the bachelor's degree attainment of 25- to 34-year-olds to 40% by 2025 (Australian Government, 2009).

Australia has a national curriculum policy that provides schools, teachers, parents, learners and the community with a clear understanding of what learners should learn, regardless of where they live or what school system they are in (Australian Government, Department of Education and Training, 2018). Australia adopted an outcomes-based education (OBE) model with the focus on 21st-century skills and competencies; a process and enquiry-based model of teaching and learning and the need to prepare learners for an ever-changing future (Australian Government, 2014). The OBE was adopted in the early 1990s because the outcomes related to the need to measure educational effectiveness in terms of student learning, instead of measuring the success of an education system or school (Donnelly, 2007).

Foodbank is Australia's largest hunger-relief organisation, providing food to over 652 000 Australians every month and children represent more than 27% of those

receiving food relief (Foodbank.org.au, 2017). It also provides regular school breakfasts to over 100 000 learners in 1 750 public schools around Australia (Foodbank.org.au, 2017).

2.3.1.1 Challenges facing the Australian education system

According to Masters (2016), there are five significant challenges facing the Australian school education system, namely:

- (i) Equipping learners for the 21st century (increasing reading, mathematical and scientific literacy levels).
- (ii) Reducing disparities specifically along socioeconomic lines by ensuring that every learner has access to an excellent school and teaching.
- (iii) Reducing the underachieving learners who fall behind and thus fail to meet minimum international standards.
- (iv) Getting all learners off to a good start by reducing the number of learners who begins school with low levels of school readiness and are at risk of ongoing low achievement.
- (v) Raising the professional status of teaching by increasing the number of highly able school leavers entering teaching (Masters, 2016).

Masters (2012) explains that high-performing education systems understand the importance of keeping excellent teachers in the classroom, continually building teachers' pedagogical knowledge and skills, and recognising and rewarding expert practice. Accordingly, various schemes have been introduced to recognise 'advanced skills' teachers. However, the processes used to identify these teachers tend to have lacked rigour and have not always required the demonstration of high levels of specialist knowledge and skill (Masters, 2012). Santiago, Donaldson, Herman and Shewbridge (2011) point out that there was an indication of some inadequacies in teachers' skills for assessment and limitations of some teachers' assessment knowledge and skills as they entered the profession. New teachers needed extensive support in reporting and moderation processes, which was lacking during teacher education (Santiago et al., 2011).

Not completing school is a major issue for Australia because those who do not gain a Year 12 or equivalent certificate have lower incomes and higher rates of unemployment (Australian Government, 2014). Within Australia, Year 12 attainment is regarded as a key factor in the development of skills and knowledge. Those with Year 12 have a greater likelihood of continuing with further study, predominantly in higher education (HE), as well as entering the workforce (Australian Government, 2014). Currently, the education system in Australia is oriented toward the capabilities and attributes all young people need for a successful future (Australian Government, Department of Education and Training, 2018). The Mitchell Institute (2015) explains that, what are needed for all learners, are more personalised teaching and learning approaches, partnerships between secondary schools and primary schools, transition programmes, and support for learners with disabilities outside of school.

There is a strong logic for the teaching of 21st-century skills and capabilities in schools, so that learners could function effectively not only in the classroom, but more importantly, beyond the classroom (Shield & Chugh, 2018). The teachers have a responsibility to transform current superficial interactions and use of technology in the classroom to more, “critical, creative, empathetic and ethical activity” (Kimber & Wyatt-Smith, 2010:620). Even in developed countries, some teachers still report limited access to information and communications technology or its unreliability as barriers to use (Kimber & Wyatt-Smith, 2010). However, the substantial investments by governments over recent decades have enabled access in most classrooms in the developed world (Rebora, 2016). That is also true in many parts of the developing world, although on some occasions, the provision of information and communications technology has taken priority over the employment of teachers to use it (Livingston, 2016).

As the HE market becomes progressively competitive and consumer-driven, employers require new workforce skills to help them meet the challenges (SEEK Insights & Resources, 2017). The pressure on universities to produce work-ready graduates and increase student employability is also rising (Dunn, Schier, Hiller, & Harding, 2016). In the last decade, with widening participation and universities

moving to accept students with low or no tertiary admission scores (Lodewijks & Stokes, 2014), the number of students in Australian higher education requiring support has increased (Knipe, 2013).

In addition, the increasing diversity of the student body poses a challenge for HE providers, predominantly concerning retention and completion of undergraduate programmes. While some challenges are shared by the mass of students in the first year of university, those entering with lower admission scores or Australian Tertiary Admission Rank (ATAR) face particular difficulty in terms of motivation, engagement with their subjects, and the successful completion of tertiary study (Carroll, Heaton, & Tani, 2014). Addressing the issues facing the future of Australian universities will require strong leadership throughout the system and country. They will be called upon to look for added know-how, build new partnerships both inside and outside the systems and respond to these challenges in creative ways. Therefore, in this speedily changing and dynamic environment, leaders must be “informed, collaborative, proactive and strategic” (Lacy, Croucher, Brett, & Mueller, 2017:71). A brief summary of the key indicators of Australia’s education system are illustrated in Table 2.1 below.

Table 2.1 Key indicators of Australia’s education system

Key indicator	% average
Early leavers from education and training (age 18 – 24)	14%
Proportion of 15-year-olds’ underachievement in reading:	
Indigenous	29%
Non-indigenous	7%
The percentage of learners (Grade 8) reaching the international Benchmarks of Mathematics (TIMSS 2015)	64%

(Source: Mullis, Martin, Foy & Hooper, 2017)

2.3.2 Education in the United States of America

Education in the USA is divided into primary education (elementary school), secondary education (middle and high school), and tertiary education, which is referred to as post-secondary education in the USA (Study in US, 2018). Around

age six, USA children begin primary school, which is most commonly called 'elementary school'. They attend for five or six years and then progress to secondary school. Secondary school consists of two programmes, the first being 'middle school' or 'junior high school' and the second being 'high school' (Study USA.com, 2017). Thus, the USA system is divided into three levels: elementary (Grade K–5), middle school (Grade 6–8) and high school (Grade 9–12) (Relocate Global, 2017).

A diploma or certificate is awarded upon graduation from high school. After graduating from high school (Grade 12), USA students may go on to college or university. College or university study is known as 'higher education' (Study USA.com, 2017).

English is the language of instruction in the USA and the curriculum is broad. Learners are expected to study a range of subjects up to Grade 12, such as English, mathematics, sciences, foreign languages, history, art, music and physical education (Relocate Global, 2017).

Public schools in the USA are generally free, but there are some associated fees that include the purchase of books, equipment and uniforms (Expatarrivals, 2017(a)). This fee varies from state to state and between schools. Public education costs are minimal and a lot less than the cost of a private or international school education, and the public school system allows learners to attend a school close to home (Expatarrivals, 2017(a)). This means they tend to have more interaction with local children in the neighbourhood.

Generally, the standard of education fostered in American private schools is considerably better than that of public schools (Expatarrivals, 2017(a)). Private schools in the USA do not have to conform to government educational directives and therefore teachers have more flexibility and opportunity to customise the curriculum and implement a variety of teaching styles (Expatarrivals, 2017(a)). Because of the higher fees charged by private schools, these institutions tend to afford greater extra-curricular opportunities to their learners and support to learners with special needs (Expatarrivals, 2017(a)). Unlike public schools,

securing a place at a private school is not determined by geographical location and private schools often have boarding facilities (Expattarrivals, 2017(a)).

Almost 90% of American learners attend public elementary and secondary schools, which do not charge tuition but rely on local and state taxes for funding (About the USA, 2010). The other 10% attend private schools, for which their families pay tuition. Four out of five private schools are run by religious groups, where religious instruction is part of the curriculum (About the USA, 2010). There are also a small but growing number of parents who educate their children themselves, a practice known as home-schooling (About the USA, 2010).

During 2019, about 56,6 million learners attended elementary, middle and high schools across the USA, with 50,8 million learners in public schools and 5,8 million learners in private schools (National Centre for Education Statistics, 2019). About 3 569 000 high school learners were expected to graduate during the 2016–17 school year, including 3 254 000 public school graduates and 315 000 private school graduates (National Centre for Education Statistics, 2018).

There are a number of studies that are considered part of post-secondary education in the USA, including non-degree programmes that lead to certificates and diplomas and associate, bachelor's, first professional, master's, advanced intermediate, and research doctorate degrees (Study in US, 2018).

Education is predominantly the responsibility of local government and state; thus, every state has its own Department of Education and laws regarding finance, the hiring of school staff, learner attendance and the curriculum (Relocate Global, 2018). The curriculum, laws and policies are set and enforced by the 50 state governments and the more than 14 000 local school districts (EuroEducation.net, 2018). After experimenting with OBE during the 1990s, the vast majority of states have now moved to what is termed a standard approach to the curriculum. A standards approach, when compared to OBE, is more academic in focus, relates to specific year levels and curriculum descriptors are expected to be concise, measurable and based on academic disciplines (Donnelly, 2007).

The National School Lunch Programme's (NSLP) average participation consists of nearly 100 000 schools/institutions that serve school lunches to 30 million learners each day, with 20 million thereof as free lunches (School Nutrition Association, 2018).

2.3.2.1 Challenges facing the United States of America's education system

There is a common practice in American schools since the early days of European settlement, 'deculturalisation', which is a conscious attempt to replace one culture and language with another that is considered 'superior' (Spring, 2016:1). Cultural difference theorists believe that the school – rather than the cultures of minority students – is primarily responsible for its low academic achievement (De Haan & Elbers, 2004). The schools often fail to help ethnic minority students to achieve, because schools regularly ignore or try to alienate them from their cultures and languages, and rarely use teaching strategies that are consistent with their learning characteristics (Banks, 2009). Low-quality teachers and teaching are a major factor behind inadequate school performance, and a lack of accountability and control in schools is a major factor behind the problem of low-quality teachers and teaching (Ingersoll & Collins, 2017).

The answer presented for causes of school failure has been thought to reside inside the school, resulting in attempts to improve America's teachers, curriculum, testing programmes and administration (Banks, 2009; De Haan & Elbers, 2004). However, the sources of America's educational problems are outside school, primarily a result of income equality, which results in high levels of inequality and poverty (Berliner, 2014). Poverty should never be an excuse for a school to do little, but poverty is an influential explanation for why they cannot do much (Berliner, 2014). Poverty hurts families and affects learners' performance at the schools they attend (Berliner, 2014). Missing school is associated with poorer school performance, greater participation in risk-taking behaviours, and greater risk for dropping out of school altogether. Truancy is also related to increased neighbourhood crime (Berliner, 2014; Grinshteyn & Yang, 2017). Research shows that learners who are overweight and obese also suffer from more school days missed (Berliner, 2014; Grinshteyn & Yang, 2017). The

following factors have all been linked to absenteeism: mild and severe depression as well as attention deficit hyperactivity disorder (ADHD) with comorbid depression, anxiety and phobias (Grinshteyn & Yang, 2017). Parent-, school- and neighbourhood-level factors influence the number of school days missed (Grinshteyn & Yang, 2017). Research shows more absenteeism among learners who perceived their classes, teachers and other learners as being less focused on college preparation (Grinshteyn & Yang, 2017; USDoe, 2017). Learners who perceived their school environment as unsafe and those who perceived their school to be dangerous were also more at risk of missing school days (Grinshteyn & Yang, 2017; USDoe, 2017).

Nearly one in five learners in high schools are chronically absent (USDoe, 2017). Overall, 20% of learners in high school are chronically absent compared to more than 12% of learners in middle school (George, 2019; USDoe, 2017). The chronic absenteeism rate is the lowest for elementary school learners at 11% (George, 2019). Nationally, 28,3% of teachers in traditional public schools miss more than ten school days a year for sick leave or personal reasons; in contrast, just 10,3% of teachers in private (charter) schools are chronically absent (Griffith, 2017).

Higher education institutions (HEIs) on the one hand, had to become more accountable for the way they manage their affairs while, on the other, being obliged to cater to the needs of a bulk student clientele, rather than those of a privileged few (McCaffery, 2019). McCaffery (2019:1) states that the changes in role and function of HEIs were challenging because HEIs attempted to do 'more' (that is, teach more students) with 'less' (fewer resources) while concurrently maintaining 'quality'. The ideal would be to follow an integrated approach for curriculum development (Khan & Law, 2015; McCaffery, 2019). However, there are challenges in an integrated approach because the need for changes in the curriculum is constant and rapid since the social environment and work are changing and dynamic (Khan & Law, 2015). There are also differences in the learning styles of individual students as well as differences in teaching styles, and educational institutions in the public sector tend to be bureaucratic, rigid and less approachable to external influences (Khan & Law, 2015). Also, methods and

other resources as technology are not well advanced; and finally, there is a need for dynamic and strategic leadership in order to make sure development is done appropriately and timely (Khan & Law, 2015).

Moreover, technological advances have brought new methods of teaching and research, and improvements in communication, especially the internet have vastly expanded the potential student audience to include people of all ages in all areas of the world (Bok, 2015; Khan & Law, 2015). Bok (2015) asserts that young American students attending universities/colleges today need a better education than ever before because corporate research can be outsourced overseas to college graduates willing to work for much lower salaries. As such, according to Granados (2015), the work of HE must be seen as a service to society; their research must predict social needs; and the products of their research must be shared effectively with society through appropriate knowledge-transfer mechanisms. A brief summary of the key indicators of the USA education system is presented in Table 2.2 below.

Table 2.2 Key indicators of the USA’s education system

Key indicator	% average
Early leavers from education and training (age 18 – 24)	5,9%
Proportion of 15-year-olds’ underachievement in reading	19%
The percentage of learners (Grade 8) reaching the international Benchmarks of Mathematics (TIMSS 2015)	70%

(Sources: Desilver, 2017; Kastberg, Chan & Murray, 2016:14; Mullis et al., 2017; National Centre for Education Statistics (NCES), 2017(a); Trading Economics, 2018)

2.3.3 Education in the United Kingdom

The education system in the UK is divided into four sectors: primary education (which is referred to as preparatory), secondary education (which is referred to as senior school), further education (two college years when the learners are in

Grades 12 and 13), and higher education (which is divided into undergraduate and postgraduate) (UKGuardianship, 2017). Children in the UK have to legally attend primary and secondary education which runs from about 5 years old until they are 16 years old (International Student, 2018). Academic qualifications are just one of several pathways that young people can take after completing compulsory schooling (Annual London Education Report, 2017). Since the summer of 2013, all young people have been required to participate in education or training until the end of the academic year in which they turn 17 under the government's 'raising the participation age' policy (Annual London Education Report, 2017). In the summer of 2015, it was raised to their 18th birthday, but it does not mean that they have to stay in full-time education; they may take-up an apprenticeship or traineeship, or combine part-time education/training with employment or volunteering work (Annual London Education Report, 2017).

The UK education system consists of public schools and state schools (UKGuardianship, 2017). Public schools consist of fee-paying schools, independent schools and a selective group of private schools (UKGuardianship, 2017). State schools consist of free (no paying schools) and government funded schools, which are not available to international students (UKGuardianship, 2017). However, it should be noted that the Scottish education system differs from the rest of the UK (UKGuardianship, 2017).

Private schools are not financed by the state but largely by school fees paid by parents and these schools can charge a wide variety of fees (for example uniforms, stationery, private tuition, and music lessons, and field trips abroad). The UK has a tradition of private (independent) schools, which generally follow the British National Curriculum, but offer a wider range of subjects. The standard of teaching at private schools is excellent, class sizes are small and learners at these schools generally perform better academically than those attending public schools (Expatarrivals, 2017(b)).

Independent schools are all private schools, and these terms are frequently used interchangeably, but a board of governors or trustees oversees all technically

independent schools, whilst other private schools may be run by their owners with no governing body (The Good Schools Guide, 2018).

There are currently 32 113 schools in the UK. Of these, 20 925 are primary schools and 4 168 are secondary schools (Besa, 2018). There are 2 381 independent schools, 1 256 special schools, and 351 learner referral units with 10 259 840 full- and part-time learners at school (8 669 080 in England, 475 889 in Wales, 781 371 in Scotland, and 333 500 in Northern Ireland) (Besa, 2018). Ninety-three percent of the learners in England and Wales go to state schools and 7% of the children in England go to independent schools (Project Britain, 2013).

The state schools are funded by the government through taxes from British citizens and foreigners legally living in the UK (Expatarrivals, 2017(b)). The standard of education at state schools varies substantially, with some offering excellent teaching and facilities and others continuing to produce underperforming academic results (Expatarrivals, 2017(b)). Generally, better state-funded schools will be found in more wealthy areas (Expatarrivals, 2017(b)). In January 2017, there were 1.13 million learners in state schools who were known to be eligible for and claiming free school meals. These 1,13 million learners represent 14% of the total learners that attended these schools (www.parliament.uk, 2018).

The UK has a vast variety of higher education opportunities to offer students with over 100 universities offering various degree programmes for students from the UK and around the world (The World University Rankings, 2018). The UK's top two universities, Oxford and Cambridge, are both expansive collegiate that is some of the oldest, higher learning institutions in existence, and consistently rank in the top five universities worldwide (The World University Rankings, 2018).

Each of the countries in the United Kingdom has separate education systems under separate governments (UKeducation, 2018). The 'National Curriculum' provides a framework for education in England and Wales between the ages of 5 and 18; in Scotland between the ages of 5 and 14, and in Northern Ireland 'the common curriculum' provides a framework for education (UKeducation, 2018).

The National Curriculum of England (also generally referred to as the ‘UK Curriculum’) is a very structured curriculum that is designed to meet the needs of all learners, and the teachers can identify, celebrate and nurture the talents and intelligences of the learners (British International School Riyadh, 2018). Learners are taught to learn by questioning, problem-solving and creative thinking, rather than by the mere retention of facts, hence giving them analytical and creative thinking skills that they will need in the working world (British International School Riyadh, 2018). A variety of teaching and assessment methods are designed to develop independent thought as well as a mastery of the subject matter (British International School Riyadh, 2018).

2.3.3.1 Challenges facing the United Kingdom education system

Educational problems, such as declining standards, the attainment gap between advantaged and disadvantaged learners and the nation’s declining rank in international league tables, are signalled as resulting from poor levels of public education accountability (Department for Education, 2010). The curriculum, in the eyes of the participants, was not only narrowed by the importance conferred on literacy and numeracy, the English Baccalaureate and core knowledge, but also as a result of the high-stakes testing regime driving learners and teachers towards top General Certificate of Secondary Education (GCSE) grades (Department for Education, 2010). Winter (2017) explains that, in an attempt to solve the accountability challenge, the curriculum was narrowed and controlled by means of a technical, ‘one-size-fits-all’ standardised curriculum formation (with prescribed outcomes), specification of curriculum knowledge, together with high-stakes standardised testing and statistical analysis and reporting. However, this reliance on standardisation and conformity around predetermined and externally imposed norms resulted in the negligence of looking for alternative possibilities of existence (Winter, 2017).

Additionally, absenteeism was a big challenge, predominantly in secondary schools (Whitney & Liu, 2017). The part-day absenteeism is responsible for as many classes missed as full-day absenteeism, raising chronic absenteeism from 9% to 24% of secondary grades’ learners (Whitney & Liu, 2017). Goodman

(2014) explains that absenteeism can cause lower achievement among the learners who are present as the teacher has the problem, when the absent learner returns to school, of most likely having to allocate instructional time to catching the learner up on what he or she missed.

With regard to teacher training in the UK, Elton-Chalcraft, Lander, Revell, Warner and Whitworth (2017) explain that there is substantial evidence that the training of teachers does not prepare them to engage with difference, counter racism or inequality in the classroom, and to understand their racial or ethnic positions in relation to the curriculum. They assert that there are not consistent opportunities provided for student teachers to explore the interplay between race and values, and cultures and traditions in relation to their own professionalism. Such teachers are unprepared to engage with these issues (Elton-Chalcraft et al., 2017). While the idea of teaching, as a research-based profession is increasingly evident in Scotland, Northern Ireland, and Wales, it seems that England, at least in respect of the political rhetoric, recent reforms and explicit definitions, is fixed on a different trajectory towards the idea of teaching as a craft-based occupation (Beauchamp, Clark, Hulme & Murray, 2015). They argue that research is urgently needed to examine the consequences for teacher education, educational research and professionalism (Beauchamp et al., 2015).

In a study about the relationship between teachers' pedagogical beliefs and educational innovations, with a special emphasis on technology, it was found that past programmes aimed at increasing technology integration often failed due to a mismatch (Tondeur, Van Braak, Ertmer & Ottenbreit-Leftwich, 2016). This discrepancy is between the educational change and the meanings attached to that change by those involved in the instructional process (Tondeur et al., 2016). Thus, support must be granted in teacher professional development programmes for the use of technology in education, not as a stand-alone event, but as meaningful effective technology integration in education (Tondeur et al., 2016). At present, educational systems appear not to be adapting fast enough to respond to future labour demands imposed by the 4th Industrial Revolution (Gao, El Souri & Keates, 2017). If not addressed, this challenge may result in the required skills being

undersupplied, thereby powering disparities between labour supply and demand, which as a result, may cause unemployment levels to rise (Gao et al., 2017).

It is generally expected that the role of the parent is to reinforce school values and to support the school if there are problems with their children (Munn, 2018). In the UK, parents who challenge school values can include assertive middle-class individuals who may complain that their children are not being stretched intellectually, as well as those living in areas of poverty where problems such as non-completion of homework may not be the most urgent priority for a family affected by social and economic difficulties (Munn, 2018). In another study, Azano and Stewart (2015) state that teachers noted that parents cared about their learners' academic performance but lacked the knowledge or experience to encourage and support their children in and outside the school.

In terms of higher education, the UK has over the last 40 years moved from a publicly funded system to a mixed publicly/privately funded system controlled as a tuition loan-based consumer market (Marginson, 2018). In this system, both the student as graduate and the HE institutions are responsible for a significant proportion of total costs, but it is subject to robust government control (Marginson, 2018). In addition, there are significant inequities with regard to the gap between the higher and lower socio-economic income classes that have not changed, even in the context of rapid expansion (McCowan, 2016). As such, McCowan (2016) explains that the key barrier to HE access in the UK is social class (together with other dimensions of inequality, for example, gender and ethnicity). Although loans are generally available, there are other factors such as debt aversion, high opportunity costs, and a perception of 'not belonging' in the university that act as obstacles for working-class and poorer students (McCowan, 2016).

Moreover, Deem (1998) states that universities are being advised to increase the standards of educational provision and the quality of their teaching, learning and research outcomes. At the same time, prevailing government and funding council policies also required annual 'efficiency gains' to be made, resulting in a diminishing unit of resource per student taught, less money for equipment and a

decline in research resourcing (Deem, 1998). The challenges facing the UK higher education are summarised by Mercer (2017) as operating in a global market; rising student expectations; increasing costs and revenue options; attracting and retaining global talent, and sustaining research and creating innovation. The key indicators in the UK education system are briefly summarised in Table 2.3 below.

Table 2.3 Key indicators of the UK's education system

Key indicator	% average
Early leavers from education and training (age 18 – 24)	11,2%
Proportion of 15-year-olds' underachievement in reading	17,9%
The percentage of learners (Grade 8) reaching the international Benchmarks of Mathematics (TIMSS 2015)	69%

(Source: European Commission, 2017:3)

2.3.4 Education in Ghana

The education system in Ghana consists of three sectors, namely basic education, secondary education and tertiary education (Education Sector Analysis, 2018). Basic education is divided into pre-primary (for learners aged 4 – 5) and primary (for learners aged 6 – 11) (UNESCO, Ghana, 2018). Secondary education is also divided into two parts, i.e. junior secondary high (for learners aged 12 – 14) and senior secondary high school (for learners aged 15 – 17). Learners aged 18 – 22 are expected to be in tertiary education (UNESCO, Ghana, 2018). Compulsory education lasts 11 years from age 4 – 14 (UNESCO, Ghana, 2018).

While government remains the main provider of education in Ghana and the tax grants are available only to government schools, private schools are on the rise, for the poor as well as the elite (Results for Development, 2014). While private schools are making progress serving the poor, government schools are still the most accessible option for those in the lowest income brackets. It is important to note that the measurement of learning needs attention with regard to comparing learning outcomes at government and at private schools, or between schools, other

than exam results. More classroom assessment support could be provided for private schools, as the government now does for its own schools (Results for Development, 2014).

Enrolment rates are close to 95% in primary schools and around 75% in junior high. At the end of junior high school, learners take the Basic Education Certification Examination (BECE) and those learners whose grades are adequate, qualify for senior high school (Duflo, Dupas & Kremer, 2019). However, the passing rates are low with 70% of junior high school entrants going on to take the BECE and 60% of BECE takers passing. Learners who complete senior high school and do well on the West African Senior School Certificate Examination (WASSCE) may be admitted to tertiary programmes, including degree programmes at universities, less admired diploma programmes and government training programmes, for example for nurses and teachers (Duflo et al., 2019).

According to Klu and Ama Ansre (2018), the language-in-education policy had many shifts and challenges as there was a strong uprising by the Ghanaian community for mother-tongue education in the first three primary years of schooling. As a result, the English only policy was changed in 2006 so that learners could study in their mother-tongue during the first three years, while English would be taught as a subject (Klu & Ama Ansre, 2018). From year four, the language of instruction would change to English, with the Ghanaian languages to continue as subjects that the learners could take (Klu & Ama Ansre, 2018).

In 2017, the government proclaimed that secondary education was free with no admission fees, no library fees, no science centre fees, no computer laboratory fees, no examination fees, with free textbooks, boarding and meals (Mitchell, 2018). This introduction of free secondary education was an attempt to control the high dropout rates (Mitchell, 2018). The WENR (2019) reported that Ghanaian learners attend school at higher rates than their counterparts in many other African countries, as well as in developing nations in other world regions. More than 84% of learners participated in elementary education in 2017, and the gross enrolment rate in secondary education was 73% in 2017 (WENR, 2019).

Notwithstanding significant government investments in the public education system, population growth and migration have led to an undersupply of school places, especially in urban areas, leading to an increase in private education enrolments (Abdul-Hamid, Baum, Lewis, Lusk-Stover & Tammi, 2015). In 2014, 23% of primary school learners were educated in private schools, while 16% of secondary school learners attended a private junior or senior high school. The growth in private education enrolments is closely linked to the fast-growing population (Edstats, 2015). Private schools generally have better physical facilities than government schools and private school teachers generally have fewer formal qualifications and are paid on average about one-third of government teachers' salaries. However, parents assume that private schools are better than government schools (Results for Development, 2015).

The total number of learners enrolled at primary level in public and private schools was 4 358 176 in 2016 (IndexMundi, 2016). Admission to senior secondary/high school is competitive: Only 150 000 learners can be admitted to the 500 public and 200 private national secondary schools (IndexMundi, 2016).

The curriculum of junior high school includes a Ghanaian language, basic Design and Technology, English, French, Information Technology, Integrated Science, Mathematics, Social Studies, and Moral Education. The senior high school curriculum includes English, Mathematics, Science, Social Studies and Physical Education. Adding to that, they also elect to focus on agriculture, business, general arts, or science (Scholaropro, 2018(a)). A new basic curriculum was implemented in September 2019 to make education more responsive to the human resource and development needs. The introduction of this standards-based curriculum means that, for every stage in school, a learner is expected to demonstrate an understanding and mastery of knowledge and skills that they are expected to learn as they progress through their education. Some of the key features of the new curriculum place greater emphasis on literacy and numeracy in Grade 2, 4 and 6 (Myjoyonline.com, 2019).

Child poverty rates are especially problematic with 3,65 million or 28,3% of all children living in poverty. One child in ten lives in extreme poverty, meaning

1,2 million children live in households that are unable to provide even adequate food (Human Rights Council, 2018).

The Ghana School Feeding Programme provides meals to over 2 600 000 learners in about 9 000 primary schools (Ghana School Feeding Programme, 2019).

The type of HEIs include 10 public universities, eight technical universities and seven university-level professional training institutions (WENR, 2019). In 2016, 420 000 students were enrolled in these higher education institutions, 20% of whom were enrolled in private institutions (France in Ghana, 2017). The best students continue with nominally free education at a state university while others have to pay for education at a private one (Scholaropro, 2018(a)).

2.3.4.1 Challenges facing Ghana's education system

A challenge experienced in Ghana's education system is the language policy and the fact that the learners received only three years of mother-tongue instruction (Klu & Ama Ansre, 2018). Erling, Adinolfi, Hultgren, Buckler and Mukorera (2016) argue that the mother-tongue education provided from early years schooling is often not providing learners with the necessary skills to move into English as the medium of instruction from Grade 4. In addition, Davis, Bishop and Seah (2013) find that learners were extensively hindered by the use of English in solving mathematical word problems, even when they have demonstrated that they understand the underlying mathematical concepts.

Moreover, there is an unwillingness among trained teachers to accept postings in under-served communities due to unacceptable living conditions, resulting in a large number of untrained teachers being employed instead (Sayed, 2018). By the 2012-2013 academic year, about 30,6% of public basic schoolteachers were untrained. Many of these teachers had been teaching without any systematic professional development to improve their classroom practice and earn them qualification status (Sayed, 2018). Given the situation of teacher shortage, especially in poor communities, and the necessity of recruiting untrained teachers to fill the vacancies there, Kwaah and Palojoki (2018) assert that it is important

for training institutions to develop tools that could adequately prepare these teachers to deliver a good-quality education.

In spite of efforts by the Ghanaian government to improve teaching and learning in the public schools, the performance in the Basic Education Certificate Examinations (BECE) continues to decrease (Mensah & Jonathan, 2016). They explain that teacher professional development should not be underestimated in building teachers' capacity in any school system; the focus should be on integrated school management practices such as assessment management, classroom preparedness, and new instructional strategies (Mensah & Jonathan, 2016).

Quality education has been found to be very important in the present educational system of Ghana and of the utmost interest to the government (Adu-Agyem & Osei-Poku, 2012). There are, however, some factors working against the achievement of quality education. These include a lack of adequate teaching and learning materials and infrastructure facilities; low number of trained and committed teachers; absence of proper guidance and performance standards for each subject; overloaded curriculum; high learner/teacher ratio; mass promotion at basic level; ineffective use of contact hours; and poor management and supervision in schools (Adu-Agyem & Osei-Poku, 2012; WENR, 2019). The WENR (2019) also reports that the literacy standards and learning outcomes remain poor (for example, about 70% of high school learners failed the WASSCE in 2014) despite increased enrolment rates in recent years.

Other challenges include attracting the remaining out-of-school children, poor learning outcomes in early grades, equity in access and learning, teacher time-on-task and deployment (Global Partnership for Education, 2018). With regard to teachers' information and communications technology training in Ghana, most teachers have participated in nationwide training, but the extent to which the training is affecting the teachers' digital literacy and professional practice is unclear (Quaicoe & Pata, 2018). A summary of Ghana's education system is presented in Table 2.4 below.

Table 2.4 Key indicators of Ghana's education system

Key indicator	% averages
Early leavers from education and training (age 18 – 24)	28,68%
Proportion of 15-year-olds' underachievement in reading	29%
Proportion of 15-year-olds' underachievement in Mathematics	45%

(Sources: Mullis et al., 2017; Unicef, 2019)

2.3.5 Education in Botswana

Botswana's education system comprises seven years of primary education (inclusive of pre-primary), three years of junior secondary education, and two years of senior secondary education, and tertiary education (Scholaropro, 2018(b); UNESCO, Botswana, 2018). The educational structure mirrors that of the United Kingdom: There is universal access to primary and junior secondary school, but a process of academic selectivity reduces the entrance to senior secondary school and university studies (Scholaropro, 2018(b)). All learners are guaranteed ten years of basic education, leading to a Junior Certificate qualification. Approximately 50% of the school population attends a further two years of secondary schooling leading to the award of the Botswana General Certificate of Secondary Education (BGCSE) (Spainexchange, 2019). Secondary education in Botswana is neither free nor compulsory (K12academics, 2019). In 2006, Botswana reintroduced school fees after 20 years of free state education, but the government still provides full scholarships with living expenses to any Botswana citizen at university (Spainexchange, 2019).

Setswana is the medium of instruction in Grades 1 to 4, while English is taught as a subject in those grades. English then becomes the medium of instruction in Grade 5 and extends through tertiary level, while Setswana is taught as a subject (Unicef, 2017). This policy applies to all government schools. Private schools,

however, use English as the medium of instruction from Grade 1 onwards, but they have a flexible policy on the number of years they teach Setswana as a subject (Unicef, 2017).

Education is provided through public and private schools (K12academics, 2019). Private schools are generally free to determine their own curriculum and staffing policies, with voluntary accreditation available through independent regional accreditation authorities (K12academics, 2019). About 87% of school-age learners attend public schools, 10% attend private schools, and roughly 3% are home-schooled (K12academics, 2019).

The total enrolment of learners in all primary schools was estimated at 344 618 in 2015 (Statistics Botswana, 2015). Government schools enrolled 92,6 percent of the learners while only 7,4 percent were enrolled in private schools (Statistics Botswana, 2015). The secondary school enrolment in 2013 stood at 175 509 learners, with government schools constituting 82,5%, and government-aided and private schools 1,4% and 16,1% respectively (Statistics Botswana, 2013).

Prior to independence in 1966, Botswana was one of the poorest countries in the world, with most children walking long distances to school without food (UNSCN, 2017). According to The World Bank (2015), half of Botswana's population remains either poor or vulnerable, with 46,2% of them children under 15 years. On average, the World Food Programme (WFP) provides one meal per day to more than 330 000 children (UNSCN, 2017).

In 1994, the Revised National Policy on Education and Vision 2016 were developed to provide direction for the education system (UNESDOC, 2015). The general approach of the Basic Education curriculum is focused on communication, literacy and numeracy skills as well as an awareness of the interrelationship between Science, Technology and Society (International Bureau of Education, 2019). It also focuses on the acquisition of desirable skills and attributes, for example, personal growth and social responsibility (International Bureau of Education, 2019).

The tertiary education system was able to increase the enrolment from 20 011 in 2003 to 56 447 in 2015 (Statistics Botswana, 2016). This percentage increase of 182% means progress towards being a knowledge-based society and the ability to produce competitive human resources by 2026 (Statistics Botswana, 2016). In view of the increase in enrolments, the number of institutions registered to provide tertiary education services also increased from 29 in 2007 to 38 in 2015 (Statistics Botswana, 2016).

2.3.5.1 Challenges facing Botswana's education system

There are great inequalities in the Botswana society, such as poverty (especially in rural areas), a lack of proper care of orphans, a lack of learning facilities in almost all schools, a lack of access to basic needs and many others which affect children's learning (Makwinja, 2017). Makwinja (2017) states that the curriculum needs to be more cultural and context-sensitive, which is still a challenge for the country. Botswana has the world's highest population percentage infected by the HIV/Aids virus; and the emphasis on education is focused on an age range where Botswana citizens tend to have the most unprotected sexual contact, which increases the risk for HIV transmission (Huang, 2016).

Moreover, Abeywardena, Karunanayaka, Nkweni and Tladi (2018) note that Botswana is faced with a continued decline in learner performance, which has been declining at an alarming rate since 2010; and one of the factors contributing to this decline is the quality of teaching and learning resources available. Shonhe (2019) argues that the government is not investing in the development and management of effective school libraries such as effective library facilities and services, staffing practices, adequate funding, clear library policies, an information and communications technology infrastructure, and an awareness of the importance of school libraries. Abeywardena et al. (2018) argue that school libraries are hubs of knowledge for the learners and teachers, and they play a key role in the ability of learners to achieve the desired level of literacy and numeracy.

Quality education requires an improvement in the educational service – infrastructure, equipment, materials, teacher numbers and competencies,

curriculum, school management, policies and regulations. (WHO, 2018). There is a concern that the curriculum is being overcrowded with ‘emerging issues’ such as HIV and Aids, gender, climate change, information and communications technology, and entrepreneurial skills to the detriment of quality (WHO, 2018).

Mother-tongue instruction in the early years of education can positively influence retention rates and learning achievement (WHO, 2018). However, the challenge is that there is a shortage of fluent mother-tongue teachers, especially in disadvantaged minorities such as the Basarwa, and lack of policy support for mother-tongue education (WHO, 2018). The policy provides for only two mediums of instruction in school: Setswana in the first two years and English thereafter (WHO, 2018). In the absence of broad-based access to pre-school education, the policy is a constraint on access to education and learning achievement for children whose mother tongue is neither Setswana nor English (WHO, 2018).

According to Moremi (2018), graduate unemployment is a factor defining HE in Africa and Botswana in particular. Universities are focusing on market-related courses to remain relevant and to equip graduates with 21st-century skills. UNESCO (2018) found the following challenges that needed to be addressed: Education is perceived to be free; however, there are still cost-sharing fees which may act as a push-out factor for some learners. There is inadequate monitoring of policy and programme implementation; and inadequate mainstreaming of productivity, research and development and innovation in the curriculum. Some sections of the community experience language barriers, and there is a lack of policy on structured home-based learning as some learners travel long distances to schools. There is also a high school learner/teacher ratio, and inadequate internet connectivity in some parts of Botswana. Lastly, not all eligible learners have access to early childhood development (ECD) and there are inadequate resources (classrooms, furniture, learning materials and teaching staff) for the ECD programme, as well as insufficient provision of nutritious foods suitable for learners of pre-school age (UNESCO, 2018). A brief summary of the key indicators in Botswana’s education system is shown in Table 2.5 below.

Table 2.5 Key indicators of Botswana’s education system

Key indicator	% averages
Early leavers from education and training (age 18 – 24)	29,4%
Functional illiteracy of primary school learners	10,62%
The percentage of learners (Grade 9) reaching the international Benchmarks of Mathematics (TIMSS 2015)	16%

(Sources: Mullis et al., 2017; Spaull, 2011)

2.3.6 Education in South Africa

The South African education system consists of three phases: primary, secondary and post-secondary (Department of Basic Education, 2011(b)). Learners may spend one to two years in early childhood development centres, and one year in Grade R/0, which is currently part of the primary schooling system. The primary school phase of eight years is followed by five years of secondary school (from Grades 8 – 12), which should be completed by the time the children reach age 18 (Statistics South Africa, 2016). The Department of Basic Education (DBE) (2011(b):2) officially groups grades into two ‘bands’ called GET, which includes Grade 0 plus Grades 1 – 9 and FET, including Grades 10 – 12 as well as non-higher education vocational training facilities. Upon completion of high schooling, learners receive the National Senior Certificate (NSC), with or without matriculation endorsement (bachelor’s pass). A bachelor’s pass in Grade 12 is the minimum requirement for admission to a South African university for a degree programme (Expatica, 2018).

Difficulties such as overcrowded classrooms and a lack of support for early childhood development (ECD) and foundation phase (Grade R – 3) teachers currently incapacitate early learning (Equal Education, 2017). Disturbingly, there is persistent overinvestment in Grade 12, when the largest investment is needed in the early school grades (Equal Education, 2017). The consequence of poor-quality early childhood development and poor-quality foundation phase education is that

the opportunity to reduce learning gaps and develop the potential of learners, irrespective of their home background, is lost. Learners acquire learning deficits in the early grades, which are the root of underperformance in the later, higher school grades (Equal Education, 2017).

After 1994, in the spirit of democracy, official and educational status was granted to eleven languages (De Wet & Wolhuter, 2009; Republic of South Africa, 1996 (Constitution)). Deep-seated distrust and fear that home-language education would lead to impoverishment, social and political isolation, and disempowerment, caused the majority of South African parents and learners to prefer English rather than their home language as the language of instruction (De Wet & Wolhuter, 2009). Increasingly more parents are choosing schools that are offering English as an instructional language, due to the social capital they believe will benefit their children in the future (Aunio, Korhonen, Ragpot, Törmänen, Mononen & Henning, 2019).

The reason for this preference is that the current school policy (Department of Basic Education, 2010) states that learners have the option to be taught in their mother tongue from Grade 1 to 3 and from Grade 4 to 12 the language of learning and teaching must be English or Afrikaans.

South Africa has in the region of 30 000 schools, with 26 000 of them publicly funded (Expatica, 2018). The majority of the 1 600 private schools in South Africa are located in Gauteng and the Western Cape (Expatica, 2018). Most parents in South Africa need to pay for their child's schooling, although many lower-income families have these fees paid by the government (Expatica, 2018). There were approximately 14 million learners at school in 2017, of which 5,9% attended private schools.

In 2014, there were 26 public universities in South Africa, including 14 traditional research universities, six universities of technology and six comprehensive universities (WENR, 2017). For 2018, a total of 1 060 312 students were projected to enrol in public universities, with 208 308 of them being first-time entering students (Department of Higher Education and Training, 2016).

The challenge for the democratic government in the post-apartheid era was to build a new South Africa on “the principles of universal human rights that would promote justice, equity and non-discrimination in all aspects, including race, colour, language, gender, disability and age” (Ischinger, 2008:125).

The Government of National Unity (GNU) played an essential role in the transformation of education in South Africa by, for example, putting an end to racial discrimination, inequality, mono-cultural education, an irrelevant curriculum and the problematic issue related to the medium of instruction. Their efforts successfully moved the country from eighteen fragmented departments of education to nine and laid the foundation for a democratic system of education governance in South Africa (Legodi, 2001).

The Department of Education (1998) states in the Green Paper that this approach required a shift away from the traditional divides between academic and applied learning, theory and practice, knowledge and skills, and head and hand. “It will require a move away from programmes that are narrowly defined in terms of ‘education’ and ‘training’ towards a new and balanced curriculum, which will provide flexible access to further and lifelong learning, to HE and to productive employment in a range of occupational contexts” (Department of Education, 1998:19).

The Curriculum and Assessment Policy Statement (CAPS) is not a new curriculum but an amendment to the NCS Grades R – 12. There is one single, comprehensive CAPS for each subject (Du Plessis & Mbunyuza, 2014). The NCS (Grades R – 12) is based on an active and critical learning principle, i.e. encouraging an active and critical approach to learning rather than rote and uncritical learning of given truths (Department of Basic Education, 2011(a)).

Three-quarters (77,3%) of learners who attended public schools benefited from school feeding schemes. Furthermore, 68,1% of learners walked to school, while 8,2% used private vehicles (Republic of South Africa, 2019). Of the public schools, the best tends to be those that were known as ‘Model C’ schools during the apartheid era. These schools are partially funded by governing bodies and

parents, resulting in better-quality education and better resources (Kokela, 2017). The challenges in South African education is further discussed in Section 3.2. A summary of key indicators in SA’s education system is presented in Table 2.6 below.

Table 2.6 Key indicators of South Africa’s education system

Key indicator	% averages
Early leavers from education and training (age 18 – 24)	30%
Functional illiteracy of primary school learners	27,62%
The percentage of learners (Grade 9) reaching the international Benchmarks of Mathematics (TIMSS 2015)	13%

(Sources: Equal Education, 2018; Mullis et al., 2017; Spaull, 2011).

2.4 COMPARISON OF THE DIFFERENT COUNTRIES’ EDUCATION SYSTEMS

Table 2.7 below reflects certain key indicators of the different countries in respect of class sizes; performance; status dropout; tertiary admission; higher education attainment; and achievement of bachelor’s degrees. The reason why these specific indicators were identified was to determine how South Africa compared with the different countries.

Table 2.7 Comparison of the different countries' key indicators

Indicator	Australia	USA	UK	Ghana	Botswana	SA
Class sizes: Learner-educator ratio (LER) in primary schools	24	21	27,1	27,25	22,6	35
Class sizes: LER in secondary schools	22	27	20,8	16,02	11,2	28
Mean scores and distribution of Grade 4 (PIRLS) reading achievement, by country	544	549	559	Did not participate	Did not participate	320
Mathematics average scale score of Grade 8/9 results (TIMSS)	505	518	518	Did not participate	391	372
Science average scale score of Grade 8/9 results (TIMSS)	512	530	537	306	395	358
Performance of year 12 learners: Achievement/pass rate	87,7%	84%	96,95%	82%	83,25% (Grade 10)	75,1%
Status dropout rates (% of 16- to 24-year-olds not enrolled in school who have not completed high school)	3,1%	5,9%	11,6%	14%	18,1%	31,8%
Tertiary admission rate	30,4%	36%	60,85%	30 – 40%	28,47%	28,7%
First-year dropout rates in universities	15%	28%	6,4%	Not available	Not available	40%
18- to 24-year-olds in higher education	59%	40%	69%	15,7%	18,2%	20%
25- to 34-year-olds with a bachelor's degree or higher	37%	36%	42%	4%	10%	14%

Sources: BusinessTech, 2018; Department for Education, 2017(a), 2017(b), 2017(c); Department of Basic Education, 2013(a), 2017(a); Department of Higher Education and Training, 2018; Hunt & Zhou, 2017; Kim, 2017; Mahomed, 2018; McFarland, Hussar, De Brey, Snyder, Wang, Wilkinson-Flicker, Gebrekristos, Zhang, Rathbun, Barmer, Bullock Mann & Hinz, 2017; Motlhabane & Adamson, 2018; Mullis et al., 2017; National Centre for Education Statistics (NCES), 2017(b); OECD, 2017(a); OECD, 2017(b); OECD Data, 2018; Pather, 2018; PISA, 2015:5; Pitman & Moodie, 2017; The Chronicle of Higher Education, 2017; The Global Economy.com, 2018; The World Bank, 2015; TIMSS & PIRLS, 2015; Universities Australia, 2017; Universities UK, 2017; US Embassy in Ghana, 2019; Wathi, 2017; Weale, 2018; YourBotswana, 2018.

Table 2.7 indicates that the class sizes or the learner-educator ratio of primary and secondary schools in South Africa are much higher than the other countries. The scores in the TIMSS with regard to reading, mathematics and sciences are much lower than the other countries, while the dropout rates in schools and universities are higher than the other countries.

The education systems of all the countries discussed followed more or less the same structure, with only small in-house differences. The language of instruction was English in the developed countries; the developing countries followed the same pattern with early childhood learning in the mother tongue of the learners, and then a switch to English from Grade 4 onwards. The developed countries' learners were more successful (in terms of their literacy levels and Mathematics) than South Africa, but all three also had their fair share of challenges.

Botswana's Grade 8/9 scores were the highest of the three developing countries, with South Africa in second place, and Ghana third. The developing countries' challenges were more or less similar as they shared a communal context of a colonised past.

2.5 CONCLUDING SUMMARY

In this chapter, the education systems and challenges of three developed countries, Australia, the United States of America and the United Kingdom, and two developing countries, Ghana and Botswana, were reviewed and discussed. This was done to compare the state of education globally and regionally to the state of education in South Africa. The review of the literature indicated that all six countries' education structures were similar, with small contextual differences, and that all six countries experienced challenges, some similar, and some different. The next chapter, Chapter 3, contextualised the challenges in South Africa's public schooling system.

CHAPTER 3

CONTEXTUALISING THE CHALLENGES IN SOUTH AFRICA'S PUBLIC SCHOOLING SYSTEM

3.1 INTRODUCTION

The previous chapter contextualised education globally by comparing the education systems and challenges of three developed and two developing countries to South Africa's education system. In this chapter, a detailed discussion of the challenges in South Africa's public schooling system is presented. Much has been written about the challenges in the public schooling system, hence a review of the literature in this regard is important to this study. Many of the challenges discussed in this chapter emerged from the data collected, which is another reason why the challenges are discussed to exemplify the fact that gaining an education is a socially embedded and complex process that requires the involvement of all the role-players. A summary of what was presented concludes this chapter.

3.2 CHALLENGES FACING SOUTH AFRICA'S PUBLIC SCHOOLING SYSTEM

The challenges were divided into four main categories, namely challenges that applied to learners, to teachers, to the school context, and to the broader community.

3.2.1 Challenges applicable to learners

Challenges concerning the lack of literacy and numeracy skills, a language barrier, learner absenteeism, class sizes, the dropout rates at schools, the NSC bachelor's pass rate, the under-preparedness of learners, and access to higher education (HE) studies are discussed below.

3.2.1.1 The lack of literacy and numeracy skills

A lack of literacy skills is a major challenge in both the public primary and high schools in South Africa. South Africa was the lowest-performing country (mean score of 320) out of 50 countries in the 2016 PIRLS study (Mullis et al., 2017). The study showed that 78% of South African Grade 4 learners could not read for meaning in any language (all 11 languages were assessed), in other words they could not “focus on and retrieve explicitly stated information, interpret and integrate ideas and information; and evaluate and critique content and textual elements” (Mullis et al., 2017:3). This means they could not understand what they were reading. The percentage in the United Kingdom was 3% (Mullis et al., 2017). On the PIRLS scale, approximately 40 score points are equal to a year’s schooling. The implication is that South Africa may be six years behind the top-performing countries (Howie, Combrinck, Roux, Tshele, Mokoena & McLeod Palane, 2017).

The statistics above imply that many learners have not mastered reading with understanding in their first language by the end of Grade 3. The lack of basic literacy skills combined with a poor grasp of a second language (typically English) further constrains their ability to master literacy skills in the transition to a second language from Grade 4. As a result, their struggle to read for meaning or comprehend the curriculum is worsened. The implications for the learner are that they are excluded and unable to catch up, they become demotivated and disengaged, disillusioned that there is any hope or future for them inside the school system. With this in mind, it is then not surprising that 50% of the learners drop out of school in the FET phase and leave without any formal qualification (Help2read, 2016).

Early numeracy skills are important for learners’ Mathematics learning at school. However, not many Black and Coloured learners have opportunities to learn and practise early numeracy skills. Hence, these learners perform poorly in the early years of primary school and continuously perform poorly in Mathematics throughout their schooling career (Geary, 2013; Jordan, Glutting & Ramineni, 2010; Spaul & Kotze, 2015; Taylor & Von Fintel, 2016). An international study

has shown that South Africa has the poorest performance when compared to other middle-income countries and low-income African countries that participate in the assessments, particularly in Mathematics (Centre for Development and Enterprise (CDE), 2013).

Almost every year when the Grade 12 results are announced, the overall performance in Mathematics is the lowest among other subjects (Dlamini, Brijlall & Jojo, 2017). The performance in Mathematics is used as a standard to determine which learners qualify to further their studies at tertiary institutions because tertiary institutions require a specific pass mark percentage in Mathematics as an entry requirement for degrees in business, sciences and law (Dlamini et al., 2017).

Given the above discussed thus far, the education system as a whole has to be considered as each phase provides the foundation for the next phase in the education chain. There should be an urgency to promote literacy and numeracy skills in each phase. The learners should have achieved all or most of the outcomes necessary to progress to the following phase. Reading is one of the most important academic tasks encountered by learners and students because reading with understanding will enable them to analyse, critique, evaluate and synthesise information from various sources (Bharuthram, 2012). Furthermore, it will also assist them to think critically, analyse problems and think out of the box, and develop their critical thinking skills so that they would become problem solvers and independent thinkers. As Dewey (1916, 2011) advocates, students should be provided with opportunities to discover and construct knowledge for themselves to develop into active and independent learners.

As such, it is too late to correct a lack of literacy and numeracy skills in Grade 12; it has to be nurtured from Grade 0, and learners' critical thinking skills should be developed from the foundation phase (FP) onwards (Jacobs, 2010). For Accounting, Business Studies and Economics, mathematical ability and reading with comprehension are paramount for abstract thinking and problem solving (Oosthuizen, 2014).

There are also other factors more closely associated with the poor reading comprehension of learners (Pretorius & Klapwijk, 2016). These consist of the role of the home language (HL) and the language of instruction, the focus of constructional attention related to reading, and teachers' reading perceptions and practices. Pretorius and Klapwijk (2016) argue that the comprehension levels of the learners are unlikely to change drastically if the current and future teachers are not becoming knowledgeable about reading, literacy, and writing, and about how to teach reading effectively. Given the challenges discussed, the reality is that learners are already disadvantaged at an early childhood level, and they will remain disadvantaged as they progress from one phase to the other.

3.2.1.2 Language barrier

A lack of language proficiency (whether in the home language or second or additional language) is one of the major causes of the poor levels of reading comprehension of South African learners (Pretorius & Klapwijk, 2016; Songxaba, Coetzer & Molepo, 2017). A language is a tool for conceptualising content and knowledge and for expressing oneself accordingly in a rational, academic style, based on subject-specific conventions and registers (Pretorius & Klapwijk, 2016). In applying language across the curriculum (LAC), the learners learn about a subject using the language as a tool for acquiring and constructing knowledge, and in so doing, develop their linguistic ability in the target language. According to the South African Demographics Profile of 2018, only 9,6% of South Africa's population has English as a home language (IndexMundi, 2018). This means that the majority of South African learners learn in a language (English) that is their second or additional language.

The current school policy provides that learners be taught in their first language from Grade 1 to 3 (of which 70% is an African language), and must switch over to English as the language of instruction from Grade 4 onwards (Department of Basic Education, 2010). Le Roux (1993) states that learners learning a new language usually struggle with vocabulary and new concepts because these are more abstract and not as easily understood as everyday language usage.

Moreover, with 11 official languages, teachers often face the challenge of teaching learners from multilingual backgrounds through a language that they (the teachers) only acquire when they begin formal education (Du Plessis & Louw, 2008). This often leads to continuous code-switching within classrooms where a speaker (normally the teacher) reverts to the use of two languages in a conversation because of an inadequate language vocabulary in English as the language of teaching and learning (Du Plessis & Louw, 2008). The speaker (teacher and the learners) will always go back to their mother tongue to seek the relevant identical word to understand the English concept better (Du Plessis & Louw, 2008). Songxaba et al. (2017) state that the home language of learners provides the foundation for the development of reading and writing behaviours. If there is a mismatch between the structures, values and expectations of the home language and the school language, learners may be at a disadvantage for success in early reading tasks, and thus spend their entire school careers catching up (Songxaba et al., 2017). Consequently, Jantjies and Joy (2015) and many other researchers explain that language is an integral part of the learning process, as the learning language not only affects the learner's communication within their school, but more importantly, it also influences their interpretation and understanding of the subject content in the different subjects (Dalvit, Murray & Terzoli, 2009; Nieman, 2006; Pennycook, 1994). Similarly, the Department of Basic Education (2014) states that listening and speaking, reading, writing and presenting are indispensable tools of the learning process as the learners move across the curriculum. It is for these reasons that Desai (2001) argues that learners need to be taught in their mother tongue until the end of Grade 6 if they are to have a solid foundation because once they fail to get the basics right, they are likely to struggle as they advance to the higher grades. Therefore, as Webb (2002) advocates, the use of English as a language of learning and teaching (LoLT) from Grade 4 onwards in South Africa's public schools is a key factor that contributes to both the poor reading comprehension of learners and the poor pass rate.

3.2.1.3 Learner absenteeism

Absenteeism is another challenge that contributes to the poor pass rate at public schools. Absenteeism affected learners on many different levels. On an intellectual level, learners fell behind with schoolwork as it became difficult to keep up with the schoolwork, given the fact that absentees had already missed explanations from educators and class discussions, and therefore continued to struggle academically (Coetzee & Venter, 2016). It often happened that absentees disrupted a class upon their return, which affected the ability of an educator to teach efficiently (Coetzee & Venter, 2016). They explain that learner absenteeism often occurs involuntarily due to learners' social and economic circumstances (Coetzee & Venter, 2016). Mboweni (2014) argues that learner absenteeism is one of the major forerunners to poor academic performance. If learners miss school, they do not learn and ultimately, they fail or drop out (Mboweni, 2014). Therefore, learner absenteeism is a contributing factor to the poor pass rates at public schools in South Africa.

3.2.1.4 Class sizes

A further challenge that could influence learners' academic performance negatively is class sizes. The national average learner-educator ratio (LER) for government primary schools is one teacher to every 35,2 learners (BusinessTech, 2018). The national average in secondary schools is 27,7 learners to a teacher (BusinessTech, 2018). However, in many primary schools, especially those in rural areas, the LER is much higher and could be as high as 150 per teacher (Marais, 2016).

Marais (2016) states that overcrowded classrooms are part of South Africa's public schooling system and will remain as such due to the shortage of qualified teachers and resources. Imtiaz (2014) reports many challenges that teachers experience in teaching large classes. Besides it being a physical constraint (a teacher cannot move freely in an overcrowded classroom), teachers cannot give individual attention to all the learners and especially to the weaker ones (Imtiaz, 2014). The result is that these learners slip through the cracks and are at a greater

risk of failing or dropping out (Imtiaz, 2014; Mlachila & Moeletsi, 2019). Also, teachers might feel overwhelmed with the number of tasks and assignments that need to be marked and might jeopardise the quality of the work, as they most probably will not assess the work submitted thoroughly because they would want to get done with the marking (Imtiaz, 2014; Marais, 2016). Hence, it is imperative to have smaller class sizes but the current reality is that the LER for this ideal situation needs to be realised. The frustration of teachers sitting with overcrowded classes and being overburdened with administrative duties such as marking will further exacerbate this ongoing challenge.

3.2.1.5 Dropout rates

Another challenge that is prevalent in South Africa's public schooling system is the high dropout rates of learners. Mlachila and Moeletsi (2019) and Spaul and Kotze (2015) state that almost half of South Africa's learners drop out of school before completing secondary education; and about one quarter of learners who do write the Grade 12 examination do not pass. For example, the Department of Basic Education (2017(a)) reported that 1 186 011 Grade 1 learners enrolled in 2006, but only 629 155 learners registered for the Grade 12 final examination (NSC) in 2017. This is a dropout rate of 46,9%. However, only 534 484 learners wrote the Grade 12 examination (Department of Basic Education, 2017(a)), which means that the 'actual' dropout rate is 54,9%.

Also, for 2017, there were 107 430 progressed learners, of which 34 011 wrote all seven subjects and only 18 751 passed the NSC examination (Department of Basic Education, 2017(a)), equating to 55,1%. The policy on progression has been applicable in the GET band since Curriculum 2005 and has been applied to the FET band since 2013 (Department of Basic Education, 2017(a)). The policy states that a learner may only be retained once in the FET phase to prevent the learner from spending more than four years in a phase. The rationale behind the progression policy was to minimise the high dropout rate and maximise school retention. The intention was that, instead of forcing learners to consistently repeat a grade, they should rather be allowed to progress to the next grade and should be provided with additional support (Polity, 2019).

The implications for the teachers are that the gaps between what the learners do know and should know become increasingly wider. As time goes on, learners fall further and further behind in the curriculum, making remediation almost impossible in higher grades as these learning gaps were not addressed and became learning deficits, which lead to failure and dropout (Spaull, 2013(a)). Spaull (2019) argues that the government and education ministers need to accept that high dropout rates and underperformance in Grade 12 are imbedded in weak foundations in primary schools and specifically in the foundation phase.

3.2.1.6 National Senior Certificate bachelor's pass rate

The low number of Grade 12 learners who obtain a bachelor's pass is a further challenge. For example, from the total number of learners (534 484) who wrote the 2017 NSC examination, 28,7% obtained a bachelor's pass, 20,3% achieved a diploma pass, 16,1% achieved a higher certificate pass, and 75,6% achieved the NSC (Department of Basic Education, 2019(a):53). From the 28,7% who obtained a bachelor's pass, 30,6% were learners from quintile 1 schools and 56,2% were learners from quintile 5 schools (Department of Basic Education, 2019(a):53). There was a slight increase in the pass rate in 2018 in that 32,8% of learners from quintile 1 schools and 61,7% of learners from quintile 5 schools achieved bachelor's passes (Department of Basic Education, 2019(a):53). In this study, at School A, 27,9% of the 2018 Grade 12s achieved a bachelor's pass and in School B, 32,5% achieved a bachelor's pass (Western Cape Education Department, 2019(a)).

Not only is the low number of learners who obtained a bachelor's pass a concern, but more concerning is the fact that there is still a huge disparity between the learners who obtained a bachelor's pass and those who register at a university/college compared to the overall population statistics (Statistics South Africa, 2019). For example, in 2017, 35,3% of White students attended a post-school institution, followed by Asian students at 27,1%, while only 10,2% of African and 8,2% of Coloured students attended a post-school institution (Statistics South Africa, 2019). Consequently, for the latter two races, 65,3% and 81,5% respectively of youth between the ages of 18 and 24 were not attending an

institution of higher learning in 2017 (Statistics South Africa, 2019). The quantity and the quality of the country's graduate outcomes have major implications for social, political and economic development, particularly in a context of scarcity of skills (Leibowitz, Van der Merwe & Van Schalkwyk, 2009). A further challenge, as pointed out by Spaull and Kotze (2015), is the fact that fewer than 5% of learners who start primary school end with a university qualification. Their research has shown that, from 100 learners that start school, approximately 60 will reach and write the NCS, 37 will pass and 12 will access university, while only four will complete an undergraduate degree within six years (Spaull & Kotze, 2015). They argue that the weak foundations from primary school is the number one cause for the low throughput rates and weak performance of learners in public high schools in South Africa (Spaull & Kotze, 2015).

3.2.1.7 Under-preparedness of learners

There is a communality among most of the challenges discussed thus far – that of underprepared learners. Difficulties such as overcrowded classrooms, a language barrier and a lack of support for early childhood development (ECD) and the foundation phase (FP) teachers undermine learners' early learning development (Equal Education, 2017; Mlachila & Moeletsi, 2019; Spaull & Kotze, 2015). The consequence of poor-quality ECD and poor-quality FP education is that the opportunity to reduce learning gaps and develop the potential of learners, irrespective of their home language and background, is lost (Equal Education, 2017; Spaull & Kotze, 2015). Learners acquire learning deficits in the early grades; this is the root of underperformance in the later, high school grades (Equal Education, 2017; Jantjies & Joy, 2015; Spaull & Kotze, 2015). Hence, the overinvestment when the learners are in Grade 12 will not have the desired outcomes because the largest investment is needed in the early school years (Equal Education, 2017; Spaull & Kotze, 2015)

Also, there is a discrepancy between the pass requirements between school and university. It is generally known that the minimum pass requirement at school is 30%, but at university, the student needs 50%, which means that the learners who do not obtain the bachelor's pass requirements cannot proceed to university

studies, even if they wanted to. In a study of exploring youth transitions, the findings suggested that while many learners are being stuck in the education pipeline, others are exiting a system that does not appear to be preparing them to leave school equipped to enter either higher education or the labour market (Isdale, Reddy, Winnaar & Zuze, 2018). Chetty and Pather (2015) share a similar sentiment; they state that large gaps exist in students' subject content knowledge and skills, which are preventing them from entering and/or succeeding in higher education.

Moreover, first-year students need to adapt to new learning environments, unfamiliar pedagogies and new and challenging assessment requirements at universities and colleges (CPUT, 2018). The 'articulation gap' is the mismatch or discontinuity between the exit level of secondary education and the entry level of HE and has been identified as a major cause of student failure and dropout – most negatively affecting students from disadvantaged educational backgrounds (Council on Higher Education, 2013:60). It is most unfortunate that the articulation gap is, and will continue to be, a problem as long as learners attend public schools that are ill-equipped to prepare learners for HE (Rantsi, 2016). Even the brightest students, who were top achievers in public schools, often experience obtaining low marks for the first time when they enter HEIs (Rantsi, 2016).

The under-preparedness of first-time entering students result in an inability of the students to adapt to unstructured curricula, to prepare their notes and deal with a heavy workload, to apply effective study skill techniques and planning and time management skills, and to cope without family support (Frick, 2008; Mahlangu & Fraser, 2017; Naong, 2009; Nyamupangedengu, 2017). On the other hand, lecturers identified a lack of responsibility and commitment and poor preparation for a class as key areas to the success of students' academic adventure (Naong, 2009). This implies that successful learning depends on both the willingness and ability of a student to succeed, and the support (moral and academic) and resources that are provided by the different stakeholders in the learning process (Naong, 2009; Nyamupangedengu, 2017). Consequently, the quality of education

at primary and secondary levels needs to be improved to prepare learners for the demands of higher education (Chetty & Pather, 2015).

3.2.1.8 Access to higher education studies

Notwithstanding the transformation that has taken place in higher education to date, South African universities are still confronted with many key challenges (Morrow, 2009; Pather, 2015; Speckman and Mandew, 2014; Van Breda, 2018). The aftermath of apartheid policies and governance is still felt and influence how Black and Coloured students access and engage with the university (Morrow, 2009; Pather, 2015; Speckman and Mandew, 2014; Van Breda, 2018). Only 3,4% of Black Africans and 3,5% of the Coloured population aged 18 – 29 years were studying during 2017, in contrast to 13,8% of Indian/Asian individuals and 18% of the White population in this age group (Republic of South Africa, 2019).

Also, the Diagnostic Report of the Department of Basic Education (2016) highlights the following areas of concern in the NSC examination: Grade 12 learners' lack of objective or creative thought; their inability to cope with logical, evaluative and problem-solving type questions; and the poor language skills of a considerable majority who wrote the examination. These are the skills (in addition to subject-specific knowledge) that higher education institutions require prospective students to have when they are admitted to a diploma or degree programme (Council on Higher Education, 2010, 2013, 2016).

All the challenges discussed in the preceding sections have a direct impact on the low statistics of Black and Coloured learners who access higher education because they are interrelated and connected. As a result of being under-prepared, of not learning in their home language, of having to deal with large classes and coming from working-class and poorer families and communities, many Black and Coloured learners' chances to access higher education are already limited. Moreover, of the learners who managed to remain in school and achieve a bachelor's pass, the fact that their critical and analytical skills were not nurtured so that they could become independent and creative thinkers, places further strain on their ability to succeed in higher education studies.

This is what Morrow (1994, 2009) argues for when explaining that widening formal access to higher education studies did not guarantee meaningful social and academic engagement, levels of retention and/or attainment of success in higher education studies. Thus, according to the author, their schooling career did not provide the learners with epistemological access (Morrow, 1994, 2009). As described in Section 1.1, epistemological access refers to a student's ability to access new knowledge based on prior learning and knowledge constructed (thus, how well they were prepared), which the student needs to engage with the concepts, practices and ways of thinking of discipline at post-school level (Lewin & Mawoyo, 2014; Morrow, 1994, 2009; Scott, 2017). This implies that the South African public schooling system failed the learners and, indirectly, their families and communities. The education that was and is provided to the learners in most of the public schools does not provide them with opportunities to link present content to previous experiences and knowledge so that they can construct and acquire new knowledge in a meaningful and constructive manner (Dewey, 1916, 2011). Moreover, because the learners were not afforded these opportunities, they relied on rote learning and memorisation, which led to a surface approach to learning, instead of a deep approach that would have developed them into reflective, self-regulated and confident young people (Biggs, 1999). Therefore, as Dewey (1916, 2011), McGhie (2012), Naong (2009) and Nyamupangedengu (2017) advocate, a holistic approach, inclusive of student support services, the provision of academic development support, financial support and other resources, has to form an integral part of tertiary institutions' commitment to providing epistemological access to the students they admit.

3.2.2 Challenges applicable to teachers

Challenges that apply to teachers are a lack of qualified teachers, absenteeism of teachers and the professional development of teachers.

3.2.2.1 A lack of qualified teachers

According to Mashau, Mutshaeni and Kone (2017), teacher education in South Africa is a matter of concern. It is a concern because students who choose teaching as a career are few. The profession is surviving because of students who

pass Grade 12 and find out that they are not qualified to pursue their first chosen career at university and hence turn to teaching as an alternative career path (Mashau et al., 2017). It becomes important to keep these teachers in the profession. It should always be remembered that teaching is a noble profession. It needs a professional individual who is dedicated to his/her work and who will practise the roles of a teacher as per the norms and standards for educators (Mashau et al., 2017).

One of the greatest challenges facing the South African education system is the production of sufficient qualified, competent teachers, who can provide quality teaching for all school subjects and phases (Bernstein, 2015). Many reform initiatives have focused on the teacher as the key to improving learner performance (Desimone, Smith & Ueno, 2006; Knight & Wiseman, 2005).

King and Newman (2001) argue that teachers play a vital role in the facilitation of learning at schools and as such should be taught and equipped with sufficient subject content knowledge, skills and pedagogical knowledge to enable them to teach effectively. However, the majority of teachers (80%) lack the content knowledge and pedagogical skill to teach the subjects they are currently teaching (Spaull, 2019). For example, 79% of Grade 6 Mathematics teachers could not obtain 60% in a Grade 6/7 level Mathematics test (Spaull, 2019).

One of the reasons why the mathematical abilities of primary school teachers is a challenge, is because primary school teachers are trained as generalists (Muller, 2016). Yet, it is in primary schools where the learning backlog begins because the crucial foundations for Mathematics are not laid, and secondary schools struggle to retain the specialist who might be able to address the problem later (Muller, 2016).

Moreover, South Africa is currently experiencing a shortage of teachers and the country needs as many as 30 000 additional teachers by 2025 (WENR, 2017). The social demand for better schools, effective principals, qualified and committed teachers and better opportunities for all places a huge challenge on provinces and the state to protect the rights of all citizens (Legotlo, 2014).

Modisaotsile (2012) and the other researchers cited above include poor teacher training, unskilled teachers and lack of commitment to teaching by teachers as challenges in the South African education system. Overcrowded classrooms are another reason why South Africa needs more teachers to reduce class sizes because class sizes impact on learner performance. Small classes allow teachers to pay more attention to individual learners (National Planning Commission, 2011). Thus, what the South African education system needs are more committed teachers with the content knowledge and pedagogical skills to provide quality education to all learners at every phase.

3.2.2.2 Absenteeism of teachers

The absenteeism of teachers plays an important role in the learners' academic preparedness, curriculum coverage and ultimately the learners' academic performance. It is estimated that when teachers are absent, they miss 11% of teaching time (Bayat, Ravinder & Louw, 2014). Reddy, Prinsloo, Netshitangani, Moletsane, Juan and Janse van Rensburg (2010) state that 60% of learners reported being in schools where teacher absenteeism is a problem.

According to Irving (2012), 20% of teachers are absent on Mondays and Fridays, and 33% are absent during month-end. In mainly Black schools, teachers teach an average of 3,5 hours per day in comparison with an average of about 6,5 hours per day spent on teaching in former White schools. There are also many instances where teachers skip classes or arrive late at school (Irving, 2012). Bayat et al. (2014) suggest that the leadership and management of schools must ensure that all these instances are strictly monitored and recorded.

The discussion above shows that the absenteeism of teachers impacts negatively on the learners as far as teaching time and curriculum coverage are concerned, which is a contributing factor to the learners' under-preparedness and weak academic performance. Therefore, it is not only about the absenteeism of teachers, but also about the content and curriculum that are not taught, which ultimately means that the learners are deprived of effective teaching and consequently, effective learning cannot take place.

3.2.2.3 Professional development of teachers

Teaching needs professionals who will be role models to their learners. Students who choose to teach as a second choice and even those who choose to teach as their priority career path need to undergo three components of teacher education for them to remain in the teaching profession for their entire career (Mashau et al., 2017). The three components are initial teacher training, induction, and teacher development or continuous professional development (Mashau et al., 2017). Teacher professional development “is seen as one way to increase teacher performance, leading to improved learner/student outcomes and accelerated learning” (Martin, Kragler, Quatroche & Bauserman, 2014:190).

Changes in education depend on the quality of teachers. As a result, the professional development of teachers has become increasingly important for school improvement initiatives. To address the challenges in the South African education system, the National Policy Framework for Teacher Education and Development (Republic of South Africa 2007) was instituted to assist in the provision of qualified teachers (Steyn, 2017). The policy framework aspires to offer an overall strategy for the effective recruitment, retention and professional development of teachers (Steyn, 2017). More specifically, it aims to ensure that teachers are properly equipped to undertake their essential and demanding tasks; that teachers can continually enhance their professional competence and performance; that appropriately qualified teachers fill all vacancies in all schools and that there is a vibrant balance between the demand and supply of teachers; that there is a community of competent teachers devoted to providing an education of high quality, with high levels of performance as well as ethical and professional standards of conduct; and that teachers are justly held in high regard by the people of South Africa (Republic of South Africa, 2007).

The Department of Basic Education (2018(b)) admits that there are challenges with teacher development due to limited resources, but they attempt to strengthen continuing professional teacher development. The results of the 2017 School Monitoring Survey revealed that the overall average hours of professional

development per teacher per year are 42 hours, whereas the target is 80 hours per year per teacher (South African Government, 2019).

Even if existing and new teachers possess all the necessary knowledge and skills, their professionalism and commitment to fulfilling their teaching responsibilities in the best interests of the learners are of paramount importance. The challenge is aptly summed up in a recent report of the National Treasury (Bernstein, 2015:11). “Above all, it is the commitment of teachers that will ensure the success of the education system: to arrive at school on time, every school day; to be prepared for each day’s lessons; and to be in their classes, teaching. If the system can ensure this, better basic education and effective expenditure will be within reach” (Bernstein, 2015:11)

Teacher development must be part of the provincial plan and should consist of content and methodology development, assessment and practical work (Department of Basic Education, 2018(b)). Teachers should be willing to become lifelong learners and adapt to curriculum changes. Due to the diversity across the school system and the rapid changes in technology, teachers should be able to adapt their teaching to be relevant and actual in the best interest of the learners.

3.2.3 Challenges applicable to the schooling system

This theme refers to the challenges that apply to the school system, namely: the CAPS curriculum and implementation, a lack of resources and integration of technology, inequalities in school funding (quintile system), the increase of dysfunctional schools and, finally, the emphasis on a school matric pass rate.

3.2.3.1 The CAPS curriculum and implementation

Hoadley (2011) reports on an essential analysis of curriculum reform in SA which she completed by referring to changes that took place in three major areas: knowledge (what should be taught), knowers (learners) and knowing (learning). According to Oosthuizen (2014), there were four major reforms in the South African school curriculum and these reforms took place to rectify inequalities caused by the apartheid government. These were:

- 1st Reform: OBE (Outcome-based Education) Curriculum 2005 (in 1997)
- 2nd Reform: Revised National Curriculum Statement (NCS) for Grades R – 9 (in 2000)
- 3rd Reform: Revised NCS for Grades 10 – 12 (in 2002)
- 4th Reform: Revised NCS (CAPS) for Grades R – 12 (in 2012) (Oosthuizen, 2014:37)

The reforms created a new national curriculum that valued human rights, democracy and equality (Oosthuizen, 2014). The CAPS Grades R – 12 curricula have been developed to provide clearness concerning the teaching of subjects on a term-by-term basis and to strengthen teaching in the classroom (Department of Basic Education, 2011(e)).

It is important to note that change, no matter how well intended or planned, and irrespective of how small, brings about uncertainty and instability in a system (Department of Basic Education, 2015(b)). Müller (2000) suggests, therefore, a need to reclaim the pedagogical and cognitive aspects of schooling lost through too much emphasis on outcomes, and to restore the importance of the role of the teacher that has been devalued by progressivism. The author argues that the teacher's role has to be the provision of the 'baggage', the facts, the raw material to be shaped and ordered, i.e. the subject matter or content knowledge (Müller, 2000:12).

Table 3.1 below illustrates the performance of the BCM and Mathematics learners in the National Senior Certificate (NSC) in 2017 (Department of Basic Education, 2018(c): 9, 41, 61, and 151).

Table 3.1 Performance of learners in the NSC in 2017

SUBJECT	Number of learners who wrote	% achieved at 30% and above	% achieved at 40% and above
Accounting	103 427	66,1	42,6
Business Studies	204 849	68,0	42,7
Economics	128 796	71,0	42,7
Mathematics	245 103	51,9	35,1

In 2017, the number of learners who wrote the NSC was 534 484. The pass rate was 75%, with 28,7% of learners passing with a bachelor's pass, 20,2% passing with a diploma and 16,1% passing with a higher certificate (Department of Basic Education, 2018(d):51).

The Department of Basic Education (2018(c)) identified the following concerns in the 2017 NSC examination: In subjects that require the use of mathematical and calculation skills, learners were harshly deprived by their lack of these basic skills. Poor language and reading skills have been highlighted as stumbling blocks in learner performance. It was eminent that learners did not understand the meaning of a range of cognitive verbs used in questions. Furthermore, in most subjects, there was a lack of understanding and capability to apply subject terminology (Department of Basic Education, 2018(c)).

Previous diagnostic reports about the Grade 12 NSC examination identified the following factors: learners did not understand and follow instructions; could not express themselves; could not expand their views; and could not uphold their arguments (Department of Basic Education, 2016; 2018(c)). Learners' lack of these essential skills, namely language, mathematical and reading skills, at the end of their schooling career is a signal that they were not adequately prepared for further studies, or the world of work.

According to Maboya (2017), although there were changes in South Africa's educational curricula, some challenges continue to be tenacious, for example, curriculum/assessment overload; poor curriculum coverage; poor quality of formal assessment tasks with regard to the cognitive levels, forms and the weightings in terms of time and marks; reading levels of the learners; and development of 21st-century skills. The progress report on the implementation of the CAPS curriculum found the following: Current teacher development policies to support the curriculum are frequently too broad and insignificant and do not offer the support the teachers needed and also teachers who were recently trained are not capable to teach the curriculum (Maboya, 2017).

Goetze (2016) argues that the CAPS curriculum is harming the learners because it is too content-heavy and inflexible; there is no time for consolidation; learners are over-assessed; it does not develop critical thinking, and it focuses mainly on assessment, content and producing facts, which provides no room for skills development.

Gouws and Russell (2013) state the FET learners are a product of what they learned during the GET phase because although OBE (C2005), NCS and CAPS have been systematically introduced throughout the education system from the FP upwards, many learners are currently in Grade 10 without the necessary and expected skills, knowledge, attitudes and values.

One can conclude that the curriculum/assessment overload and the poor curriculum coverage, together with the inability of teachers to implement the curriculum, leave the learners underprepared for university studies.

3.2.3.2 A lack of resources and integration of technology

A lack of resources and integrated technology is another challenge that public schools in South Africa are facing. There is also a discrepancy between no-fee schools and fee-paying schools about the availability of resources and technology. “There should be well-equipped libraries, laboratories, computer and media centres to ensure that learners in no-fee schools have access to similar learning resources as their counterparts in less poor communities” (National Planning Commission, 2011:303). Spaul (2019) asserts that a decrease in public funding is likely to worsen inequalities since it would increase the resource gap between fee-paying and no-fee schools. Van der Berg (2008) argues that school resources in South Africa matter only tentatively and that there are huge differences among schools in their ability to convert these resources into outcomes. Thus, simply adding more resources will not automatically improve school performance because it is not only about the availability of the resources, but also the management and effective use thereof (Van der Berg, 2008).

One of the challenges, according to Van Staden and Motsamai (2017), is that not all schools in the South African education system offer Mathematics in the FET

band. Moreover, many of those schools that offer Mathematics do not have the necessary facilities and equipment to provide effective Mathematics teaching and learning (Van Staden & Motsamai, 2017).

Many children experience a broken journey through school, interrupted by irregular attendance, absent teachers, teenage pregnancy and school-related abuse and violence (Unicef South Africa, 2018). Around 27% of public schools do not have running water, 78% are without libraries and 78% do not have computers (Unicef South Africa, 2018). There is also limited provision for preschool and special education (Unicef South Africa, 2018). Alex and Juan (2017) state that a conducive and safe learning environment with better facilities at school supports learners' academic achievement and will allow a competent teacher to function optimally.

Also, according to Nhando (2015), the challenges that hinder the effective integration of technology and implementation of eLearning in South African schools are internet access or connectivity and the availability of locally developed content that is aligned with the national curriculum and can be utilised for eLearning. Furthermore, the development and implementation of training and professional development for teachers will enable them to embrace teaching with technology and to understand the benefits of teaching with technology as a way to advance the academic outcomes of learners (Nhando, 2015).

According to Nxumalo (2017), research shows that the integration of technology increases academic performance while simultaneously raising the standard of education in schools (Nxumalo, 2017). The research also reveals that learners have higher comprehension scores after reading the text through an electronic device versus reading from print (Nxumalo, 2017). The conclusion was that learners are more likely to retain more information and will be more engaged through visuals and animations offered by using technology (Nxumalo, 2017). However, access to technology in South African classrooms is low by international standards (Spaull, 2019).

According to Aurel (2018), technology is almost inseparable from people's daily lives; it has changed the world and will continue to develop and advance further. Aurel (2018) states that schools should modify and reconsider how they share knowledge and learn and teach in the digital era because, if the critical skills needed now and in future are not being developed and taught, the learners and the youth will face a challenging future. The Department of Basic Education (2018(m)) acknowledges that, by the time the current learners leave school, the world as they knew it would no longer exist, and unless they have had some insights on these changes and how to respond to them, they will be ill-prepared. Therefore, education must respond to technological changes, but there should not be an expectation that information and communication technologies are the silver bullet that will solve all the educational challenges.

3.2.3.3 Inequalities in school funding (quintile system) and the increase of dysfunctional schools

According to Dass and Rinqest (2016:145), "the South African Schools Act provides that schools must be funded through public funds. To address the past inequities in school funding, the Schools Act allows for certain schools in more affluent areas to raise their funds, while the government fully subsidises learners in poorer areas". "The Act also allows for learners who attend partially subsidised schools, but who are not able to pay school fees, to apply for full, partial or conditional exemptions from the payment of school fees" (Dass & Rinqest, 2016:145). "The Schools Act requires that the Minister of Basic Education determines the national quintiles for public schools annually" (Dass & Rinqest, 2016:146). "The Minister classifies schools according to the level of poverty in surrounding areas" (Dass & Rinqest, 2016:146). "The factors that they consider include the surrounding infrastructure and how many homes in the area are made from brick, wood and iron sheeting" (Dass & Rinqest, 2016:146). "Schools are then ranked between quintiles 1 and 5; with quintile 1 being schools in a very poor area and quintile 5 is being schooled in a wealthier area" (Dass & Rinqest, 2016:146). "Schools in quintiles 1 to 3 are no-fee schools, and schools in quintiles 4 and 5 are fee-charging schools" (Dass & Rinqest, 2016:146). The government

wholly subsidises schools in quintiles 1 to 3 and partially subsidises schools in quintiles 4 and 5 (Dass & Rinquest, 2016:146). For each province, the minister must publish a list of no-fee schools where learners are entitled to enrol without paying school fees (Dass & Rinquest, 2016:146). “Schools lacking in infrastructure, physical and financial resources and usually located within poor socio-economic environments, are ranked quintiles 1 and 2” (Mestry, 2016:385). “These schools are referred to as no-fee schools and are provided with far more state funding than well-resourced schools, ranked quintiles 4 and 5” (Mestry, 2016:385). “More recently, quintile 3 schools, serving middle-of-the-range communities, have also been declared no-fee schools” (Mestry, 2016:385).

Nationally, 4 929 schools are rated as no-fee schools (quintile 1, quintile 2 and quintile 3) (Department of Basic Education, 2017(b):42). The majority of schools in Limpopo, KwaZulu-Natal, Mpumalanga and the Eastern Cape fall in these quintile ratings (Department of Basic Education, 2017(b):42). In Gauteng and the Western Cape, most schools are classified as quintile 4 and quintile 5 schools. Only 10,6% of schools in South Africa are classified as quintile 5 (Department of Basic Education, 2017(b):42).

The percentage of learners in public schools that do not pay school fees is 69,7% and the percentage of learners in schools receiving social grants is 62,9% (South African Market Insights, 2018). According to Amin and Ramrathan (2009), the scarcity of educational resources is particularly dominant in historically African township schools and rural schools because of inequalities that originated in the apartheid era, and which are often complicated by poor home environments.

According to the National Development Plan (NDP), the priority is to reduce poverty and support food security by providing meals to more than nine million learners in quintiles 1 – 3 schools nationwide (Deveraux, 2018; Republic of South Africa, 2019). South Africa provides 75% of learners with free school meals in comparison with Australia (27%), the UK (14%) and the USA (40%).

The DBE contributes to the NDP’s priority of eliminating poverty and supporting food security through the NSNP. As part of the programme, the department plans

to provide meals to more than nine million learners each year over the medium term in over 20 000 quintile 1 to 3 schools.

Ghana gives meals to 2 600 000 learners in about 9 000 primary schools, and Botswana gives one meal per day to more than 330 000 learners (Ghana School Feeding Programme, 2019; UNSCN, 2017). The latest statistic of 2016 is that 81,4% of learners benefit from the school feeding scheme in South Africa (Department of Basic Education, 2019(c)).

According to Burch, Sikakana, Gunston, Whittle and Murdoch-Eaton (2018), persistent gross inequalities exist in pre-university education, despite increases in education expenditure, radical changes in educational policy, curriculum transformation and improved access to basic education. They explain that the relationship between learner performance and the quality of education that learners receive is multidimensional, and that factors such as the fast expansion of the education system producing large numbers of poor quality institutions; teachers' limited subject knowledge despite training, and the ineffective use of classroom teaching time influence learners' performance negatively (Burch et al., 2018). Ineffective school management practices and poor access to basic resources such as textbooks hamper quality education in primary and secondary schools located in low socio-economic districts (Burch et al., 2018).

Moreover, Taylor (2011:11) states that "the South African public school system is still a tale of two school sub-systems: One which is functional, wealthy and able to educate learners; the other being poor, dysfunctional and unable to equip learners with the necessary numeracy and literacy skills they should be acquiring in primary school." Similarly, Spaul (2013(a)) asserts that apart from the 25% of schools that are mostly functional, public schools in South Africa are not able to equip learners with the necessary foundational knowledge and skills they should be acquiring at school.

In the same vein, Khumalo (2018) explains that teaching in most primary and secondary schools in South Africa is not effective and this has resulted in the deterioration of quality education and an increase in the number of dysfunctional

schools. As was pointed out by Spaul (2019), in almost half (45%) of South African primary schools, not a single learner could read and make suggestions. Likewise, in 47% of high schools, not a single learner could reach the Intermediate International Benchmark in Mathematics (Spaul, 2019). Nuku (2007:7) is of the view that “inevitably, principals are confronted with cases of ill-discipline among educators such as laziness, frequent absence from school, incitement of learners against authority, drunkenness, financial misconduct, fighting in the staff-room, misuse of school property, threatening behaviour and acts of discourtesy”.

The discussion above demonstrated that the South African public schooling system is in a dire state, which is one of the major contributing factors for the learners’ under-preparedness and dismal academic performance.

3.2.3.4 Placing emphasis on a school’s matric pass rate

There is a huge emphasis on a school’s matric pass rate, which means that schools use damaging strategies to boost matric rates to avoid being referred to as an underperforming school (Equal Education, 2017). Equal Education (2017) warns that an uncritical concern with matric results has dangerous consequences for teaching and learning and this narrow focus on test results has unwanted practices at school level. These include: ‘Teaching to the test’, when teachers train learners to answer specific test questions rather than focusing on broader content and skills; and ‘gaming, ‘culling’ or ‘gatekeeping’, when schools hold learners back in a lower grade or encourage them to take different subjects to improve a school’s matric pass rate (Equal Education, 2017).

They suggest that the focus of the education authorities and the public should shift from a ‘be-all and end-all’ preoccupation with matric results to real and fundamental improvements in the foundation phase (Equal Education, 2017). Reliable information on learning outcomes in these early grades should be shared with the public, and appropriate intervention strategies should urgently be implemented (Equal Education, 2017). Also, Ensor (2019) noted that the adjustments of examinations to compensate and equalise exam results over the

years resulted in the lowering of standards to accommodate these learners, as was the low percentage mark required for a pass at 30% in some subjects, and 40% in others.

It seems as if the emphasis on how the school performs in the Grade 12 NSC examination is shifting the focus to schools' reputations, rather than what is best for the learners. A focus on a 'good' pass rate in Grade 12, without addressing the underlying and real challenges of under-preparedness and the lack of 21st-century skills in learners, is not what the Department of Basic Education should concentrate on.

3.2.4 Challenges applicable to the broader community

The challenges applicable to the broader community were divided into two themes, namely poverty and a lack of parental involvement.

3.2.4.1 Poverty

Is it generally known that South Africa has a big divide, with a minority of the population who is classified as rich, while the majority of its population is classified as poor. This divide was caused by legislation under apartheid and is unfortunately still prevalent despite attempts of the democratic government to improve the marginalised populations' living conditions. Chutel and Kopf (2018) report that more than half of the population already lives in poverty and a further 27% live in a state of susceptibility to poverty. Amin and Ramrathan (2009) state that the scarcity of educational resources is particularly dominant in historically African township schools and rural schools because of inequalities that originated in the apartheid era, and which are often complicated by poor home environments.

Spaull (2013(b):447) explains that without acknowledgment and an understanding of the existing inequalities in South African primary and secondary education, particularly the extent and nature of those inequalities, "the current patterns of poverty and privilege will remain unabated".

As was discussed in Section 3.2.3.3, the Department of Education introduced school legislation that was aimed at empowering and uplifting the poorer

communities in that primary and high school education is ‘free’ as parents do not have to pay school fees. Provisions were also made for school transport and food schemes. The National School Nutrition Programme (NSNP) continues to contribute to the NDP’s priority of reducing poverty and supporting food security by providing meals to 20 000 quintiles 1 – 3 schools, feeding over nine million learners nationwide (Deveraux, 2018; Republic of South Africa, 2019). The latest statistic of 2016 is that 81% of learners benefit from the school-feeding scheme in South Africa (Department of Basic Education, 2019(c):13).

Poverty is the major driver behind low educational attainment for Black and Coloured learners as it defines to a large extent where learners will go to school, with whom, and by whom they will be taught (Gándara & Mordechay, 2017). It also determines the resources they have available outside of school, where learners spend the majority of their time, and the kind of nutrition they have, the kind of healthcare they receive (or do not receive), and frequently the amount of time that parents have to spend with them (Gándara & Mordechay, 2017). The researcher agrees with these authors and that is why she augmented the readiness model, which is the study’s conceptual framework, in the manner that she did in Section 4.5.

3.2.4.2 A lack of parent involvement

Parental involvement in the education of their children is regarded as a key factor in learners’ academic performance at school. Research shows that children whose parents are more involved in their schooling are more likely to experience academic success than children whose parents are less involved (Hill & Craft, 2003; Singh & Mbokodi, 2004).

Parents who are not involved in their children’s schoolwork and study programmes contributed to the poor performance of their children in the classroom (Singh & Mbokodi, 2004). Hall and Engelbrecht (1999) point out that parents need to be involved in their children’s education and this involvement should include insight into their children’s progress, participation in decision making and being critical of information on educational issues. Furthermore, they

argue that parents who respect diversity and are willing to become involved in education can influence a community in how it supports its institutions (Hall & Engelbrecht, 1999).

According to Minister Motshekga in the release of the 2017/2018 School Monitoring Survey, some parents were not fulfilling their role (South African Government, 2019). School governing bodies that met the minimum criteria of effectiveness stand at 65% in primary schools, and at a low of 55% in secondary schools (South African Government, 2019). Parents are the first educators of their children and should be actively involved in the education of their children.

Unfortunately, many parents have never had the opportunity to attend school themselves, and do not know how to read and write due to the previous dispensation. Nevertheless, the more parents participate in the schooling of their children, sustainably, at every level, the better for learner achievements (Modisaotsile, 2012). The current president said that another critical priority is to substantially improve reading comprehension in the first years of school, because it is essential in equipping learners to succeed in education, in work, and in life. He said, “It is possibly the single most important factor in overcoming poverty, unemployment and inequality” (Ramaphosa, cited in Cooper, 2019).

Lemmer (2007) states that good school, family and community partnerships will lead to improving academic performance for the learners, high self-esteem, regular school attendance, and positive social behaviour. He further asserts that parents and teachers will experience shared support and satisfaction in achieving positive behaviour in children and schools (Lemmer, 2007).

Parent involvement can relate to school activities such as assisting the school with fundraising events, being involved in extramural activities at the school and attending parental and governing body meetings (Kgaffe, 2001). Page (2016) explains that parents are regarded as the primary educators until the child(ren) attends formal schooling and that they will remain a major influence throughout the child’s schooling career. As such, parents and schools both have essential roles to play in the education of learners (Page, 2016).

At home, parental involvement can include reading to their children, listening and assisting their children with homework, taking them to the library, providing reading materials, and assisting and discussing school-related issues (Sanders & Sheldon, 2009). The literature discussed above shows that parental involvement is important and that parents are one of the most important stakeholders in the education of learners. However, due to many different factors and challenges, not all parents are involved in the education of their children.

3.3 CONCLUDING SUMMARY

In this chapter, a comprehensive discussion of the challenges in the South African public schooling system was provided. Four sets of challenges were discussed, namely challenges related to the learners, to teachers, to the school system, and to the broader community. Challenges such as the learners' lack of literacy and numeracy levels, overcrowded classrooms, poor school infrastructure, poorly performing teachers, low levels of accountability, poor control by education authorities, and a lack of community and parental support were discussed. It was evident that the challenges contributed to the learners' under-preparedness and poor academic performances, and could be the reasons for the high failure and dropout rates at high schools in South Africa.

Moreover, the discussions showed that the challenges were socially embedded and interconnected and that the learners cannot achieve academic success on their own because there are different role-players and factors that influence their schooling careers. Most importantly, the discussions showed that the right of children to freely exist and function to execute their right to basic education as stipulated in the Constitution of South Africa (Republic of South Africa, 1996) was hindered by the many challenges they faced.

The next chapter, Chapter 4, discusses the curricula of the business-related subjects and Mathematics, university requirements for the B Com degree, what epistemological access is, and the conceptual framework used in this study.

CHAPTER 4

CONTEXTUALISING THE BUSINESS-RELATED SUBJECTS AND THE CONCEPTUAL FRAMEWORK

4.1 INTRODUCTION

A detailed discussion of the challenges in South Africa's public schooling system was presented in the previous chapter. In this chapter, the business-related subjects of Accounting, Business Studies and Economics at public high schools in South Africa are discussed as the study entails the learners' academic achievement and university readiness in these subjects. The CAPS curriculum in terms of the aims and objectives, the main content and main outcomes, and the challenges identified in each of the three subjects across the three grades (Grades 10, 11 and 12) are discussed first. Also, because Mathematics is a requirement for admission to business-related degree programmes at university, the Mathematics curriculum is discussed. A discussion on the subject content knowledge and skills required in the business-related subjects at university level follows thereafter, with a discussion on the provision of epistemological access. The chapter concludes with a detailed discussion of the study's conceptual framework, and a concluding summary.

4.2 THE CAPS CURRICULA OF THE THREE BUSINESS-RELATED SUBJECTS

The CAPS curricula for the three business-related subjects and Mathematics across the three grades, together with the challenges identified are discussed below. The Accounting subject is dealt with first, followed by Business Studies, Economics and finally Mathematics.

4.2.1 Accounting

A summary of the aims, objectives and main content and outcomes for Grades 10 – 12 are presented in Tables 4.1a, 4.1b and 4.1c below (Department of Basic Education, 2011(a) 8, 13-18; 20-28; 30-39).

Table 4.1a The CAPS curriculum for Accounting in Grade 10

Aims and objectives	Main content	Main outcomes
<p>Accounting focuses on measuring performance, and processing and communicating financial information about economic sectors.</p> <p>This discipline ensures that principles such as ethical behaviour, transparency and accountability are adhered to.</p> <p>It deals with the logical, systematic and accurate selection and recording of financial information and transactions, as well as the compilation, analysis, interpretation and communication of financial statements and managerial reports for use by interested parties.</p> <p>The subject encompasses accounting knowledge, skills and values that focus on the financial accounting, managerial accounting and auditing fields.</p> <p>These fields cover a broad spectrum of accounting concepts and skills to prepare learners for a variety of career opportunities.</p>	<p>Financial accounting</p> <p>Accounting concepts GAAP Bookkeeping of a sole trader Accounting equation Final accounts and financial statements of a sole trader Value-added tax (VAT) Salaries and wages</p> <p>Managerial accounting</p> <p>Cost accounting Budgeting</p> <p>Managing resources</p> <p>Ethics Internal control</p>	<p>Definition and explanation of accounting concepts up to financial statements</p> <p>Definition and explanation of GAAP principles</p> <p>Accounting cycle of a sole trader based on the perpetual inventory system</p> <p>Preparation of final accounts and financial statements of a sole trader taking into account yearend adjustments</p> <p>Analysis and interpretation of financial statements and notes</p> <p>Analysis and an indication of the effect of transactions on the accounting equation of a sole trader</p> <p>Explanation of the basic concepts of VAT</p> <p>Salaries and wages journal and ledger</p> <p>Definition and explanation of basic cost concepts</p> <p>Define and explain basic budgeting concepts</p> <p>Explanation of the code of ethics applicable to all parties in the financial environment</p> <p>Definition and explanation of what is meant by internal control</p>

Table 4.1b The CAPS curriculum for Accounting in Grade 11

Aims and objectives	Main content	Main outcomes
<p>Accounting focuses on measuring performance, and processing and communicating financial information about economic sectors.</p> <p>This discipline ensures that principles such as ethical behaviour, transparency and accountability are adhered to.</p> <p>It deals with the logical, systematic and accurate selection and recording of financial information and transactions, as well as the compilation, analysis, interpretation and communication of financial statements and managerial reports for use by interested parties.</p> <p>The subject encompasses accounting knowledge, skills and values that focus on the financial accounting, managerial accounting and auditing fields.</p> <p>These fields cover a broad spectrum of accounting concepts and skills to prepare learners for a variety of career opportunities.</p>	<p>Financial accounting</p> <p>Bookkeeping of a partnership Bookkeeping of a club Value-added tax (VAT) Reconciliations</p> <p>Managerial accounting</p> <p>Cost accounting Budgeting Inventory systems</p> <p>Managing resources</p> <p>Ethics Internal control Fixed assets</p>	<p>Partnerships: concepts, GAAP, accounting equation, accounting cycle, adjustments, general ledger, final accounts, financial statements and analysis, and interpretation</p> <p>Clubs: concepts, accounting cycle, cash book, ledger, trial balance, statement of receipts and payments, the difference between receipts and income, and payments and expenses</p> <p>Perform VAT calculations Bank reconciliation and creditors reconciliation</p> <p>Calculation of costs in a manufacturing environment, preparation of ledger accounts.</p> <p>Preparation of a cash budget and projected income statement.</p> <p>Definition and comparison of a perpetual and periodic stock system</p> <p>Identification and analysis of ethical behaviour applicable to financial environments concerning accountability, transparency, and sustainability</p> <p>Demonstration of the knowledge of internal audit processes</p>

Table 4.1c The CAPS curriculum for Accounting in Grade 12

Aims and objectives	Main content	Main outcomes
<p>Accounting focuses on measuring performance, and processing and communicating financial information about economic sectors.</p> <p>This discipline ensures that principles such as ethical behaviour, transparency and accountability are adhered to.</p> <p>It deals with the logical, systematic and accurate selection and recording of financial information and transactions, as well as the compilation, analysis, interpretation and communication of financial statements and managerial reports for use by interested parties.</p> <p>The subject encompasses accounting knowledge, skills and values that focus on the financial accounting, managerial accounting and auditing fields.</p> <p>These fields cover a broad spectrum of accounting concepts and skills to prepare learners for a variety of career opportunities.</p>	<p>Financial accounting</p> <p>Bookkeeping of a company Value-added tax (VAT) Reconciliations</p> <p>Managerial accounting</p> <p>Cost accounting Budgeting Inventory systems</p> <p>Managing resources</p> <p>Ethics Internal control Fixed assets</p>	<p>Company: concepts, GAAP, accounting equation, accounting cycle, adjustments, general ledger, final accounts, financial statements and analysis and interpretation of financial statements and audit reports</p> <p>Calculate the amount payable to or receivable from the South African Revenue Services (SARS)</p> <p>Analysis and interpretation of bank, debtors' and creditors reconciliations</p> <p>Definition and explanation of accounting concepts unique to a manufacturing business</p> <p>Preparation, presentation, analysis, interpretation and reporting on cost information for manufacturing enterprises</p> <p>Analysis, interpretation and comparison of the projected income statement and cash budgets for sole traders or companies</p> <p>Validation, valuation and calculation of inventories of businesses using the perpetual and periodic inventory systems</p> <p>Role of professional bodies, King code, legislation governing companies</p> <p>Application of internal control and audit processes in a business environment</p> <p>Interpretation and reporting on the movements of fixed assets</p>

The above tables show that in Grade 10, the learners do the bookkeeping of a sole trader, in Grade 11, it is partnerships and clubs and in Grade 12, it is companies. The accounting cycle of a sole trader forms the foundation in Grade 10, Grade 11 and Grade 12. The learners should understand how partnerships, clubs and companies differ from sole traders. In terms of financial accounting, managerial accounting and managing resources, the subject content in Grade 11 builds on what was done in Grade 10, and Grade 12 builds on what was done in Grade 11. In Grade 10, the focus is on the basic concepts. In Grade 11, it is on calculations,

and in Grade 12, the focus moves to analysis and interpretation. To achieve the higher-order thinking skills according to Bloom's taxonomy, the learners' basic thinking skills in Grade 10 should be developed, and moderate-high thinking skills should be developed in Grade 11 in order for higher-order thinking skills to be developed in Grade 12. It is important to note that ethics and internal control should be integrated with other topics using appropriate scenarios over the three grades.

The skills in recommended classroom activities for Grade 12 are: language and logical thinking skills; bookkeeping, financial reporting and projection application skills; reconciliation, analytical, evaluation, valuation and creative problem-solving skills (Umalusi, 2014(a):64, 65). For a detailed discussion of the aims, objectives, main content, main outcomes and content topics examined at exit (Grade 12) and skills in recommended classroom activities for Grade 12, refer to Appendices A, B, C and D.

4.2.1.1 Challenges encountered in the implementation of Accounting

The subject EMS from Grade 7 – 9 (SP) is a practical subject that equips learners with entrepreneurial skills, financial knowledge and real-life skills for personal development and the development of the community. The main topics in EMS are the economy, Financial Literacy (Accounting) and Entrepreneurship. These topics are integrated to assist learners to become economically and financially literate. EMS forms the foundation for the FET subjects Accounting, Business Studies and Economics. The decision to take the business-related subjects in Grade 10 affects future motivation, performance at school and tertiary studies (Department of Basic Education, 2013(b)).

According to Letshwene (2014), the gap between Grades 9 EMS and Grade 10 Accounting makes it difficult for Grade 10 teachers to equip the learners with the necessary subject content knowledge and skills they require to pass Grade 12. Learners who were not exposed to 'proper' Accounting in Grades 8 and 9 are at a disadvantage, which is indicative of their academic performance in Grade 10

Accounting. It can make learners lose interest in the subject, and as a result they may not make enough effort to understand the subject (Letshwene, 2014).

Schreuder (2009), who conducted an empirical study on EMS in preparing learners for Accounting in Grade 10, acknowledged three challenges regarding the shift from Grade 9 to Grade 10.

Firstly, teachers who are unqualified to teach Accounting often neglect to teach the subject and tend to focus more on Economics and Business Studies. Secondly, all EMS teachers who participated in the study revealed that time allocated for Accounting is insufficient “to do justice to the content they need to address”. Lastly, Grade 10 Accounting teachers need to dedicate a term to teach the learners the basics of Accounting before the Grade 10 syllabus can commence. Teachers are compelled to offer classes after school to complete the Grade 10 Accounting syllabus (Schreuder, 2009:99).

These challenges strain teachers’ resources. Accounting is a hierarchical, cumulative process, which means that individual steps in the learning process cannot be left out.

Also, the Department of Basic Education (2009) states in a report released to review the implementation of the National Curriculum Statement that there was a perturbing gap between knowledge required for Grade 10 and what is provided in Grade 9, particularly for the Accounting subject. The transition to Accounting in Grade 10 was perceived as problematic because the subject is grouped with two other subjects, namely Business Studies and Economics to form the subject EMS in the Senior Phase. It was found that many teachers who teach EMS were not adequately trained to teach all three subjects, and therefore concentrated on the subject(s) they know best or are more comfortable with (Schreuder, 2009). The content of the learning area EMS aims for “breadth rather than depth, resulting in inadequate preparation” especially to specialise in Grade 10 Accounting (Department of Basic Education, 2009:39). In a study conducted by Dos Reis (2012), Accounting teachers shared the sentiments of the department’s report that

EMS in the senior phase does not adequately prepare learners for business-related subjects in the FET phase.

According to Nwosu, Bechuke and Moorosi (2018), the poor performance in Accounting concerns teachers who do not have adequate content knowledge, and hence, cannot teach Accounting competently. Accounting is also identified as one of the subjects in which teachers encountered learners with reading problems, arithmetic deficiency and language problems (Nwosu et al., 2018). The main finding of this study revealed that there were various management strategies employed by the schools to manage the teaching and learning of Accounting. These strategies include supporting Accounting teachers, providing teaching and learning of resources to Accounting teachers and learners, supervising the teaching and learning of Accounting in the classroom and providing exchange programmes for Accounting learners (Nwosu et al., 2018).

Cheng (2009) asserts that there are many problems in the current Accounting education, and a major one lies in the content and the design of the curriculum. In a report of Umalusi (2014(a):65), the concern was expressed that “many teachers actually teach to the NSC examination and hence might not allocate enough time to the development of the skill of independent research”. They were also concerned that the CAPS document is not being updated in terms of “current developments in the profession” (Umalusi, 2014(a):65). The team reported that the “progression in terms of content from Grade 10 to Grade 12 is appropriate” but suggested a reduction in the Grade 10 content to allow for a deeper development of skills and to facilitate a greater depth of understanding (Umalusi, 2014(a):66). The team further commented that the “spread of cognitive levels as detailed in the CAPS is appropriate, but expressed the concern that the development of the higher-order skills presented in the curriculum, such as analysis, evaluation and creative problem solving, is not guaranteed, as this is currently dependent on the teacher” (Umalusi, 2014(a):66). More exact advice regarding the development of these higher-order skills is certainly required in the CAPS (Umalusi, 2014(a)).

Another challenge with the implementation of the Accounting curriculum is the teaching methods of the teachers. The ‘talk and chalk’ method of teaching creates an environment in which learners are passive recipients of information (Barlow, 2012:57). The ‘chalk and talk’ method fails to stimulate all the learners’ interests in learning and understanding the Accounting subject. Education needs to be more practical, and it should provide opportunities for learners to express themselves and learn independently at their own pace. Another criticism is that this method of teaching tends to go with the pace of the faster learners and can leave a lot of children behind (Anwar, 2018). The school management teams (SMTs) should ensure that Accounting educators are fully knowledgeable about the content of Accounting and that they spend more time on facilitating learning for the learners rather than chalkboard writing (Barlow, 2012; Nwosu et al., 2018). Different teaching strategies should be used in teaching Grade 10 Accounting because one teaching method will not be adequate for the different needs and learning styles of all the learners (Letshwene, 2014). It is important to note that Accounting is not ‘parrot’ learning work. The prominence is on the learners’ capability and technique to understand and interpret calculations with the accounting standards as a foundation to guide them. These abilities and techniques can only be developed through regular daily practice and a obligation to put in extra effort (Stellenbosch University, 2018(a))

A lack of exposure leads to a lack of understanding, which in turn leads to learners not doing their homework or adopting a habit of not making any effort to do their homework because they do not know how to even begin to write (Letshwene, 2014). The teacher’s work will become difficult because the teacher will not know whether the aims of the lessons of that particular topic have been achieved or not (Letshwene 2014). Therefore, the parents should help the teachers by making sure that their children do their homework, and by checking the learners’ books regularly to ensure that their children are doing what is expected of them (Mbiza, 2018). Dudley-Marling (2003) asserts that parents should be available both at home and school when necessary, to work with their children in support of their education. Similarly, Mbiza (2018) explains that parents need to be more involved and that the department needs to reach out to them. It is

important to build a balanced educational environment where teachers are actively engaging with learners and parents are contributing to a learning mentality in their children (Mbiza, 2018). However, as is generally known in South Africa, many parents cannot read or write and even if they do, not many will have Accounting knowledge. Thus, even if the parents are assisting their children at home with their homework in Accounting, they would not be able to do so effectively, which increases the challenge for the teachers at school.

Lastly, language is a vital component of education in general, and specifically for understanding the subject content knowledge in any subject (Joubert, 2010). The level of understanding of Accounting learners will be affected by language because it is taught in English and not in their home language, resulting in many learners not understanding the accounting concepts (Letshwene, 2014; Steenkamp, Baard & Frick, 2009). As such, second or additional language-speaking learners will need a lot of language support to fully comprehend and master the Accounting subject content knowledge and skills in all their grades.

4.2.2 Business Studies

A summary of the aims, objectives and main content and main outcomes for Grades 10 – 12 are presented in Tables 4.2a, 4.2b and 4.2c below (Department of Basic Education, 2011(b):8, 13-21, 23-31, 33-43).

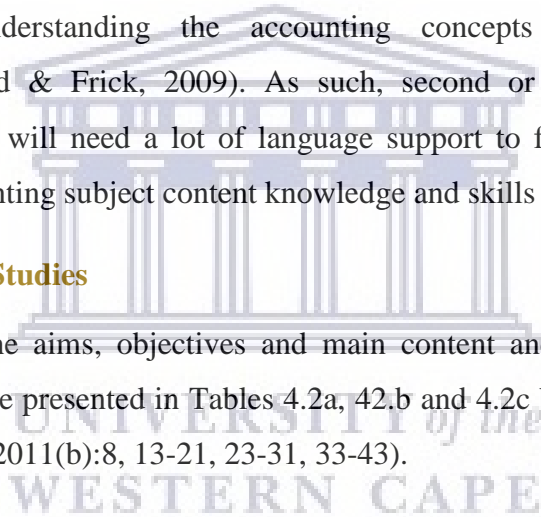


Table 4.2a The CAPS curriculum for Business Studies in Grade 10

Aims and objectives	Main content	Main outcomes
<p>The subject Business Studies deals with the knowledge, skills, attitudes and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors.</p> <p>The subject encompasses business principles, theory and practice that underpin the development of entrepreneurial initiatives, sustainable enterprises and economic growth.</p>	<p>Business environment</p> <p>Micro, market and macro environments Interrelationship between environments Business sectors Contemporary socio-economic issues</p> <p>Business venture</p> <p>Entrepreneurship qualities Forms of ownership Business opportunity Business location Contracts Presentation of business information Business plan</p> <p>Business role</p> <p>Social responsibility Creative thinking and problem solving Self-management Relationship and team performance</p>	<p>The components and features of the micro (internal), market and macro business environments</p> <p>The relationship between micro, market and macro environments</p> <p>Primary, secondary and tertiary sectors</p> <p>Contemporary socio-economic issues, e.g. inequality and poverty, inclusivity, unemployment that impact on a business</p> <p>For example, desire for responsibility, risk-taker, perseverance</p> <p>Definition, characteristics, advantages, disadvantages and differences (comparison) between the forms of ownership</p> <p>Develop a research instrument and the assessment of needs and desires</p> <p>Investigation of and debate on the factors that impact on business location decisions</p> <p>The relevance of contracts and their legal implications in different business contexts</p> <p>Accurate and concise verbal and non-verbal presentation of a variety of business-related information</p> <p>A business plan (including a financial analysis) that can be implemented</p> <p>Ways in which a business can contribute responsibly towards its immediate community</p> <p>Creative thinking and its contribution to successful and sustainable business practices</p> <p>The concepts of self-management and a discussion on how it is relevant in a business context</p> <p>Ways in which people need to work together to accomplish business objectives</p>

Table 4.2b The CAPS curriculum for Business Studies in Grade 11

Aims and objectives	Main content	Main outcomes
<p>The subject Business Studies deals with the knowledge, skills, attitudes and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors.</p> <p>The subject encompasses business principles, theory and practice that underpin the development of entrepreneurial initiatives, sustainable enterprises and economic growth.</p>	<p>Business environment</p> <p>Influences on and control factors influencing business environments</p> <p>Challenges in business environments</p> <p>Adapting to challenges in business environments</p> <p>Impact and challenges of contemporary socio-economic issues on business operations</p> <p>Business sectors</p> <p>Citizenship role and responsibilities</p> <p>Business venture</p> <p>Benefits of a company over other forms of ownership</p> <p>Avenues of acquiring a business</p> <p>Transforming a business plan into an action plan</p> <p>Starting a business venture based on an action plan</p> <p>Presentation of business information</p> <p>Assessment of entrepreneurial qualities in business</p> <p>Business role</p> <p>Creative thinking and problem solving</p> <p>Stress, crisis and change management</p> <p>Professionalism and ethics</p> <p>Team stages, dynamic theories and conflict management</p> <p>Business operation</p> <p>Marketing function</p> <p>Production function</p> <p>Introduction to human resources function</p>	<p>Examination of control factors and ways to be involved in the macro environment</p> <p>The challenges of the micro (internal), market and macro business environments</p> <p>How a business constantly needs to adapt to the challenges of the micro, market and macro business environments</p> <p>The impact of contemporary socio-economic issues on business operations, and their challenges, decisions for specific business situations and possible business solutions</p> <p>The links between various primary, secondary and tertiary enterprises</p> <p>The citizenship roles and responsibilities that business practitioners need to perform within a business environment.</p> <p>The benefits and challenges of establishing a company versus other forms of ownership, for example, franchising, outsourcing, leasing; discuss the advantages and disadvantages as well as their contractual implications, including Gantt charts and timeline</p> <p>Collaboratively or independently starting a business venture based on an action plan</p> <p>Accurate and concise verbal and non-verbal presentation of a variety of business-related information</p> <p>The degree to which a business embraces entrepreneurial qualities</p> <p>Application of creative thinking to address business problems and to improve business practice</p> <p>The concepts relating to stress, crisis and change management. The theories and principles of professionalism and ethics.</p> <p>Description of team dynamics theories; use them to analyse specific business-based case studies.</p> <p>Marketing function: marketing activities; product policy; pricing policy; distribution; marketing communication; foreign marketing</p> <p>The aspects of the production function; systems; production planning; safety management; quality control; production costs</p> <p>Human resources activities (e.g. recruitment and selection, contracts, induction, salaries and other benefits)</p>

Table 4.2c The CAPS curriculum for Business Studies in Grade 12

Aims and objectives	Main content	Main outcomes
<p>The subject Business Studies deals with the knowledge, skills, attitudes, and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors.</p> <p>The subject encompasses business principles, theory and practice that underpin the development of entrepreneurial initiatives, sustainable enterprises and economic growth.</p>	<p>Business environment</p> <p>Impact of recent legislation on business – response to demands for redress and equity Devise strategies to enable a business to respond to the challenges of the macro business environment Business sectors and their environments</p> <p>Business venture</p> <p>Investment: Securities Investment: Insurance Forms of ownership and their impact on the business operation Presentation of information and data response</p> <p>Business role</p> <p>Professionalism and ethics Creative thinking Corporate social responsibility Human rights, inclusivity and environmental issues Team performance assessment and Conflict management Management and leadership</p> <p>Business operation</p> <p>Human resources function Quality of performance within business functions</p>	<p>The impact of recent legislation, developed in response to demands for redress and equity, on small and large business operations</p> <p>Devising/formulation of strategies a business could use in response to the challenges of the macro business environment; critically evaluate such strategies and make recommendations as required</p> <p>Selecting a business from each sector and describing the three environments related to these sectors and the extent to which a business can control these environments</p> <p>A range of available business investment opportunities Compulsory and non-compulsory insurance Determining the extent to which a particular form of ownership can contribute to the success or failure of a business</p> <p>Accurate and concise verbal and non-verbal presentation of a variety of business-related information (including graphs), respond professionally to questions and feedback, and amend the information as necessary.</p> <p>How professional, responsible, ethical and effective business practice should be conducted in changing and challenging business environments Application of creative thinking to respond to challenges in dynamic and complex business contexts</p> <p>The concept of social responsibility and its implications for both business and communities</p> <p>The extent to which a business venture addresses issues such as human rights, inclusivity and environmental issues</p> <p>Collaboration with others to contribute towards the achievement of specific objectives Differentiation between management and leadership styles and approaches</p> <p>The relevant legislation and the following aspects of the human resources function: recruitment and selection; employee contracts</p> <p>How the quality of performance within the business functions can influence the success or failure of a business</p>

The tables show that the four main topics in the Business Studies curriculum, namely business environment, venture, role and operation are covered from Grade 10 to 12. In Grade 10, the emphasis is on components, concepts, relationships, definitions, characteristics, advantages, disadvantages, differences, theory and relevance. Grade 11 builds on the content of Grade 10 and the emphasis is on examination, impact, links, benefits and challenges, application and transformation. Grade 12 builds on the content of Grade 11 and the emphasis is on impact, discussions, reflection, application, devising/formulation, evaluation, implications, how issues are addressed, assessing, selecting, describing, differentiation, relation, distinguish, determining and presentation. For example, in Grade 10 the various components and features of the micro, market and macro business environments are discussed. In Grade 11, the focus is on the influences of business environments, challenges and how business constantly needs to adapt to the challenges of business environments. In Grade 12, the impact of recent legislation on small and large business operations with the development of strategies, in response to challenges in business environments, are covered. Thus, Grade 10 is the basics or theory, and in Grade 11 and ultimately in Grade 12 the learner must be able to differentiate, evaluate and apply the content knowledge.

The skills in recommended classroom activities for Grade 12 are critical analysis and problem-solving; debating and communication; practical; mathematical; research; and language and logical thinking skills (Umalusi, 2014(a):102 -104). For a detailed discussion of the aims, objectives, main content, main outcomes, content topics examined at exit (Grade 12) and skills in recommended classroom activities for Grade 12, refer to Appendices A, B, E and F.

4.2.2.1 Challenges encountered in the implementation of Business Studies

The discipline Entrepreneurship in the EMS learning area in the SP is the place where the content for the Business Studies in Grades 10 – 12 should be taught (Umalusi, 2019). In a study conducted by Muhle (2014), a finding showed that Business Studies (Grades 10 – 12) teachers do not indicate “the aims and objectives in their Business Studies teaching and lesson plans” (Muhle, 2014:95). The reasons for implementing the CAPS are confused with the purpose of

teaching Business Studies. It was also evident that Business Studies teachers still apply the National Curriculum Statement (NCS) approach when teaching the CAPS because they are not aware that the NCS was a “competence curriculum whereas the CAPS is a performance curriculum” (Muhle, 2014:126). Although the CAPS curricula do cover the skills necessary for the learner attainment, “the affective domain is not addressed in the content” (Muhle, 2014:129). It is recommended that Grade 10 – 12 “teacher support and frequent ‘in-service training’ need to be intensified to close the gaps identified in the implementation of the CAPS, including the provision of resources to all schools to improve learner performance” (Muhle, 2014:58). “Teachers should research the CAPS to enable them to link their experiences with the content that may enable them to understand the curriculum and therefore come up with relevant ‘teaching approaches’” (Muhle 2014:113).

The Department of Basic Education (2018(c):44) reported that there “needs to be a greater emphasis on the learning of appropriate terminology related to the various topics in the Business Studies subject in the FET phase”. “The department recommended that teachers should illustrate the meaning of new terms by using them in sentences and short scenarios; identify new terms in every lesson, write them on the board and elaborate on the meaning and context of each; encourage learners to be attentive during the lesson, to spot new terms and to find the meaning in a dictionary or textbook; and ask the learners to compile a glossary at the back of their notebooks” (Department of Basic Education, 2018(c):44). They also recommended that “teachers should include Business Studies terminology in all informal assessment tasks daily” (Department of Basic Education, 2018(c):45).

The 2013 Umalusi report noted that the content in Business Studies is covered adequately in the curriculum, however, more emphasis could be placed on the practical application of content (Umalusi, 2013(a)). The report explains that “practical application of knowledge was not adequately covered and therefore did not explicitly equip the learner passing Grade 12 Business Studies with the practical skills to interpret new and unfamiliar information and making certain judgments from it” (Umalusi, 2013(a)13). Skills to be practised are “reading

comprehension, writing, presentation, and evaluation. This will allow a content-driven curriculum to make room for creativity” (Umalusi, 2013(a):13). Recommendations of Umalusi (2013(a):16) are to “have a more interactive learning process with the use of technology and blended learning”. “Blended learning is a combination of face-to-face classroom methods combined with computer-mediated activities. Whilst acknowledging the financial implications and infrastructure need for blended learning in the classroom, especially in schools located in rural areas, it will allow learners entering the job market or entering HE after matric feeling comfortable with computer-aided activities” (Umalusi, 2013(a):16).

A study by Rantsu (2018) revealed that the moderation of Business Studies assessment tasks has serious concerns that need to be addressed in many schools in the FET band. The author recommended that the Department of Basic Education should manage the moderation of assessment tasks properly and that subject advisers, school principals, heads of departments and teachers should be adequately trained to conduct moderation of assessment tasks effectively because of constant curriculum changes (Rantsu, 2018).

4.2.3 Economics

A summary of the aims, objectives and main content and main outcomes for Grades 10 – 12 are presented in Tables 4.3a, 4.3b and 4.3c below (Department of Basic Education, 2011(c):8, 14-23, 25-31, 33-38).

Table 4.3a The CAPS curriculum for Economics in Grade 10

Aims and objectives	Main content	Main outcomes
Economics is the study of how individuals, businesses, governments and other organisations within our society choose to use scarce resources to satisfy their numerous needs and wants in a manner that is efficient, equitable and sustainable.	<p>Macroeconomics</p> <p>Microeconomics</p> <p>Economic pursuits</p> <p>Contemporary economic issues</p>	<p>Economics: basic concepts; basic economic problems</p> <p>Circular flow and quantitative elements (production and income); business cycles</p> <p>Dynamics of markets; production possibility curve; public sector intervention</p> <p>Growth, development, and globalisation; South African economic growth and development (historical view)</p> <p>The history of money and banking; population and labour force</p> <p>Economic issues of the day: unemployment; labour relations; economic redress</p>

Table 4.3b The CAPS curriculum for Economics in Grade 11

Aims and objectives	Main content	Main outcomes
Economics is the study of how individuals, businesses, governments and other organisations within our society choose to use scarce resources to satisfy their numerous needs and wants in a manner that is efficient, equitable and sustainable.	<p>Macroeconomics</p> <p>Microeconomics</p> <p>Economic pursuits</p> <p>Contemporary economic issues</p>	<p>Economics: basic concept and population and labour force; factors of production and its remuneration; circular flow and quantitative elements: economic goods and services</p> <p>Economic systems: mixed economy; basic economic problem, business cycles and public sector: South Africa's economic structures; economic Structure</p> <p>Dynamics of markets: price elasticity; relationship between markets; effects of cost and revenue on price and quantities</p> <p>Economic growth and development: economic growth; economic development; money and banking</p> <p>Economic growth and development: South Africa's economic importance in Africa</p> <p>Economic issues of the day: poverty; globalisation; economic redress: environmental deterioration; economic issues of the day, quantitative elements and other essentials.</p>

Table 4.3c The CAPS curriculum for Economics in Grade 12

Aims and objectives	Main content	Main outcomes
Economics is the study of how individuals, businesses, governments and other organisations within our society choose to use scarce resources to satisfy their numerous needs and wants in a manner that is efficient, equitable and sustainable.	<p>Macroeconomics</p> <p>Microeconomics</p> <p>Economic pursuits</p> <p>Contemporary economic issues</p>	<p>Circular flow; business cycles; economic systems: protection and free trade (globalisation); basic concepts and quantitative elements: economic and social performance indicators</p> <p>Public sector; protectionism and free trade; dynamics of markets: perfect markets; imperfect markets; market failures; basic economic problem: environmental sustainability</p> <p>Economic growth and development: foreign exchange market (globalisation); industrial development policies</p> <p>Economic issues of the day: inflation; tourism and economic redress; economic issues, quantitative elements, and other essentials; environmental sustainability</p>

The tables indicate four main topics in Economics, namely macroeconomics, microeconomics, economic pursuits and contemporary economic issues. In Grade 10, the methods and setting within the field and its relationship with other sciences, and the basic economic problem are discussed. The theory is discussed about circular flow; business cycles; dynamics of markets; the public sector; growth, development and globalisation; the history of money and population; labour force; unemployment; labour relations; economic redress and economic issues of the day. The Grade 11 content builds on the Grade 10 content, where the learners should analyse, explain, investigate, illustrate, compare and debate the content learnt. The Grade 12 content builds on the content of Grades 10 and 11; the learners should be able to do presentations, analysis, explanations, evaluations, comparisons, investigations, debating and identification of issues discussed and learnt.

The tables also show that the content in Grade 10 to Grade 12 is similar, but that their understanding and application thereof change as the learners continue to Grade 12. For example, in Grade 10, the dynamics of a market as a phenomenon (demand and supply) are discussed with graphs to illustrate the establishment of

prices and quantities. In Grade 11, the explanation of price elasticity, analysis of the relationships between markets and the effects of cost and revenue on prices and the levels of production are presented for illustration by using graphs. In Grade 12, the dynamics of perfect, imperfect markets are examined with the aid of cost and revenue curves and the reasons for and consequences of market failures are covered. For a detailed discussion of the aims, objectives, main content, main outcomes, content topics examined at exit (Grade 12) and skills in recommended classroom activities for Grade 12, refer to Appendices A, B, G and H.

4.2.3.1 Challenges encountered in the implementation of Economics

After studying EMS for three years in the SP, learners would have acquired a distinct Economics knowledge base and skill set that would prepare them to study the subject Economics in the FET phase (Umalusi, 2019). According to the 2013 report of Umalusi, for a learner to proceed with ease into Grade 10 Economics, the following key skills/values need to be in place: respect for the environment; calculation and derivation skills, illustrative skills; explanatory skills; historical research skills; graphical skills; problem-solving skills; decision-making skills and evaluation of alternatives (Umalusi, 2013(b):4). If such minimum skills are not in place it is likely to put pressure on Grade 10 teachers of Economics who may have to infuse these competencies into their Grade 10 teaching, given the challenges of breadth and depth of the curriculum coverage (Umalusi, 2013(b):4).

The Economics evaluation team (Umalusi, 2014(a):133) commented that, although all necessary content areas are covered in the FET phase, some areas need more explicit emphasis. These areas are: ‘broad social goals of Economics’, the issue of ‘the predictable response of people to incentives’, the assumption that ‘voluntary exchange occurs only when participating parties expect to gain’, and the topic of ‘interest rates’, where the current exit-level content is not regarded as adequate for a Grade 12 Economics learner. Also, the team mentioned that CAPS places inadequate importance on the evaluation of government policies (Umalusi, 2014(a):133). The team commented that “although CAPS offers an extensive variety of generic and also subject-specific skills across the FET phase, it will strengthen the curriculum and be helpful for teachers if the exact skills related to

the specific content were indicated” (Umalusi, 2014:(a)134). The team concluded “with the cognitive demand in the CAPS, and indication that to improve the standard, a higher percentage should be assigned to content that teach and assess the higher-cognitive demands (between 20% and 25%) and not the 64% that inclined at the two lowest levels of demand” (Umalusi, 2014(a):134).

It is evident from the above report of Umalusi that in all three business education subjects, the foundational content knowledge and skills must be grounded in EMS in the SP so that the learners would be able to do the more advanced application, interpretation, synthesis and evaluation in the FET phase (Umalusi, 2013(a), 2013(b), 2013(c), 2015, 2019). It is also important to note that gaining knowledge and skills in the foundation phase (FP) and intermediate phase (IP) in subjects such as Language and Mathematics, supports and strengthens the learners’ transition to the study of EMS in the SP. The Mathematics subject is discussed next.

4.2.4 The CAPS curriculum for Mathematics

A summary of the aims, objectives and main content and main outcomes for Grades 10 – 12 are presented in Tables 4.4a, 4.4b and 4.4c below (Department of Basic Education, 2011(f)8, 12 -15).

Table 4.4a The CAPS curriculum for Mathematics in Grade 10

Aims and objectives	Main content	Main outcomes
<p>Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships.</p> <p>Mathematical problem solving enables us to understand the world (physical, social and economic) around us, and, most of all, to teach us to think creatively.</p>	<p>Functions</p> <p>Number patterns, sequences, series</p> <p>Finance, growth and decay</p> <p>Algebra</p> <p>Probability</p> <p>Euclidean geometry and measurement</p>	<p>Work with relationships between variables in terms of numerical, graphical, verbal and symbolic representations of functions</p> <p>Investigate number patterns leading to those where there is a constant difference between consecutive terms, and the general term is therefore linear</p> <p>Use simple and compound growth formulae</p> <p>Simplify expressions using the laws of exponents for rational exponents</p> <p>Compare the relative frequency of an experimental outcome with the theoretical probability of the outcome</p>

	Analytical geometry Trigonometry Statistics	Revise basic results established in earlier grades Represent geometric figures in a Cartesian coordinate system and derive and apply Definitions of the trigonometric ratios $\sin\theta$, $\cos\theta$ and $\tan\theta$ in a right-angled triangle Collect, organise and interpret univariate numerical data
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Table 4.4b *The CAPS curriculum for Mathematics in Grade 11*

Aims and objectives	Main content	Main outcomes
<p>Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships.</p> <p>Mathematical problem solving enables us to understand the world (physical, social and economic) around us, and, most of all, to teach us to think creatively.</p>	Functions Number patterns, sequences, series Finance, growth and decay Algebra Probability Euclidean geometry and measurement Analytical geometry Trigonometry Statistics	<p>Extend Grade 10 work on the relationships between variables in terms of numerical, graphical, verbal and symbolic representations of functions</p> <p>Investigate number patterns leading to those where there is a constant difference between consecutive terms, and the general term is therefore quadratic</p> <p>Use simple and compound decay formulae</p> <p>Apply the laws of exponents to expressions involving rational exponents</p> <p>Dependent and independent events</p> <p>Investigate and prove theorems of the geometry of circles assuming results from earlier grades, together with one other result concerning tangents and radii of circles</p> <p>Use a Cartesian coordinate system to derive and apply Derive and use the identities Represent measures of central tendency and dispersion in univariate numerical data</p>

Table 4.4c The CAPS curriculum for Mathematics in Grade 12

Aims and objectives	Main content	Main outcomes
<p>Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships.</p> <p>Mathematical problem solving enables us to understand the world (physical, social and economic) around us, and, most of all, to teach us to think creatively.</p>	<p>Functions</p> <p>Number patterns, sequences, series</p> <p>Finance, growth and decay</p> <p>Algebra</p> <p>Differential calculus</p> <p>Probability</p> <p>Euclidean geometry and measurement</p> <p>Analytical geometry</p> <p>Trigonometry</p> <p>Statistics</p>	<p>Introduce a more formal definition of a function and extend Grade 11 work on the relationships between variables in terms of numerical, graphical, verbal and symbolic representations of functions</p> <p>Identify and solve problems involving number patterns that lead to arithmetic and geometric sequences and series, including infinite geometric series</p> <p>Calculate the value of n in a formulae Demonstrate an understanding of the definition of a logarithm and any laws needed to solve real-life problems</p> <p>An intuitive understanding of the concept of a limit Generalisation of the fundamental counting principle</p> <p>Revise earlier (Grade 9) work on the necessary and sufficient conditions for polygons to be similar Use a two-dimensional Cartesian coordinate system to derive and apply Proof and use of the compound angle and double angle identities Represent bivariate numerical data as a scatter plot and suggest intuitively and by simple investigation whether a linear, quadratic or exponential function would best fit the data</p>

The tables indicate that nine of the ten main content areas are covered from Grade 10 to Grade 12. Only differential calculus is covered additionally in Grade 12. The subject in the FET phase forges the link between the senior phase and the higher/tertiary education band (Department of Basic Education, 2011(f)). For example, the topic functions in Grade 10 focus on the concept of a function, where a certain quantity (output value) uniquely depends on another quantity (input value). It also includes work with relationships between variables using tables, graphs, words and formulae and convert flexibly between these representations. In Grade 11, the learner has to revise the effect of the parameters a , and q and investigate the effect of p on the graphs of the functions. In Grade 12, the definition of a function, the general concept of the inverse of a function and

how the domain of the function may need to be restricted to ensure that the inverse is a function, are covered. Also, in Grade 12 the learner must determine and sketch graphs of the inverses of the functions.

It is important to note that the previous phases, namely the foundation phase, the intermediate phase and the senior phase affect the FET phase. There is continuous revision about content that was covered in previous grades. If the learners' basis is not firmly laid and the learners do not know the basics and the theory, it will be very difficult for them to apply and do difficult formulae and functions in the higher grades. Therefore, if the learner does not possess solid background knowledge and skills in Grade 10, the learner will be challenged to understand and apply the content in Grade 11, and ultimately in Grade 12.

For the detailed discussion of the aims, objectives, main content, main outcomes, content topics examined at exit (Grade 12) and skills in recommended classroom activities for Grade 12, refer to Appendices A, B and I. For a detailed discussion on the assessments and examinations in the BCM subjects and Mathematics, refer to Appendix J and Appendix K (Department of Basic Education, 2011(a), (b), (c) and (d)).

4.2.4.1 Challenges encountered in the implementation of Mathematics

“Given the low pass rate in Mathematics that exists in the NSC examination and the increase in both depth and breadth of the CAPS, there is a concern that the CAPS Mathematics might prove too difficult for many learners and thus they will not take Mathematics” (Umalusi, 2014(a):47). As a result, these learners will not be able to study further in technical and scientific fields and will be deprived of job opportunities. Some of the tensions in the CAPS arise from trying to “meet the needs of learners who intend to study Mathematics further at university level as well as learners who need to show competency in school Mathematics” (Umalusi, 2014(b):47).

According to Moalosi (2015), the crisis in Mathematics is due to underqualified and untrained teachers in the education system. The data propose that most of the

challenges that were present before the introduction of CAPS are still current today in Mathematics classrooms (Chirinda & Barmby, 2017; Moalosi, 2015; Olivier, 2018). Some of the main issues that added to the Mathematics crisis are the lack of content knowledge of in-service teachers, learners' attitude and the mathematical skills shortfall of learners as they progress through the school phases (Olivier, 2018). The sad truth is that neither universities nor any other formal education service providers could achieve a mathematics in-service training programme that has showed to efficiently increase teacher content knowledge (Olivier, 2018).

According to CAPS, problem solving and cognitive development should be central to Mathematics teaching, but this is not what researchers had discovered in South African mathematical classrooms. The traditional methods of teaching Mathematics are still dominant (Adler & Ronda, 2014; Chirinda & Barmby, 2017). The first step in mathematical problem solving is to understand the problem (Polya, 1957). Classroom observations showed that English, which is the language of instruction, attested to be a hindrance in the understanding of the learners (Chirinda & Barmby, 2017). The language of instruction and the problem-solving process cannot be split and in order to interpret the problem, English language proficiency is needed (Sibanda & Graven, 2018).

According to the Department of Basic Education (2018(c):153), the overview of the learners' performance in Mathematics Paper 1 was that "their algebraic skills were poor". "It was found that most of the learners lacked fundamental mathematical competencies, which should have been acquired in the lower grades" (Department of Basic Education, 2018(c):153). The argument was that even though "calculations and performing well-known routine procedures formed the basis of answering questions in a Mathematics paper, a deeper understanding of definitions and concepts cannot be overlooked" (Department of Basic Education, 2018(c):153).

The department further pointed out that "Financial Mathematics requires two crucial skills which are often neglected by learners" (Department of Basic Education, 2018(c):160). "These are reading skills and calculator skills"

(Department of Basic Education, 2018(c):160). “The learners must read the Financial Mathematics question very carefully and make sure that they understand what is asked” (Department of Basic Education, 2018(c):160). “Calculator work is essential when doing Financial Mathematics and this should be practised through the use of correct English in the teaching of Financial Mathematics” (Department of Basic Education, 2018(c):160).

The department’s overview of the learners’ performance in Paper 2 was that the learners performed well “in data handling and analytical geometry, but they struggled with trigonometry and Euclidean geometry” (Department of Basic Education, 2018(c):163). The learners’ interpretation of information presented the utmost challenge, with learners overseeing particular fundamental rules and laws. While the calculator is a useful and essential instrument, it does not offer all the answers to all their problems and the learners need to read the questions and not need the calculator to manipulate the algebraic operations (Department of Basic Education, 2018(c):164).

In summary, it was evident from the discussions above that the content in both the three business-related subjects and Mathematics builds on each other, with basic content and topics in Grade 10, and a gradual progression to a more difficult and advanced understanding and application in Grades 11 and 12. Thus, if learners arrive in Grade 10 with an existing backlog it will be very difficult to catch up, which could mean that they will never be able to fully understand and acquire the subject content knowledge and skills in Grades 11 and 12.

It was also clear that, if the learners were not adequately prepared for Grade 10 in the lower phases of schooling, the learners would not be able to make the transition from the senior phase to the higher education and training phase. More importantly, they will not be able to pass the business-related subjects with an adequate rating of 4 and above, and would not pass their Grade 12 with a bachelor’s pass that would provide them with access to university study.

Finally, proficiency in the language of teaching and learning was identified as an important factor for understanding and meaning-making in all subjects. If the

learners do not understand the concepts and the terminology in the different subjects as they progress through their schooling careers, the application and interpretation thereof would not be possible. Similar to the discussion in Chapter 3, these are all the challenges that learners and public schools are facing in education in South Africa. The requirements for admission to a B Com degree at two universities are described in the next section.

4.3 REQUIREMENTS FOR ADMISSION TO A B COM DEGREE AT SOUTH AFRICAN UNIVERSITIES

Since the study is about Grade 12 learners' university readiness for a business degree at university, it was deemed important to include the admission requirements for such a degree in this chapter. The admission requirements of two universities in the Western Cape, namely Stellenbosch University and the University of the Western Cape were reviewed. To meet the minimum admission requirement to study towards a degree at a university in South Africa, learners must obtain the NSC with a bachelor's pass in Grade 12. "A bachelor's pass means that learners achieve at least a rating of 4, which is an adequate achievement pass of a final mark between 50 – 59% in four designated subjects chosen from the recognised 20 credit-bearing subjects" (Department of Basic Education, 2018(d):7). The subjects are "Accounting, Information Technology, Agricultural Sciences, Languages, Business Studies, Life Sciences, Consumer Studies, Mathematics, Dramatic Arts, Mathematical Literacy, Economics, Music, Engineering, Graphics and Design, Physical Sciences, Geography, Religion Studies, History, and Visual Arts" (Department of Basic Education, 2018(d):7).

At Stellenbosch University, the Faculty of Economic and Management Sciences, with 8 000 students that include 1 500 new first-years, is the largest at the university (Stellenbosch University, 2018(b)). "The minimum admission requirements for a B Com, B Com (Economic Sciences), B Com (Management Sciences) and B Com (Industrial Psychology) are a minimum NSC average of 65%, Mathematics minimum of 60%, and the minimum language requirement. The NSC average is based on the six best subjects, excluding Life Orientation". The minimum language requirements are English Home Language 50% or

Afrikaans Home Language 50%, or English First Additional Language 60% or Afrikaans First Additional Language 60% (Stellenbosch University, 2018(c):11).

The Faculty of Economic and Management Sciences at the University of the Western Cape is well-connected with commerce, industry and government. Its strong teaching and applied research focus are building critical capacity in both the private and public sectors (University of the Western Cape, 2018(a)). Similar to Stellenbosch University, the faculty is the largest faculty with more than 5 000 students (University of the Western Cape, 2018(a)). The admission requirements for the B Com degree are as follows: a minimum of 50 – 59% in English (Home or First Additional Language), a minimum of 40 – 49% in another language (Home or First Additional Language) and a minimum average of 50 – 59% in Mathematics (University of the Western Cape, 2018(b)).

The implications for learners who wanted to study towards a B Com degree is that Mathematics (and not Mathematical Literacy) is required. Certain language admission requirements must be met. Therefore, learners who want to study towards a business degree at university need to be informed about the requirements when they select their subjects at the beginning of Grade 10. They also need to be aware that they will have to work hard to meet the admission requirements. The next section discusses the factors that influence epistemological access.

4.4 FACTORS INFLUENCING EPISTEMOLOGICAL ACCESS

In South Africa, concerns about students' success in undergraduate degree programmes are not new, as there have been attempts since the 1980s to improve this situation (Case, Marshall, McKenna & Mogashana, 2018; Leibowitz & Bozalek, 2014; Morrow, 2009). A most notable impact has been the extended curriculum programmes (ECP) that have been established in most universities and are funded by the Department of Higher Education (Case et al., 2018). The authors state that students in their study who participated in the ECP were positive about the academic support and assistance they received in transitioning to university studies. Leibowitz and Bozalek (2014) argue that the introduction of the ECP provides evidence for the Department of Higher Education's

commitment to widening post-school access to more diverse groups of South African students.

However, Morrow (1994, 2009) has a different perception of the widening of access in higher education. According to the author, the Department of Higher Education succeeded in widening formal access for the youth, but not epistemological access (Morrow, 1994, 2009). Morrow (2009:78) explains that

Epistemological access cannot be supplied or ‘delivered’ or ‘done’ to the learner; nor can it be ‘automatically’ transmitted to those who pay their fees, or even to those who also collect the hand-outs and attend classes regularly. The reason for this is that epistemological access is learning how to become a successful participant in an academic practice. In the same way, in which no one else can do my running for me, no one else can do my learning for me.

Defined narrowly, epistemology is the study of knowledge and justified belief (Stanford Encyclopaedia of Philosophy, 2005). Understood more broadly, epistemology is about issues having to do with the creation and dissemination of knowledge in particular areas of inquiry (Stanford Encyclopaedia of Philosophy, 2005). If learners and students are not able to make sense of the context and meaning of the work they are engaging with, then they will not be engaging in quality learning, and the educational practice would not be effective (Wilson-Strydom, 2012). According to Scott (2017), epistemological access refers to a student’s ability to access new knowledge based on prior knowledge, or preparedness (the key to epistemic access), that the student needs to engage with the concepts, practices and ways of thinking of the discipline concerned. Scott (2017) argues that a mismatch between assumptions and students’ actual academic preparedness will create a challenge for effective teaching and learning to occur, which prevents epistemic access. As such, adequate academic preparedness is critical in constructing new advanced knowledge at university level, and hence it is essential for academic success in degree programmes at university level.

Moreover, Lewin and Mawoyo (2014:56) assert that gaining epistemological access to university requires facilitation and support. They assert that epistemological access should be understood as the extent to which students can and are enabled to access the academic workings and expectations of university study, also described as ‘scaffolding’ and the ‘discourses of learning’. Quinn (2012) argues that providing formal and epistemological access should not just be for the affluent students but should also be for students who were previously disadvantaged and excluded from higher education studies. Thus, the author advises that lecturers should change their teaching methods, the curricula and their assessment methods so that all students will be empowered with epistemological access.

As discussed in Sections 3.2.1.7 and 4.2, the under-preparedness of Grade 12 learners due to difficulties such as overcrowded classrooms, a language barrier, a lack of support from early childhood development (ECD) through to the further education and training (FET) phase prevent their academic achievement and university readiness. The Organisation for Economic Cooperation and Development (2008) suggests that learners should be prepared to be change agents for the future. They should be equipped with the competencies that will enable them to positively affect their surroundings and the future; understand people’s purposes, behaviours and emotions, and be conscious of their goals and actions and the consequences thereof (Organisation for Economic Cooperation and Development, 2008). “The concept of competency implies more than just the acquisition of knowledge and skills; it involves the mobilisation of knowledge, skills, attitudes and values to meet complex demands” (OECD, 2018:5).

Fadel (2015), Kereluik, Mishra, Fahnoe and Terry (2013) and the World Economic Forum (2015) developed 21st-century learning and teaching frameworks, and literacies and competencies. They divide these frameworks into knowledge, skills, character and meta-learning (how we reflect and adapt). They also include meta-learning, which is how we think about our thinking and our learning (Fadel, 2015; Kereluik et al., 2013). They suggest that, without metacognitive reflection, people would not move to a new level of understanding

(Fadel, 2015; Kereluik et al., 2013). Figures 4.1, 4.2 and 4.3 illustrate the learning and teaching framework and the 21st-century learning framework, and the literacies, competencies and character qualities that learners should acquire.

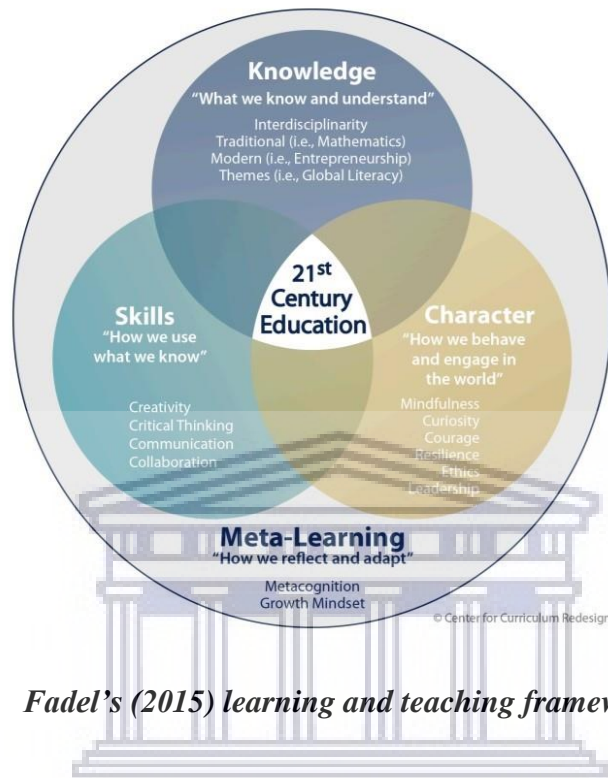


Figure 4.1 Fadel's (2015) learning and teaching framework

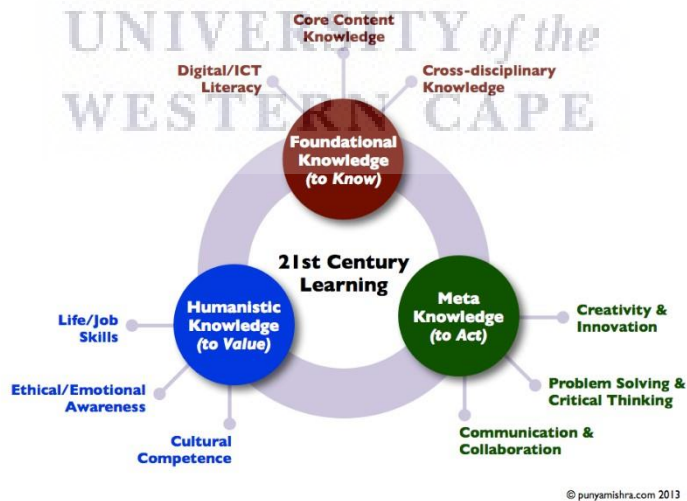


Figure 4.2 The 21st-century learning framework (Kereluik et al., 2013)

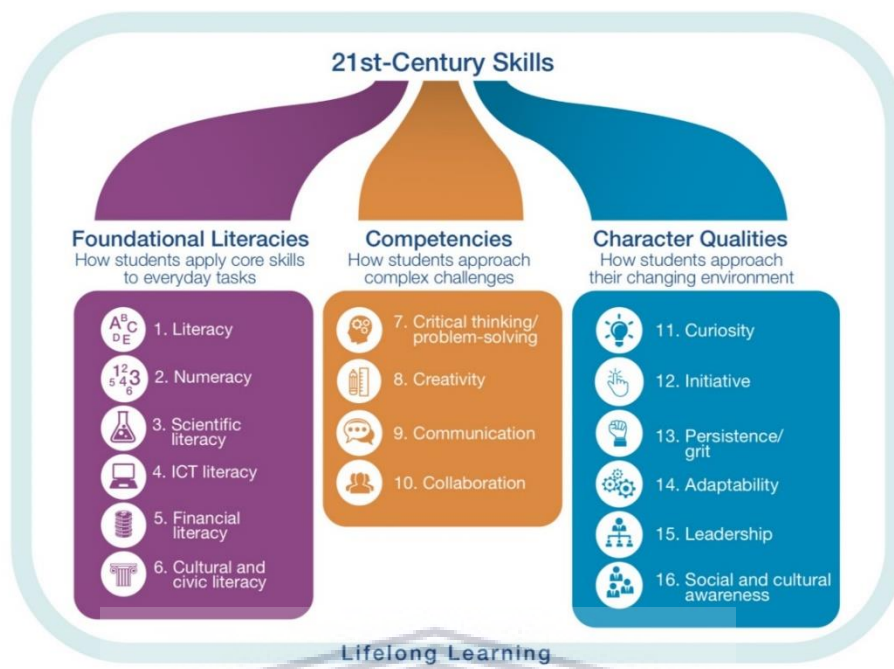


Figure 4.3 *The literacies, competencies and character qualities that students need in the 21st century (Source: World Economic Forum, 2015)*

Kereluik et al. (2013:130) explain that “knowledge refers to traditional/foundational knowledge, which can be divided into core content knowledge, digital literacy, and cross-disciplinary knowledge”. “Core content knowledge and high academic achievement in traditional domains appeared to be among the most frequently cited essential skills for success in the 21st century” (Kereluik et al., 2013:130). “Excellence in traditional academic domains such as English and Mathematics was considered as the foundations upon which other 21st-century skills are to be developed” (Kereluik et al., 2013:130). Digital and information literacy can be defined as “the ability to effectively and thoughtfully evaluate, navigate and construct information using a range of digital technologies and thus to function fluently in a digital world” (Kereluik et al., 2013:130). “Cross-disciplinary knowledge is the knowledge that integrates and combines information from across fields or spheres, such as the application of knowledge to a new context in the pursuit of exact end goals, including foundational literacies (Kereluik et al., 2013:130). Character refers to how we perform and participate in the world. These characteristics included: mindfulness, curiosity, courage,

resilience, life/job skills; persistence; ethical, emotional, social and cultural awareness (Fadel, 2015; Kereluik et al., 2013; World Economic Forum, 2015).

The challenges identified in Chapter 3 and the previous sections above mean that learners in public high schools in South Africa are at an even bigger disadvantage because they not only lack epistemological access, but they also lack the 21st-century skills and attributes listed in Figures 4.1, 4.2 and 4.3 above. It is for these reasons that higher education institutions are moving to an increasingly student-oriented and professionalised approach to support first-year students' transition from high school to university study (Wilson, 2009).

However, laying a solid subject content knowledge and skills foundation for learners should start in primary school, and should continue and be strengthened in high school. A concerted effort focusing on 21st-century teaching and learning frameworks, and the development of 21st-century skills and competencies should be instituted at all schools in South Africa. If this does not become the core focus and business of primary and secondary education in South Africa, epistemological access and successful learning will remain a privilege for a selected few only. The study's conceptual framework is discussed next.

4.5 CONCEPTUAL FRAMEWORK

The discussions presented in the preceding chapters and the sections above clearly indicate that what happened to learners before they enter university study is vitally important. Accordingly, since the central issue in this study is about how well learners are being prepared academically at high school level to be ready for university study, three readiness models are discussed that assisted the researcher to construct a South African-specific readiness model, which is used as the study's conceptual framework. A conceptual framework, similar to a theoretical framework, guides all the aspects of a research process, and specifically the presentation and discussion of the findings, and the conclusions that are drawn (Babbie & Mouton, 2001; Creswell, 2013; Creswell & Creswell, 2018). Similarly, Adom, Hussein and Agyem (2018), Fulton and Krainovich-Miller (2010) and Sinclair (2007) state that a theoretical and/or conceptual framework guides

researcher so that they would not deviate from the margins of accepted theories or, in this case, readiness models, to make their final academic contribution.

College readiness, as it is communicated in the USA, is broadly defined as the point to which high schools are successful in preparing their learners to learn beyond high school (McCormick & Johnson, 2013). Conley (2007:5) is even more specific in his definition of readiness as he defines readiness for post-school studies as “the level of preparation a student needs to enrol and succeed, without remediation in a credit-bearing programme at a higher education institution”. Both definitions presuppose that the education to which the learners have been exposed should equip the learners with the necessary subject knowledge and skills that would lay a solid foundation for higher education studies. However, as discussed in Chapters 2 and 3 and the preceding sections in this chapter, this was not the case due to contextual and systemic challenges in the South African public schooling system. These challenges included the learners’ socio-economic statuses, their skills and abilities or lack thereof, and their self-concept and use of agency (Byrd & MacDonald, 2005; McCormick & Johnson, 2013; Organisation for Economic Cooperation and Development, 2008). The three readiness theories that were reviewed are discussed below.

4.5.1 Three readiness models reviewed

The first readiness model that was reviewed was that of Byrd and MacDonald (2005). Byrd and MacDonald (2005) explored the college readiness of first-generation students (older than 25) to attend a university via a two-year community college in America. They examined the preparedness of students entering the college through the identification of three categories, namely skills and abilities, background factors, and non-traditional student self-concept. The first category, skills and abilities, include academic skills (reading, writing, mathematics, technology, communication and study skills), time management, goal focus and self-advocacy skills. The second category, background factors, identifies factors that influence a decision to enrol or prepare for university. Included in these factors are family factors, career influences, financial concerns and college preparation. The third category, non-traditional student self-concept,

identifies participants' sense of identity as a university student and the understanding of the culture of a university. The main finding of this study was that university readiness is more complex than often acknowledged and that all these factors, abilities and skills are necessary to meet the demands of university study (Byrd & MacDonald, 2005).

The second readiness model was Lemmens' (2010) readiness and retention model. Lemmens (2010) focused on the readiness characteristics that South African students present upon entering the university and the contextual or environmental dimensions in which the readiness characteristics are located. The author based the theoretical underpinnings for readiness for university education on various theories and models as well as psychological perspectives related to academic success. The readiness and retention model was constructed on the work of Conley (2007). The author identified four dimensions of readiness characteristics: a contextual dimension (parental, socio-cultural and financial), a cognitive sub-dimension (skills and abilities, and academic preparedness), a non-cognitive sub-dimension (educational values, self-efficacy, target goal, beliefs and behaviours, and coping strategies) and lastly, a biological dimension (gender and race). The contextual dimension functions as the 'cradle' for the development of psycho-social and cognitive skills that are expressed in behaviour, thoughts and emotions (Bandura, 1986). The cognitive dimension, especially those related to academic achievement at high school, forms the base for the evaluation of cognitive ability (Lemmens, 2010). The non-cognitive dimension represents the expectations and values of students and their self-efficacy, judgements and goal orientations (Lemmens, 2010).

Lemmens' (2010) overall readiness characteristics were high school achievement, race, language, credits registered for, goal orientation, learning-efficacy, gender, distance from school, reading behaviour, parental education, study choice, the distance of parental home; and financial pressure of the student to pay for studies and living costs. The main findings of his study revealed that the readiness characteristics showed a direct relationship with academic success and intention to withdraw (Lemmens, 2010).

The third and last readiness model is that of Conley (2007, 2014). Conley, a professor at the College of Education at the University of Oregon (United States), organises the key areas necessary for HE readiness into four key components in what he refers to as a readiness theory model, namely cognitive strategies, acquiring key content (content knowledge), academic behaviours, and contextual knowledge and skills (Conley, 2007). In order to provide a functional representation of the key aspects of HE readiness, Conley (2007) stresses the fact that in practice these components are not mutually exclusive or perfectly nested as portrayed in the model, but they interact and overlap with one another. Figure 4.4 illustrates the interconnectedness of the four levels.



Figure 4.4 *Interconnectedness of Conley's readiness theory model (Conley, 2007:12)*

Conley (2007) explains that cognitive strategies include conceptual and evaluative thinking, synthesising and problem-solving, and that these strategies develop over time and are necessary to attain academic success at university. Conley (2007:12-17) further explains the four components as follows:

- Key content (content knowledge) comprises skills that are inherently part of specific high school subjects, such as critical reading skills.
- Success depends on developing and using key cognitive strategies to achieve content knowledge.

- Academic behaviours consist of meta-cognitive skills and study skills.
- Meta-cognitive skills consist of self-awareness, self-monitoring and self-control.
- Good study skills comprise time management, planning a task, setting up the study environment, breaking up tasks into manageable chunks and balancing competing priorities.
- Contextual skills and awareness refer to two factors. The first is the ability to adapt and understand the context or climate of the institution, which he refers to as ‘university knowledge’ (the bureaucratic processes associated with applying, enrolling and studying at a university).
- The second is the ability to make a life transition from youth to young adults, to select the right post-secondary programme, and to secure sufficient financial resources to enter the programme and remain in it.
- An understanding of the norms and culture of post-secondary institutions and how they are different from high schools, and the ability to advocate for oneself in a complex bureaucratic context.

Conley believes that the absence of any of these skills could lead to failure just as surely as deficiencies in reading, writing or mathematics could (Conley, 2007, 2014). Table 4.1 below illustrates Conley’s (2014:17) four keys to college and career readiness.

Table 4.5 Conley's four keys to college and career readiness

KEY COGNITIVE STRATEGIES	KEY CONTENT KNOWLEDGE	KEY LEARNING SKILLS AND TECHNIQUES	KEY TRANSITION KNOWLEDGE AND SKILLS
THINK	KNOW	ACT	GO
Problem Formulation	Structure of knowledge	Ownership of learning	Contextual
Hypothesise	Key terms and terminology	Goal setting	Aspirations
Strategise	Factual information	Persistence	Norms/culture
Research	Linking ideas	Self-awareness	Procedural
Identify	Organising concepts	Motivation	Institution choice
Collect	Attitudes towards learning content	Help-seeking	Admission process
Interpretation	Challenge level	Progress monitoring	Financial
Analyse	Value	Self-efficacy	Tuition
Evaluate		Learning techniques	Financial aid
Communication	Effort	Time management	Cultural
Organise	Technical knowledge and skills	Test-taking skills	Postsecondary norms
Construct	Specific college and career	Note-taking skills	Personal
Precision and accuracy	Readiness standards	Memorisation/recall	Self-advocacy
Monitor		Strategic reading	Institutional context
Confirm		Collaborative learning	
		Technology	

When one compares the three models, it is evident that they focus on similar factors, with Byrd and MacDonald's model to a lesser extent, and Lemmens' model slightly more than Byrd and MacDonald, while Conley presents a detailed readiness model with far more skills and attributes than what Lemmens and Byrd and MacDonald do. A commonality among the three models is the fact that all three include not only cognitive and academic skills, but also contextual factors about the learners' socio-economic backgrounds and their abilities and attributes.

Thus, all three readiness models demonstrate that gaining an education is a socially constructed process; learners cannot achieve academic success on their

own. It was also evident in the discussion of the challenges in education in Chapter 3, and the preceding sections in this chapter. As such, following Dewey (1916, 2011) and Vygotsky (1994), the researcher argues that university readiness is based on a social constructivist approach. The learners, as the most important role-players in the learning process, need to be enabled and supported so that they will gain a solid subject knowledge and skills base, together with the 21st-century skills at the end of their high school career to build on and construct advanced knowledge at university level. However, and this is the fundamental issue that this study is concerned with, the contextual dimension that includes the learners' socio-economic backgrounds, the school context and parental circumstances and involvement, and the learners' socio-cultural factors, plays a fundamental role in the learners' academic achievement and university readiness. It was for these reasons that the researcher decided to combine some of the dimensions and categories of the three readiness models reviewed above, to arrive at a simplified augmented readiness model for the South African public schooling context. Table 4.6 illustrates the augmented readiness model.

Table 4.6 *Augmented readiness model*

ACADEMIC ACHIEVEMENT AND UNIVERSITY READINESS			
CONTEXTUAL DIMENSION	OWNERSHIP OF LEARNING DIMENSION	COGNITIVE DIMENSION	CONTENT KNOWLEDGE DIMENSION
School context and parental circumstances and involvement University context and requirements	Aspirations/vision Self-efficacy Attitude and effort towards learning	Critical and analytical thinking Research skills	Subject content Extra academic support
Socio-cultural factors	Time management Integrated communication technology (ICT)	Language and logical thinking skills (reading and writing) Mathematical ability	Relevance/value of what you learn in school for post-school opportunities
	Collaborative learning (teamwork)	Communication and debating skills (presenting)	Soft skills learnt

Following Conley (2007, 2014) and Lemmens (2010), the researcher is in agreement that the factors are not mutually exclusive, but interrelated and interdependent. However, the researcher argues that a South African-based readiness model cannot start with the cognitive or skills dimension and factors. It should start with the contextual dimension and sub-dimensions because these factors are the determinants for which school a learner will attend, what resources and opportunities a learner will have, and what the learners' orientation and attitude towards gaining an education will be. For example, if a learner's parents are unemployed or have a low-paying job, such a learner generally attends a quintile 1 or 2 school, compared to a learner whose parents are in a higher income bracket. The higher-income parents will have more choice and can afford to place their child in a quintile 4 or 5 school. Moreover, the school context and environment of where some quintile 1 and 2 schools are situated are not conducive to successful learning taking place as they are surrounded by gangsterism, drug and alcohol abuse, and crime (cf. 3.2.3.3). These circumstances are the lived realities for many Black and Coloured learners in poor and rural communities, which could negatively influence the learners' aspirations, self-efficacy and attributes. That is why the ownership of the learning dimension is positioned second and the contextual dimension is positioned first in the augmented readiness model.

The cognitive dimension is placed as the third category in the augmented readiness model because the argument is that, if the factors in the preceding two dimensions were in place, the learners would be able to concentrate and engage cognitively. They would stand a better chance to construct new knowledge to gain the necessary subject content knowledge and skills. Again, as was discussed in the preceding sections in this chapter, the cognitive dimension has its challenges because the CAPS curriculum and how it is taught in the public schooling system are not preparing the learners' critical and analytical skills and their mathematical skills. The language of teaching and learning also poses a major challenge to second and additional language speakers of English (cf. 3.2.1.2).

The last dimension in the augmented readiness model, content knowledge, places the focus on the school and its ability to provide in the learning needs of the learners. This dimension is dependent on the first dimension, because, for example, a quintile 1 or 2 school will not be able to provide the learners with all the academic support and resources they need, while a quintile 4 or 5 school will be able to do. Consequently, the augmented readiness model starts with the contextual dimension and ends with the content knowledge dimension to arrive at the learners' academic achievement in Grade 12, which should ideally be a bachelor's pass as it could assist the learners to gain access to study towards a degree at a university. As explained, the model presupposes that if all the dimensions are in place, the learners will have the knowledge and skills that are required for university studies. Thus, they would have been provided with epistemological access that Morrow (2009) and other researchers argue for. Figure 4.5 below illustrates the interconnectedness and interdependence of the four dimensions, with an upward spiral that would result in the learners' academic achievement and university readiness.

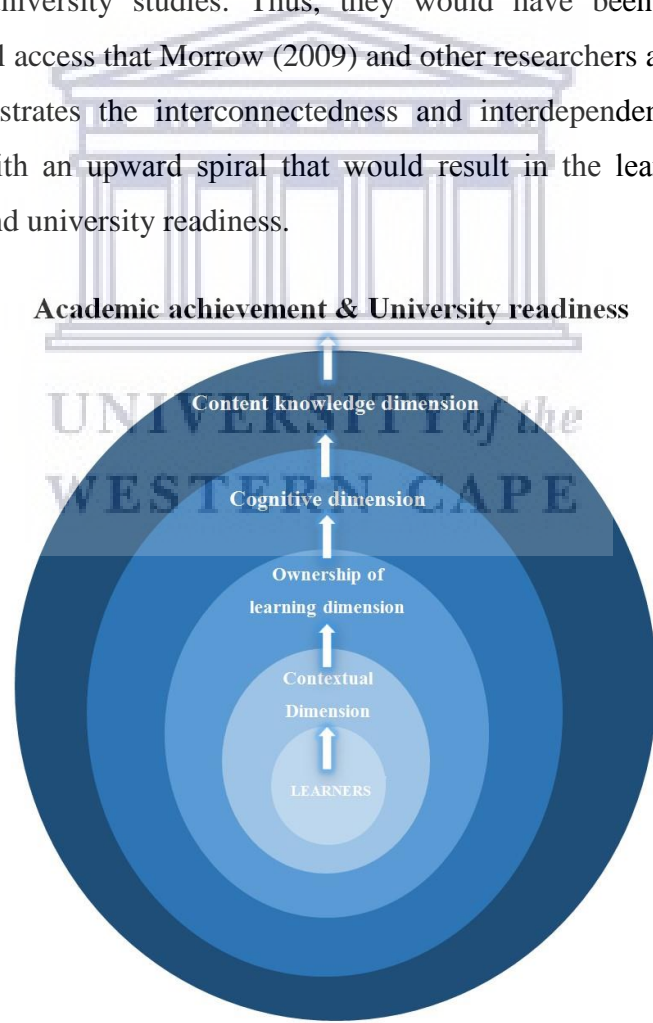


Figure 4.5: Augmented readiness model

This simplified augmented readiness model is the conceptual framework of this study. The dimensions and sub-dimensions were used for the analysis of data, and as the basis for the discussion and interpretation of the findings in Chapter 7. It is also the basis of the recommendations proposed in Chapter 8.

4.5.2 Criticism of readiness theories

It is acknowledged that there are forms of criticism against the use of readiness models as theoretical or conceptual frameworks. One form of criticism against Conley's readiness model is that it applies to the knowledge and skills necessary for college readiness in the USA. The problem lies with the fact that the USA context is different from many other countries' contexts and not easily transferrable (Conley, 2014). The second form of criticism comes from Sedlacek (2011) who explains that the weakness of the readiness models is that they are restricted and that some of the things they measured are no longer relevant in this technology-driven society. The author's view is that there are non-cognitive variables that are not in Conley's readiness model such as adjustment, motivation and student perceptions, which are also important factors that can contribute to college readiness (Sedlacek, 2011).

The last form of criticism is from Conley himself, where he explains that not all four keys of his model can be measured (Conley, 2015). He explains that the key cognitive strategies are occasionally measured; the key content knowledge is intensively measured or over-measured, while the main learning skills and techniques and the main transition knowledge and skills are unmeasured (Conley, 2015). It can be inferred from his explanation that the key cognitive strategies and key content knowledge are more readily tested and measured, whereas the other two keys are difficult to test and assessed because they are subjective and context-specific (Conley, 2015).

The researcher's response to the first form of criticism is that she acknowledged that Conley's model was designed for an American context and could not be transferred to the South African context. This was another reason why she decided to construct her own South African-specific readiness model. To overcome the

second form of criticism, the researcher focused on the factors that she thought were relevant to the South African educational context and the role-players involved. This she has done using her data collection methods and the responses thereto from the different research participant groups.

Lastly, the researcher overcame the last form of criticism by putting in place measurement tools that assisted her to test and assess the cognitive dimensions. The measurement tools for the learners were pre- and post-tests, one questionnaire, two reflection forms, and six focus group discussions, plus the learners' 2017, 2018 and 2019 examination results. Two further measurements were the individual interviews with the six teachers, six lecturers, three subject advisers and one circuit manager; and two focus group discussions with the learners' parents. These different data sets assisted the researcher to assess the learners' academic performance and to triangulate the findings.

4.6 CONCLUDING SUMMARY

This chapter reviewed literature about the business-related subjects of Accounting, Business Studies, Economics and Mathematics at public high schools in South Africa, as well as the university requirements for a business-related degree programme. A discussion on what constituted epistemological access was also presented. It was evident in the discussion of the challenges encountered in the implementation of the business-related subjects and Mathematics, that a solid foundation of content knowledge and skills must be grounded in the previous phases (Foundation phase, Intermediate Phase and Senior Phase). If the foundation is not properly laid in the previous phases, the learners would not be able to do more advanced application, interpretation, synthesis and evaluation in the FET phase. Similarly, if the learners do not have critical and analytical thinking, research, language, communication, mathematical and problem-solving skills at the end of their schooling careers, they will not be adequately prepared for higher education, or the world of work.

Three readiness models were reviewed in the conceptual framework section of the chapter, which enabled the researcher to construct a simplified and augmented

readiness model for the South African public schooling context. The dimensions and sub-dimension chosen demonstrated the social situatedness of the learning context as they were interconnected and interdependent. The augmented readiness model was used as the conceptual framework of the study and formed the basis of the discussion and interpretation of the findings in Chapter 7. A detailed discussion of the research methodological processes followed in this study is presented in the next chapter.



CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

In the previous chapter, the challenges of South African's public education system were discussed as well as the conceptual framework used in the study. This chapter presents a detailed account of the research process followed and the methodological decisions made. The aim and objective of the study, and the main research question and sub-questions are restated first. This is followed by a discussion of the critical education science paradigm within which the study is positioned. Thereafter, an explanation and justification for a participatory action research design are given, and a comprehensive discussion of the research process followed and methodological decisions made are presented next. The researcher concludes this chapter with a summary of what was discussed and a self-reflection on what it meant to be an insider and an outsider researcher.

5.2 AIM AND OBJECTIVES OF THE STUDY

The aim, objectives and research questions are restated in this chapter to contextualise the methodological processes followed in the study. Du Plooy-Cilliers, Davis and Bezuidenhout (2014) assert that conducting research is, for the most part, a search for the truth, knowledge and understanding. This search takes a form of a critical and controlled review of a research problem through a structured process that involves data collection and analysis to establish key findings (Du Plooy-Cilliers et al., 2014). As the purpose of this study was to contribute to the body of knowledge in the form of a readiness model that educators in the business, commerce and management sciences subjects in public high schools could use to lay a solid subject content knowledge base for learners in Grades 10 to 12, the aim of the study was twofold. Firstly, it investigated whether Grade 10 – 12 learners who were in the further education and training (FET) phase at two public high schools had adequate subject content knowledge

and skills in Accounting, Business Studies and Economics. Secondly, it sought to identify the challenges that the two schools and the learners were experiencing in these subjects. The study had three objectives.

The study had three objectives, namely to:

- The first objective was to identify the subject content knowledge and skills gaps and the challenges experienced by Grade 10 – 12 learners in Accounting, Business Studies and Economics in order to develop appropriate intervention strategies that would assist them to overcome the challenges;
- The second objective was to implement the intervention strategies over three years (2017 – 2019) to strengthen the learners' subject content knowledge and skills so that a solid foundation could be laid in these subjects; and
- The third and final objective was to develop a readiness model that could be used in public high schools in South Africa.

It was argued that a solid subject content knowledge and skills foundation in Grades 10 to 12 would not only equip the learners to pass these subjects well but, equally important, it would also ensure that the learners are adequately prepared for university studies in a business-related degree programme.

To achieve the objectives stated above, the main research question of this study was: *How should learners in Accounting, Business Studies and Economics be equipped with epistemological access so that their chances of succeeding in a business degree programme at university level are strengthened?*

Three sub-questions guided the data collection and analysis process, namely:

- Which subject content knowledge and skills are learners lacking in Accounting, Business Studies and Economics in the FET phase?
- What are the challenges that learners experience in these subjects, and why?

- How should the learners and schools be assisted to overcome these challenges so that the learners will acquire the necessary subject content knowledge and skills to become university ready?

Following Creswell (2013), the research paradigm and design of the study are discussed next, and thereafter, the research site and participants, the data collection methods used, and how the data were analysed.

5.3 SITUATING THE STUDY IN A CRITICAL EDUCATION SCIENCE PARADIGM

Due to the nature of the main and sub-main research questions and the objectives of the study, a critical education science paradigm was deemed the most appropriate research paradigm in which to locate the study. Critical education derives from a critical theory that has a long history of informing and shaping diverse qualitative research practices (Ryoo & McLaren, 2010). Although it is difficult to point to one universal, accepted definition of critical theory, a shared notion of critical theory as referring to both the legacy of Western theoretical traditions following the Frankfurt School could be recognised (Ryoo & McLaren, 2010). Through using critical theory, qualitative researchers can push educational reform for the better of all humanity (Carr & Kemmis, 1986). As such, educational researchers can find agency through critical theory to engage in a social inquiry that transforms the space of schools, the practice of teachers, the treatment of learners/students, the sharing of different knowledge and the improvement of society at large (Carr & Kemmis, 1986; Ryoo & McLaren, 2010).

Similarly, Ritchie, Lewis, McNaughton Nicholls and Ormston (2013) explain that critical theory is concerned with empowering people to overcome social circumstances and it influences a call for greater equality between the researcher and research participants. One example of this was the development of participatory action research (PAR), which aimed to break down obstacles between the researcher and what is being researched to perform positive change for those involved in the research process (Ritchie et al., 2013). Salehi (2013) proposes that the goals of critical pedagogy are the development of critical

citizenship rather than just a good citizen, to defend the oppressed, restructuring the aims and methods of curricula, defining new roles for teachers and learners/students, and to help them in the direction of change in society.

Also, Carr and Kemmis (1986:156) explain that “critical education science has the aim of transforming education; it is directed at educational change. It is not research on or about education; it is research in and for education”. They also state that a critical educational science focuses on educational reform that allows for participation and collaboration by stakeholders who are involved in education (Carr & Kemmis, 1986).

Carr (1995:12) further asserts:

A critical, social/education science is a species of social theory which in separate but related ways, aims at ideology critique (social transformation, including the circumstances and consciousness of people as individuals, members of groups and bearers of culture); the organisation of enlightenment in social groups and societies (including some kinds of educational processes); and the organisation of social and political action to improve the world.

For him, a critical education science is not just a means to individual enlightenment, but a mode of collective social action profoundly “connected to emancipatory ideals of rationality, justice, and freedom” (Carr, 1995:13). Similarly, Hammersley (2013) further elaborates that critical researchers intentionally assume an ethical and moral standard to review the setting. In this way, the research is practice with the consideration of socio-economic and cultural context for precise research of objectives (Hammersley, 2013). The researcher agrees with the above viewpoints of what a critical education science theory stands for. It was because of these principles that this study was positioned within a critical education science paradigm. Following Carr and Kemmis (1986), Ritchie et al. (2013), Ryoo and McLaren (2010) and Salehi (2013), the researcher wanted to transform a social group (high school learners) through the power of

education to provide them with epistemological access for a brighter future and a chance to rise above poverty and improve their standard of living.

5.3.1 Further justification for a critical education science paradigm

In addition to the explanation in the previous section, there were five more reasons why a critical education science paradigm was deemed suitable for this study. The first reason was that the researcher wanted to identify what subject content knowledge and skills were lacking in Grade 10 to 12 learners who were doing Accounting, Business Studies and Economics. The researcher was an Accounting teacher and a subject adviser for 23 years. Thus, she has a good idea of the knowledge and skills that are necessary to gain at high school to be prepared for university studies. The second reason was that the researcher also wanted to identify what the challenges were that the learners at the two high schools experienced in the three subjects. The challenges that were mentioned in the literature review in Chapter 3 were a lack of a solid literacy and numeracy foundation, a language barrier, absenteeism, class sizes and a lack of resources. The researcher wanted to establish if the learners at the two schools experienced similar challenges or other challenges.

A third reason why a critical education science paradigm was suitable was that the researcher implemented intervention strategies in each grade, over three years, in the three business-related subjects. The intervention strategies intended to equip the learners in these subjects with extra academic support to strengthen their subject content knowledge and skills. The intention was to positively transform the learners' learning experiences and knowledge creation in the three subjects so that their academic performance could improve.

The fourth reason was that many studies conducted in education use the critical education science paradigm. According to Taylor (2008), critical reviews focus on raising the awareness of teachers' educationally recognised values and beliefs that reinforce teacher-centeredness. The author further clarifies that when teachers are aware of the teacher-centred approach, critical theory is introduced (e.g. critical pedagogy, cultural inclusiveness, social justice) that can stimulate teachers' innovative thinking about designing curricula and assessments (Taylor, 2008).

Moreover, Taylor and Medina (2013) argue that it is vital that the researcher shows critical self-awareness and, grasping the challenges of socio-economic context, to foster an idea to improve teaching and learning, as well as research practices, which is based on ethical principles that can revolutionise professional practice. This is exactly why the researcher used the critical education science paradigm because she was aware of the challenges in public high schools in South Africa, and she wanted to make a positive change that was learner-centred.

A final reason was that the researcher wanted to arrive at a readiness model that public high schools in South Africa could use to equip Grade 10 to 12 learners with a solid content knowledge and skills foundation so that they could pass Accounting, Business Studies and Economics each year with an adequate rating of 4 and higher. It was argued that if a solid content knowledge and skills foundation is laid in Grade 10, then in Grade 11, and finally in Grade 12, these learners will have a good foundation for pursuing a business-related degree at university level. Thus, they would be ready for the demands of university studies in the Accounting, Business Studies and Economics disciplines. Following Morrow (2009), the researcher's ultimate goal was to equip the learners in Grades 10 – 12 with epistemological access to strengthen their chances of successfully completing a business-related degree programme.

5.3.2 Strengths of the critical education science paradigm

A critical education science theory has different strengths. Creswell (2007) is of the view that research should not only be conducted for research itself, but it must be transformative to improve the people involved in the research project. He emphasises that a benefit of the critical education science paradigm is that educational researchers can gain insight into learning, and that teaching matters have evolved interactively with other social factors such as economy, politics and culture (Creswell, 2007).

Hence, it can be said that the implementation of critical educational science cannot be derived from theory alone; it also involves a commitment on the part of educational researchers inside and outside the educational process to the

improvement of education (Carr & Kemmis, 1986; Salehi, 2013). This means that it requires the involvement of the different role-players in education. As Carr and Kemmis (1986) suggest, the circumstances of critical education science achievements are in the progress made within the authentic educational practices and all educational stakeholders understanding their roles within the education sector. Based on the researcher's educational experience as already stated, and her current role of being a Deputy Chief Education Specialist, she identified the need to conduct action research in two public high schools and to involve as many of the role-players as possible. The learners were central in this study, and their learning experiences and challenges were comprehensively discussed and interpreted in Chapter 7.

Therefore, according to Arthur, Waring, Coe and Hedges (2012:99), a critical education science paradigm offers “a means to enter into dialogue with participants in ways that privilege those participants' experiences and understandings, the insiders with knowledgeable insight and expertise, and they provide avenues to research spatiality and delve into issues often left unspoken”. They advocate that a critical education science approach seeks a rigorous research practice as well as research that advances social justice, and that the findings of critical research can potentially resolve society's issue, especially of educational sectors in a contemporary context (Arthur et al., 2012).

To conclude why this paradigm was used, according to Du Plooy-Cilliers et al., (2014:32):

Critical realists also argue that social reality has multiple layers and that what we observe and experience is often merely a surface reality, which is only partial and sometimes even false. We often do not see the deep structures on which the myths and illusions by which social reality operates are built. People who are oppressed often cannot see how change is possible and thus lose their independence, freedom and control over their own lives. For critical realists, the role of the researcher is to uncover these deep structures, expose and criticise them, and empower people to free themselves from all forms of oppression and exploitation.

The role of the researcher was to conduct this study as ethically and objectively as possible, involving the seven different participant groups, and investigating the challenges the learner participants experienced at the two high schools to develop a readiness model that could be implemented in public high schools throughout South Africa.

5.3.3 Criticism of a critical education science paradigm

Every research paradigm has strengths and weaknesses and the critical education science paradigm is no exception. According to Tobin and Steinberg (2015), there are contextual differences (prejudices and predispositions) about the use of language, ways of thinking, and access to knowledge between that which is investigated and the researcher him-/herself in critical education science theory. Similarly, Peim (2018) is also of the view that a language barrier can also have an impact on what researchers do and what social and cultural spaces they occupy.

To overcome these prejudices and predispositions, the researcher attempted to deal with the complexity of the lived reality of the participants in a particular manner. Firstly, the researcher understood that the learners at both schools needed financial support to be able to attend the interventions. As such, food and transport were provided to all the learners. Secondly, to assist the learners and their parents with the language barrier, the information sheets were translated into isiXhosa and the reflection forms were translated into Afrikaans and isiXhosa. Lastly, the researcher administrated the data collection methods herself and provided an isiXhosa translator for the focus group discussions with the parents to provide further assistance with the language barrier.

Carr (1995) noted another challenge that, for most teachers, including teachers of education studies, theorising about education is something that occurs away from the practice. The author further explains that theory and practice cannot be separated, the theory is not just words, and practice is not mute behaviour; theory and practice are mutually constitutive aspects of one another; there can be no gap between theory and practice, only greater and lesser degrees of mismatch, elision and illusion in the relationship between them (Carr, 1995).

To overcome this limitation of a gap between theory and practice, there was a three-step process in which the interventions were implemented in the three-year cycle (2017, 2018 and 2019) in each of the three subjects (Accounting, Business Studies and Economics). The first step was a pre-test to establish the learners' knowledge and skills at that stage. The second step was to scaffold the knowledge and skills gap that was identified through real-life scenarios, case studies and relevant content. Within the scaffolding process, the learners had the opportunity to apply the theory to the practical case study scenarios. This was done to bridge the gap between theory and practice. The third and final step was the post-test, in which the learners' knowledge and understanding of how to apply theory to practice were assessed. Hence, the researcher attempted to overcome the limitations of a critical education science approach as best as she could.

5.4 RESEARCH DESIGN

Following a critical education science paradigm, the study used a participatory action research (PAR) design because it was not only about implementing interventions over three years, but the PAR design embodies the goals and principles of a critical education science approach. A discussion of the aim and implementation of PAR is provided next, and thereafter, the critique that has been voiced against PAR and how the researcher has overcome the critique.

5.4.1 Participatory action research (PAR)

PAR is viewed as a sub-division of action research, which is the methodological collection and analysis of data to act and execute deviation through the initiation of practical knowledge (McDonald, 2012). To this end, McTaggart (1997) states that the fundamental purpose of PAR is the emancipation of participants to collaborate for social change that would intensify capacity development and growth for all stakeholders who are involved in the study. Similarly, Arthur et al. (2012) concurs that the objective of PAR towards broader social change knowingly involves participants in each phase of the research journey. Moreover, Kemmis and McTaggart (2007) assert that participatory action research does not regard either theory or practice as unsurpassed in the relationship between theory and practice. Instead, the objective is to formulate an advanced theory and

practice with each other, through critical rationalising about both theory and practice and their outcomes. Critical participatory action research conveys an obligation to improve the connection between education and social change (Kemmis, McTaggart & Nixon, 2014). It therefore relates closely to the definition and goals of the critical education science paradigm in which this study was situated.

Another reason why PAR was used as the research design of this study, following Carr and Kemmis (1986:211), was the fact that educational action research offers teachers a means to take “collaborative responsibility for the development and reform of education”. Likewise, Craig (2009) describes that one of the significant points of action research is that researchers can utilise their expertise and knowledge to implement logical inquiries that provide the platform to improve situations to solve problems. As such, action research can address challenges with outcomes feeding back into practice (Maree, 2007). As already stated, the researcher was a teacher and a subject adviser for Accounting, so she could use her expertise and knowledge to research the two school high schools to find solutions to the challenges that the learners experienced at the schools.

A final reason why PAR was used was the fact that it involved stages and cycles in which one can implement actions and evaluate the impact thereof to arrive at solutions to effect positive change. Sagor (2009:12) describes the action research process as “involving four sequential stages: (a) vision or target setting, (b) theory articulation, (c) action or data collection, and (d) reflection or action planning”. Similarly, Christie, Carey, Robertson and Grainger (2015), state that action research includes a curved method of planning, acting, observing, analysing, reflecting and then evaluating. The conclusion of one full cycle usually presents other matters that will be researched and given attention to in a new cycle (Christie et al., 2015).

In this study, the planning involved the identification of the problem, which was the difference between the knowledge and skills that learners gained in high school versus the knowledge and skills that higher education requires. Acting referred to testing the problem through a learner questionnaire, focus group

discussions and interviews with teachers, subject advisers, the circuit manager, principals and learners to assess the skills and knowledge the learners were gaining at the two high schools. Observing and monitoring were done through the implementation of the interventions over the three years. Analysing and reflecting happened when the researcher analysed the data sets obtained from the seven different participant groups, and through discussing and interpreting the results in Chapter 7.

There were three cycles in the action research process, namely Cycle 1 when the learner participants were in Grade 10 in 2017, Cycle 2 when they were in Grade 11 in 2018, and Cycle 3 when they were in Grade 12 in 2019. A total of fourteen interventions (seven per school) were implemented over the three years. Two interventions were implemented in 2017, three in 2018, and two in 2019. The interventions were in the form of extra academic support that focused on a specific section of the content (according to the CAPS curriculum in each of the three subjects) that was already covered by the teachers during normal school time. The reason why the interventions were on content that was already taught was to strengthen and reinforce that specific subject content knowledge and skills section for the learners. The interventions started in Grade 10 with basic subject content knowledge and thinking skills (e.g. factual recall, low-level comprehension and application) and moved cumulatively to the more complex application and problem-solving issues in Grade 11 and Grade 12. As Sargent (2013) proposes, learning builds cumulatively, moving from the simple to the more complex (e.g. advanced analytical skills, evaluation and creative problem solving).

The interventions took place from September 2017 to May 2019. All the interventions were planned to strengthen the specific subject content knowledge and skills sections that were focused on for the learners to improve their academic performance in the three subjects. Evaluating and monitoring the performance of the learner participants took place through a pre-test to determine the knowledge and skills of the learners before the interventions, and a post-test after the interventions took place in each cycle. Also, the learners were requested to reflect

on the first five interventions at the beginning of their Grade 12 year in 2019, and they also completed a second reflection after the last two interventions that were done in May 2019. Appendix L provides a detailed description of the content and rationale, the inputs, activities, outcomes, responsibility (execution and monitoring) and the impact (notes on progress) of the interventions. Therefore, the researcher used the learner participants' results in the post-test to evaluate their performance after the interventions were completed, and she used their end-of-year examination (November 2017 and 2018) and June 2019 examination results to assess their overall academic performance per cycle.

5.4.2 Criticism against PAR

One form of critique against action research is the fact that it requires the participation of all the practitioners and role-players in educational theorising as part of the process of improving educational practice, which is not always possible (Carr, 1995). Another form of critique is that, in contrast to most other forms of research, action research is often led by 'insiders' defined as "those facing the situation or trying to develop their practice, as opposed to an external 'outside' research expert who researches other people's problems or practices" (Arthur et al., 2012:71). This could create bias and lead to a subjective representation of the facts because of a researcher's 'insider's role'. A last form of critique comes from Du Plooy-Cilliers et al. (2014) who think that researchers face the challenge of gaining the trust of participants, which is an essential step to gain insights into their perceptions and lived experiences.

To overcome the first form of critique, the researcher was able to involve most of the role-players in the education of learners in high schools. These were the learners themselves, a sample of the learners' parents at both schools, the teachers who were responsible for teaching the three subjects at both schools, a subject adviser for each of the three subjects, the two principals, the circuit manager of the district, and the lecturers involved in teaching the three subjects at two universities in the Western Cape Province. As a result, rich data were collected, and they assisted with the triangulation and validity of the findings.

To overcome the second form of critique, the researcher had a dual role as explained in Section 5.5.6 below. She was both an insider and an outsider (Babbie & Mouton, 2001). The involvement of so many different research participants also helped her minimise her bias regarding the amount of data obtained and used in the discussions and interpretations of the findings in Chapter 7.

The last form of critique was overcome through an explanation of the study's aim and objectives, and the research questions to all the participants, and the fact that the researcher assured the participants that the information shared with her would be kept confidential. The fact that the researcher was also a teacher and that she could relate to some of the issues, also made it easier for the participants to trust her. Hence, she was adequately able to counter the critique against a PAR design.

5.5. METHODOLOGICAL PROCESSES FOLLOWED

The methodological processes followed in this study consisted of the ethical procedures, the selection of the two research sites, the research participants, the data collection methods, and the data analysis process. Each of these sections is described below.

5.5.1 Ethical procedures followed in this study

All research should be conducted within clearly defined ethical principles to ensure the protection of all parties involved in the research (Mauthner, Birch, Jessop & Miller, 2002; Punch, 2009). The ethical matters related to this study were attended to before the study and for the entire duration of the study (Creswell & Creswell, 2018).

Before conducting the research, ethical clearance was first sought from the University of the Western Cape's Ethics Committee as well as from all the relevant stakeholders and participants involved in the study. The ethical clearance letter received from the university's research office is attached as Appendix M.

Fundamental ethical principles such as obtaining the necessary permission for accessing the research site, obtaining consent from participants, explaining the purpose of the study, and protecting and ensuring participants' confidentiality and

anonymity were strictly adhered to. The participants were informed of their right to withdraw at any point if they so wish, or to refrain from answering any questions. It was also explained to the participants that the focus group discussions were treated as confidential and would thus not be divulged to anyone.

To adhere to the fundamental principles of ethical research, the following principles according to Arthur et al. (2012) were addressed:

- Staff at the two schools were made aware that research was taking place and that it had certain definable processes and expected outcomes;
- The research participants were assured that their anonymity would be protected;
- Informed consent agreements were compiled, and these were signed by all the research participants;
- Arrangements were made for translation into IsiXhosa; and
- People who were illiterate in any language had the option of having the agreement read to them by someone they trusted.

Furthermore, careful attention was given to ensure that the study did not impact on learners' class time or the educators' work time. Participants and all concerned were fully briefed about the aims and objectives of the study and the findings were confidentially and sensitively communicated to the participants and the school. According to O'Brien (as cited in McDonald, 2012), the ethical ideologies of PAR are transparent in all undertakings regarding the objectives of the research and plausible results are combined. They also indicate that the researcher and supervisors should generate a method that optimally expands the opportunity for the involvement of all participants (O'Brien as cited in McDonald, 2012). All these ethical principles were adhered to and upheld during this study.

The permission of the Western Cape Education Department was granted on 18 August 2017 (refer to Appendix N). The researcher was only permitted to continue with the interventions until June 2019, because the learners would have

been in their Grade 12 year. The information and the arrangements were e-mailed to the schools on 5 September 2017. Both schools were visited on 12 September 2017 and the information sheets and consent forms were distributed (Appendix O contains copies of the information sheets and Appendix P contains copies of the consent forms).

A structured interview schedule (refer to Appendix Q) was used to maintain the focus of the important issues as recommended by Mills (2007:66). All the focus group interviews were conducted at the selected schools after school hours. All the parents and learners completed a consent form (Appendix P) before the focus group discussion started. Lastly, information sheets in English and IsiXhosa, in which the aim and objectives of the study were explained, were given to the learners and parents (refer to Appendix O).

5.5.2 Research sites

The thought behind the critical science paradigm is to tenaciously choose participants or sites that will assist the researcher to comprehend the problem and the research questions (Creswell, 2014; Creswell & Creswell, 2018). Purposeful sampling is a method widely utilised in qualitative research for the classification and assortment of information-rich cases for the optimal use of limited resources (Patton, 2002). This comprises the identification and selection of individuals or groups of individuals who have a particular knowledge of the phenomenon under study (Creswell & Plano Clark, 2011).

The research sites included two high schools in the Western Cape Province. High School A was a quintile 1 school, which means that the school was situated in a poorer area and the learners were entitled to enrol without paying school fees (refer to Section 3.2.3.3). The school was situated in a semi-rural Black community. The total number of learners enrolled at the school was 694 in 2017, 758 in 2018 and 862 in 2019. The school had 21 classrooms and 27 instruction rooms. The number of learners per instruction room was 39,15 and the number of learners per classroom was 50,33. There were 24 teachers and one principal who had been in an acting capacity for the past four years. The school had a feeding scheme and there were six bus routes with 108 learners making use of school

transport (Western Cape Education Department, 2020). Some of the over-age learners were involved in gang-related activities. The school experienced a few gang-related fights on and outside the school premises over the three years while the researchers were collecting the data.

High School B was a quintile 4 school, which means that the school was situated in a more affluent community in town and the learners had to pay school fees. The total number of learners enrolled at the school was 1 391 in 2017, 1 412 in 2018 and 1 447 in 2019. The school had a total of 50 classrooms and 63 instruction rooms. The number of learners per instruction room was 24,35 and the number of learners per classroom was 30,68. The total number of teachers was 47. There were nine bus routes and 385 learners made use of school transport. The principal had been in an acting role for the past four years. The school had a hostel with 88 learners (Western Cape Education Department, 2020). There were a few gang-related fights that took place in and outside the school grounds over the past years and these learners were also involved in using and dealing in drugs. As a result, the learners and staff members experienced discomfort and were sometimes subjected to intimidation.

5.5.3 Research participants

The research participants included seven groups. The first group of participants was 30 Grade 10 learners at School A, and 30 Grade 10 learners at School B, totalling 60 learners. These learners were purposively selected, which is, according to Etikan, Musa and Alkassim (2016:2), “the deliberate choice of a participant due to the qualities the participant possesses”. The learners were selected through the code distribution system that the teachers use to grade formal assessments. Two formal assessments, the March control test and June examination results of Grade 10 learners in 2017 were used to select the 30 learners per school in August 2017. The table below represents the total enrolments of the Grade 10 learners at School A and B in 2017.

Table 5.1 The total enrolments of learners in School A and B in 2017

Subjects	School A: Grade 10	School B: Grade 10
	Number of learners	Number of learners
Accounting	9	42
Business Studies	78	243
Economics	79	32

Through using the code selections, five of the nine Accounting learners, 12 of the 78 Business Studies learners, and 13 of the 79 Economics learners were selected to arrive at a total of 30 learner participants for School A. The same selection criteria were used at School B. All learners at School A and B were chosen based on their poor academic performance in the three subjects. Since the aim of the study was to strengthen the learners' content knowledge and skills in the three subjects, 28 of the 60 learners who were selected had a Code 1 (0 – 30%), 23 had a Code 2 (30 – 39%), four had a Code 3 (40 – 49%) and five had a Code 4 (50 – 59%) respectively in the three subjects. The learners were monitored and tracked from 2017 to 2019.

In Chapter 6 where the results are presented, two different groups of the learners' results are presented, namely the *sample learners*, and the *control group learners* in Cycles 1 and 2. The *sample learners* refer to the learners who attended the interventions each year (2017, 2018 and 2019). This group included some of the learners who were selected as the official learner participants of the study together with learners who were not selected as the official learner participants. The reason why their results are included in the *sample learners* is that not all the originally selected learner participants attended all the interventions. Arrangements were made with the teachers and the two schools before the interventions started, but on the days when the interventions took place some of the selected learner participants did not attend, and the teachers invited other learners to come to the interventions. The researcher did not want to send these learners away as she did not want to offend the teachers, and she thought that the learners could benefit from the extra academic support that was provided through the interventions.

The *control group* consisted of all the learners who did not partake in the interventions and who were not selected as learner participants – they were all the other learners who were doing the same three subjects at both schools.

In Cycle 3, another group, the *cohort learners'* examination results are included in the analysis in Chapter 6. The *cohort learners* are those who were selected as the official learner participants of the study in 2017 and who attended the interventions each year (from 2017 to 2019). They are also the learners who completed the questionnaire, the two reflective forms and who participated in the focus group discussions. Fifteen of the 30 learners selected attended the intervention from 2017 to 2019 at School A, and 12 at School B. There were different reasons why the other selected learners did not partake in the interventions over the three years. At School A, seven learners failed Grade 10 and one learner dropped out of school. One learner went to another school and three learners attended the interventions in 2017, but not in 2018, and attended again in 2019. The remaining three learners did not attend the interventions for reasons unknown to the researcher.

At School B, eight learners failed Grade 10. One learner changed from Mathematics to Mathematical Literacy and had to change his subject from Accounting to Physical Sciences. The remaining nine learners did not attend the interventions from 2017 to 2019 for reasons unknown to the researcher. Also, the absenteeism of some of the selected learner participants was a challenge at both schools, even though transport was arranged for learners to be taken home after the intervention sessions.

It should also be noted that in 2019, when the *cohort learners* completed the questionnaire and the two reflection forms, some of the learners who were originally selected as the learner participants and who did not attend the interventions in 2017 and 2018, joined the *cohort learners* in 2019. Thus, in 2019, 20 learners at School A (instead of 15) and 20 learners at School B (instead of 12) attended the interventions and completed the questionnaire and the first reflection form, totalling 40 learners. The reason why the same number of learners

completed the questionnaire and the first reflection form was that they completed both on the same day during the breaks, in school time.

The second reflection form (with the same questions) was completed after the two interventions took place in May 2019 in the afternoon after school time. Similar to the first reflection form, only 20 of the original selected 30 learners at School A completed the second reflection form. At School B, only 17 of the original selected 30 learners completed the second reflection form, which brought the total of learners who completed the second reflection form to 37 (refer to Appendix R).

The *cohort learners* who participated in the focus group discussions comprised 23 learners at School A and 24 learners at School B, totalling 47 learners (refer to Appendix R). The reason why more learners participated in the focus group discussions was that it was during the breaks in school time, and not after school.

The second research participant group consisted of a representative sample of the learner participants' parents from both schools. The third group comprised three teachers (one from each subject), totalling six teachers. The fourth group entailed the three subject advisers (one from Accounting, Business Studies and Economics) under which the two schools' resort. The fifth group entailed the principals of the two schools, while the circuit manager of the district formed participant group number six. The last group (group number seven) consisted of one lecturer or coordinator in each of the three disciplines (Accounting, Business Studies and Economics) from two universities (one was from a traditional university and one was from a university of technology). All these selections were based on a convenient sampling method because they were the persons directly involved in the schools and at the universities, and they were readily available (Taherdoost, 2016). In addition, each subject had one or two teachers, each school had only one principal and the parents of the learners who participated in the study were invited to participate in the parent focus group discussed. Not all the parents attended the focus group discussions, but the researcher worked with those who did attend the meeting. Therefore, as Taherdoost (2016) suggests, it was a convenient and less time-consuming selection method.

5.5.4 Data collection methods

Both quantitative and qualitative data collection methods were used to triangulate and validate the data. Du Plooy-Cilliers et al. (2014) state that quantitative data collection methods are used for numerical or statistical data, whereas qualitative methods are more interpretative. Qualitative research includes focus group interviews, semi-structured and structured interviews, as well as the analysis of artefacts (Hammarberg, Kirkman & De Lacey, 2016). The aim is to investigate beliefs and concepts, to seek views with key participants, and to gain background information and institutional and personal perspective.

Also, Yin (2009:16) explains that the use of multiple sources of data is advantageous because of its capacity to develop “converging lines of inquiry, a process of triangulation and corroboration” that strengthen the validity and credibility of the findings. Based on these explanations of data collection methods, the study used multiple data collection methods to collect data that would provide answers to the study’s research questions. For the learner participation group, a questionnaire, pre-test, interventions and post-tests in each of the three years (2017, 2018 and 2019), the learners’ academic results, two reflection forms and six focus group discussions formed part of the data collected. The questionnaire consisted of both quantitative and qualitative questions.

For the parents, two focus group discussions (one at each school) were held with a representative sample of parents (totalling 50) of the learners. Semi-structured interviews were conducted with all the other participating groups, totalling 18 interviews. The CAPS curricula of the three subjects and the Mathematics curriculum were also consulted, as well as the curricula of the three first-year subjects at the two universities. These documents formed part of the data collected as they represented a specific version of realities constructed for educating the learners in the FET phase at the two high schools and at the universities (Flick, 2014). Each data collection method is described in detail in Appendix R.

5.5.5 Data analysis

The data collected from the different participation groups were divided into quantitative and qualitative data sets. De Vos, Strydom, Fouché and Delpont (2011) state that quantitative data analysis is an accepted method for analysing data collected. The quantitative data sets consisted of the first section of the learners' questionnaire, a section of the two reflection forms, all the learners' March and September control tests as well as the June and November examination results, the pre- and post-test results of the interventions implemented over the three years, and the learners' academic reports to ascertain the absenteeism. The questionnaire consisted of 121 quantitative questions, and the reflection forms contained 11 quantitative questions (refer to Appendix S and T). The data were sorted and categorised according to the research sub-questions and the sub-dimensions of the conceptual framework. The quantitative data were analysed through Excel and SPSS software.

De Vos et al. (2011:397) define qualitative data analysis as “the process of bringing order, structure and meaning to the mass of data”. To this end, Du Plooy-Cilliers et al. (2014:226) distinguish between two types of qualitative data analysis, namely “descriptive statistics and inferential statistics”. They clarify that descriptive statistics provide researchers the opportunity to create a synopsis and to establish multiple key characteristics of the data, whereas inferential statistics provide researchers with the means to transfer the findings based on the sample of the study to other similar groups of people (Du Plooy-Cilliers et al., 2014). The qualitative data sets consisted of six questions in the learners' questionnaire, two questions in the learners' two reflection forms, and the learners' focus group discussions.

The other qualitative sets consisted of the responses from the parents in their focus group discussions, and the teachers, the subject advisers, the principals, the circuit manager, and the lecturers' responses in their semi-structured interviews. The responses in the semi-structured interviews were audio recorded and transcribed; each manually coded, and then analysed to reveal the data obtained from the different participant groups. The software package Atlas.ti was used to

analyse all the qualitative data and themes, and sub-themes were identified based on the study's research questions and the sub-dimensions in the conceptual framework (refer to Appendix V). The responses were uploaded to the Atlas.ti software package and a hermeneutic unit was created for each participant group. For example, a separate hermeneutic unit was created for the parents, teachers, learners, subject advisers, lecturers, school principals and the circuit manager. The research sub-questions were used as a guide for the coding of each transcript. After the coding process was completed, themes and sub-themes were identified based on the dimensions and sub-dimensions of the conceptual framework.

Using Atlas.ti, the researcher needed to understand that the software programme cannot comprehend the meaning of words. However, the strength of the software programme was to structure, retrieve and display the responses of the participants (Henning, Van Rensburg & Smit, 2005). 'Open coding' was used to code the sentences and phrases linked to the research questions, and the sub-dimensions of the conceptual framework (Henning et al., 2005). Atlas.ti provides the user with a 'code list' if multiple codes are identified. A 'memo' was attached, where applicable, to provide more details of a particular code. The advantage of using Atlas.ti was that retrieving information was fairly easy as the software attached a number to a document or quote. When the coding was completed, the functions 'code manager' and 'output' were used to view the codes and quotations. Thereafter hard copies of the codes, quotations and memos were printed to write an individual report of each interview and focus group discussion. Lastly, the researcher drew cross-case conclusions to establish emerging themes in the data.

Validity and reliability, in other words, rigour, signify the level to which the phenomena under study have been correctly evaluated and whether the method of evaluation provides similar results when replicated by other researchers with the same research objectives (Drost, 2011). Reliability refers "to whether scores to items on an instrument are internally consistent, stable over time and whether there was consistency in test administration and scoring" (Creswell & Creswell, 2018:250). There are two types of validity, namely internal and external. Internal validity refers to "whether the research method or design will answer your

research question”. External validity “focuses on the ability to generalise findings from a specific sample to a larger population” (Du Plooy-Cilliers et al., 2014:257). The reason why multiple sources of data were collected was that they increased the validity and reliability of the study’s findings (Du Plooy-Cilliers et al., 2014). Trustworthiness in qualitative research correlates with credibility, which is also similar to the validity and reliability in quantitative research (Munhall, 2011).

The credibility of the data was quality assured by corroborating the responses of one participant group with those of another participant group concerning the same questions. For example, similar questions were posed to the circuit manager and the principals, and their responses were crosschecked and compared. Transferability, dependability and conformability were achieved by requesting the participants to read the transcripts and give feedback if there were any inaccuracies or if something was omitted. Moreover, two work colleagues acted as critical friends by reading the transcripts and findings to affirm that the data were correctly analysed and presented.

Internal validity and the triangulation of the data were achieved through the use of multiple sources (Creswell & Creswell, 2018). The study had seven different participant groups, and the data collection methods included the learner participants’ control test results, pre- and post-test results, November examination results, June examination results, a questionnaire, two reflection forms, and focus group discussion responses. Six further sets of data were obtained from the parents’ two focus group discussions, and the responses from the semi-structured interviews conducted with the remaining five research participant groups. The multiple research instruments provided the researcher with rich data and multiple insights into the study’s focus area and research questions, and triangulation and validity.

The analysis of the data was both deductive and inductive (Creswell, 2014; Polit & Beck, 2006). Inductive thinking is the process of creating inferences of data that was collected, by emerging new data into theories (Creswell, 2014). The researcher objectively scrutinised the data from the three cycles in order to

compare the results of the sample learners to those of the control group, and the results of the November 2017 and 2018 examinations of the sample learners at School A to those at School B (Creswell, 2014; Polit & Beck, 2006). Deductive reasoning is the opposite of inductive reasoning because the researcher uses predetermined and current knowledge to commence the analysis of data (Berg, 2001; Polit & Beck, 2006). As stated, the dimensions and sub-dimensions of the augmented conceptual framework were used as a guide to identify themes and sub-themes in the data, but the researcher also looked out for other factors or information that were not included in the themes and sub-themes.

5.5.6 The role of the researcher as insider and outsider

As explained in Section 1.7.1, and mentioned in Section 5.4.2, the researcher's role was twofold in that she was both an insider and an outsider (Babbie & Mouton, 2001; Du Plooy-Cilliers et al., 2014). As an insider, the researcher was an Accounting teacher herself and she conducted the Accounting interventions with the learners and administered their pre- and post-tests. She was also knowledgeable about the challenges experienced by learners at public high schools in South Africa. As an outsider, she was the researcher who conducted and executed the study. While acknowledging her own bias and involvement in the process, the researcher attempted to minimise the bias in the way in which she formalised the research questions, decided on the research design, selected the participant groups, used different data collection methods, and through the data analysis process and triangulation of the results (Du Plooy-Cilliers et al., 2014).

In addition, the researcher verified and interrogated her judgements, actions and interpretations as the research study unfolded. Equally important, the researcher moved back and forth while analysing the data to ensure that the results were trustworthy and authentic (Henning, 2004). She reflected throughout the study journey and requested colleagues to critically review her analysis process and her discussion and interpretation of the results to ensure validity and reliability.

Moreover, as an outsider, the researcher was not a teacher at the two schools where the data were collected. As such, the researcher remained professional and impartial throughout the data collection process and did not try to influence the

opinions of the research participants. The researcher was neutral and ensured that the context within which the participants were answering the questions was the same as the context within which the researcher understood and interpreted the answers (Du Plooy-Cilliers et al., 2014). Consequently, she could make observations and conclusions that insiders could not, and gained valuable insights precisely because of her role as an outsider (Hellawell, 2006).

However, an argument against outsiders could also be made, which is that outsiders would be unable to relate to the lived experiences of the participants, especially when the research was conducted with individuals who were oppressed (Bridges, 2001). To overcome this limitation, the researcher had various data collection methods with the learner participants, the parents, the teachers, the subject advisers, the two principals, the circuit manager and the lecturers to obtain a broad spectrum of perspectives and opinions in order to understand the context and the lived realities of the participants. Lastly, the researcher used reflection as an effective communication tool to communicate with the participants, her two supervisors and critical friends, which allowed her to produce research that could lead to meaningful outcomes for the people involved in the study (Clarke, Ellis, Peel & Riggs, 2010).

5.6 CONCLUDING SUMMARY

This chapter discussed and provided justification for the research process and decisions made in this study. The aim and objectives of the study and the main research question and sub-questions were restated to contextualise the study. This was followed by a discussion of the critical education science paradigm within which the study was positioned. Thereafter, an explanation and justification for a participatory action research design were given, and a comprehensive discussion of the research process followed and methodological decisions made were presented. The researcher experienced the writing of this chapter as both challenging and enriching. It was challenging because she had to justify all the actions taken and the decisions made, and at the same time, was aware of her involvement and bias as an insider and outsider in the research process. Hence, the researcher attempted to provide justification based on sound theories and

expertise from well-known researchers in the field of qualitative research. It was enriching because she was driven by the end goal, which was to assist and equip learners who take business-related subjects with the necessary subject content knowledge and skills at high school level so that they will be able to access post-school studies and have a better chance at succeeding in a business degree programme. The next chapter, Chapter 6, presents the results from the data collected.



CHAPTER 6

PRESENTING THE RESULTS

6.1 INTRODUCTION

The previous chapter presented a detailed account of the research process followed in this study. This chapter presents the results of the data collected. The biographical information of the learner participants is presented first. Thereafter, the data sets of the three cycles are presented. Cycle 1 represents the data collected when the learners were in Grade 10 in 2017, which was the start of the intervention process. The same structure is followed for Cycle 2 in 2018 and Cycle 3 in 2019. Subsequently, all the other data sets are presented. This includes the learner participants' responses from the questionnaire, their responses in the two reflection forms, and their focus group discussion responses. The parents' responses in their focus group discussions are presented next, and this is followed by all the responses of the interviews with the remaining five participant groups. Lastly, the chapter is concluded with a summary of what was presented in this chapter.

6.2 RESULTS OF LEARNERS' BIOGRAPHICAL INFORMATION

As was reported in Section 5.3.3, of the 30 learners who were selected in 2017 at School A, only 20 learners completed the questionnaire in 2019, and likewise, only 20 of the 30 learners at School B completed the questionnaire. Table 6.1 reflects the number of learners per subject at both schools.

Table 6.1 *Learner participants who completed the questionnaire at School A and School B*

Subjects	School A	School B
	Number of learners	Number of learners
Accounting	5	7
Business Studies	8	3
Economics	7	10
Total	20	20

The questionnaire consisted of six sections. The first section asked questions related to the learner participants' biographical information. These are presented in Table 6.2.

Table 6.2 *Learner participants' biographical information*

Questions asked	Options	School A: Number of learners	School B: Number of learners
How old are you?	16 years	0	1
	17 years	1	15
	18 years	6	3
	19 years	7	1
	20 years	6	0
From which grade did you start attending this school?	Grade 8	6	18
	Grade 9	2	0
	Grade 10	10	1
	Grade 12	2	1
What is your racial or ethnic identification?	Coloured	0	18
	African	20	2
What is your home language?	Afrikaans	0	17
	English	0	2
	IsiXhosa	19	1
	Other	1	0
Who do you live with?	Parents	11	19
	Grandparents	2	1
	Sister(s)/brothers(s)	3	0
	Other family members	3	0
		1	0
	Unanswered		
What is your parents' / guardians' employment status?	Employed	8	16
	Unemployed	7	3
	Social grant	2	1
	Unanswered	3	0
Immediate family's highest educational level?	University/college	2	4
	Matric	8	9
	Grade 10 – 11	4	3
	Grade 4 – 6	0	1
	I don't know	2	3
	Unanswered	4	0
How often were you absent without a valid reason?	Never	9	12
	Once or twice	6	7
	Many times	3	1
	Unanswered	2	0

As discussed in Section 5.5.2, School A was a quintile 1 school and School B was a quintile 4 school. The responses show that thirteen of School A's learners were over-aged (older than 18 years); all African learners had IsiXhosa as a home language, except for one learner who did not disclose her first language; just over half of the learners lived with their parents; more parents were unemployed; only two of the learners' immediate family members went to a university/college; six learners were absent once or twice, while three learners were absent more frequently without a valid reason.

At School B, one learner was over-aged (older than 18 years); the majority of learners was Coloured and Afrikaans-speaking, with only two English-speaking learners, and one learner did not disclose his home language. Nineteen learners lived with their parents, and sixteen learners' parents were employed; four of the learners' immediate family members went to a university/college; seven learners were absent once or twice, while one learner was absent more frequently without a valid reason. A copy of the questionnaire is attached as Appendix S and the SPSS tables of the questionnaires (biographical information) are illustrated in Appendices W and X. The remaining responses to the other five sections of the questionnaire are presented under Section 6.4.1 below.

6.3 DATASETS OF THE THREE CYCLES WHERE THE INTERVENTIONS TOOK PLACE

As described in Section 5.5.1, the interventions took place in three cycles. There were two interventions in 2017 when the learner participants were in Grade 10, three in 2018 when they were in Grade 11, and two in 2019 when they were in Grade 12, totalling seven interventions per school over the three years. The purpose of the interventions was to provide the learners with extra academic support on specific sections of the content that were already covered by the teachers in the three subjects. The objective was to strengthen the foundation of the subject content for the learners, thereby enabling them to gain a better understanding of the subject content so that their academic performance in the three subjects could improve. Each cycle's data are presented below.

6.3.1 Cycle 1: Grade 10 learners in 2017

The learner participants' March control test, June examination and September control test results were used as a benchmark to ascertain the level of content knowledge and skills that they had in the three subjects in Grade 10 before the interventions started in the middle of September 2017. As explained in Section 5.5.3, the sample learners' results were compared to the control group's results. A pre-test was administered before the interventions were implemented and a post-test after the interventions were completed to determine if the interventions achieved the desired outcome of strengthening the learners' subject knowledge and skills. Thereafter, the sample learner participants' November examination results were compared to those of the control group (all the other learners' examination results) at the end of 2017 when the learners were in Grade 10, and at the end of 2018 when the learners were in Grade 11.

Tables 6.3a and 6.3b below illustrate the sample learners' average marks in percentages versus the control group's marks for School A and B when the learners were in Grade 10 in 2017.

Table 6.3a *School A average marks in percentages of the sample and control group, Grade 10 learners in 2017*

Subject	Sample learners' average marks in percentages			Control group's average marks in percentages		
	March control test	June exams	September control test	March control test	June exams	September control test
Accounting	24,2	30,4	24	24	19,5	19
Business Studies	36,8	31	21,87	32	25	23
Economics	31,1	25,5	28,6	29	25	26

Table 6.3b *School B average marks in percentages of the sample and control group, Grade 10 learners in 2017*

Subject	Sample learners' average marks in percentages			Control group's average marks in percentages		
	March control test	June exams	September control test	March control test	June exams	September control test
Accounting	35,8	28,7	47,4	51	53	55
Business Studies	45,2	30,2	60,4	63	43	60
Economics	29,3	38	60,3	45	54	71

Table 6.3a shows that the results were higher for the sample learners at School A, except for the March Accounting control test, which had a similar result, and the Business Studies September control test, which was lower than the control group's result. At School B, the control group's results were higher than those of the sample learners, except for the Business Studies September control test result that was similar.

Tables 6.4a and 6.4b below reflect the results of the pre- and post-test averages of the sample learner participants in 2017, when they were in Grade 10.

Table 6.4a School A pre- and post-test averages in percentages of the sample learner participants in 2017

Subject	Intervention 1 pre-test	Intervention 1 post-test	Intervention 2 pre-test	Intervention 2 post-test
Accounting	48	81	8	38
Business Studies	39	70	66	88
Economics	35	65	48	64

Table 6.4b School B pre- and post-test averages in percentages of the sample learner participants in 2017

Subject	Intervention 1 Pre-test	Intervention 1 Post-test	Intervention 2 Pre-test	Intervention 2 Post-test
Accounting	45	81,6	12,3	34,5
Business Studies	60	88	86	96
Economics	63	78	60	73

The results show that there was an increase in the post-test results of all three subjects after the interventions were implemented at both schools.

Tables 6.5a and 6.5b illustrate the November examination average results of the sample learner participants versus the control group for both schools when the learners were in Grade 10 in 2017.

Table 6.5a School A November examination results of the sample learner participants versus the control group, Grade 10 in 2017

Subject	Sample learners' average marks in percentages	Control group's average marks in percentages
	November exams	November exams
Accounting	31,6	29
Business Studies	19,12	18,3
Economics	33,4	29,7

Table 6.5b School B November examination results of the sample learner participants versus the control group, Grade 10 in 2017

Subject	Sample learners' average marks in percentages	Control group's average marks in percentages
	November exams	November exams
Accounting	42	53,5
Business Studies	55,3	42
Economics	50	63

Table 6.5a shows that, after the interventions, the sample learners' November examination results were higher than those of the control group in all three subjects at School A. At School B, it was only the Business Studies result of the sample learners that was higher than the control group, while the control group's average results in Accounting and Economics were higher than the sample learner participants' averages. At School A, the biggest difference in the November examination results between the sample learners and the control group was in Economics with 3,8%. At School B, the biggest difference between the sample learners and the control group's examination results was 13% in both Business Studies and Economics.

6.3.2 Cycle 2: Grade 11 learners in 2018

The presentation of the results follows the same structure as that of Cycle 1.

Tables 6.6a and 6.6b illustrate the sample learners' average marks in percentages versus the control group for School A and B when the learners were in Grade 11 in 2018.

Table 6.6a *School A average marks in percentages of the sample learners and the control group when the learners were in Grade 11, 2018*

Subject	Sample learners' average marks in percentages			Control group's average marks in percentages		
	March control test	June exams	September control test	March control test	June exams	September control test
Accounting	32,3	24	43,8	26	11,3	24
Business Studies	27	25	34	32	21	35
Economics	41	22,5	45,9	42	26	50

Table 6.6b *School B average marks in percentages of the sample learners and the control group when the learners were in Grade 11, 2018*

Subject	Sample learners' average marks in percentages			Control group's average marks in percentages		
	March control test	June exams	September control test	March control test	June exams	September control test
Accounting	42,2	51,6	43,4	56	58,4	54
Business Studies	46	32,3	64,1	54,7	40,3	66,2
Economics	75,3	61,3	84,7	62	41	78

Table 6.6a reflects that at School A, the sample learners achieved higher marks for Accounting than the control group. In Business Studies and Economics, the control group achieved higher marks than the sample learners, except in the June examination for Business Studies. At School B, the control group's results were higher than those of the sample learners in Accounting and Business Studies. The sample learners achieved higher results in Economics than the control group. The sample learners and the control group of School B performed better than the sample learners and the control group of School A, except for the Accounting September control test where the sample learners of School A achieved a slightly higher result.

Tables 6.7a and 6.7b below reflect the pre- and post-test average results of the sample learners in Grade 11, 2018.

Table 6.7a School A pre- and post-test average results in percentages of the sample learner participants in Grade 11, 2018

Subject	Intervention 1 Pre-test	Post-test	Intervention 2 Pre-test	Post-test	Intervention 3 Pre-test	Post-test
Accounting	17,81	48,72	27	50,3	19,09	41,8
Business Studies	25	41,7	54,4	66,6	13,8	53,4
Economics	7,0	17	18,0	43	4,5	51,8

Table 6.7b School B pre- and post-test average results in percentages of the sample learner participants in Grade 11, 2018

Subject	Intervention 1 Pre-test	Post-test	Intervention 2 Pre-test	Post-test	Intervention 3 Pre-test	Post-test
Accounting	9,6	33,6	25,7	55,1	10,6	48,1
Business Studies	21	35	65	85	26,2	61,8
Economics	8	68	17	64	18,75	77,5

Similar to Cycle 1, Tables 6.7a and 6.7b show that there was an increase in the post-test results after the interventions at both schools. The biggest difference between the pre- and post-test results was in Economics for the third intervention, with a 47,3% difference at School A and 58,75% at School B.

Tables 6.8a and 6.8b below reflect the November examination average results in percentages for the sample learner participants versus the control group when the learners were in Grade 11 in 2018.

Table 6.8a School A November examination average percentage results of the sample learner participants versus the control group, Grade 11, 2018

Subject	Sample learners' average marks in percentages	Control group's average marks in percentages
	November exams	November exams
Accounting	25	20,7
Business Studies	26,6	26,3
Economics	32,8	33,7

Table 6.8b School B November examination average percentage results of the sample learner participants versus the control group, Grade 11, 2018

Subject	Sample learners' average marks in percentages	Control groups average marks in percentages
	November exams	November exams
Accounting	51,6	57,5
Business Studies	36,2	42
Economics	79,5	67,7

The tables show that at School A, the sample learners' average November examination marks for Accounting were higher than those of the control group. In Business Studies, the sample learners and the control group's results were similar. In Economics, the control group did better than the sample learners. The results also reflect that both the sample learners and the control group could not achieve a 30% result in Accounting and Business Studies and a 40% result in Economics at School A. At School B, the control group learners' average November examination marks for Accounting and Business Studies were higher than those of the sample learners, but the sample learners achieved a higher average result in Economics than the control group. Both the sample learners and the control group achieved a 50% and higher mark in Accounting and Economics, but not in Business Studies. At School A, the biggest difference in the November examination result between the sample learners and the control group was in Accounting with 4,3%. At School B, the biggest difference between the sample learners and the control group was in Economics with 11,8%.

6.3.3 Cycle 3: Grade 12 learners in 2019

The results follow the same structure as that of Cycles 1 and 2 for the sample learner participants and the control groups. In addition, the cohort learners' examination results (the learners who were originally selected as the learner participants in 2017, refer to Section 5.5.3) are also presented under this cycle. As was reported in Section 5.5.3, the researcher was only permitted to work with the learners until the end of June 2019. As such, the sample learners' June examination average results are compared to the control groups' June examination

results and not the November examination results as was the case under Cycles 1 and 2 above.

Tables 6.9a and 6.9b below show the March control test average percentage results of the sample learners and the control group when they were in Grade 12, 2019.

Table 6.9a *School A average marks in percentages of the sample learners and the control group, in Grade 12, 2019*

Subject	Sample learners' average marks in percentages: March control test	Control group's average marks in percentages: March control test
Accounting	34	12
Business Studies	38	43,8
Economics	25	40,5

Table 6.9b: *School B average marks in percentages of the sample learners and the control group, in Grade 12, 2019*

Subject	Sample learners' average marks in percentages: March control test	Control group's average marks in percentages: March control test
Accounting	41,9	55,9
Business Studies	54,4	51,1
Economics	62,8	53,1

Table 6.9a shows that at School A, the sample learners did better in Accounting than the control group did. In Business Studies and Economics, the control group did better than the sample learners did. At School B, the control group achieved a higher mark than the sample learners did in Accounting, while the sample learners did better than the control group in Business Studies and Economics.

Tables 6.10a and 6.10b below reflect the pre- and post-test average percentage results of the sample learners in 2019 when they were in Grade 12.

Table 6.10a School A averages of the pre- and post-test percentage results of the sample learner participants, Grade 12 in 2019

Subject	Intervention 1 Pre-test	Intervention 1 Post-test	Intervention 2 Pre-test	Intervention 2 Post-test
Accounting	10,3	37,6	4	10,8
Business Studies	29	35	6	18
Economics	23,4	46,2	11,3	34,4

Table 6.10b School B averages of the pre-test and post-test percentage results of the sample learner participants, Grade 12 in 2019

Subject	Intervention 1 Pre-test	Intervention 1 Post-test	Intervention 2 Pre-test	Intervention 2 Post-test
Accounting	3	53,7	2,1	19,4
Business Studies	31	50,1	4,9	35
Economics	27,6	65,8	7,4	51,7

Similar to Cycles 1 and 2, the tables reflect that there was an increase in the post-test results after the interventions at both schools. It is important to note that the pre-test average results are alarmingly low at both schools. The biggest average percentage between the pre- and post-tests result was in Accounting with 27,3% for School A and 50,7% for School B.

Table 6.11 reflects the sample learner participants' average percentage results in the June 2019 examination versus the control group's average percentage of Schools A and B.

Table 6.11 June 2019 examination average percentage results for both schools

Subject	School A: Sample learners, Grade 12	School A: Control group, Grade 12	School B: Sample learners, Grade 12	School B: Control Group, Grade 12
Accounting	37,6	23	30,15	41
Business Studies	24,2	27,3	37,4	29
Economics	21,8	31,6	49,4	41,3

Table 6.11 illustrates that the sample learners' June results were better than the control group in Accounting at School A, but the control group's results were better in Business Studies and Economics. At School B, the sample learners' June results for Economics and Business Studies were better than those of the control

group, but the control group's results for Accounting were better than the sample learners' results.

It should be noted that the researcher was able to obtain the November 2019 examination average results of the sample learners, which are reflected in Tables 6.12a and 6.12b below.

Table 6.12a *School A November examination average percentage marks of the sample learner participants over the three years, 2017 to 2019*

Subject	November 2017	November 2018	November 2019
Accounting	31,6	25	33,5
Business Studies	19,12	26,6	32,8
Economics	33,4	32,8	32,4

Table 6.12b *School B November examination average percentage marks of the sample learner participants over the three years, 2017 to 2019*

Subject	November 2017	November 2018	November 2019
Accounting	42	51,6	35
Business Studies	55,3	36,2	39,2
Economics	50	79,5	44,4

Table 6.12a shows that at School A, the sample learners could not achieve an average mark of 30% and above in Business Studies in both the 2017 and 2018 November examinations and in November 2018 for Accounting, despite the fact that they attended interventions. It also reflects that they could not achieve a 40% and above in all three subjects over the three-year period. Table 6.12b shows that the sample learners at School B did achieve a 50% and above in Business Studies and Economics in 2017, and in Accounting and Economics in 2018. They could not achieve a 40% and above in Business Studies in 2018, and in Accounting and Business Studies in 2019. Overall, the sample learners' results at School B were higher than those of School A in all three years.

Lastly, the examination average results over the three-year period of the cohort learners are reflected in Tables 6.12c and 6.12d below. These results are included under this cycle because these were the learners who were originally selected as the learner participants of this study (refer to Section 5.5.3).

Table 6.12c School A November examination average percentage marks of the cohort learners over the three years, 2017 to 2019

Subject	November 2017	November 2018	November 2019
Accounting	32	31	35
Business Studies	16,5	26,6	32
Economics	31	30,7	30,3

Table 6.12d School B November examination average percentage marks of the cohort learners over the three years, 2017 to 2019

Subject	November 2017	November 2018	November 2019
Accounting	46,2	34,4	33,2
Business Studies	32	32,5	41
Economics	72,3	76,0	45,5

Table 6.12c shows that, similar to Table 6.12a, the cohort learners could not achieve a mark of 30% and above in Business Studies, and they could not achieve an average mark of 50% and above in all three subjects, over the three-year period at School A. Table 6.12d shows that the cohort learners at School B only achieved an average result of more than 50% in Economics in 2017 and 2018, compared to the sample learners who achieved 50% and more in Business Studies and Accounting as well. Overall, the results reflect that the cohort learners at School B did better than the cohort learners at School A, but they too could not achieve a mark of 50% and above in the November 2019 examination in all three subjects.

The next two tables (Tables 6.13a and 6.13b) reflect the absenteeism of the cohort learners over the three-year period in which the interventions were implemented. The cohort learners attended the interventions for the three years but some of them did not attend all the interventions each year. The data were obtained from the cohorts' official November results which reflected the days they were absent during each school year. Absenteeism at both schools in this study affected the attendance of the learner participants who were originally selected in 2017. Consequently, only 27 learners from the 60 learners selected attended the interventions over the three years, while the remaining 33 learners did not (refer to Section 5.5.3).

Table 6.13a School A cohort of learners' absenteeism for 2017 to 2019

Subject	Learners	2017: Number of days absent	2018: Number of days absent	2019: Number of days absent until June
Accounting	Learner 1	12	15	2
	Learner 2	14	12	2
	Learner 3	23	18	1
	Learner 4	5	11	1
Business Studies	Learner 1	15	19	2
	Learner 2	3	7	6
	Learner 3	14	18	9
	Learner 4	25	30	7
	Learner 5	5	10	5
	Learner 6	48	52	9
	Learner 7	16	14	9
	Learner 8	2	4	4
Economics	Learner 1	12	9	6
	Learner 2	9	12	8
	Learner 3	14	8	3

Table 6.13b School B cohort of learners' absenteeism for 2017 to 2019

Subject	Learners	2017: Number of days absent	2018: Number of days absent	2019: Number of days absent until June
Accounting	Learner 1	6	6	0
	Learner 2	6	2	0
	Learner 3	14	5	0
	Learner 4	6	11	0
	Learner 5	8	3	2
Business Studies	Learner 1	16	7	2
Economics	Learner 1	4	1	0
	Learner 2	2	9	4
	Learner 3	1	2	0
	Learner 4	1	0	0
	Learner 5	3	3	0
	Learner 6	2	0	0

Table 6.13a shows that at School A, three learners were absent during the second intervention in 2017. There were 11 learners absent during the interventions in 2018, when two learners were absent for two of the three interventions. There were six learners absent during the interventions in 2019.

At School B, six learners were absent during the first intervention in 2017 and in 2018, four learners were absent for two of the three interventions. There were four learners absent during the interventions in 2019.

Tables 6.14a and 6.14b below illustrate the absenteeism of the teachers over the same three-year period. The data were obtained from the official teacher attendance registers at both schools.

Table 6.14a School A teacher absenteeism from 2017 to 2019

Subject	Teacher	2017: Number of days absent	2018: Number of days absent	2019: Number of days absent until June
Accounting	Teacher	5	10	7
Business Studies	Teacher	37	10	4
Economics	Teacher 1	24	12	6
	Teacher 2	2		

Table 6.14b School B teacher absenteeism from 2017 to 2019

Subject	Teacher	2017: Number of days absent	2018: Number of days absent	2019: Number of days absent until June
Accounting	Teacher	6	46	2
Business Studies	Teacher 1	6	21	3
	Teacher 2	5	6	7
Economics	Teacher	12	0	1

Tables 6.14a and 6.14b illustrate the days that the teachers were absent in 2017, 2018 and until June 2019. At School A, the Business Studies teacher was absent 37 days in 2017 and at School B, the Accounting teacher was absent 48 days in 2018.

6.4 RESULTS OF REMAINING DATASETS

The results of the remaining data sets are presented in this section. The learner participants' responses to the remaining five sections of the questionnaire are presented first, then their responses in the two reflection forms, and thereafter, their responses in the two focus group discussions. This is followed by the responses from the focus group discussions with the parents of the learner participants and thereafter, the responses of the teachers, subject advisers, principals, circuit manager and lecturers from the semi-structured interviews.

6.4.1 Learner participants' responses to the remaining five sections of the questionnaire

The remaining five sections of the questionnaire had both quantitative and qualitative answers. The quantitative responses are presented first, followed by the qualitative responses. At School A and B, 20 learners completed the questionnaire (refer to Section 5.5.3 and Appendix R).

6.4.1.1 Quantitative responses of the learner participants in both schools

Sixty-one questions related to their school were asked. The answers of the learners of School A and School B were treated jointly and the responses are presented in the format that the questions were asked.

Table 6.15 *Learners' responses to questions related to their school*

Question asked: How do you feel about each of the following statements related to your school?	Number of responses from the 40 learners and percentages			
	Yes	No	Sometimes	Not sure
I have a voice in classroom and/or school decisions	18 (45%)	4 (10%)	14 (35%)	2 (5%)
My opinions are respected in this school	11 (27,5%)	8 (20%)	13 (32,5%)	8 (20%)
Teachers try to engage me in classroom discussions	27 (67,5%)	2 (5%)	9 (22,5%)	1 (2,5%)
I am challenged academically by my classwork	17 (42,5%)	4 (10%)	15 (37,5%)	
I have opportunities to be creative in classroom assignments and projects	29 (72,5%)	2 (5%)	6 (15%)	1 (2,5%)
I received good quality teaching at this school	26 (65%)	2 (5%)	9 (22,5%)	1 (2,5%)
I can be who I am at this school	30 (75%)	1 (2,5%)	6 (15%)	1 (2,5%)
This school makes me feel confident about who I am	17 (42,5%)	9 (22,5%)	9 (22,5%)	3 (7,5%)
I am involved in different activities at my school	15 (37,5%)	17 (42,5%)	4 (10%)	1 (2,5%)

Table 6.16 *Learners' responses to questions relating to activities during the school year*

Question asked: During this school year, how often have you done each of the following?	Number of responses from the 40 learners and percentages			
	Often	Sometimes	Only once/ twice	Never
Asked or answered questions in class	15 (37,5%)	22 (55%)	3 (7,5%)	
Talked to a teacher about your classwork	17 (42,5%)	10 (25%)	9 (22,5%)	3 (7,5%)
Made a class presentation	18 (45%)	9 (22,5%)	5 (12,5%)	5 (12,5%)
Received helpful feedback from teachers on your work	20 (50%)	13 (32,5%)	6 (15%)	1 (2,5%)
Discussed questions in class that do not have one clear answer	21 (52,5%)	14 (35%)	2 (5%)	
Used what you have learned in one class (or subject area) to enrich	16 (40%)	12 (30%)	4 (10%)	5 (12,5%)

your work in another class (or subject area)				
Written a report, essay, etc. of fewer than five pages	22 (55%)	11 (27,5%)	2 (5%)	5 (12,5%)
Written a report, essay, etc. of more than five pages	5 (12,5%)	9 (22,5%)	1 (2,5%)	25 (62,5%)
Worked on a project during which you needed to find information not available in your textbooks	22 (55%)	12 (30%)	6 (15%)	
Written tests with multiple-choice questions	27 (67,5%)	10 (25%)	2 (5%)	1 (2,5%)
Written tests with longer answers such as paragraphs, essay questions or problems that you need to solve	27 (67,5%)	8 (20%)	3 (7,5%)	1 (2,5%)
Worked on a project during which you needed to interact with people outside of your school (for example, conduct interviews in your community)	8 (20%)	10 (25%)	11 (27,5%)	10 (25%)
Worked on a project in a group with other learners	14 (35%)	17 (42,5%)	5 (12,5%)	4 (10%)
Discussed your marks with teachers	8 (20%)	11 (27,5%)	12 (30%)	9 (22,5%)
Discussed ideas from your classes, your reading, or your homework with teachers outside of class	4 (10%)	15 (37,5%)	8 (20%)	11 (27,5%)
Discussed ideas from your classes, your reading, or your homework with other people outside of class (e.g. friends, family, members of your community)	17 (42,5%)	14 (35%)	7 (17,5%)	2 (5%)
Talked to or worked with at least one learner from a different race or culture	19 (47%)	14 (35%)	4 (10%)	3 (7,5%)
Talked to or worked with at least one learner who is different from you in terms of religion, political opinion, family income, or personal values	20 (50%)	15 (37,5%)	3 (7,5%)	2 (5%)
Talked to a teacher in the school about career goals	14 (35%)	11 (27,5%)	9 (22,5%)	6 (15%)
Talked to a teacher in the school about how to apply for university	13 (32,5%)	11 (27,5%)	8 (20%)	8 (20%)
Attended class with all your homework completed	17 (42,5%)	21 (52,5%)	1 (2,5%)	1 (2,5%)
Attended class with no homework completed	3 (7,5%)	14 (35%)	12 (30%)	11 (27,5%)
Prepared a draft of a report, essay, etc. before handing it in	24 (60%)	12 (30%)	3 (7,5%)	1 (2,5%)

Table 6.17 *Learners' responses to the extent to which they thought their school emphasises specific issues*

Question asked: To what extent do you think your school emphasises the following?	No of responses from the 40 learners and percentages			
	Very much	Sometimes	Seldom	Never
Memorising facts and figures	21 (52,5%)	16 (40%)	1 (2,5%)	
Understanding information and ideas	17 (42,5%)	19 (47,5%)	2 (5%)	
Analysing ideas in depth	13 (32,5%)	16 (40%)	7 (17,5%)	1 (2,5%)
Exploring new ideas	21 (52,5%)	15 (37,5%)	4 (10%)	
Using computers for schoolwork	8 (20%)	17 (42,5%)	4 (10%)	11 (27,5%)
Spending a lot of time studying, doing schoolwork or doing homework	15 (37,5%)	21 (52,5%)	3 (7,5%)	1 (2,5%)
Spending a lot of time preparing for the end-of-year tests or exams	20 (50%)	16 (40%)	2 (5%)	2 (5%)
Continuing to study after school (i.e. FET College, university)	27 (67,5%)	5 (12,5%)	4 (10%)	2 (5%)
Participating in school events and activities (e.g. sports, plays, choir)	17 (42,5%)	12 (30%)	3 (7,5%)	7 (17,5%)

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Table 6.18 *Learners' responses to questions about how much the school contributed to their growth*

Question asked: How much has your experience at this school contributed to your growth in the following areas?	No of responses from the 40 learners and percentages			
	A lot (80 -100%)	Average (40 – 60%)	Very little (20%)	Not at all (0%)
Thinking critically	17 (42,5%)	22 (55%)		
Solving real-world problems	10 (25%)	23 (57,5%)	4 (10%)	1 (2,5%)
Speaking well	27 (67,5%)	11 (27,5%)	2 (5%)	
Writing well	23 (57,5%)	14 (35%)	1 (2,5%)	
Reading and understanding difficult material	17 (42,5%)	17 (42,5%)	5 (12,5%)	1 (2,5%)
Using computers and the internet	10 (25%)	10 (25%)	13 (32,5%)	7 (17,5%)
Being an independent learner	14 (35%)	19 (47,5%)	4 (10%)	2 (5%)
Understanding yourself	29 (72,5%)	8 (20%)	3 (7,5%)	
Working well with others	22 (55%)	17 (42,5%)		
Developing skills needed for work when you have finished school	19 (47,5%)	14 (35%)	6 (15%)	
Gaining awareness of conditions in the community outside of school	17 (42,5%)	11 (27,5%)	10 (25%)	2 (5%)
Developing clear career goals	27 (67,5%)	10 (25%)	2 (5%)	
Understanding the relevance of what you learn in school for life after school	24 (60%)	15 (37,5%)		
Understanding people of other racial and ethnic backgrounds	28 (70%)	7 (17,5%)	4 (10%)	
Treating people with respect	32 (80%)	6 (15%)	1 (2,5%)	
Developing personal beliefs and values	30 (75%)	6 (15%)	3 (7,5%)	

Table 6.19 *Learners' responses to questions on things they have done during high school*

Question asked: Which of the following have you done during high school?	Yes	No
Participated in community service or volunteer work	15 (37,5%)	25 (62,5%)
Participated in work experience programme(s)	14 (35%)	26 (65%)
Taken part in any educational activities or programme(s) offered by a local university	22 (55%)	18 (45%)
Taken any additional subjects beyond what is compulsory	14 (35%)	26 (65%)

Table 6.20 *Learners' responses to questions related to time management*

Question asked: How many hours do you spend on average per week (Monday-Sunday) doing each of the following activities?	None	1 or fewer	2 - 5	6 - 9	10 or more
Doing written homework		9 (22,5%)	18 (45%)	9 (22,5%)	4 (10%)
Reading and studying for class	2 (5%)	7 (17,5%)	11 (27,5%)	14 (35%)	6 (15%)
Reading for yourself (books, magazines, newspapers, online articles, etc.)	8 (20%)	11 (27,5%)	8 (20%)	5 (12,5%)	8 (20%)
Participating in school-sponsored activities (clubs, sports, learner governance, etc.)	19 (47,5%)	6 (15%)	3 (7,5%)	7 (17,5%)	5 (12,5%)
Practising a sport and/or musical instrument and/or rehearsing for a performance	17 (42,5%)	10 (25%)	3 (7,5%)	3 (7,5%)	7 (17,5%)
Working for pay	24 (60%)	3 (7,5%)	7 (17,5%)	1 (2,5%)	4 (10%)
Doing volunteer work (not for pay)	23 (57,5%)	5 (12,5%)	4 (10%)	6 (15%)	1 (2,5%)
Exercising	8 (20%)	17 (42,5%)	8 (20%)	3 (7,5%)	4 (10%)
Watching television, playing video games	3 (7,5%)	6 (15%)	18 (45%)	5 (12,5%)	8 (20%)
Surfing the internet or chatting online	6 (15%)	6 (15%)	17 (42,5%)	5 (12,5%)	5 (12,5%)
Talking on the phone (including cell phones)	7 (17,5%)	13 (32,5%)	15 (37,5%)	3 (7,5%)	2 (5%)
Hanging out or socialising with friends outside of school	7 (17,5%)	7 (17,5%)	14 (35%)	5 (12,5%)	3 (7,5%)

Travelling to and from school by taxi	27 (67,5%)	3 (7,5%)	2 (5%)	2 (5%)	5 (12,5%)
Travelling to and from school by bus	19 (47,5%)	10 (25%)	1 (2,5%)	1 (2,5%)	8 (20%)
Walking to and from school	17 (42,5%)	14 (35%)	-	4 (10%)	4 (10%)
Taking care of family members (ill parents, younger siblings, grandparents and so on)	16 (40%)	7 (17,5%)	2 (5%)	7 (17,5%)	8 (20%)
Doing chores at home (preparing food, cleaning, washing clothes, etc.)	7 (17,5%)	6 (15%)	6 (15%)	6 (15%)	15 (37,5%)

Table 6.21 *Learners' responses to questions relating to the importance of activities*

Question asked: How important are each of these activities to you?	Not at all	A little	Somewhat important	Very important	Top priority
Doing written homework	1 (2,5%)	1 (2,5%)	4 (10%)	24 (60%)	9 (22,5%)
Reading and studying for class	4 (10%)	1 (2,5%)	3 (7,5%)	18 (45%)	14 (35%)
Reading for yourself (books, magazines, newspapers, online articles, etc.)	2 (5%)	6 (15%)	17 (42,5%)	12 (30%)	2 (5%)
Participating in school-sponsored activities (clubs, sports, learner governance, etc.)	9 (22,5%)	14 (35%)	8 (20%)	7 (17,5%)	2 (5%)
Practising a sport and/or musical instrument and/or rehearsing for a performance	10 (25%)	13 (32,5%)	9 (22,5%)	7 (17,5%)	1 (2,5%)
Working for pay	12 (30%)	11 (27,5%)	6 (15%)	5 (12,5%)	6 (15%)
Doing volunteer work (not for pay)	11 (27,5%)	15 (37,5%)	4 (10%)	6 (15%)	4 (10%)
Exercising	4 (10%)	12 (30%)	12 (30%)	6 (15%)	5 (12,5%)
Watching television, playing video games	6 (15%)	13 (32,5%)	13 (32,5%)	7 (17,5%)	1 (2,5%)
Surfing the internet or chatting online	8 (20%)	12 (30%)	10 (25%)	7 (17,5%)	2 (5%)
Talking on the phone (including cell phones)	10 (25%)	15 (37,5%)	10 (25%)	3 (7,5%)	2 (5%)
Hanging out or socialising with friends outside of school	8 (20%)	9 (22,5%)	10 (25%)	9 (22,5%)	1 (2,5%)
Travelling to and from school by taxi	24 (60%)	5 (12,5%)	4 (10%)	3 (7,5%)	4 (10%)

Travelling to and from school by bus	14 (35%)	4 (10%)	4 (10%)	7 (17,5%)	9 (22,5%)
Walking to and from school	12 (30%)	6 (15%)	3 (7,5%)	9 (22,5%)	7 (17,5%)
Taking care of family members (ill parents, younger siblings, grandparents and so on)	7 (17,5%)	3 (7,5%)	5 (12,5%)	7 (17,5%)	17 (42,5%)
Doing chores at home (preparing food, cleaning, washing clothes, etc.)	4 (10%)	2 (5%)	7 (17,5%)	9 (22,5%)	17 (42,5%)

Table 6.22 *Learners' responses to questions relating to their beliefs about learning*

Question asked: How do you feel about the following statements related to your beliefs about learning?	Number of responses from the 40 learners and percentages			
	Strongly disagree	Disagree	Agree	Strongly agree
Learning is very important to me			11 (27,5%)	28 (70%)
I have the skills and ability to complete my work successfully		1 (2,5%)	19 (47,5%)	19 (47,5%)
I try very hard when doing my schoolwork		1 (2,5%)	20 (50%)	18 (45%)
I am motivated to do my schoolwork because I want to learn new things			22 (55%)	17 (42,5%)
I like it when I can be creative at school	2 (5%)		28 (70%)	9 (22,5%)
I like working on problems that are difficult and require a lot of thinking	3 (7,5%)	8 (20%)	17 (42,5%)	11 (27,5%)
My schoolwork makes me curious to learn about other things	10 (25%)		19 (47,5%)	10 (25%)
I like discussions when there is no clear right or wrong answer	1 (2,5%)	7 (17,5%)	18 (45%)	13 (32,5%)
My marks are important to me		1 (2,5%)	14 (35%)	24 (60%)
I feel good about myself as a learner			15 (37,5%)	24 (60%)
I feel good about myself as a person		1 (2,5%)	13 (32,5%)	25 (62,5%)

Table 6.23 *Learners' responses to questions relating to activities that excite/encourage them to learn*

Question asked: To what extent does each of the following types of activity excite or encourage you to learn?	Number of responses from the 40 learners and percentages			
	Not at all	A little	Some	Very much
Reading on my own	2 (5%)	7 (17,5%)	12 (30%)	18 (45%)
Writing work/ projects (e.g. essays)	2 (5%)	7 (17,5%)	13 (32,5%)	17 (42,5%)
Research work/projects	2 (5%)	6 (15%)	16 (40%)	15 (37,5%)

Table 6.24 *Learners' responses to a question relating to their marks*

Question asked: In what category do MOST of your marks fall THIS YEAR?	Number of responses from the 40 learners and percentages
Achievement level 7 (80% – 100%)	7 (17,5%)
Achievement level 6 (70% – 79%)	10 (25%)
Achievement level 5 (60% – 69%)	15 (37,5%)
Achievement level 4 (50% – 59%)	4 (10%)
Achievement level 3 (40% – 49%)	1 (2,5%)
Achievement level 2 (30% – 39%)	-
Achievement level 1 (0% – 29%)	-
Don't know	-

Table 6.25 *Learners' responses to questions relating to what your plans are after completing Grade 12*

Question asked: In what category do MOST of your marks fall THIS YEAR?	Number of responses from the 40 learners and percentages
Go to University/college	36 (90%)
Look for work	1 (2,5%)
I don't know	3 (7,5%)

Overall, most of the learners responded that they could be who they wanted to be at school; they often wrote tests with multiple-choice questions, with longer answers such as paragraphs, essay questions or problems that they needed to solve; the school emphasised continued studies after school; the school contributed to treating people with respect; the learners did not participate in work

experience programme(s) and did not take any additional subjects beyond what were compulsory; most of the learners did not spend any time working for pay; they thought that doing written homework was very important and that travelling to and from school by taxi was not important to them; they strongly agreed that learning was very important to them; they also agreed that they liked it when they could be creative at school; reading on their own was exciting or encouraged them to learn; most of the learners' expected their marks to be on achievement level 5 (60 – 69%) and most of them wanted to go to university/college after completing Grade 12.

Although most of the learners responded that they did written homework, only four learners (10%) spent more than 10 hours on average per week doing written homework. Most of the learners spent time (10 or more hours) doing chores at home. Most of the learners responded that they were not involved in different activities at their school, but in contrast, most of the learners responded that they took part in educational activities or programme(s) offered by a local university. Most of the learners replied that they never wrote a report, essay, etc. of more than five pages.

Similar responses were that the school never emphasises using computers for schoolwork and that the school only contributed a little to their growth using computers and the internet. The next section presents the qualitative responses of the learners' questionnaire.

6.4.1.2 Qualitative responses of the learners' questionnaire

Six qualitative questions were asked in the learners' questionnaire. These were:

1. Did you attend another school before this one, and why did you come to this school?
2. List the university/college funding opportunities and financial support that you know of.
3. If you are selected to a university/college, what would you like to study?
4. Why do you want to study it?

5. What subject choices are required for your preferred study field?
6. What are the minimum requirements for your preferred study field?

Three themes were identified from the learners' responses to the questions, namely reasons for attending the school, a vision of obtaining a tertiary qualification, and career knowledge and skills. A summary of the sub-themes under each theme is provided below.

Theme 1: Reasons for attending the school

Two sub-themes were identified from the learners' responses, namely reasons related to the school's reputation, and other reasons.

Sub-theme 1: Reasons related to the school's reputation

At school A, four learners indicated that they attended the school because they needed quality education, which they thought the school could provide. There were not any responses from the learners of School B.

Sub-theme 2: Other reasons for attending the school

At School A, five learners replied that the school is near their homes and their family for help and support. Two learners answered that their parents decided to send them to the school; two learners answered that transport is free; for one learner the previous school was overcrowded and many learners failed, and one learner stated the reason for taking English as home language was that it would help her with tertiary studies. Two learners indicated that the previous school only taught until Grade 9 (Junior Secondary School), and they wanted to complete Grade 12. There were not any responses from the learners of School B.

Theme 2: Vision of obtaining a tertiary qualification

Both schools' learners said that they wanted to study their preferred study field because they love, enjoy or have an interest/passion in the specific careers; to make life better for themselves and their parents; to help others; to make a difference, and to prove to themselves that they can be something.

Theme 3: Specific post-school studies and career knowledge and skills

Theme 3 reflected on the learners' post-school studies and career knowledge and skills as well as whether or not the subjects they were doing were aligned with the tertiary qualification they wanted to study for. The learners identified business management, human resource management, teaching, B Com, tourism, marketing, chef, social worker, actress, engineer, and tour operator as their career choices. At School A, all the learners knew what they wanted to study. At School B, two learners did not know what they wanted to study.

The learners from both schools identified Business Studies, Economics, Mathematics, Mathematical Literacy, Accounting, English, Tourism and Physical Science as required subjects for their preferred study field. Nine learners at School A and eight learners at School B did not know which subjects were required for their preferred study field. One learner said that he had the right subject choices.

6.4.2 Results from the learners' reflection forms

Two reflection forms were administered to the learner participants. The reflection form consisted of 11 quantitative questions and two qualitative questions (13 in total). The responses to the quantitative questions are presented first, and thereafter, the responses to the two qualitative questions.

6.4.2.1 Quantitative responses

The quantitative questions focused on the impact or effect of the interventions on some of the aspects in the sub-dimensions of the conceptual framework, namely:

- subject/content knowledge
- language and logical thinking skills
- application skills
- critical analysis and problem-solving skills
- debating and communication skills
- research skills
- mathematical skills

As reported under Section 5.5.3, the purpose of the first reflection form was for the learners to reflect on the five intervention sessions that were implemented in 2017 (two) and 2018 (three), and to indicate if the interventions assisted them academically (refer to Appendix R).

Table 6.26 Reflection form 1: Learners' quantitative responses to the questions asked

Did the interventions help you with the following?	School A: 20 learners		School B: 20 learners	
	Helped me a little	Helped me a lot	Helped me a little	Helped me a lot
Subject/content knowledge	9 (45%)	9 (45%)	10 (50%)	10 (50%)
Language and logical thinking skills		14 (70%)	10 (50%)	
Application skills		12 (60%)	13 (65%)	
Critical analysis		8 (40%)	9 (4%)	9 (45%)
Problem-solving		10 (50%)	13 (65%)	
Debating and communication skills		13 (65%)	10 (50%)	
Research skills		13 (6%)	13 (65%)	
Mathematical skills	9 (45%)		11 (55%)	

Table 6.27a School A: Did the interventions help to improve your marks?

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	3	15,0	15,0	25,0
	Yes, it helped me a lot	15	75,0	75,0	100,0
	Total	20	100,0	100,0	

Table 6.27b School B: Did the interventions help to improve your marks?

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	10	50,0	50,0	55,0
	Yes, it helped me a lot	9	45,0	45,0	100,0
	Total	20	100,0	100,0	

At School A, 18 (90%) of the learners responded that the interventions helped them to improve their marks. At School B, 19 (95%) of the learners responded that the interventions helped them to improve their marks.

Reflection form 2

The learners' responses to the questions asked in reflection form 2 after the last two interventions in May 2019 were completed, are presented below in Table 6.28, Table 6.29a and Table 6.29b.

Table 6.28 *Reflection form 2: Learners' quantitative responses to the questions asked*

Did the interventions help you with the following?	School A: 20 learners		School B: 17 learners	
	Helped me a little	Helped me a lot	Helped me a little	Helped me a lot
Subject/content knowledge		11 (55%)	10 (58,8%)	
Language and logical thinking skills	9 (45%)		15 (88,2%)	
Application skills	7 (35%)		9 (52,9%)	
Critical analysis	9 (45%)		9 (52,9%)	
Problem-solving		10 (50%)	11 (64,7%)	
Debating and communication skills	8 (40%)	8 (40%)	7 (41,2%)	
Research skills		12 (60%)	9 (52,9%)	
Mathematical skills		8 (40%)	9 (52,9%)	

Table 6.29a *School A: Did the interventions help to improve your marks?*

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Yes, it helped me a little	6	30,0	30,0	30,0
	Yes, it helped me a lot	13	65,0	65,0	95,0
	No answer	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Table 6.29b School B: Did the interventions help to improve your marks?

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	I am not sure (no change)	1	5,9	5,9	5,9
	Yes, it helped me a little	8	47,1	47,1	52,9
	Yes, it helped me a lot	8	47,1	47,1	100,0
	Total	17	100,0	100,0	

At School A, 19 (95%) of the learners responded that the interventions helped them to improve their marks. At School B, 16 (94,2%) of the learners responded that the interventions helped them to improve their marks.

6.4.2.2 Qualitative responses

The two qualitative questions were, (i) Was there anything else that you have learnt? If yes, please explain it in a few sentences; and (ii) Do you have any other comments or suggestions? Twelve themes were identified from the learners' responses, based on the sub-dimensions of the conceptual framework and the research questions, these were:

1. Learning to collaborate
2. An improved understanding of content
3. Motivated to improve academic performance
4. Developing written communication skills
5. Learners' view of the purpose of the interventions
6. Developing critical analytical skills
7. Learning to scaffold content
8. Independent learning
9. Developing self-confidence
10. Improving learners' marks
11. Learners' understanding of the importance of pure Mathematics to develop problem-solving skills
12. Distinguishing between the context of school and university

A summary of the response under each theme is provided below.

Theme 1: Learning to collaborate

Three learners responded that one could learn and gain information from the other learners in the class. Three learners also commented that if one is struggling, one should ask people (learners and teachers), one could ask one's classmates to assist in order to understand the work. Two learners responded that it helped them to work in a team, and three learners indicated that their communication skills improved during the interventions.

Theme 2: An improved understanding of content

The following improvements were reported: How to answer Accounting and Economics questions properly (five learners); how to answer multiple-choice (three learners), essay and difficult questions (five learners); learn different ways to calculate different things in Accounting (one learner); how to answer an income statement question (one learner); how graphs work in Economics (one learner); to do bookkeeping and to understand the work (four learners); that Economics is all around her (one learner); understand the question papers better (two learners).

Theme 3: Motivated to improve academic performance

Seven learners responded that the interventions helped them a lot and the tutors gave the best quality of work and information, and eight learners responded that there must be more interventions to support them.

Theme 4: Developing written communication skills

Five learners replied that they can write essays now, are more confident when writing (one learner), have gained research skills to look for answers of given questions (one learner); how to summarise the work (one learner) and how to study long questions (four learners).

Theme 5: Learners' view of the purpose of the interventions

Four learners replied that the interventions must be on new work and not work that was already covered and tested on.

Theme 6: Developing critical analytical skills

Three learners indicated that they had learnt to answer short questions; to interpret questions much better (one learner); to study long questions in an easy way (four learners) and to analyse long questions (two learners); to take their time when doing a question (two learners); that they can debate in Economics and that it changes (one learner); to think before you answer and consider all your answers (two learners).

Theme 7: Learning to scaffold content

One learner replied that he/she could break up the work in smaller chunks and apply the work that was explained to them.

Theme 8: Independent learning

Two learners said that they learnt to be independent and to do their work, and how to manage their time.

Theme 9: Developing self-confidence

Four learners answered that the interventions helped them to believe in themselves. They appreciated the individual attention and learnt to overcome obstacles.

Theme 10: Improving learners' marks

Two learners indicated that their marks had improved.

Theme 11: Learners' understanding of the importance of pure Mathematics to develop problem-solving skills

One learner's recommendation was to include Mathematics in the interventions.

Theme 12: Distinguishing between the context of school and university

One learner referred to the difference between school and university, and one learner learnt that at university there are still things that they are going to experience which they did not know.

6.4.3 Results of the learner participants' focus group discussions

The three focus group discussions with the learners took place at School A on 10 May 2019 and the other three at School B on 17 May 2019. At School A, the first group consisted of six Accounting learners, the second group of seven Business Studies learners, and the third group of 10 Economics learners, totalling 23 learners. At School B, the first group consisted of six Accounting learners, the second group of eight Business Studies learners, and the third group of 10 Economics learners, totalling 24 learners.

The same questions were posed to the learners in the different discussion groups. These were (i) about their vision for the future, (ii) whether they wanted to study or find work after completing Grade 12, (iii) about their career choices, (iv) if the subjects they were doing were the right ones for the career they wanted to study, (v) their perception of school versus university/college life, and (vi) what their expectations of university or college life were. A first theme identified in the learners' responses was **Learners' vision, perceptions and career choices for the future and post-school studies**, with four sub-themes, namely:

1. Learners' vision for the future
2. Learners' future career choices
3. Learners' perception of the difference between school and university
4. Learners' perception of post-school studies

A summary of their responses is provided under each sub-theme below.

Sub-theme 1: Learners' vision for the future

All the learners from both schools wanted to complete Grade 12.

Sub-theme 2: Learners' future career choices

At School A, 17 learners wanted to continue studying at a university or a college and had an idea of what they wanted to become, and six learners wanted to find work after Grade 12. At School B, all 24 learners wanted to study. Eighteen of the learners were unsure about what they want to study, but they were sure that they had the right subjects to study further.

Sub-theme 3: Learners' perception of the difference between school and university

All the learners thought that school and university were different.

Sub-theme 4: Learners' perception of post-school studies

At School A, the learners' perceptions of post-school studies were that it is going to be more difficult, uncertain, the challenge of language, and it is going to be life-changing. At School B, the learners answered that they will have to adapt to a new environment, must be independent, not to succumb under peer pressure, and must be willing to make sacrifices.

A second theme that was identified from the learners' responses was **the learners' perceptions of how the school prepares them for post-school studies**. This theme covered the learners' perceptions of how the school prepares them for post-school studies in terms of (i) subject choices, (ii), academic preparation (iii), career counselling (iv) information, for post-school studies (v) and development of learners' soft skills. Each of these sub-themes are summarised below.

Sub-theme 1: Subject choices – school's lack of advice

At School A, all 23 learners answered that the school did not help them to select their subjects for Grade 10. At School B, 23 of the 24 learners answered that the school did not help them with their subject choices in Grade 10, while one learner said that he/she had some assistance.

Sub-theme 2: School's academic preparation for post-school studies

At School A, 16 of the 23 learners answered that the school prepared them academically for university/college life. Seven learners answered that the school did not prepare them academically for post-school studies. At School B, all 24 learners agreed that the school did not prepare them academically for university/college life.

Sub-theme 3: Schools' lack of career counselling

At both schools, all the learners answered that the schools did not offer career counselling. At School B, the only career counselling that the learners received was in the Life Orientation classes. The learners said that a career exhibition day was arranged at both schools at the beginning of their Grade 12 year, where different post-school institutions came to talk to them about further studies.

Sub-theme 4: School's lack of providing information for post-school studies

At School A, 17 learners responded that they did not receive help from the school on how to select a university/college and how to apply to a post-school institution. They also did not receive assistance regarding career choices, and how to apply for NSFAS or other bursaries and loans. Six learners responded that a few teachers helped them to do these things. At School B, all the learners responded that during the Life Orientation classes and at career exhibitions the school provided them with information about university and college studies, and how to apply, but they indicated that they did not receive assistance with career choices and how to apply for bursaries and loans.

Sub-theme 5: Schools' lack of developing learners' soft skills

At both schools, the learners agreed that the school did not prepare them socially for university/college life.

6.4.4 Results of the parent focus group discussions

At School A, 30 parents and at School B, 20 parents attended the focus group discussions (refer to Section 5.5.3 and Appendix R). The discussion points in the

focus groups were (i) how the parents viewed their roles and responsibilities towards their children, (ii) what their perceptions were about the teachers' role in different aspects of their child's schooling, and (iii) what the school's role and responsibilities was in preparing the learners for post-school studies.

Two themes were identified from the parents' responses, namely:

1. The parent's role and responsibilities in assisting their children at school.
2. The parents' perceptions of the school's role and responsibilities in educating their children.

A summary of their responses is provided under each theme below.

Theme 1: The parents' role and responsibilities in assisting their children at school

The question was posed to the parents if they were supportive and involved in the schooling of their child(ren). It was asked to determine the parents' thoughts regarding their role and responsibilities towards their child(ren)'s schooling.

The overall responses of the parents were that they encouraged and supported their children. At School B, the parents raised the issue that they must make an effort to do research to guide and support their children. They are interested in their children, but the children give them the impression that they understand the work and do not need any assistance. After the test results, it was evident that the children were struggling and did not fully understand the work. They also indicated that they were not involved in [their children's] extramural activities at school.

Theme 2: The parents' perceptions of the school's role and responsibilities towards educating their children

Four sub-themes were identified from the parents' responses under this theme. These were:

1. Support provided to the learners
2. The school's communication with the parents

3. Parents' perception of the school and teachers' roles
4. Learners' preparation for post-school studies

The responses are summarised under each of these sub-themes below.

Sub-theme 1: Support provided to the learners

At School A, the parents agreed that the school gives the learners support by providing them with resources and previous examination papers. At School B, the parents were concerned about academic support through extra classes that were only offered for certain subjects.

Sub-theme 3: The school's communication with the parents

The parents responded that the school has a responsibility to contact them if there is something wrong and that they, the parents, in turn have a responsibility to let the school know if there is something wrong at home. They indicated that communication from the school is predominantly through letters (hard copies). The parents pointed out that the learners sometimes forget to give the letters to the parents. At both schools, the parents agreed that there was not effective communication from the schools when learners were absent.

Sub-theme 2: Parents' perception of the school and teachers' roles

At both schools, the parents responded that the learners must understand the work to be able to do the homework at home, and that the teachers must explain the work and elaborate on the work, and must give attention to all the learners.

Sub-theme 2: Learners' preparation for post-school studies

The parents of both schools said that the school did not help the learners in Grade 9 with subject choices and that the school had a responsibility to help the learners. They indicated that both schools had career days where institutions from outside came to the schools. The parents said that the teachers must advise the learners about university requirements and the language admission requirements. At School B, the parents indicated that only the top 10 learners were prepared for post-school studies.

6.4.5 Results of the semi-structured interviews with the remaining participants

The responses from the teachers, subject advisers, principals, the circuit manager and lecturers in their semi-structured interviews are presented below.

6.4.5.1 Results of the semi-structured interviews with the teachers

The responses from the six teachers were transcribed and analysed based on the research questions and the dimensions and sub-dimensions of the conceptual framework. Pseudonyms were used for confidentiality purposes. Table 6.30 below illustrates the participants' pseudonyms, their subjects and years of experience.

Table 6.30 Pseudonyms of teachers, their subjects and years of experience

Teacher	Pseudonym	Subject	Years of experience
Number 1	AB	Economics	1
Number 2	MN	Economics	31
Number 3	AH	Accounting	27
Number 4	TK	Accounting	4
Number 5	MJ	Business Studies	16
Number 6	NS	Business Studies	9

The overall purpose of the questions was to ascertain what subject knowledge and skills the teachers thought were necessary to gain at high school to succeed at university level. Also, if the teachers thought that the schools adequately prepared the learners for university studies, and what the subject challenges were, and how to overcome those challenges. Two themes were identified from the teachers' responses during their semi-structured interviews, namely:

1. Teachers' contribution to the learners' education
2. Learners' subject knowledge and skills requirements for university studies

The themes and sub-themes are summarised below.

Theme 1: Teachers' contribution to learners' education

Five sub-themes were identified from the teachers' responses under this theme, namely:

1. The teachers' subject academic training received
2. Teachers' duties
3. Teachers' personal beliefs about teaching and learning
4. Teachers' perceptions of the learners' university readiness
5. The subject content knowledge requirements for university studies

The responses are summarised under each sub-theme below.

Sub-theme 1: The teachers' subject academic training received

A question was asked about the subjects that the teachers were teaching. All six responded that the subject they taught formed part of their academic training. Three teachers indicated that they had the subject at second-year level, two indicated that they had the subject at first-year level, and one teacher had the subject at fourth-year level.

Sub-theme 2: Teachers' duties

The teachers were asked what percentage of time was typically spent on administrative tasks, maintaining discipline, and actual teaching and learning. The averages of the responses were that they spent 22,5% on administrative tasks, 20% on maintaining discipline, and 57,5% on actual teaching and learning.

Sub-theme 3: Teachers' personal beliefs about teaching and learning

The teachers were asked what their personal belief about teaching was. Teacher AH's personal beliefs about teaching and learning was that a teacher must be passionate and committed to his/her teaching and a teacher should at all cost put the learners' needs above his/her own. He further explained that all the role-players such as the learners, parents and the community must be involved in the learners' academic career and the development of the learner.

The three teachers at School A (AB, TK and MJ) agreed that learners must be equipped with quality resources and should receive the knowledge they deserve and that is applicable to their everyday lives, which will be useful in their careers. Teacher MN answered that learning can only take place where there is order and different learning strategies must be used. Teacher NS believed that learning is a life-long commitment.

Sub-theme 4: Teachers' perception of learners' university readiness

The question posed to the teachers was whether they thought the school was adequately preparing the learners for university studies. Three teachers at School A (AB, MJ and TK) said yes, the school was preparing the learners for university studies. Their reasons were that high school learners get a good foundation (the content of the subjects) that is useful at university, and that the level of education in schools and teacher involvement and dedication are assisting learners to compete well. Two of the other three teachers at School B (AH and NS) said no, they did not think the school adequately prepared learners for university studies. They explained that most learners struggle to work independently at university level, that the curriculum was designed for ideal circumstances and that they were sitting with overcrowded classes, which made it difficult to adhere to time and consolidate knowledge.

Sub-theme 5: Subject content knowledge requirements for university

The question that was asked was: What specific subject knowledge do you think is necessary to take at high school to succeed at university level? Four teachers responded that Economics, Mathematics, Physical Science, English and Accounting will assist the learners at university level. Teacher AH stated that the ability to prepare, interpret and analyse financial statements, to compare and advise on budgets and manufacturing are important subject knowledge. Teacher NS said that the career chosen will determine what subject knowledge is needed, for example in Business Studies, the learners can follow the direction of starting their own business, human resources (HR), business management, administration, marketing and commerce teachers.

Theme 2: Learners' subject knowledge and skills requirements for university studies

The teachers were asked what specific subject knowledge and skills they thought the learners should gain at high school to succeed at university. It addresses the following aspects: (i) learners' subject challenges and problems, (ii) a language barrier, (iii) skills per subject that were required for university studies, and (iv) strategies to overcome the learners' challenges.

Sub-theme 1: Learners' subject challenges and problems

The question was: What type of challenges and problems are learners experiencing in your subject in Grades 10 – 12? Teachers AB and TK responded that hindrances the learners face were that they find it difficult to understand and analyse graphs, to understand formats and to prepare financial statements, resulting in them becoming demotivated. Teacher MN said learners struggle with reading and writing and with questions that test insight. There was a lack of motivation and work ethics among learners and they should be more responsible for their learning. Teacher MJ identified peer pressure, drug and substance abuse and a lack of discipline as challenges that the learners were facing. Teacher NS felt that the volume of work and the time constraints to complete the amount of work, with no time for consolidation, hindered her subject.

Sub-theme 2: A language barrier

The question to the teachers was to estimate the broad percentage of learners whose first language is different from the language(s) of instruction, which could be a barrier to their understanding. The teachers at School A responded that approximately 90% and more learners' first language was isiXhosa. At School B, the teachers answered that the percentage of learners whose language is different from the language of instruction was very low, approximately 10% and below.

Sub-theme 3: Skills per subject that were required for university study

The question posed to the teachers was what specific skills regarding their subject do they think is necessary to gain at high school to succeed at university level.

Two teachers (AH and TK) mentioned communication skills are necessary to gain at high school to succeed at university level. Three teachers (AB, MJ and TK) responded that time management skills are necessary to gain at school level. Teacher AH answered that human skills, financial skills, ability to work under pressure, mathematical skills and integrity were necessary to gain at school level. Teacher MN added that research skills, presentation skills, the ability to read in limited time with comprehension, and also the ability to draw graphs and the interpretation of graphs were skills that learners needed to gain at school. Teacher MJ replied that the learners had to be self-dedicated. Teacher NS thought that reasoning, creativity, problem-solving skills and strategising were important. Teacher TK responded that loyalty was also important.

Sub-theme 4: Strategies to overcome the learners' challenges

The teachers made different suggestions on how the learners could overcome their challenges. Teacher AH stated that the parents should be more involved in the learners' academic career, that learners should be more dedicated to their studies, and that teachers should motivate the learners more. Teacher MN stated that learners must learn the basic reading and learning skills, and it must be consolidated in the foundation phase. He added that the content of the subjects must be reduced so that there can be more time for the development of skills, and that the high-performing learners must be motivated by bursaries.

6.4.5.2 Results from the semi-structured interviews with the three subject advisers

Similar to the teacher participants, pseudonyms were used for the subject advisers as well. Table 6.31 below illustrates their pseudonyms, subjects and years of experience.

Table 6.31 Pseudonyms of subject advisers, their subjects and years of experience

Subject adviser	Pseudonym	Discipline/subject	Years of experience
Number 1	CL	Accounting	3
Number 2	LC	Business Studies	2½
Number 3	LZ	Economics	2

The overall purpose of the questions put to the subject advisers was to ascertain what they regard as quality teaching, factors that obstruct quality teaching, what subject content knowledge and skills the learners needed to be prepared for further studies, and teacher and learner interventions that the schools have implemented. Four themes were identified from their responses, namely:

1. Quality teaching
2. Challenges that prevent quality teaching at the two schools
3. Learners' preparation needs for university studies
4. Suggestions on how to overcome the challenges

The responses under each of these themes are summarised below.

Theme 1: Quality teaching

The question posed to the subject advisers was: How do you describe quality teaching, and to what extent does it happen in your district? Adviser CL described quality teaching as an educator who comes prepared daily to teach the learners. Adviser LC explained that quality teaching includes using teaching time productively (time on task); teaching relevant content as prescribed, creating a learning environment where maximum learning can take place, and ensuring improvement in the quality of results, which includes quality assessments to ensure quality results. Adviser LZ only focused on the challenges that are reported on under Theme 2.

Theme 2: Challenges that prevent quality teaching at the two schools

The question that was asked to the subject advisers was: What factors obstruct the quality teaching of your subject in Grades 10 – 12? They identified nine challenges, namely (i) classroom management in large classes, (ii) teachers' pedagogical content knowledge and a lack of adequate training, (iii) curriculum overload, (iv) quality of the textbooks, (v) a lack of managerial support, (vi) a lack of resources, (vii) a language barrier, (viii) absenteeism, and (ix) social problems at home. The responses are summarised under each of these sub-themes below.

Sub-theme 1: Classroom management in large classes

Adviser LZ explained that teaching large classes was a challenge that prevents quality teaching from taking place as it was challenging to manage a large class and give attention to all the learners in the class. She also mentioned that classroom management is a challenge because some learners were not disciplined.

Sub-theme 2: Teachers' pedagogical content knowledge and a lack of adequate training

Advisers LZ and LC explained that most teachers have sufficient knowledge of the content they teach, but they were not fully prepared in discipline management, pedagogy and methodology. They also explained that there was a lack of communication between teachers in Grade 10, 11 and 12, and that caused problems because the teachers did not know what to focus on to properly prepare the learners for the next grade.

Sub-theme 3: Curriculum overload

Adviser LZ reported that the content of the subject (Economics) was overloaded and that there was not sufficient time for revision. She also pointed out that teachers had to teach a variety of subjects and could not focus on one subject, and did not always have the time to set proper tasks with all the cognitive and difficulty levels.

Sub-theme 4: The quality of the textbooks

Adviser CL stated that all schools are using different textbooks and most of these books had many mistakes.

Sub-theme 5: A lack of managerial support

All three advisers stated that HODs and principals cannot assist or moderate properly, due to a lack of knowledge of the subject and subject-related difficulties. They also mentioned that the HODs and principals were overloaded with work and that the curriculum was mostly neglected.

Sub-theme 6: A lack of resources

Adviser LZ explained that there was a lack of equipment at School A, for example, data projectors, and no proper Wi-Fi for learners or teachers to watch telematics or e-lessons. She further pointed out that there was a lack of proper textbooks and that the teachers had to use core notes, and that the school did not have sufficient finances to make copies of the notes for learners.

Sub-theme 7: A language barrier

All three subject advisers explained that the vocabulary of the learners (home language and second language) was poor. They stated that a teacher could not do quality teaching if the learners did not grasp the concepts, and that there was a gap between the learners' language and the concepts. Adviser LZ at School B also pointed out that teaching two languages (Afrikaans and English) at the same time in the same class was problematic as it took too much time.

Sub-theme 8: Absenteeism

Adviser LZ mentioned that absenteeism is a challenge that some learners faced and that there were teachers who were also absent, and that was a challenge in both schools.

Sub-theme 9: Social problems

Adviser LZ mentioned that social problems at home affected absentees. Adviser CL identified drug use, learner pregnancy, absenteeism, transport problems and poverty (no food/money) as social challenges that some learners faced.

Theme 3: Learners' preparation needs for university studies

This theme focused on advisers' responses to the knowledge and skills that were necessary to gain at high school to succeed at university level, and whether or not the schools were adequately preparing the learners for university studies.

Sub-theme 1: The knowledge and skills that were necessary to gain at high school to succeed at university level

All three subject advisers stated that it was important that the learners gained the content knowledge of the specific subjects from Grade 10 to Grade 12. Adviser LC pointed out that the knowledge of action words and interpretation of knowledge were important. He listed good reading skills and analytical skills as key skills that the learners needed for university studies. Adviser LZ mentioned good listening skills, self-reliance, self-motivation, diligence, perseverance and time-on-task as important skills that are needed for university studies.

Sub-theme 2: The role of the school to adequately prepare the learners for university studies

Two of the three subject advisers, LC and CL, stated that the schools prepared the learners for university because it covered a lot of content and high analytical skills. Adviser LZ said no, the schools did not prepare the learners adequately for tertiary studies because the learners were not given proper guidance and advice from Grades 8 to 12.

Theme 4: Suggestions on how to overcome the challenges

The question that was posed to the subject advisers: How could the learners be assisted to overcome the challenges and problematic areas in their subjects so that they would acquire a good foundation for university studies? Adviser LC

explained that the learners must be educated in the concepts and from there be taught how to apply the concepts in the questions. She further pointed out that the district supported schools with winter and spring schools, weekend camps for progressed learners, core notes and resources (for example Mind the Gap), tutorial classes, and class visits. Adviser LZ suggested that the interpretation of scenarios must be practised as well as the reading skills, and there must be more emphasis on concepts and the application of concepts. Adviser CL suggested that the private sector needs to step in and support the learners, especially in the rural districts. Lastly, all three subject advisers said that the district supported the teachers through electronic and professional development sessions to assist them with difficult topics.

6.4.5.3 Result from the semi-structured interviews with the two principals

As was the case with the preceding two groups of participants, pseudonyms were used for confidentiality purposes. Table 6.32 illustrates the pseudonyms used and their years of experience.

Table 6.32 *Pseudonyms of principals and their years of experience*

Principal	Pseudonym	Years of experience
Number 1	GS	4 (in acting capacity)
Number 2	JS	4 (in acting capacity)

The overall purpose of the questions to the two principals was to ascertain what the challenges were that they had to deal with at the schools, and the solutions; the availability of resources at the schools and the learners' homes; the learners' parental involvement with the school, what the school culture or climate was, and how the schools recruited and maintained quality teachers and staff members. Two themes were identified from their responses, namely:

1. Challenges that occurred in the two schools
2. Suggestions on how to overcome the challenges

The responses are summarised below.

Theme 1: Challenges that occurred in the two schools

Nine sub-themes were identified from the two principals' responses under this theme. These were (i) learners' absenteeism and lack of punctuality, (ii) learners' disciplinary problems, (iii) learners' inability to work independently, (iv) teachers' absenteeism and lack of punctuality, (v) teachers' low morale, (vi) a lack of resources, (vii) a lack of support from the district, (viii) a lack of parental involvement and non-payment of school fees, and (ix) social problems. These are summarised below.

Sub-theme 1: Learners' absenteeism and lack of punctuality

Both principals spoke about the learners' absenteeism and late-coming. Principal GS at School A responded that class teachers kept the records of absenteeism and parents were informed about such behaviour. Principal JS at School B pointed out that the average learner absenteeism per day is more or less 20 learners, and that class-cutting (to not go to a lesson/school when you should be there) happened daily in the school.

Sub-theme 2: Learners' disciplinary problems

Both principals indicated that there were disciplinary problems with some learners. Principal GS reported that the disciplinary committee handles the matter of discipline and keeps the records. Principal JS mentioned one of the challenges at School B was undisciplined learners.

Sub-theme 3: Learners' inability to work independently

Principal JS responded that one of the challenges that were often discussed in staff meetings was that learners struggle to work independently without the teacher. Learners work only in class, where the teacher is present. He suggested that a possible reason could be the learners' social disadvantages.

Sub-theme 4: Teachers' absenteeism and lack of punctuality

Both principals replied that teacher absenteeism had increased and become more complex. Principal JS explained that, if there were three or more teachers absent,

it became difficult to manage the supervision. He gave a possible reason – that it could be a short holiday, and the fact that teachers were exhausted.

Sub-theme 5: Teachers' low morale

Principal JS stated that the biggest challenge was the low morale of the educators due to overcrowded classes, undisciplined learners, limited resources, and assessment tasks that must be performed. He also indicated that the classrooms were overcrowded and the educators were overloaded. There was no response from principal GS on this matter.

Sub-theme 6: A lack of resources

Principal JS pointed out that the internet access was not sufficient for the school, and that not all the teachers were proficient in using technology.

Sub-theme 7: A lack of support from the district

Principal JS believed that the support from the district was insufficient and could be improved. Principal GS did not mention anything in this regard.

Sub-theme 8: A lack of parental involvement and non-payment of school fees

Both principals (GS and JS) reported that one of the challenges was weak parent involvement. At School B, there were several meetings with the parents throughout the year, which were generally not well attended. Principal GS pointed out that around 50% of the parents at School B were not paying the school fees of their children. As a consequence, the school was struggling financially.

Sub-theme 9: Social problems: Gangsterism

Principal JS stated that gang activity was taking place in the school (School A) and learners were arrested. Principal GS did not speak about this matter.

Theme 2: Suggestions on how to overcome the challenges

The principals were asked to make suggestions on how the challenges could be overcome. They made suggestions for the learners, for the parents, and the teachers. These are summarised below.

Sub-theme 1: Suggestions to overcome the challenges for the learners

Principal GS replied that during assembly on Mondays, the learners were motivated and encouraged to put more effort into their school activities, versus a zero mark approach in their formal and informal activities, cooperation during the lessons and completion of homework given to them. Principal GS answered that School A arranged accommodation at another school for learners who stay 5 km away, so that they would have a better place to study in the afternoons. Principal JS said that at School B, extra classes were given in Mathematics (Grade 10 – 12), Accounting (Grade 11 and 12), Physical Science (Grade 10 – 12) and in the Arts.

Sub-theme 2: Suggestions to overcome the challenges for the parents

Principal GS responded that parents were invited to assist the teachers with learners who were facing challenges and the school always invited the parents to meetings to discuss with them the learners' results, behaviour, participation and late-coming. When the parents were individually invited and they received the invitation personally per letter at their house, the meetings were better attended. Principal JS suggested that if the parents had home e-mail addresses, there could be communication from the school via that medium.

Sub-theme 3: Suggestions to overcome the challenges for the teachers

Principal GS replied that the teacher played a vital role in giving feedback and assisting the learners who struggled to complete their activities. Principal JS responded that he held developmental and motivational sessions with his staff and that a reward system was in place, where the teacher received a certificate as a token of gratitude. He had individual conversations with the teachers to give them recognition for the extra mile that they walked with the learners.

Principal GS reported that each department was provided with laptops and data projectors to be used during their lessons. Telematics satellite programmes also assisted the learners to perform better in Grades 10 – 12. Principal JS at School B replied that the school had a slim lab with 26 computers. Teachers were getting

training in e-learning. Twenty-five classrooms had laptops and data projectors and whiteboards.

Lastly, principal JS suggested that when a teacher was absent, it was important that the learners in that specific class had work to do and that there was supervision. In such cases the school asked parents to do supervision to keep order in class, not to teach.

6.4.5.4 Result from the semi-structured interview with the circuit manager

The circuit manager (MM) had 19 years of experience. The overall purpose of the questions put to him was to ascertain the general impression of the two schools regarding their functionality and performance; the schools' culture and climate and how could it be improved; what worked well; what the challenges were and to provide suggestions for solutions; whether these two schools prepared the learners for post-school studies; and whether these schools were compliant with what was expected of them according to CAPS. Three themes were identified from his responses, namely:

1. His perception of the schools' functionality and whether or not they were preparing the learners for post-school studies
2. Challenges the schools were facing
3. Suggestions on how to overcome the challenges at the two schools

These are summarised below.

Theme 1: The circuit manager's perception of the schools' functionality and whether or not they were preparing the learners for post-school studies

The questions that were posed to the circuit manager were about what he thought worked well at the two schools, and if the schools prepared the learners for university studies. His responses are summarised below.

Sub-theme 1: The two schools' functionality

The circuit manager (MM) reported that at School A, the NSC examination was normally managed professionally with no security breaches reported in the past.

The school worked well with external support offered during the Grade 12 examination and the management of funds received from the provincial department. However, there was no evidence of innovative activity and structured systems created by the school itself. He reported that School B was fully functional and that the school communicated with the community and the circuit office. The management of the curriculum was functional except that the few teachers created a problem with capacity to teach the subjects in Grade 12.

Sub-theme 2: Were the schools preparing the learners for post-school studies?

The circuit manager (MM) indicated that School A did not prepare the learners for post-school studies, because it was a struggle to keep the learners in school, to manage the teachers to complete the curriculum and to motivate the learners to study. His perception of School B was that the school prepared the learners for post-school studies to a certain extent because they were giving the learners exposure to career planning.

Theme 2: Challenges that the schools were facing

Questions that were posed to the circuit manager were about the absenteeism of the teachers and learners, parental involvement; class-cutting, gang activities, school resources and teacher-learner ratios. Nine sub-themes were identified from his responses. These were (i) learners' absenteeism and lack of punctuality, (ii) learners' disciplinary problems, (iii) a language barrier, (iv) teachers' absenteeism and lack of punctuality, (v) teachers' lack of commitment and low morale, (vi) a lack of leadership, (vii) managing the schools' resources, (viii) a lack of parental involvement, and (ix) social problems. Each of these sub-themes are summarised below.

Sub-theme 1: Learners' absenteeism and lack of punctuality

The circuit manager responded that there was not an effective system in place to deal with lateness, absence and truancy. He explained that the learners did not attend school after examination and valuable teaching time was lost every term. This situation had a detrimental effect on the functionality of the schools and the

performance of the learners. He stated that there was a strong correlation between struggling learners and a high rate of absenteeism.

Sub-theme 2: Learners' disciplinary problems

The circuit manager said that the unacceptable behaviour of learners normally occurred during contact time when teachers were not in class or teachers were not fully prepared and engaging 100% in teaching and proper classroom management. He pointed out that there was a high rate of disciplinary problems as a result of unacceptable learner behaviour, drugs and assaults on learners at School B.

Sub-theme 3: A language barrier

The circuit manager replied that the learners and teachers at School A were predominantly isiXhosa, but the LoLT was English. He indicated that he was aware that the teachers were using code-switching during lessons. He explained that School B was a traditional Afrikaans-speaking school who was forced to apply for dual-medium status because of the need for English LoLT in FET (Grade 10 – 12) education in the circuit, but the teachers were struggling in the English Home Language classes.

Sub-theme 4: Teachers' absenteeism and lack of punctuality

The circuit manager pointed out that the average teacher absence at both schools was at least one teacher per day. He indicated that the absenteeism rate for term 1 of 2019 was 7,6% at School B, and 1,9% at School A. He further explained that neither of the two schools had proper policies or procedures on how the teacher could catch up on the time lost, and added that teachers were not always willing to take care of absent teachers' classes during their administration periods.

Sub-theme 5: Teachers' lack of commitment and low morale

The circuit manager indicated that there was a high tendency of class-cutting behaviour by staff and that the productivity of the educator team was not high at School A. He pointed out that the learner-teacher ratio at School A was 36:1 and at School B 32:1, both of which was an acceptable ratio.

Sub-theme 6: A lack of leadership

The circuit manager pointed out that both principals had been in an acting capacity for the past four years and that they did not get full support from the staff and the school management teams (SMTs), and that the staff was highly unionised.

Sub-theme 7: Managing the schools' resources

The circuit manager said that School A was well resourced but that there were no effective systems and procedures in place to manage it properly. He explained that there was an over-reliance on external support and that the school was not taking ownership of its growth and development. He further stated that the learners at School B did not have sufficient textbooks although the school did receive the norms and standards funding to buy the books. He suggested that the reason was the weak retrieval rate of textbooks at the end of the year, and indicated that School B also did not manage its resources well.

Sub-theme 8: A lack of parental involvement

The circuit manager indicated that there was no parental involvement in the running of the school with regard to fundraising activities, and that the attendance rate at parent meetings was about 50% at both schools.

Sub-theme 9: Social problems: Gangsterism

The circuit manager pointed out that at both schools, a small group of over-aged learners were actively involved in gang-related activities. He explained that there were a few gang-related fights on the school grounds and outside the school over the past three years, and that learners were involved in using and dealing in drugs. He indicated that these learners were terrorising other learners and staff members.

Theme 2: Suggestions on how to overcome the challenges at the two schools

The circuit manager was asked to make suggestions on how the challenges could be overcome at the two schools. He made seven suggestions, which are summarised below.

Sub-theme 1: How to overcome learners' absenteeism and lack of punctuality

The circuit manager explained that the challenges were all determined by the socio-economic and politically based circumstances of the communities that the learners hailed from. He made the following suggestions for both schools:

- Daily monitoring of absent learners.
- The follow-up actions of the school with regard to the absence of learners need to be improved.
- It was useless to give a letter to a high school learner for the attention of his/her parents – the school must make use of electronic communication with parents.

Sub-theme 2: A language barrier

The circuit manager suggested that more English-speaking teachers had to be recruited and that there should be a sincere effort by the management of both schools to promote the use of English Home Language.

Sub-theme 3: Teachers' absenteeism and lack of punctuality

The circuit manager suggested that a proper policy had to be drawn up and accepted by all parties concerned. He explained that the principals should ensure that the policy was implemented, and that the schools should have a back-up system of resource material that could be provided to the learners in the case of an educator being absent. He added that the resource material should be stored in such a way that it will be accessible for the person responsible for invigilation arrangements.

Sub-theme 4: Teachers' lack of commitment and low morale

The circuit manager proposed that the principals should act in a decisive way to curb this kind of behaviour. He explained that the best teachers should be recruited, and not the first available person, and that both schools should start to network with better performing schools.

Sub-theme 5: A lack of leadership

The circuit manager recommended the following to overcome the challenge of the lack of leadership at both schools:

- A good permanent principal should be appointed to set the standard and to lead by example and drive the process of change at the schools.
- The SMT should continuously implement standard-setting and quality assurance to move away from mediocre standards that were currently too easily accepted by all, just as an excuse for not working hard.
- The SGB should be fully constituted and needs training, and capacity building should be implemented.

Sub-theme 6: A lack of parental involvement

The circuit manager explained that the perception at School A was embedded in the minds of a working-class community and it would require hard work and determination to break it down. He suggested good and effective communication by the principal with the community and that loyal staff members should demonstrate what quality education was all about. He further explained that a change in the belief system of a poor community could take place through dedicated and hardworking teachers. He further suggested that both schools should make use of electronic communication with the parents, and that more opportunities should be created for parents to participate in the activities of the schools.

Sub-theme 7: Social problems: Gangsterism

The circuit manager suggested that both schools should address the issues of assembly, that a proper disciplinary structure should be set up and maintained by a dedicated educator corps, and that a code of conduct for the learners should be implemented. He also suggested that guest speakers from the community should be invited to speak to the learners and the staff.

6.4.5.5 Results from the semi-structured interviews with the lecturers

The six lecturers' responses are the last qualitative data set of all the research participant groups. It follows the same structure as the previous groups. Table 6.33 below illustrates the pseudonyms used, their discipline/subject and years of experience.

Table 6.33 *Pseudonyms of lecturers, their disciplines/subjects and years of experience*

Lecturer	Pseudonym	Discipline/subject	Years of experience
Number 1	VG	Business Management	11
Number 2	AM	Economics	21
Number 3	BW	Financial Accounting	5
Number 4	LB	Financial Accounting	7
Number 5	NH	Entrepreneurship	2
Number 6	WD	Financial Accounting	8

The overall purpose of the questions posed to the lecturers in their interviews was to ascertain the challenges that they were experiencing with first-year students, the school pedagogical requirements, the first-year subject knowledge requirements; the teachers' knowledge of university requirements, pedagogical content knowledge, and what the universities are doing to assist the students. Three themes were identified from their responses, namely:

1. Skills that learners should gain at high school to be ready for university studies
2. Challenges that lecturers identified in teaching business-related subjects to first-year students
3. Lecturer and university interventions to overcome first-year students' challenges

The responses are summarised below.

Theme 1: Skills that learners should gain at high school to be ready for university study

One of the questions posed to the lecturers in the semi-structured interview elicited their opinion on whether or not first-year students enter university studies with the necessary skills.

The lecturers indicated in their responses to this question that the learners came to university without the ability to work independently, that they lacked soft skills (a lack of confidence and verbal presentation skills), a lack of time management, and a lack of critical thinking and problem-solving skills. Lecturer WD stated that *“The students came to university without the required 21st-century skills.”*

Theme 2: Challenges that lecturers identified in teaching business-related subjects to first-year students

One of the questions posed to the lecturers was to elicit their opinion on whether or not the school curriculum adequately prepared the learners for university. Seven sub-themes were identified from the lecturers' responses, which related directly to the lack of skills they identified in the learners. Each sub-theme is summarised below.

Sub-theme 1: Working independently versus group work

Lecturer VG commented that they had to guide the students in independent work. The student had to come to the lecturer with specific questions, and not tell the lecturer that he/she did not understand the work. Lecturer LB reported that at school level, the teachers do the planning and time management, which led to students not developing those skills. Lecturer BW reported that the modules she lectured all required independent work and no group work took place, and the assessments were individual.

Lecturer NH indicated that the majority of the students liked to work independently because working in groups made some students anxious. Lecturer AM replied that many students wanted to do group work, and wanted to study in a group. WD said that the students gradually realised that it was their independent

and individual efforts (besides group work) that assisted them during assessments (especially the written assessments).

Sub-theme 2: Soft skills

Lecturer WD said that there was a big gap relating to a lack of confidence, and advanced verbal presentation and writing skills. She explained that learners should be aware of citizenship (as an individual, that you are part of a system and what you do impact it) as well as the character (value system), and that it was not only about the cognitive ability, but also to be socially, ethically and environmentally aware. Lecturer NH responded that the students were noisy and chatted with friends in class, but they became mute when questions had to be answered. Lecturer BW replied that she experienced the students to be more confident and participatory nowadays. The other three lecturers reported that the first-year classes were big, and it was difficult to determine their level of skills if they did not have direct contact with the students.

Sub-theme 3: Time management

Lecturer LB answered that students struggled at university level to come to grips with the workload and to manage their time, mainly because there was no enforcement at university level of study activities. Lecturer WD was of the opinion that time management is one of the most noteworthy reasons most first-year students fail. Lecturer VG responded that the vast majority, more than 90%, of the students lacked proper planning and preparation; pre-reading and organisational skills were very poor; a lot of the students procrastinated, meaning students delayed until the last minute; although students were penalised if the assignments were not submitted on due dates, they still submitted the assignments after the due dates. Lecturer NH replied that some students do not manage their time well and came late to classes and for a test or an assignment. Lecturers AM and BW explained that the majority of students did not learn these practices at school, and that prioritising and time management was important at university to be able to cope with the demands. Lecturer BW said that the students do not

necessarily arrive with those skills, but they picked it up at university and she emphasised time management in her subject.

Sub-theme 4: Critical thinking skills

Lecturer LB replied that many students struggled with critical thinking. She explained that students were scared of thinking, as it seems they had been conditioned that it is 'safe' to do rote learning, e.g. "you will pass if you memorise the textbook". This led to students not being able to think critically and prevented them from developing problem-solving skills. Lecturers BW and VG responded that the students struggled to solve problems from different angles and perspectives. Lecturer WD responded that students could solve problems once they got going, but struggled with the initial assessment of the task, clarity of instructions and where to access information, as well as how to package the solution. AM also replied that the students lacked the ability to use specific tools, mathematically and structurally. NH said that the students wanted the lecturers to provide them with everything.

Sub-theme 5: A language barrier

Three lecturers (LB, WD and BW) responded that for many students, English was a second or additional language and therefore communication was one of the major struggle points for the students. Lecturer NH indicated that writing essays or discussing a topic was a challenge to students. Lecturer LB answered that students struggled with writing down sentences and/or documenting their thoughts. Lecturer WD replied that "students have to intellectually go through the process of understanding, translating and retranslating into their native language".

Sub-theme 6: Inadequate school preparation

Lecturers NH and LB said that schools did to an extent prepare learners who did Business Studies, Economics, Accounting or some Business Management-related subjects in high school as the learners had a basic knowledge and understanding of business principles. Lecturers VG, AM and BW answered that schools prepared learners adequately for university to a lesser extent, because analytical skills were

lacking and students were not well equipped to discuss concepts and applied them in different scenarios. Lecturer WD said that students were taught to regurgitate information in Mathematics and English (more specifically the ability to read with comprehension) and that it was, sadly, a huge challenge.

Sub-theme 7: Pass requirements

Lecturer LB indicated that learners may pass with 30% at school, which is less than the 50% required to pass a subject at university. This means that the learners who passed with 30% at school level had gaps in their subject knowledge, which is a concern at university level. The other five lecturers did not mention the pass requirements in their interviews. WD said that the significance and differences between the National Senior Certificate (NSC) and the National Benchmark Test (NBT) must be clear. It is important to note that the significance of the NSC examination tests how well you meet the Grade 12 curriculum expectations. If the learner passes, he/she will get an NSC certificate. The NBT sees how ready the learners are for the demands of tertiary coursework with regard to Academic Literacy, Quantitative Literacy and Mathematics.

Theme 3: Lecturer and university interventions to overcome these challenges

A question was asked to the lecturers about the type of intervention strategies the lecturers and/or the universities had in place for students who were at risk of failing their modules. Two sub-themes were identified from the responses, namely:

1. Interventions that the universities had in place to assist first-year students
2. Interventions that the lecturers had in place to assist first-year students

The responses are summarised below.

Sub-theme 1: Interventions that the university had in place to assist first-year students

Lecturers VG and AM indicated that there were gaps that the university identified and they have support modules such as Academic Literacy for Commerce and Quantitative Skills for Commerce to help the students overcome their challenges

in terms of language and Mathematics. Lecturer AM also said that the university facilitated winter and summer school weeks, during the breaks, where students are identified based on their coursework marks. Lecturer VG indicated that the faculty presented a boot camp with lesson plans and aspects of the work that were challenging for at-risk students. Lecturers LB and VG said that online tutorials had to be completed after every topic. Lecturer VG also said that there was tutorial support with well-prepared tutors. Mentoring sessions were also provided by mentors, in particular to at-risk students. Lecturers BW, NH and WD did not refer to any university interventions to assist the students to overcome their challenges.

Sub-theme 2: Interventions that the lecturers had in place to assist first-year students

Lecturer LB replied that she performed extensive at-risk identification at the end of each term, based on student performance and attendance. Lecturers BW and VG gave feedback to students after a test and she would revise the test script and concepts and the actual scenario with the students. Lecturer VG followed an approach of application and the technique to answer a test or examination. Lecturer BW tried to use videos to help students with particular parts of homework they were struggling with. Lecturer LB explained that for the at-risk students, there were e-learning courses that consisted of a range of videos to catch up with topics missed, which the students could revisit as many times as they wanted, or where they had identified gaps in their knowledge.

Lecturer LB indicated that there had to be understanding when teaching and assessing and that new ways should be used to support learners to rather understand the accounting topics and processes, instead of doing rote learning. Lecturers WD and AM answered that Mathematics and English (reading with comprehension) were also essential to be prepared for university studies.

Lecturers NH and BW said that the learners had to understand why things were done in a particular manner and that the learners should be assisted to apply the knowledge and content they learnt to other scenarios. Lecturer VG responded that basic terminology could assist the students to be prepared for university.

Lecturer WD explained that she started a voluntary revision class to assist the students, but the students came unprepared for the class. Lecturer VG replied that there was peer support, one-on-one consultations, and e-mails to students to make appointments and follow-ups. Lecturer NH indicated that she offered extra hours in her office during consultation time to explain certain concepts that they found difficult to understand. Lecturer LB said that she made resources available to the students, for example, previous test papers and handouts. Lecturer AM did not make any suggestions on how he assisted the students.

6.5 CONCLUDING SUMMARY

This chapter presented the results of all the data collected from the study's seven participant groups. It was a multitude of data that resulted in several reworked drafts of this chapter to find the best possible structure that would allow for a logical and structured presentation. The chapter started with the presentation of the learner participants' data sets, including the data obtained from the study's three cycles. The responses from the parent participants were presented thereafter, and lastly, the responses from the semi-structured interviews with the remaining five participant groups. The researcher attempted to present the results as objectively as possible, and in the same manner they were conveyed to her in the questionnaires, focus group discussions and individual interviews.

The next chapter, Chapter 7, presents the discussion and interpretation of the results.

CHAPTER 7

DISCUSSION AND INTERPRETATION OF RESULTS

7.1 INTRODUCTION

The results from the data collected from the different participant groups were presented in the previous chapter. These results are discussed and interpreted in this chapter. The discussion firstly, focuses on the results of the three cycles, from 2017 to 2019 of the sample and cohort learner participants. Thereafter, a discussion and interpretation of the results from all the data sets are presented based on the dimensions and sub-dimensions of the augmented readiness model. The researcher concludes the chapter with a synthesis of the observations made from the discussions and interpretations.

7.2 DISCUSSION AND INTERPRETATION OF THE RESULTS FROM THE THREE CYCLES

The results of each cycle per year are discussed and interpreted separately. The discussion includes the results of the control tests, June exam, pre-tests, the interventions, post-tests and the learners' November examination for 2017 and 2018, as well as their June 2019 examination. As explained in Section 5.5.3, the learner participants who attended the interventions per year are referred to as the *sample learners* and the *control group* includes all the other learners who were also doing the three subjects but did not attend the interventions.

7.2.1 Cycle 1: Grade 10 learner participants in 2017

As discussed in Section 5.5.3, the learner participants were purposively selected in August 2017 when they were in Grade 10, and the first interventions in the three subjects of Accounting, Business Studies and Economics were implemented in the middle of September 2017. The purpose of the interventions was to assist the learners not only to pass these subjects well but, equally important, to provide the learners with the required subject content knowledge and skills to lay a good foundation for their subsequent years. As such, all the interventions were planned

to strengthen the subject content knowledge and skills of the learners to improve their academic performance and, ultimately, their university readiness. According to Umalusi (2013(b):3, 2015:2, 2019:37), for a learner to succeed and proceed with ease to the FET phase, the following skills need to be developed: basic application and analytical skills, mathematical skills, constructing and interpreting graphs, competence to work in a team; problem-solving skills, decision-making skills, and evaluation of alternatives. The interventions focused on these skills in the three subjects over the three years. As indicated in Section 6.3.1, the learners' March control test, June examination and September control test results were used as a benchmark to ascertain the level of the subject content knowledge and skills that all the learners had in the three subjects in Grade 10. A pre-test was administered before the interventions were implemented and a post-test after the interventions were completed to determine whether the interventions achieved the desired outcome of strengthening the learners' subject content knowledge and skills. Lastly, the sample learners' November examination results were then compared with the control group's examination results at the end of 2017, when the learners were in Grade 10, and at the end of 2018, when the learners were in Grade 11. The Grade 12 learners' June examination results were used for the comparison in 2019 because, as explained in Section 5.5.3, the researcher was only permitted to work with the learner participants until the end of the second term in 2019. The discussion under all three cycles follows this structure.

Table 6.3a indicated that the sample learners at School A performed better than the control group in all three subjects across the three assessments, except in the Business Studies September control test, where the control group had a slightly higher average result of 23%. The sample learners achieved a 30% and above result in the March control test for Business Studies and Economics, and in the June examination for Accounting and Business Studies. However, both the sample learners and the control group did not achieve a minimum pass rate of 30% and above in the March control test for Accounting, in the June examination for Economics, and for all three subjects in the September control test. Furthermore, the results show that there was a decline in all the learners' results from the March

control test to the September control test, except for the sample learners' results for Accounting that were similar.

Although 30% in some subjects is the minimum pass requirement at school level, these results indicate that the learners at School A did not achieve the adequate rating code of 4 (50 – 59%), which is the requirement for a bachelor's pass (refer to Section 3.2.1.6). This is a clear indication that the foundation was not firmly laid in the previous phases. An inference could be made that the lack of literacy and numeracy in the previous schooling phases hindered the learners in developing a thorough understanding of the content knowledge and skills in the different subjects (refer to Section 3.2.1.1). The fact that 95% of the learners at School A were second and additional language speakers of English could have also contributed to the low test results (this matter is further discussed under Sections 7.3.3.1 and 7.3.3.3). Consequently, if the learners' average scores were so low at the beginning of their Grade 10 academic year, it could mean that more learners acquired and learnt only 24% or 36% of the subject content knowledge and skills in these subjects in the previous grades.

Therefore, an argument could be made that the sample learners (and the control group) in School A lacked 75,8% of the subject content knowledge and skills in Accounting, 63,7% in Business Studies, and 69,9% in Economics at the start of their Grade 10 academic year in 2017. What is more alarming is the fact that, instead of the learners acquiring and strengthening their subject content knowledge and skills as the year progressed, there was a decline in their results in all three subjects in the September control test to below 30% (refer to Table 6.3a). Two questions should be asked – *what happened during the school year, and why did the learners' subject content knowledge and skills decrease?* Possible answers to these two questions are discussed in Sections 7.3.2.3 and 7.3.4.1 below. Hence, if Grade 10 learners already do not have an adequate entry-level content knowledge and skills for the FET phase when they arrive in Grade 10, and if the little they know further diminish over the course of the school year, they are at a disadvantage and will fall even further behind, resulting in them not completing Grade 12 successfully, and, even if they wanted to proceed to post-school studies,

they will not be able to do so. These results confirm the perturbing gap between the subject content knowledge and skills required for the business-related subjects (Department of Basic Education, 2009; Dos Reis, 2012; Gouws & Russell, 2013; Schreuder, 2009).

It was a different story at School B, as the control group achieved higher results than the sample learners in all three subjects across all three assessments, except for the September control test in Business Studies where the result was similar (refer to Table 6.3b). A possible reason why the control group learners had higher marks than the sample learners could be the fact that the academically strong learners were not selected as the learner participants for the study; they were part of the control group. As explained in Section 5.5.3, the selection criteria focused on the learners who had a code 4 and below.

In addition, the sample learners could not achieve a minimum pass rate of 30% in the March control test in Economics and in the June examination in Accounting, but their overall average results in all three subjects in the September control test were higher than those of the sample learners of School A. Unlike the sample learners at School A, they achieved a pass rate of 40% and above for Accounting, and 50% and above for Business Studies and Economics (refer to Table 6.3b).

However, the sample learners' progression through the year from not so good in the March control test to much better and even good in the September control test, was on par and positive, which is what should have happened. The learners' subject content knowledge should have been strengthened and cemented as the academic year progressed, and should not have declined as was the case at School A. One could argue that better results were to be expected at School B, a quintile 4 school. In addition, because 95% of the learners' LoLT was also their mother tongue, it could have contributed to their better results. But the fact remains that the sample learners lacked 64,2% of the subject content knowledge and skills in Accounting, and 70,7% in Economics in their March control test (refer to Table 6.3b). Fortunately, their subject content knowledge and skills increased as the year progressed, unlike those of School A's learners. An overall inference could be

made that the learners at School A had a greater lack of subject content knowledge and skills than the learners at School B.

Tables 6.4a and 6.4b reflect that the pre-test average results were better at School B than at School A, except for the Accounting score. Two interventions were implemented with the sample learner participants in September 2017. After the interventions, the results show that there was an increase in the post-test results at both schools. An inference could be made that the interventions helped the sample learner participants to a certain extent because the interventions targeted a specific section of the work that was already taught by the teachers during normal school time (refer to Appendix L). The groups were smaller as well, which assisted in effective teaching and learning to take place, compared to the normal classes where the groups were bigger, which would not have resulted in effective teaching and learning.

Consequently, the November examination results in all three subjects were higher for the sample learner participants at School A than the control group, compared to School B where only Business Studies showed a higher result by the sample learner participants than the control group (refer to Tables 6.5a and 6.5b). More important though, is the fact that at School A the sample learners' average November 2017 examination results were slightly higher in Accounting and Economics than in their March and September control tests; but the results were dismally low in Business Studies, which declined from 36,8% in March and 32% in September to 19,12% in the November 2017 examination. The downward trend of the sample learners' results in Business Studies at School A was a red flag, which is further discussed under Sections 7.3.2.3 and 7.3.4.1.

At School B, the sample learners' average results in the November 2017 examination were higher than in their March control test in all three subjects, but lower than in their September control test in all three subjects. Unlike School A where the sample learners only achieved the minimum of 30% and above in Accounting and Economics, the sample learners at School B achieved a 40% and above in Accounting, 50% in Economics, and above 50% in Business Studies (refer to Table 6.5b). But again, the control group learners' results were higher

than the sample learners' results in Accounting and Economics and these learners were not part of the interventions. The assumption made earlier could also apply here – that they could have been the academically strong learners in the school.

Nonetheless, the November 2017 examination results showed that the sample learners at School B achieved an adequate rating of 4 (50% and above) in Business Studies and Economics, while the sample learners at School A could not achieve this. The results also reflected that there was a decline in the results of the sample learners at School B in all three subjects in the November examination compared to their September control test. What should be noted here for both schools is the fact that the November examination covered all the work that was done throughout the year, while the control tests covered only the work that was done in the term. An inference could be made that, when the learners are being assessed on part of the work (for example, a term's work), they do better than when they are assessed on the whole year's work. Notwithstanding this point, an argument could be made that the interventions were not sufficient to provide the sample learner participants with adequate content knowledge and skills to achieve an adequate rating of 50% in all three subjects in School A, and in Accounting at School B in the November 2017 examination.

7.2.2 Cycle 2: Grade 11 learner participants in 2018

As discussed in Cycle 1, the learners started the year in Grade 10 with insufficient content knowledge and skills, and they ended the year with insufficient content knowledge and skills in all three subjects at School A, and in Accounting at School B. If the learners do not possess a solid basis of the subject content knowledge and skills in the three subjects in Grade 10, it will not be possible to develop and apply it in Grade 11 and then in Grade 12 as the one grade's curriculum builds on that of the former grade (refer to Section 4.2). The FET is a phase from Grade 10 to Grade 12, and the examination at the end of each year tests 20% of the previous year's content knowledge and skills, and 80% of the current year's content knowledge and skills (Department of Basic Education, 2011(a)).

School A sample learners' 2018 March control test average results reflected that there was an improvement in all three subjects compared to their November 2017 examination average results (refer to Table 6.6.a). Their September control test also showed an improvement in all three subjects, unlike their results in the September 2017 control test, which reflected a decline. Once again, there was a decline in the results of the June examination in which half of the year's work was assessed. This provides evidence for the inference made under the previous cycle – that they tend to do better when only a single term's work is tested (lower volume of work). As such, the sample learners started their Grade 11 year with somewhat more subject content knowledge and skills than what they had at the start of their Grade 10 year in 2017. However, it was still not an adequate rating of 4 (50% and above), which means that in 2018 they continued to lack 66,7% subject content knowledge and skills in Accounting, 73% in Business Studies, and 59% in Economics.

At School B, the sample learners showed a 15% improvement in their March control test results in Economics, compared to their November 2017 results. They had a similar result for Accounting, but a decline in their Business Studies March control test, compared to their November 2017 examination results (refer to Table 6.6b). They ended their Grade 10 year with results of 50% and above in Business Studies and Economics, but started their Grade 11 year with less than 50% in Accounting and Business Studies, which means that they, too, lacked 57,8% subject content knowledge in Accounting, and 54% in Business Studies. Their Economics result was 75,3%, which means that they had more than adequate subject content knowledge and skills in Economics. For these learners, the assumption that they do better when the work assessed is of a lower volume, does not apply to all the subjects, because here the reverse was true – they did better in Business Studies in the November examination in which the year's work was assessed than in the March control test where only the term's work was covered. However, the assumption does apply to Economics.

Three interventions per school were implemented in 2018 with the sample learner participants. Similar to Cycle 1, the results reveal that there was an improvement

in the marks of the post-test for the sample learner participants at both schools (refer to Tables 6.6a and 6.6b).

Notwithstanding the improvement in their results after the interventions, School A sample learners' November examination results were below the minimum of 30% in Accounting and Business Studies, but 32% in Economics (refer to Table 6.8a). Their November 2018 results were lower than their November 2017 results in Accounting and Economics, but slightly better in Business Studies (25% compared to 19,12% in 2017). The results indicate that the learner participants did not manage to overcome the backlog in their content knowledge and skills in all three subjects and that is why the statement 'too little too late' could be applicable with regard to the interventions they attended. It would appear that ongoing, extra academic support should be provided throughout the academic year to assist the learners in acquiring the necessary content knowledge and skills in the three subjects, and perhaps in all the other subjects. Also, ongoing language and reading support should be provided to the learners so that their academic performance could be strengthened and enhanced.

At School B, the sample learners' November 2018 average results showed an improvement in Accounting and Economics (51,6% and 79,5%) compared to their November 2017 average results (42% and 50%), but a decline in Business Studies (36,3%) compared to 55,3% in November 2017. Similar to Cycle 1, School B sample learners' November 2018 results were higher than those of the sample learners at School A. One could again argue that the learners at School B were supposed to perform better than School A as they were attending a quintile 4 school. However, there was a decrease in their Business Studies result, which raises the question: *How did the learners manage to achieve such a high mark for Economics in the November 2018 examination, compared to Business Studies, which could be regarded as less demanding than Economics?* It should be noted that the Grade 11 November examination papers are compiled internally per school and not externally as with the Grade 12 NSC papers. As such, the possibility could not be overlooked that the learners could have had an indication of the content of the Economics November examination paper and consequently,

could prepare well. If that was the case, then there is no real value that could be attached to the high pass rate, and it would remain questionable whether all the learners had acquired the necessary subject content knowledge and skills that the mark symbolises.

7.2.3 Cycle 3: Grade 12 learner participants in 2019

The sample learners' March 2019 control test results showed that there was an improvement in their average results in Accounting (34%) and Business Studies (38%) compared to their March 2018 control test (32,3% and 27%), and March 2017 control test (24,2% and 36,8%), but a decline in Economics (25%) compared to Economics in 2018 (41%) and 2017 (31%) at School A when they entered Grade 12 (refer to Table 6.9a). These results also reflect favourably compared to their November 2018 examination results for Accounting (25%) and Business Studies (26,6%), while their Economics results followed the same pattern – a decline compared to their Economics November 2018 (32,8%) result. However, similar to Cycles 1 and 2, their average results in all three subjects were not at an adequate rating of 4 (50% and above), which means that they did not have sufficient subject content knowledge and skills when they arrived in Grade 12 in 2019. They lacked 66% in Accounting, 62% in Business Studies and 75% in Economics. The upward trend in their marks also provides further evidence for the assumption that they do better when less work is assessed, than when the year's work is assessed.

At School B, the learners' March 2019 control test results show that there was a decline in their Accounting average results (41,9%) and their Economics results (62,8%) compared to March 2018 (42,2% and 75,3%), while there was an improvement in their Business Studies result from 46% in the March 2018 control test to 54,4% in 2019 (refer to Table 6.9b). Similar to their counterparts in School A, the sample learners' March control test results show that there was a decline in Accounting (41,9%) and Economics (62,8%) compared to their November 2018 Accounting (51,6%) and Economics results (79,5%), and an increase in their Business Studies result (54,4%) compared to their November 2018 Business Studies result, which was 36,2%. The sample learners' results showed that they

consistently started each year with a below 50% average in Accounting (2019, 2018 and 2017), and they also had a below 50% average result in Business Studies in 2018, but at the beginning of their Grade 12 year in 2019, their Business Studies average result increased to 55,4% in the March control test. Their Economics results were below the minimum of 30% in 2017, but it increased to 75,3% in the March 2018 control test, with a decline to 62,8% in the March 2019 control test, but it was still above the adequate rating of 4 (50% and above). Thus, they started their Grade 12 year with a lack of 58,1% subject content knowledge in Accounting, but an adequate rating of 4 (50% and above) in Business Studies and Economics.

As described in Section 5.4.1, two interventions were implemented in this cycle, in April 2019 and again in May 2019. Similar to what happened in Cycles 1 and 2, there was an improvement in the results of both schools' sample learner participants' post-test marks after the interventions were implemented in all three subjects. As Table 6.10a reflected, at School A, the post-test results of the sample learners after the first intervention were higher than those of the second intervention results. A similar trend can be seen in the sample learners' post-test results at School B. Their first intervention's post-test results were also higher than their second intervention's post-test results (refer to Table 6.10b).

The second interventions' post-test results were disturbingly low in Accounting and Business Studies because the academic support that was provided through the interventions focused on a specific section of the content that was already covered during normal school time. These results are different to the previous two cycles because all the post-test results were higher in all three subjects after the interventions were completed in 2017 and 2018.

Thus, a concerning implication is the fact that the learners could not master the content of the sections that was focused on in the second interventions, but achieved higher marks in Accounting and Business Studies in the June examination in which the first half of the year's content was assessed (refer to Table 6.11). This is similar to what happened in Cycle 2 with the Economics result; and hence, one could again infer that the learners could have had insights

as to what will be tested in the examination, or they were assisted by the respective teachers to focus on what they would be tested on. However, the post-test results of the second intervention in Economics were higher than the June examination results at both schools, which is ‘what should have happened’ in the other two subjects as well, but it did not.

The June examination average result of the sample learners at School A was higher in Accounting (37,6%) than what it was in their March control test (34%), but lower in Business Studies (24,2%) and Economics (21,8%). At School B, the sample learners’ June examination results were lower than their March control test results in all three subjects (Accounting 30,15%, Business Studies 37,4% and Economics 49,4%) (refer to Tables 6.9a and 6.9b for the March control test results). Thus, their results followed the trend of having a higher mark when a lower volume of work is assessed, and a lower mark when half the year’s work is assessed.

School A sample learners’ November examination results over the three-year cycle showed that their average results in November 2017 (31,6%) were higher in Accounting than in November 2018 (25%), but increased again in November 2019 to 33,5%. Their Business Studies result increased gradually over the three years, from 19,2% in November 2017 to 26,6% in November 2018, and to 32,8% in November 2019. Their Economics result on the other hand, gradually decreased from 33,4% in November 2017 to 32,8% in November 2018, and to 32,2% in November 2019 (refer to Table 6.12a). These results show that the sample learners (and the control group) not only started each year with a lack of subject content knowledge and skills, but they also ended each year with a lack of subject content knowledge and skills in the three subjects as they did not pass their examinations with an adequate rating of 50% and above.

Consistent with their performance over the three-year period, School B sample learners’ November examination showed mixed results. Their November 2017 average result in Accounting was 42%, it increased to 51,6% in November 2018, and decreased to 35% in November 2019. Their Business Studies average result in November 2017 was 55,3%, it decreased to 36,2% in November 2018, and

increased again in November 2019 to 39,2%. Their Economics average result in 2017 was 50%, it increased to 79,5% in November 2018, and decreased to 44,4% in November 2019. The sample learners' results illustrate that, while they started their Grade 10 in 2017 with a lack of subject content knowledge and skills in the three subjects, they managed to acquire more knowledge over the course of the year and achieved an adequate rating of 50% and above in Business Studies and Economics in the November 2017 examination. They started their Grade 11 year in 2018 with a lack of subject content knowledge and skills in Accounting and Business Studies but managed to pass their November 2018 examination with an adequate rating of 50% and above in Accounting and Economics. And while they started their Grade 12 year in 2019 with a lack of subject content knowledge and skills in Accounting only, they could not pass the three subjects with an adequate rating of a 50% and above in the November 2019 examination.

Moreover, the sample learners' results at School B were consistently higher than those at School A in all three subjects over the three-year cycle, but at both schools they could not achieve an adequate rating of 4 (50% and above) in the three subjects in the November 2019 examination, despite having received extra academic support through the seven interventions that were implemented over the three years.

In addition, these results also showed that while the sample learners at School B could achieve 50% and more in some of their subjects in 2017 and 2018, the sample learners at School A could not. Their highest result (School A's sample learners) was 33,5% in Accounting in November 2019. This, ironically, is the national examination, whereas the November 2017 and 2018 examinations were internally compiled per school and yet these learners could not achieve a higher mark in either examination. The fact that the School B sample learners' Economics result in November 2019 decreased to below 50%, provides further evidence for the inference that was made under Cycle 2, which is that they could have had an indication of the content of the Economics 2018 November examination paper and could consequently prepare well, but they could not maintain their high performance in the national examination.

As was reflected in Tables 6.12c and 6.12d, the final examination results of the cohort learners were presented. These were the 27 learners who were part of the sample learners in the three cycles, and who were the study's 'officially selected learner participants' (refer to the explanation in Section 5.5.3). Their results follow a similar pattern to those of the sample learners' final examination results at both schools, as explained in the preceding two paragraphs.

It should be noted that the bachelor's pass rate of the cohort learners at School A in June 2019 was 13,3%, as well as in November 2019, while the bachelor's pass rate for all the Grade 12 learners at School A was 25% in June 2019 and 27,8% in November 2019 (Western Cape Education Department, 2020). Three of the fifteen learner participants at School A did not pass the NSC of November 2019. The bachelor's pass rate of the cohort learners at School B was 25% in June 2019 and 41,2% in November 2019, while the bachelor's pass rate of all the Grade 12 learners at School B was 20,7% in June 2019, and 37,7% in November 2019 (Western Cape Education Department, 2020). These pass rates are noted here to illustrate that there was a 28% difference between the sample learners' pass rate at School A and School B, and a 10% difference between all the Grade 12 learners at School A and at School B in 2019. Thus, the results show that there was a bigger difference between the sample learners' results at School A and B, than was the case between all the Grade 12 learners' results at School A and B. As was suggested towards the end of the discussion under Cycle 1, one could argue that the learners at School B were at a better school (quintile 4), they had the advantage of learning in their first language, and they had a better subject content knowledge and skills foundation than their counterparts at School A.

After the interventions were completed, the learner participants were requested to reflect on the academic support that they received in the three subjects. In the first reflection (after the first five interventions in 2018), 14 learners (70%) at School A reported that the interventions assisted them a lot with their language development and logical thinking skills. At School B, 10 learners (50%) indicated that the development of subject/content knowledge assisted them a lot. Eighteen

learners (90%) at School A and 19 (95%) learners at School B indicated that the interventions helped them to improve their marks in the three subjects.

In the second reflection (after all the interventions were done in 2019), 12 (60%) learners at School A indicated that the development of their research skills improved a lot. At School B, 15 (88,2%) learners reported that their language development and logical thinking skills improved a little. Nineteen 19 (95%) learners at School A and 16 (94,2%) learners at School B indicated that the interventions helped them to improve their marks in the three specific subjects (refer to Table 6.29a and Table 6.29b). Also, in both reflection forms the learners indicated that their ability to answer questions, their writing, research and study skills, independent learning, time management, self-confidence, and analysis and interpretation of questions improved. In the qualitative responses, the learners reported that the interventions assisted the development of their subject/content knowledge, language and logical thinking skills, application skills, critical analysis, problem-solving, debating and communication skills, research skills and mathematical skills.

The learners' responses above illustrate that the interventions did assist them to improve their understanding of the specific subject content knowledge and skills that were taught. As explained, one should bear in mind that the interventions (the extra academic support) focused on specific sections that were already taught by the different teachers in the three subjects. As such, an inference could be made that the academic support provided reinforced the specific sections and that could be the reason why the learners in both reflections at the two schools reported that there was an improvement in their subject content knowledge and skills. Their post-test results also reflected an improvement in their results, but the improvement did not carry them through in the November examination, especially the learners at School A. Hence, the interventions were a drop in the ocean, and could not provide adequate academic support so that all the learners could achieve an adequate pass rating of 4 in all their subjects in Grade 12 at the end of 2019.

In conclusion, as was pointed out in the discussions under the three cycles, the sample learners' results fluctuated over the three-year period at both schools.

Their results would be higher or lower in the March control test, then some would increase and some would decrease in the June examination, and the same pattern will continue in the September control test and in the November examination (decreasing or increasing again). The results that were steady would either gradually increase over the three years (but still not increase significantly), or gradually decrease over the three years. These learners' results draw attention to the fact that an adequate subject content knowledge and skills foundation should be laid in the early phases, together with a thorough grounding in literacy and numeracy, and it should continue throughout the learners' public schooling career – it cannot start in the FET phase as by then, it is too late.

7.3 DISCUSSION AND INTERPRETATION OF ALL THE OTHER RESULTS BASED ON THE AUGMENTED READINESS MODEL

The discussion and interpretation in this section are based on the conceptual framework's augmented readiness model's dimensions and sub-dimensions (refer to Section 4.5). The researcher attempted to illustrate the interrelatedness and interdependency of the dimensions and sub-dimensions in the discussions and interpretations of the results (refer to Section 4.5.1).

As explained in Section 5.5.3, only 40 of the originally selected 60 learner participants completed the questionnaire and the two reflection forms in 2019. Their responses, together with the other participant groups' responses are discussed and interpreted in this section. Reference is also made to the discussions under the three cycles.

7.3.1 Contextual dimension

The contextual dimension is the first dimension in the augmented readiness model (refer to Table 4.6). It consists of three sub-dimensions, namely the school context and parent circumstances and involvement, university requirements, and socio-cultural factors. The applicable results are discussed and interpreted under the three sub-dimensions below.

7.3.1.1 The school context and parent circumstances and involvement

Poverty is a key factor behind low educational achievement; it determines what school a learner will attend, and who will teach them (Gándara & Mordechay, 2017). It also governs the resources and support available to them at the school and at home, the food they eat, the healthcare they have access to, and if their parents are able to support them or not (Gándara & Mordechay, 2017). As described in Section 5.5.2, School A was a quintile 1 school, which means that the school was situated in a poor area and the learners were entitled to enrol without paying school fees. The school was also a poorly resourced school located in a rural area (Mestry, 2016). Eight learners (40%) reported in the questionnaire that their parents/guardians were employed, seven learners' (35%) parents/guardians were unemployed, and two learners (10%) said that their parents received social grants. Three learners (15%) did not respond to this question.

On the other hand, School B was a quintile 4 school, which means that it was situated in a more affluent area and the learners had to pay school fees. Accordingly, 16 learners (80%) reported that their parents were employed, three (15%) indicated that their parents/guardians were unemployed and one learner's (5%) parents received social grants. However, the principal stated in his interview that 50% of the parents were not paying the school fees of their children, resulting in the school struggling financially.

At School A, the parents in the focus group discussion agreed that the school provided the learners with resources and previous examination papers. At School B, the parents did not make any remarks on the learners' resources, but the district supplied these resources to both schools (e.g. Mind the Gap).

Teacher AB was of the view that learners must be equipped with quality resources when facing general impediments. Another teacher (MN) replied on the question of her perception of learners' university preparedness that the school does try, but not all the learners have the resources to develop their skills.

According to subject adviser LZ, there was a lack of equipment (e.g. data projectors), no proper Wi-Fi at School A for learners or teachers to watch

telematics or e-lessons. There were no proper textbooks, teachers had to use core notes, and the school did not have sufficient funds to copy the notes. However, the principal of the school stated that each department was provided with a laptop and data projector to be used during the lessons.

The circuit manager (MM) explained that no effective systems and procedures were in place to properly manage the resources at both schools. According to him, School A had sufficient funds to buy the resources, but there was sometimes a reluctance to use the funds, and an over-reliance on external support. He thought that the school was not taking ownership of their growth and development.

The principal at School B explained in his interview that the school had a slim lab with 26 computers, and 25 classrooms with laptops and data projectors and whiteboards. However, he pointed out that not all the teachers were proficient in using technology, and that the internet access was not sufficient for the school. The circuit manager explained that the resources were not well managed, especially the provision of textbooks to learners at School B. He further explained that the schools received the funding to buy the books, but the retrieval rate of textbooks at the end of the year was poor, leaving the learners without textbooks. There was also a high rate of breakage of machines and turnover of printing consumables, due to proper supervision and a weakened administration structure at the school.

The teachers indicated in their interviews that what they taught formed part of their academic training and most of them had a specific subject at second-year level. The two subject advisers (LZ and LC) stated that most teachers have sufficient knowledge in the content they teach, but not necessarily in the pedagogical content knowledge. This means that the teachers had sufficient knowledge of the subject content but could not transfer the content to the learners' level of understanding. They also explained that there was a lack of communication between teachers in Grade 10, 11 and 12, which created problems because the Grade 11 teachers did not for example know what was taught in Grade 10 to take the learners further and prepare them well for Grade 12.

Lecturer LB explained that the teachers at schools should understand what they teach and assess, and should find new ways to support the learners. Lecturer WD suggested that teachers must keep things simple and look for opportunities to collaborate in order to better prepare learners for university. Lecturers NH and BW stated that the learners must understand why something is done in a particular manner and that the teachers should assist the learners in applying the knowledge and content they learn to other scenarios. Lecturer NH emphasised that teachers must use “real-life simulations and teach them how to discuss a concept with its pros and cons”.

In the focus group discussion with the parents, one parent at School B made the following statement:

The overcrowded classes are a challenge because the teacher is not always aware whether the learners understand the work and are capable of doing it.

Subject adviser LZ stated that large classes were a challenge that hindered quality teaching from taking place. Both school principals referred to the challenge of overcrowded classes at their schools, but the circuit manager (MM) indicated that the learner-teacher ratio at School A was 36:1 and at School B it was 32:1 in the FET phase, both of which is an acceptable ratio.

However, because all subjects in the GET phase are compulsory, the classes are much bigger than in the FET phase where subject choices are allowed. For example, as observed in this study, the class size for Mathematical Literacy in the FET phase is much larger than the pure Mathematics class. As discussed in Section 3.2.1.4, class sizes impact on learner performance. Small classes allow teachers to pay more attention to individual learners, but bigger classes are more demanding and challenging, which could result in the teacher not being able to pay all the learners individual attention (National Planning Commission, 2011). It should also be noted that the learner-educator ratio (LER) of South Africa is much higher than all other countries that were compared (refer to Table 2.7).

Thus, the results highlight the following three aspects. Firstly, the fact that School A was a quintile 1 school (a no-fee school) and that School B was a quintile 4

school where parents were supposed to pay school fees, but the school struggled to get the money from the parents. Secondly, both schools did not have enough resources to provide in all the needs of the learners. Thirdly, the management of resources by the teachers and SMTs were problematic at both schools. They did not know how to optimally use what they had.

Moreover, the school context also implies that the school will assist the learners with career guidance and information on post-school studies and application procedures. As such, one section of the questionnaire had questions relating to the learners' specific post-school options and career knowledge and skills. Thirty-six of the 40 learners (90%) wanted to go to university/college after completing Grade 12. At School A, 20 (100%) learners knew what they wanted to study, but nine of them (45%) did not know which subjects were required for their preferred study field. At School B, 18 learners (75%) wanted to study further but were unsure what they wanted to study, but they were sure that the subjects they were doing were the right ones for further studies. Their responses were:

The subjects we have, we can study various courses.

We have done research.

There were open days and career exhibitions that helped us.

Our families will help us.

As the results in the previous section showed, only 27,8% of the learners at School A and 37,7% at School B passed with a bachelor's pass at the end of 2019. This means that some of the learners who indicated that they wanted to study at a university will not be able to do so because they did not obtain a bachelor's pass.

In the focus group discussion, the learners' perception of how the school prepared them for post-school studies focused on subject choices, career counselling, academic preparation, information on how to apply, and the selection of a career choice at university/college. Thirty-seven of the 40 learners (97%) responded that the schools did not help them to select their subject choices in Grade 9. The learners gave the following reasons:

The teachers gave us the subject choice forms with no advice or explanations.

Teachers mind their own business, they inform us to do our research, and ask advice from our parents.

Because there was no guidance in Grade 9, we made the wrong choices/decisions.

We don't have a good relationship with our teachers and did not have the confidence to speak to them.

At School A, all 23 learners (100%) in the focus group discussion answered that the school did not offer career counselling. The learners at School B indicated that they received career counselling during their Life Orientation periods. A career exhibition day was held at both schools at the beginning of the learners' Grade 12 year, during which higher education institutions visited the schools. At School A, seven (30,4%) and at School B, all 24 learners (100%) agreed that the schools did not prepare them academically for university/college life. Their responses were:

The teachers just focus on the Grade 12 November examination and not beyond Grade 12.

Teachers do spoon-feeding and there is no independent working.

We don't know how to summarise (my mother is still doing my summaries).

We do rote learning (they only learn what the teachers tell them to learn).

If we get something else to do, we will not be able to do it.

In the focus group discussion with the learners at School A, 17 (85%) said that they did not receive help from the school on how to select a university/college, how to apply for admission to a degree programme, advice on career choices, and how to apply for NSFAS or other bursaries and loans. At School B, 20 learners (100%) responded that they only received information on how to select a university/college and to apply for admission but did not receive assistance with career choices and how to apply for bursaries and loans.

During the parent focus group discussions, the issues discussed were the school's role and responsibilities in preparing the learners for post-school studies, which included the provision of academic support to the learners. The parents had

different opinions about the provision of academic support to their children. At School A, the parents indicated that the school gave the learners academic support by providing resources and previous examination papers, and in the topics of tourism and transport. At School B, the parents were concerned about the curriculum coverage and the provision of extra classes and support for certain subjects only.

The parents' responses corresponded with the learners' responses about subject choices and career counselling advice. The parents explained:

My child had to change from Mathematics to Mathematical Literacy and because of that, she had to change Accounting for Physical Science.

The subject choices must get the necessary attention from Grade 9 already.

There is a deficit in the advice from the school's side in terms of subject choices and careers to the learners.

The school must evaluate the learners and give recommendations to the learners and parents about subject choices.

The parents pointed out that both schools had career days during which institutions came to the schools to speak to the learners about their institutions and the degree programmes they offered, which is also what the learners indicated in their responses. However, the parents indicated that the learners were unable to attend university open days because it cost a lot of money for the school to transport the learners, and the schools did not make the dates available to the parents so that they could make an effort to take their children. An inference could be made from the parents' responses that both schools did not have adequate financial resources to provide transport for all the learners to attend the open days, and the schools did not ask the parents to assist in this regard either.

Another question that was asked to the parents was *whether the school's academic programme meets the learners' needs*. The responses were:

The subject choices are limited.

The school arranges subject packages.

The school does not have the subject Computer Application Technology, and it is avoided because in this 21st century technology is the order of the day.

The learners do not know how to use a computer, how the format must be of their tasks, and that is a backlog.

Furthermore, the parents at School B explained that the school only prepared the top 10 learners for further studies regarding study choices and requirements. This concern of the parents indicates that the school is investing in their top achieving learners only, and not in all their learners, which is unfair as the average and weaker learners could feel disadvantaged and demotivated to try to work hard. They could also feel that the school does not care about them, and as such would not feel loyal to the school or interested to work harder to perform well and make the school proud.

The other participant groups were also asked in their semi-structured interviews about the schools' contribution to the learners' university readiness. Irrespective of the years that the teachers had been teaching, the three teachers of School A believe that the school was adequately preparing learners for university. Their reasons were:

Learners get a good foundation, which is very useful at university (MJ).

...the level of education in schools and teacher involvement and dedication are assisting learners to compete well (TK).

The subject knowledge of Economics lays a good foundation to pursue this subject at tertiary level (AB).

From Grade 10 learners are required to do markets, which is the same as the university stuff (AB).

In contrast with these remarks, two teachers (AH and NS) at School B did not agree with their School A counterparts that the schools were adequately preparing learners for university studies. Their responses were:

Most learners struggle to work independently at university level (AH).

The curriculum is designed for ideal circumstances and we are sitting with overcrowded classes, so it makes it difficult to adhere to time (NS).

The third teacher, MN, did not have a definitive opinion about learners' readiness for university and said, "the schools do try, but not all the learners have the resources to develop their skills".

A similar trend was noted in the responses of the lecturers. The three lecturers from the traditional university, irrespective of the number of years' lecturing experience they had, indicated that the school curriculum does not adequately prepare the learners for higher education. In contrast, two of the three lecturers from the university of technology thought that the students were, at least to a certain extent, prepared for post-school studies. They believed that learners from well-functioning schools are better prepared for university. Lecturer VG responded:

It is not only the school curriculum, but they also have social capital, and other aspects contribute to them being university ready. It is not the school curriculum, per se, it is also the type of school and teachers, all the schools have the same curriculum. Certain schools do prepare the students well, but that is the minority.

Lecturer LB placed particular emphasis on the discrepancies between the university and school pass requirements and raised this as a serious concern. She explained:

Learners are allowed to 'pass' with less than 50%, which means that some students have passed the school subject but have 'gaps' in their subject knowledge, which do cause concerns at university level.

Lecturer MM said, "No, the learners were not adequately prepared for university study." She explained that there were "gaps which the university identified, and, as a result, the university has support modules to help the students overcome the challenges in terms of language and mathematics". She articulated the concern she felt after the first assessment she gave to the first-year Economics students:

The student outcomes of the first class test [showed that] the students with no Economics background did better than students [who] had Economics at Grade 12 level. It is about the assessment types at school level, such as to define and match words, and fill in [missing] words, and writing the [misnamed] 'essays'. We found these assessment methods to be counter-intuitive as students then grapple with providing more depth in answering questions (those that go beyond merely defining) at first-year [level].

Lecturer BW, who lectures Accounting, shared a similar view as lecturer MM and felt that learners are taught at a superficial level and lack critical thinking skills, which are a major requirement of her subject. She stated:

My opinion is that schools focus on the application of Accounting. In the first year of the Accounting module, concepts and principles are taught, followed by the application of these principles. At school level, I feel that teachers tend to focus on the application only and the learners become robotic, because they know how to do it, but not why.

While lecturer NH had mixed responses about how the business related subjects prepare learners for the B Com degree, she said:

To an extent yes, [the school] does prepare learners who did Business Studies, Economics, or some business management-related subjects in high school, because the learners have a basic knowledge and understanding of business principles. To a lesser extent, no, because the students are not well equipped to discuss concepts and apply them in different scenarios. Analytical skills are lacking.

Two of the three subject advisers (LC and CL) thought that the schools prepared the learners for university because it covers a lot of content and high analytical skills are needed to understand the content. The third subject adviser, LZ was not in agreement. Her response was, “Most schools do not prepare the learners adequately for tertiary studies, because the learners are not given proper guidance and advice from Grades 8 to 12.”

The circuit manager’s perception of School A was that the school did not prepare the learners for post-school studies because “it is rather a struggle to keep the learners in school, to manage the teachers and to complete the curriculum and to motivate the learners to study”.

He was also concerned about the current culture of the school and said:

There is a lack of culture to work hard for the whole school day. I am not sure whether the whole staff is fully prepared every day of the week.

His perception of School B was that the school prepared the learners for post-school studies to a certain extent, “because they are giving the learners exposure to career planning”.

The responses from the different participants above form two patterns. The first is the fact that both the learners and their parents, and the circuit manager believed that the two schools did not prepare the learners for university studies. The second pattern is that there were opposing views between the teachers from the one

school, versus the teachers from the other school. The first group indicated that the school did prepare the learners for university studies, while the other group said no, the school did not prepare the learners. Similarly, opposing views came from the subject advisers – where two of them said yes, the schools did prepare the learners, and one said no, the school did not. There were also opposing views from the lecturers. The lecturers from the university of technology felt that the schools were preparing the learners for university studies to a certain extent, whereas the lecturers from the traditional university did not think so. Given the responses of the above stakeholders, it is clear that there was no consensus on whether the schools were adequately preparing learners for university studies or not. However, in total, the responses that the schools are not preparing the learners for university studies were more than those who agreed that the schools were preparing the learners.

Parental involvement or the lack thereof is also a factor that could influence learners' academic progress and success at school. The learners did not indicate that their parents were involved in their schoolwork, or that their parents supported and encouraged them in their focus group discussions.

The parents, on the other hand, agreed that they had a responsibility to communicate with the teachers at school. According to the parents of School A, their role was to assist their children in what they want to achieve in life. They explained:

The parents must make an effort and do research to guide and support their children. The parents must be informed of all the opportunities and bursaries for their children. As parents, we must support each other's children.

It takes a community to raise a child.

The parents' role is to encourage and to support.

The parents at School B indicated that:

They encourage their children from primary school to work at home.

We as parents are interested in our children, but the children give the impression that they understand everything, till the test results are released.

It is my responsibility as a parent to provide for my daughter's stationery and school uniform and everything she needs, but she also has a responsibility, namely to attend school, study and learn.

Also, the parents did not indicate that they were involved in extramural activities with their children. At School B, the parents felt that, because it is a volunteering service, they as parents must be willing to give their experience and expertise to the school. One parent stated that "it is the parent's own decision to be involved in the school's activities".

The subject adviser referred to the social problems that "mostly cause the learners not to be able to study or work at home". Teacher AH shared this view and explained:

Parents' involvement and social challenges at home and within the community also affect the learners' ability to perform to their best potential.

The two principals and the circuit manager remarked in their interviews that there was a lack of parental involvement in supporting their children's schooling and academic career and in the running of the school with regard to fundraising activities, and the attendance of parent meetings, paying school fees, and communication.

In the South African context, unfortunately, many parents never had the opportunity to attend school themselves, and do not know how to read and write due to the previous dispensation (Modisaotsile, 2012). In the UK, according to Azano and Stewart (2015) and Munn (2018), teachers noted that parents cared about their learners' academic performance but lacked the knowledge or experience to encourage and support their children in and outside the school.

Parental involvement in education has unfailingly been found to be positively linked to learners' academic performance at schools (Mbiza, 2018; Page, 2016). In the case of this study, even though the parents acknowledged that they should be communicating with the school and be involved in their children's schools, they were not. This view was supported by one teacher, the principals of both schools, and the circuit manager. If one looks at what the learners reported about their immediate family's highest education level, the parents of two (10%)

learners at School A and the parents of four (20%) learners at School B attended post-school studies. A possible reason could be that the rest of the parents were not involved in their learners' schooling because of their level of schooling, or simply because they worked long hours and were not home in the afternoons when their children arrived from school. The parents did indicate that they were supporting their children or attempted to do so.

7.3.1.2 University context and requirements

The university context and requirements are the second sub-dimension under the contextual dimension. It has to do with what the university requires from Grade 12 learners, as well as the difference between school and university studies.

As stated in the previous section, 36 (90%) of the 40 learners responded that their plans after completing Grade 12 were to go to university/college. As was already pointed out, not many of these learners would be admitted to a post-school institution due to their academic performance in Grade 12 (refer to Cycle 3).

The learners were asked in their questionnaire whether they thought that school and university/college were the same or whether it was different. All the learners at both schools thought that university would be different from school. Learners at School A responded:

At school, your teachers are pushing you to do your work and assist you; at university, you are on your own.

At school, you wear a uniform; at university, you wear casual clothes.

At school, there are school hours and at university, it is more flexitime.

At school, you get your books and at university, you must pay for your books.

Responses from learners at School B were:

At school, you have the support and help, not as much at university; at university, you must take responsibility for yourself.

At school, it is more personal (know your name); at university, it is impersonal (do not know your name).

At university, you have more freedom; at school, they tell you what to do to improve.

At university, you meet new people; there are more subjects, and the way of teaching is different at university (at school it is more spoon-feeding).

At School A, the learners' perception and expectations of post-school studies were:

It is going to be academically more difficult.

Going to meet different people and different cultures.

It is going to be fun.

Uncertain, do not know what to expect or what will happen.

The language is going to be a challenge because English is not my home language (language barrier) and it is going to be life-changing.

At School B, the learners' expectations of university/college life were:

Scared, it is going to be tough and difficult.

Must adapt to the new environment; must be more mature; cannot depend on your parents; must be independent.

You must know who you are, know what you want, to make the right choices and decisions not to succumb under peer pressure

Must be willing to make sacrifices, e.g. to study and not to go out.

Must make new friends, fear, there are going to be challenges, e.g. peer pressure.

Must submit tasks on time and it all depends on yourself.

It is clear from the learners' responses that they had an idea that university and school differ. Their responses indicate that they had a sense that university life would be difficult and challenging, and that hard work would be needed. They also had a sense of the fact that they would have to become independent and that they could not rely on their parents anymore. The one learner at School A also raised a very important point – that of a language barrier. For him, studying at a university will be even more challenging as he will have to learn and acquire higher-order skills and subject knowledge in English as the language of learning and teaching, while being a second or additional language user of English.

In the focus group discussions with the learners, 39 learners (98%) responded that the school did not help them to select their subject choices in Grade 10 – 12. They

explained that two learners had to change subjects in Grade 12 because there was no guidance in Grade 9, which resulted in the learners making the wrong subject choices.

The focus group discussion with the parents revealed that the parents thought that the learners were unaware of the university requirements. One parent made the following suggestion:

The teachers must motivate the learners and advise them about the requirements. If the learners are not aware of e.g. the language admission requirements, they will not be informed to make the best decisions.

Both the school and parents have a responsibility to inform the learners about post-school studies. In the previous section, both the learners and parents at School B indicated that the learners received career counselling and information about post-school studies during their Life Orientation classes, while the learners and parents at School A responded 'no' they did receive career counselling and information about post-school studies. As such, if the information is not shared with the learners in the Life Orientation classes, the teachers are not using these periods for the purpose it is meant for. Hence, if these responsibilities are not met, the learners at School A will not be knowledgeable about the requirements, and will consequently not know how to prepare themselves for post-school studies, which will be a further disadvantage.

In the interviews with the teachers and subject advisers, the question was posed: *What knowledge and skills are necessary to gain at high school to succeed at university level?* All six teachers responded that the learners should gain communication skills, time management skills, financial skills, mathematical skills, research skills, presentation skills, and problem-solving and interpretation skills. They also noted that the learners should have integrity and loyalty, and they should develop the ability to work under pressure, to read in limited time with comprehension, and to work independently. These skills were similar to the skills that the lecturers thought learners should have for success at university level.

The three subject advisers said it was important that the learners gain the content knowledge of the specific subjects from Grade 10 to Grade 12. According to

adviser LC, the knowledge of action words and interpretation of knowledge are important; and key skills that learners must gain are good reading skills and analytical skills. Adviser LZ mentioned good listening skills, self-reliance, self-motivation, diligence and perseverance, and time-on-task skills as the most important skills that learners should gain and develop at school to be successful at university.

The skills identified above relate to the discussion in Section 4.4, which are skills that are needed for the 21st century. These skills should be part of the curricula of the subjects that learners take in the FET phase and should be explicitly taught to the learners so that they can develop skills over the three years (Grades 10 – 12). The development of these skills would ensure that learners are prepared not only for university studies, but also for the 4th industrial revolution. However, if these skills are not part of the curricula and not explicitly taught to the learners in the FET phase, the development of these skills will not materialise at high school level.

Another challenge that was identified by the lecturers in their interviews was the low pass requirements at schools. Lecturer LB explained that learners are allowed to pass with 30%, which is far less than the university's pass requirement of at least 50%. If learners have a bachelor's pass (adequate rating of 4 [50 – 59% in at least four subjects excluding Life Orientation], a rating of 2 [30% and more] in the language of learning and teaching [LoLT] of the higher education institution and at least 30% in one other subject) and they are admitted to university studies, and especially to the B Com degree programme, they will not only have 50% of the subject content knowledge and skills, but would have to make up 70% for the lack of subject content knowledge and skills in the other subjects they passed with 30% and more. This means that the learners will have 'bigger gaps' in some of their subject content knowledge, which will be problematic at university level because it will mean that they do not have a solid foundational knowledge base on which they can construct and acquire advanced knowledge creation at university level (refer to discussion under Cycles 1 to 3 above).

The lecturers also indicated that rote learning at school level is a challenge because it means that the learners did not understand the content, and will forget what they have memorised, which in the end means that they do not possess the necessary subject content knowledge when they start with their university studies. The assessment types and methods at school level are counter-intuitive as students struggle to provide more depth in answering questions (those that go beyond defining) at first-year level. Lecturer WD also pointed out that the significance and differences between the National Senior Certificate (NSC) and the National Benchmark Test (NBT) must be clear to prepare the learners adequately at school level. The difference between the two is that the NSC examination tests how well the learners meet the Grade 12 curriculum expectations. If the learner passes, he/she will get an NSC certificate. The NBT on the other hand, tests the learners' readiness for the demands of tertiary studies about Academic Literacy, Quantitative Literacy and Mathematics.

The comparison in Table 2.7 of the different countries' tertiary admission rate and first-year dropout rates at universities showed that Australia's tertiary admission rate was 30,4% and the first-year dropout rate was 15%; the USA was 36% and 28%; the UK was 60,85% and 6,4%, and South Africa was 28,7% and the dropout rate was 40%. South Africa's tertiary admission percentage was the lowest, but the dropout rate was the highest. It could indicate that large gaps exist in students' subject content knowledge and skills, which are preventing the students to succeed in higher education (Chetty & Pather, 2015). Similar to many other studies conducted on students' success at university level, an inference could be made that the learners in this study were not adequately prepared for post-school studies (Council on Higher Education, 2013, 2016; Nyamupangedengu, 2017; Rantsi, 2016).

7.3.1.3 Socio-cultural factors

Social factors are the last of the three sub-dimensions under the contextual dimension. It has to do with social problems in the communities where the learners live and the environment where the schools are situated. These social problems could negatively affect the learners' academic performance.

The teachers, subject advisers and principals in their interviews spoke about the social problems that learners experience at both schools and how that impacted on the learners' academic achievement. Teacher MJ highlighted that "peer pressure and drug and substance abuse" were rife in his school (School A). Teacher AB was concerned about the learners' lack of motivation and ascribed it to social challenges that the learners experience at home. Subject adviser CL explained that the social problems at both schools include drug use, pregnancy, absenteeism, transport problems and poverty (no food/money). He expressed that these social problems caused the learners not to study or work at home.

School A's principal, JS, stated that one of the challenges was that the learners did not work independently and that their social disadvantages could be one of the reasons. He explained that gang activity was taking place in the school, which resulted in some learners being arrested. School B's principal also indicated that gangsterism was a challenge at his school. Both principals explained that there was a small group of over-aged learners at both schools who were actively involved in gang-related activities. There were a few gang-related fights on the school grounds and outside the schools over the past three years. Some learners were involved in using and dealing in drugs and these learners were terrorising the learners and the staff members.

An inference could be made that the school context was not a conducive and safe learning environment for teaching and learning to take place and that both the learners and staff most probably lived in fear because of the gangsterism and the terrorisation. This could also be a reason for the high learner and teacher absenteeism (refer to discussion on absenteeism in Section 7.3.2.3), and for the low overall pass rates over the three-year period, especially at School A.

7.3.2 Ownership of learning dimension

The ownership of the learning dimension is the second dimension in the augmented readiness model. It refers to how the learners orient themselves towards their learning and development. It includes the learners' aspirations/visions; self-efficacy; attitude and effort towards learning; time management; ICT

and collaborative learning (teamwork) as sub-dimensions. These factors are discussed below.

7.3.2.1 Aspiration/vision

Aspiration/vision is the first sub-dimension under this dimension. It relates to the learners having a vision and aspiring to continue with post-school education upon completion of Grade 12. In the focus group discussions with the learners, the questions that were posed to the learners were about their vision for the future, and if they wanted to study or find work after the completion of Grade 12. All the learners from both schools wanted to complete Grade 12. At School A, the learners' reasons for wanting to complete Grade 12 were:

There are not a lot of job opportunities.

I want to finish school to be able to get a job so that I can help my family.

I want to go to university, graduate and support my family.

I have dreams and visions and want to be successful and independent.

I want to be the first one in my family to complete Grade 12.

At School B, the learners' reasons were:

To make money.

To be successful and educated.

To achieve a better standard of living.

To rise above my circumstances.

To have a better future.

I want a better life for my parents and my children and to make something out of my life.

At School A, 17 learners (85%) wanted to study at a university or a college and had an idea of what they want to become, and the rest wanted to find work after Grade 12. The reasons why they wanted to study were:

It will be difficult to go and study after you have a job and earn a salary.

To gain a better qualification to be able to get a better job and to support my family.

To be more informed to proceed in a career.

The reasons why the remaining three learners wanted to find work after they completed Grade 12 were:

I do not have the finance to go and study.

I want to earn my own money and be independent.

Because of the situation at home.

At School B, all the learners wanted to study further. Their reasons were:

It is difficult to get a job without a qualification.

If you go and study, the chances are better to get a better job to have a higher standard of living.

You cannot do much with a Grade 12 certificate.

To have more experience and to improve my skills.

The learners were inspired to further their education to improve their standard of living. They were also aware that having only a Grade 12 certificate will not secure them a good-paying job and a brighter future. Equally important for these learners, was that a post-school qualification would alleviate their impoverished circumstances. The fact that all the learners in School B aspired to go to university was a positive one. However, a concern is the low bachelor's pass rate of 37,7% at the end of 2019 at the school, as it means that not all the learners would qualify for university admission. Thus, some of the learners who participated in this study would be disappointed, as they did not meet the minimum admission requirement for university study.

7.3.2.2 Self-efficacy

Self-efficacy is the second sub-dimension. According to Artino (2012:76), “self-efficacy is a personal belief in one’s capability to organise and execute courses of action required to attain designated types of performances”. Moreover, over the past three decades, educational researchers have used the concept of self-efficacy to forecast and describe a variety of human behaviours, from skills to academic performance (Cherry, 2019; Hopper, 2019).

The learners were asked in their questionnaire how they felt about statements relating to their self-efficacy and self-confidence. Collectively, 30 learners (75%) indicated that they could be themselves at school. Seventeen learners (42,5%) replied that the school made them feel confident about who they are, and the school emphasised that they should participate in school events and activities. Fifteen learners (37,5%) indicated that they were involved in different activities at their school. Twenty-seven learners (72,5%) experienced that the school contributed a lot to them understanding themselves. Thirty learners (75%) said that the school assisted them to develop personal beliefs and values, and 19 learners (47,5%) felt that the school contributed on average between 40 – 60% to them becoming independent learners.

On the question to the learners related to their beliefs about learning, 24 learners (60%) strongly agreed that they felt good about themselves as a learner, and 25 learners (62,5%) strongly agreed that they felt good about themselves as a person.

All the learners felt comfortable at the school and believed that the school instilled positive values in them. This means that the schools did something right, even though both schools had to deal with gangsterism, drug abuse and gang-related fights (refer to the previous section on social problems).

It seems as if the school managed to create a degree of stability for the learners despite the social challenges. It is clear that one's education at school and one's circumstances at home are interdependent. Sometimes it is insurmountable that the role one's circumstances play outside the school is greater than one often thinks or acknowledges and that it could determine the life choices one makes. However, some schools manage to overcome social issues by providing learners with options in which they can realise their potential and thus not fall into negative environmental norms. Other schools often fail to keep learners in school or to prevent their social circumstances from leading to negative choices simply because most of the social challenges are systemic and beyond the school's control.

7.3.2.3 Attitude and effort towards their learning

This is the third sub-dimension of the ownership of the learning dimension. It is about the learners' mindsets of being committed, diligent and willing to work hard to achieve their learning objectives. In the words of Csikszentmihalyi (1990:3), "The best moments in our lives are not the passive, receptive, relaxing times...the best moments usually occur if a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile." Conley (2015) refers to this as the approach students have towards their learning, and that effort-based mindsets are certainly endowing.

One section in the learners' questionnaire was about questions related to the learners' schools and their attitude towards their schoolwork. Collectively, 19 learners (47,5%) responded that their schoolwork made them curious about other things. Seventeen (42,5%) indicated that they often attended class with all their homework completed. Eleven learners (27,5%) never attended class with no homework completed. Twenty-one learners (52,5%) answered that the school sometimes emphasised spending a lot of time studying, doing schoolwork or doing homework. Twenty learners (50%) responded that the school emphasised spending a lot of time preparing for the end-of-year tests or examination, and four learners (10%) spent 10 or more hours per week on doing written homework. Eighteen learners (45%) reported that they spend two to five hours on doing written homework, and nine learners (22,5%) spend six to nine hours. At School A, nine learners (45%) were never absent without a valid reason and at School B, 12 learners (60%) were never absent without a valid reason. The remaining learners indicated that they were absent without a valid reason once or twice and more times.

The average of the total learners' absenteeism rate at School A for 2018 was 5,30% and 20% to 40% of learners came late daily. One of the learner participants at School A was absent for a total of 52 days in 2018. The average of the total learners' absenteeism rate at School B for 2018 was 4,83%, while the average of learner absenteeism per day was approximately 20 learners, and six learners came late daily (refer to Tables 6.13a and 6.13b).

Both principals and the circuit manager in their interviews spoke about the absenteeism of the learners and teachers at their schools. The principals explained that the absenteeism rate for term 1 (2019) was 1,9% in School A, and 7,6% in School B. At School A, four out of 25 (16%) educators and at School B, five out of 48 (11%) educators came late daily. At School B, the Accounting teacher was absent for 46 days and the Business Studies teacher for 21 days during the year.

The circuit manager stated that an effective system was not in place to deal with lateness, absence and truancy. Learners did not attend school after examination and valuable teaching time was lost every term. This situation had a detrimental effect on the functionality of the school and the performance of the learners. He explained:

Learners are travelling from Atlantis without a proper travelling arrangement. Some of the learners hitchhike to and from school daily. Some learners live alone without parents. Some learners are parents of children. There is limited parental control over learners and parents leave home early in the morning and arrive late in the evenings. Some of the learners are responsible for the wellbeing of their siblings. There is a large number of learners who are over-aged and a predominant number comes from the Eastern Cape as part of the annual migration of learners to the Western Cape and these learners are living their lives as adults.

The circuit manager further explained that there was a strong correlation between struggling learners and a high rate of absenteeism on the one hand, and disciplinary problems and a high rate of absenteeism on the other hand. His views were that learners with high levels of absenteeism were missing the completion of their practical assessment tasks (PATs), school-based assessments (SBAs) and other forms of assessment and were at risk of failing their grades. The circuit manager's sentiment was evident in one Business Studies learner that was absent for 48 days in 2017, and 52 days in 2018; he/she achieved 28% in the November 2017 and 2018 examination and did not write the June examination in 2019. Absenteeism could also be a reason why the learners' subject content knowledge gradually decreased in Business Studies, for example. Because they were absent, they could have fallen further behind, and in the end, simply gave up.

The parents' responses in the focus group discussion correspond with the circuit manager's views. They indicated that no proper monitoring and management of

learner absenteeism were in place (at both schools). One parent at School A replied:

If a learner is absent, the school does not always let the parents know that the learner is absent. When the learner returns to school, the learner receives a letter. There is no guarantee that the parents receive the letter from the learner.

One parent at School B stated that no SMS was received from the school to inform the parents if a learner was absent. However, the principal explained that the class teachers kept records of learners' absenteeism and parents were informed about such behaviour.

Also, as reported in Section 5.5.3, learners attended the interventions poorly. The researcher started with 60 learners in 2017, and by June 2019, only 27 (45%) learners had attended the interventions during the three-year cycle. This could be due to poor school attendance, but also because of a lack of commitment and willingness to work hard. Therefore, as Otto (2016) advocates, if no system is in place to record and monitor absenteeism at the school, and if there is no opportunity to make up for the time lost, the learners will fall behind and consequently never catch up (Otto, 2016).

The circuit manager also discussed the teachers' absenteeism. He explained:

There is no proper policy in place with regard to reporting the absence of a teacher or public servant. It happened in the past that some of the teachers did not even inform the school of their absence. The school structures to manage the absence of a teacher are weak and it is common practice to just leave the class of the absent teacher unattended for a period in the school day.

The Business Studies teacher and the Economics teacher at School A were absent 37 and 24 days respectively in 2017. The Accounting teacher and the Business Studies teacher at School B were absent 46 and 21 days respectively in 2018 (refer to Tables 6.14a and 6.14b). The teachers' absenteeism could thus be another reason why the School A learners' subject content knowledge and skills in Business Studies gradually decreased over the three years, and why their Economics results were consistently low. The same would apply for the learners at School B – their Business Studies results decreased from 55,3% to 36,2% in

2018 and to 39,2% in 2019 (refer to Tables 6.12a and 6.12b and the discussion under the three cycles). It is interesting though that the learners' results for Accounting in 2018 was the highest of the three years, despite the teacher being absent for 46 days. It could be that the teacher arranged make-up classes after hours and on Saturdays, or that he solely focused on what he knew would be included in the November 2018 examination to make up for the days he was absent.

Bayat et al. (2014), Irving (2012) and Reddy et al. (2010) state that teacher absenteeism is a severe challenge at many public schools in South Africa. Bayat et al. (2014) explained that there are many instances where teachers are absent, skip classes or arrive late at school. They urge the leadership and management of the schools to monitor these behaviours and to have proper procedures in place to address the problem. They also identified a further challenge, which is that the teachers who are present are not always willing to take care of classes of absent teachers during their administration periods (Bayat et al., 2014). An unattended class is a direct source of disciplinary problems in a school (Bayat et al., 2014). If three or more teachers are absent it is difficult to manage the supervision of the classes, which is how disciplinary problems arise. More importantly, it means that no one is teaching the learners and there is no covering of the content that was supposed to be covered.

Absenteeism affects learning and teaching time, and ultimately impacts on performance and the requirements of CAPS. This means that the curriculum is not covered, including the subject content knowledge and skills that have not been mastered, which will hinder the outcomes of the formal assessment tasks and ultimately negatively affect the learners' academic performance, as reflected in Tables 6.12a and 6.12b. Therefore, teacher absenteeism could be another reason why some learners do poorly and why they do not have adequate subject knowledge and skills in their different subjects.

Moreover, the teachers' attitudes and efforts toward learning are equally important to the learners during the learning process. Bernstein (2015) explains that teachers' commitment ensures the success of the education system. As such,

teachers should arrive at school on time every school day, they should be prepared for each day's lessons, and they should be in their classes, teaching. The discussion above illustrated that this was not the case at both schools in this study.

The principal of School B was of the view that the teachers assisted the learners who struggled to complete their activities. However, the circuit manager stated that there was a high tendency of class-cutting behaviour by the staff, and that the acting principal and the SMT were reluctant to address the issue. He further pointed out that holding staff accountable for the lack of commitment was non-existent amongst management, and that there was an expectation from certain teachers that support in the form of tutors should come from outside to bail them out with their teaching responsibilities. His view was that there was no structured after-school sport or cultural programme at School A, and that:

Some teachers are willing to do after-school classes and even on Saturdays with Grade 12 learners. The reality is that if the majority of the teachers could prepare themselves and teach for the full duration of a period, most of the afternoon classes will not be needed. The teachers do not take ownership of their teaching task and will always blame somebody else or the circumstances around them.

Hence, what the circuit manager suggests is that there would not be a need for extra classes after school and on Saturdays if the teachers were committed and taught during the normal school periods every day. In addition, the three subject advisers indicated that the HODs and principals could not assist or moderate properly, that they were overloaded with work, and that the curriculum was mostly neglected. The circuit manager stated that both principals (School A and B) were in acting capacities for the past four years, that there was a lack of clear and decisive leadership in the school; and that the principals did not receive support from all the staff and the SMT in the management of the schools.

In the questionnaire, almost all the learners (39 or 97,5%) responded that learning is very important to them; 38 (95%) indicated that they had the skills and ability to complete their work successfully and that they try very hard when doing their schoolwork. Thirty-nine (97,5%) responded that they were motivated to do their schoolwork because they wanted to learn new things, 37 (92,5%) liked to be creative at school and 38 (95%) said that their marks were important to them.

In contrast to what the learners indicated, in their interviews all the teachers commented on the poor work ethics of the learners. Teacher MN stated that “there is a lack of motivation and work ethics by learners and they must take bigger responsibilities of their learning”. Similarly, in the interviews with the principals, the learners’ lack of commitment was also mentioned. The principals thought that the learners only work in class where the teacher is present, but that class-cutting happens daily.

The findings implied that the learners’ lack of work ethic, absenteeism and attitude towards their learning negatively influenced their academic achievement. The teachers’ lack of commitment and absenteeism negatively impacted the learners’ learning and ultimately their academic performance.

7.3.2.4 Time management

Time management is the fourth sub-dimension under the ownership of learning. Frick (2008) explains that time management and the identification of priorities are important skills for students’ university readiness. Likewise, Wilson (2009) advocates that a successful transition from high school to university study requires students to balance their study, work and social commitments.

Questions relating to time management were included in the learners’ questionnaire to determine how many hours the learners spent on average per week (Monday to Sunday) doing school and other activities, and how important these activities were to them. Four learners (10%) reported that they spent 10 hours or more on written homework, and six learners (15%) on reading or studying for class. Eight learners (20%) did not read, and 19 learners (47,5%) did not participate in school-sponsored activities. Seventeen learners (42,5%) did not practise a sport and/or play a musical instrument and/or rehearse for a performance. Twenty-four learners (60%) did not work for pay, 23 (57,5%) did not do volunteer work, and four learners (10%) exercised 10 or more hours per week.

Eighteen learners (45%) also indicated that they spent two to five hours per week watching television and playing video games, 17 learners (42,5%) surfed the

internet or chatted online, 15 learners (37,5%) talked on the phone, and 14 learners (35%) hung out or socialised with friends outside of school. Five learners (12,5%) indicated that they spent more than 10 hours per week travelling to school by taxi. Eight learners (20%) travelled by bus, and four learners (10%) walked to school. Eight learners (20%) spent 10 hours or more taking care of family members, and fifteen (37,5%) reported that they did chores at home (preparing food, cleaning and washing clothes).

If only ten learners (four plus six) were doing written homework, reading and studying for class, and spending enough time on their academic work, it means that being busy with their studies was not one of their priorities as their responses above indicated. The 15 learners doing chores at home had a 'valid' excuse as it could mean that their parents were working and that they had to assist them with the housework. If that was the case, it could mean that no parent was at home to supervise the learners, which could further mean that there was no routine or structure in place. Overall, the responses indicate that the learners did not plan and manage their time effectively, and if some of them had to travel two hours to get to school, it means that there was an even greater need for effective planning and time management to also spend time on their academic work.

Although the teachers indicated that it was necessary for learners to gain time management skills at high school to succeed at university level, it was mostly the lecturers who discussed the learners' lack of effective planning and time management in their interviews. Lecturer WD was of the opinion that time management was one of the most noteworthy reasons why most first-year students fail. He explained:

Students need social orientation for various reasons but also need to get a grip with the volume of reading required for university, note-taking, how to manage their academic week whilst still maintaining a balance with healthy exercise and eating and social life.

Lecturer VG also stated that a vast majority, more than 90%, of first-year students lacked proper planning and preparation, and their pre-reading and organisational skills were also very poor. He further explained that many students procrastinated (they delayed working on assignments until the last minute) and they were then

penalised for the late submission of assignments, yet they still submitted their assignments after the due dates. He identified fear of failure, laziness and a lack of motivation as some of the reasons why students procrastinate.

Lecturer MM emphasised that the learners were no longer at school where teachers strategically planned and coordinated their tests. At university, students can write two to three tests in one week and as such they have to prioritise and learn to manage their time to cope with the demands. Similarly, lecturer LB explained that students struggle at university to come to grips with the workload and to manage their time, mainly because there is no enforcement of study activities at university level– the students are free to do whatever it is they want to do. Lastly, lecturer BW noted that the students do not emerge from school with planning and time management skills but picked it up quickly at university. She emphasised time management in her subject and asked the students to time themselves when they practise the activities at home, because assessments are done within a specific timeframe. She explained that she attempts to instill the identification of priorities and planning and time management in her students.

It is generally known that learners at schools and students at post-school institutions struggle to plan and manage their time. Therefore, effective planning and time management should explicitly be taught to the learners at school level. This could happen, for example, during the Life Orientation periods. If it does not happen, then the learners are not solely to blame for a lack of planning and time management skills when they arrive at a post-school institution.

7.3.2.5 Integrated Communication Technology (ICT)

Integrated Communication Technology (ICT) is the fifth sub-dimension under the ownership of learning. Being computer literate and knowing ICT is important in today's technology-driven world. As such, learners should be exposed to and be taught digital and information literacy at school level. Kereluik et al. (2013:130) define digital and information literacy as “the ability to effectively and thoughtfully evaluate, navigate and construct information using a range of digital technologies and thus to function fluently in a digital world”.

In the learners' questionnaire, 25 learners (62,5%) indicated that they used computers for schoolwork, and 15 (37,5%) responded that they seldom or never used computers. Twenty of the learners (50%) said that the schools encouraged the use of computers and the internet, but the other twenty learners (50%) did not think so.

One of the questions that were asked to the parents in the focus group discussion was: *How does the school's academic programme meet the learners' needs?* The parents at both schools noted that Computer Application Technology classes were not offered. One parent mentioned that "learners do not know how to use a computer and how to format their tasks".

In the interviews with the school principals, School B's principal (JS), acknowledged that not all the teachers were proficient in using technology, and that the internet access was not sufficient for the school. None of the other interviewees mentioned anything about ICT in their responses.

It is not only in South Africa that ICT in schools is limited and problematic. In developed countries, for example Australia, some teachers still report limited access to ICT or its unreliability as barriers to use. In Ghana, basic schools lacked ICT teachers; some teachers lacked the requisite ICT knowledge and skills; ICT integration in schools was minimal or non-existent and few teachers were integrating ICT in teaching (Quaicoe & Pata, 2018). In Botswana, poor ICT infrastructure was mentioned, as well as the fact that the curriculum was overcrowded with ICT to the detriment of quality (Shonhe, 2019; WHO, 2018).

Moreover, it is concerning that 78% of public schools in South Africa are without libraries and do not have computers and access to technology, which contributes to a low classroom rating by international standards (Nhando, 2015; Spaul, 2019; Unicef South Africa, 2018.) Nxumalo (2017) explains that the integration of technology increases academic performance while simultaneously raising the standard of education in schools. Consequently, Aurel's (2018) views about ICT apply to this discussion. He explains that digital education is key to the country's future and that people should move away from their old ways of doing things and

embrace technology (Aurel, 2018). Hence, if the use of digital academic literacy and technological advancements are not being taught and encouraged at school level, it is going to leave the youth with a challenging and questionable future. An argument could be made that, if learners are not exposed to ICT skills at school level, they will be unprepared for university and, more importantly, for the 4th industrial revolution and revolutions to come.

7.3.2.6 Collaborative learning (teamwork)

Collaborative learning is the last sub-dimension under the ownership of the learning dimension. Collaboration and effective teamwork are important 21st-century skills (Fadel, 2015; Kereluik et al., 2013; World Economic Forum, 2015).

In the questionnaire, 26 learners (65%) responded that they did not often work on a project in a group with other learners at school. This was corroborated in the focus group discussion with the learners at School A, where the learners stated:

It is very rare to work in groups; to have discussions and give opinions.

It is just a few classes where it sometimes takes place.

The lecturers indicated that the teachers must look for opportunities to collaborate to better prepare learners for university. Lecturer WD said, “Focus on collaboration (teamwork and project management).” Lecturer MM explained the following about group work in his response in the interview:

Many students want to do group work, and they want to study in a group, and it is not discouraged by lecturers, but there is a fine line between group work and just coming with one modelled, copied answer.

It is interesting to note that none of the teachers, principals, subject advisers or the circuit manager mentioned anything about collaboration. This is an important attribute, which forms part of the 21st-century skills and is important for university readiness. Thus, if the schools are not encouraging the teachers to find group work activities for the learners to allow them to work on group assignments, the learners will not learn how to work effectively in groups and will therefore not experience group dynamics where their interpersonal skills could be developed. Consequently, they will not know how to work in groups when they are at

university or have developed the interpersonal skills to prepare them for the greater diversity of students in higher education, and one day, in their respective workplaces.

7.3.3 Cognitive dimension

The cognitive dimension is the third dimension in the augmented readiness model. It represents the thinking ability of the learners and has to do with how the learners use their thinking ability to develop cognitive strategies that will assist them in acquiring and constructing new knowledge. The development of the learners' thinking ability and the use of cognitive strategies in the learning process are paramount for all their subjects. The sub-dimensions include critical and analytical thinking, research skills, language and logical thinking skills, mathematical ability, and communication and debating skills.

7.3.3.1 Critical and analytical thinking

Critical and analytical thinking is the first sub-dimension of the cognitive dimension. Conley (2007, 2014) explains that cognitive strategies include conceptual and evaluative thinking, synthesising and problem solving. According to the author, these techniques develop over time and are fundamental to succeeding at university/college level.

Questions were posed in the learners' questionnaire about how their experiences at school helped to develop their critical thinking skills. Twenty-three learners (57,5%) replied that the school contributed on average (40 – 60%) to their growth in solving real-world problems, and twenty-two (55%) indicated that the school helped to develop their critical thinking. Another question was how often the learners used what they had learned in one subject to enrich their work in another subject area – sixteen learners (40%) replied often. The learners were also asked to what extent they thought the school emphasised analysing ideas in depth, to which sixteen (40%) learners replied sometimes and eight learners (20%) indicated seldom or never.

In the focus group discussion with the learners, they said that the school does not prepare them academically for tertiary studies. A learner at School A replied:

The teachers just teach the subject, they only focus on the Grade 12 November examination and not beyond Grade 12.

The Umalusi team who expressed the concern that many teachers teach to the NSC examination, confirmed this (Umalusi, 2014(a)).

Responses of School B's learners were:

Teachers do spoon-feed.

Rote learning (we only learn what the teachers tell us to learn) and if we get something else, we will not be able to do it.

It was also discussed in the focus group discussion with the parents. The parents of School B raised the following concern:

The teachers do rote learning.

The learners do perform well because they only write the textbook down. The learners do not have the opportunity to form opinions to be able to think critically.

All six teachers indicated that the ability to draw and interpret graphs, reasoning and creativity, problem-solving skills and strategising were necessary for the learners to gain at high school to succeed at university level. The subject advisers, the two principals and the circuit manager did not mention or discuss critical thinking in their responses.

In contrast, all six lecturers indicated that critical and analytical thinking skills were a challenge for first-year students. One of the critical outcomes of the Business Management module, for example, was to identify, make decisions and solve business-related problems, based on critical thinking. According to lecturer LB, many students struggle with critical thinking as they lack analytical skills. Her perception is that students are scared of thinking, as it seems they have been conditioned that it is 'safe' to do rote learning, e.g. "you will pass when you memorise the textbook". This leads to students not being able to think critically, which prevents them from developing problem-solving skills.

Furthermore, lecturer WD explained:

Students are taught to regurgitate information. Mathematics and English (more specifically the ability to read with comprehension) are sadly a huge

challenge. Also, students do not come with the required 21st-century skills, albeit at an acceptable level for the first year.

Lecturer BW stated that the students struggle to solve problems from different angles and perspectives. Lecturer WD asserted that students can solve problems once they get going, but struggle with the initial assessment of the task, clarity of instructions and where to access information, as well as how to package the solution. Lecturer AM pointed out that the tutorials are designed to guide the students in their thought processes around problems. She explains:

The lecturer gives the student practical and problem sets around structured questions. It is a more mathematical nature than it is theoretical. Students probably do have a certain element of problem solving, which they carry through from high school, but not extensively. The first-year tutorials are the first steppingstone to assist the students. There is a lack by the students to use specific tools, mathematically and structuring. The students prefer that the lecturers give them a breakdown of the steps.

Lecturer WD also stated that teachers must emphasise creative problem-solving (looking at a problem from different angles and coming up with out-of-the-box solutions) and critical thinking skills to prepare learners for university.

It is not surprising that only 17 (42,5%) of the learners indicated that the school contributes a lot (80 – 100%) to developing critical and analytical skills as part of their schooling. This could mean that it was not regularly reinforced and was not the norm. Sibanda and Graven (2018) and Songxaba et al. (2017) advocate that the South African public schooling system does not develop learners' critical and analytical thinking skills. Sibanda and Graven (2018) state that interpretation requires English language proficiency, which implies that the language of instruction and critical and analytical thinking and problem solving go hand in hand. As is discussed under the language sub-dimension below, 95% of the learners at School A were learning in a second and additional language, which means they were in a further disadvantaged position because they needed to mediate meaning and the construction of new knowledge in a language other than their first language. The difficulty of having to learn in a second or additional language relates directly to the cognitive dimension in that it will not only restrain learners' comprehension ability, but their ability to think critically and

analytically as well (Conley, 2007; Lemmens, 2010; Sibanda & Graven, 2018; Songxaba et al., 2017).

In the British education system, learners are taught to learn by questioning, problem solving and creative thinking, rather than by the mere retention of facts (British International School Riyadh, 2018). In South Africa, Cheng (2009) and Goetze (2016) state that the CAPS curriculum is harming the learners' critical thinking development because CAPS is solely focused on assessment, content and the regurgitation of facts, which leave no space for the development of critical thinking skills. The skills recommended in classroom activities for Grade 12 BCM learners by CAPS (refer to Appendices D, F and H) listed: critically analyse and interpret; identify problems and provide valid solutions; synthesise and evaluate; apply creative thinking skills to solve complex business problems; apply and use background knowledge as a basis; and engage in abstract reasoning and make critical judgements.

The Umalusi team reported that the progression in terms of content from Grade 10 to Grade 12 is appropriate but suggested a reduction in the Grade 10 content to allow for a deeper development of skills, and to facilitate a greater depth of understanding (Umalusi, 2014(a):66). The team also commented that the spread of cognitive levels as detailed in the CAPS is appropriate, but expressed the concern that the development of the higher-order skills in the curriculum, such as analysis, evaluation and creative problem solving is not guaranteed, as this is currently dependent on the teacher (Umalusi, 2014(a):66). They suggested that more explicit guidance regarding the development of these higher-order skills is required in the CAPS curricula (Umalusi, 2014(a):41).

What the learners were saying in their responses is that the teachers at the two schools did not encourage or develop their ability to analyse and interpret information, or to solve problems. The lecturers affirmed that learners lack these skills when they start their first year of studies at university level. The researcher is therefore in agreement with Jacobs (2010) and Oosthuizen (2014) who suggest that critical thinking should be implemented from the foundation phase. Hence, the development of problem-solving and critical thinking skills must be part of the

learners' schooling career at primary school level and should be further developed and cultivated throughout their secondary schooling to ensure that a solid foundation is laid for higher education studies.

7.3.3.2 Research skills

Research skills are the second sub-dimension under the cognitive dimension. Research skills include an ability to investigate something, to search for information from sources, and to write and present the research results at a basic level. It also includes information literacy skills.

A question about research skills was asked in the learners' questionnaire. Twenty-two learners (55%) reported that they often worked on a project during which they needed to find information not available in their textbooks. Eight learners (20%) often worked on a project during which they needed to interact with people outside of their school. Sixteen learners (40%) indicated that research work/projects excited or encouraged them to learn, and thirteen learners (32,5%) replied that the school contributed very little (2%) in the area of using computers and the internet.

The teachers mentioned in their interviews that research skills were necessary to gain at high school to succeed at university level, but they did not explain or mention how they attempted to develop these skills in the learners in their respective subjects.

On the other hand, the lecturers stated that students wanted to be provided with everything because they do not want to do research. Lecturer NH, for example, commented that the students do not like to do research on a topic and would rather discuss it in class.

Both the learners and the parents reported in the previous section that the teachers made use of rote learning, especially in Grade 12 as they focused on teaching the NSC examination, so the learners' research skills were not being developed. The 2014 Umalusi report also found that many teachers teach to the NSC examination, which means that the development of the skill of independent research is not a

priority (Umalusi, 2014(a):65); even though it is listed in CAPS as part of the recommended classroom activities for Grade 12 BCM learners (refer to Appendices F and H).

7.3.3.3 Language and logical thinking skills (reading and writing)

Language and logical thinking are sub-dimension three under the cognitive dimension. Language is a fundamental component in the learning process, together with the development of one's cognition and the ability to read and write (Joubert, 2010).

The biographical information in the learners' questionnaire indicated that at School A, nineteen learners (95%) were predominantly isiXhosa speakers and second and additional language speakers of English as opposed to the learners at School B. The circuit manager and principals replied in their semi-structured interviews that at School A, the learners and teachers are predominantly isiXhosa, but the LoLT is English. This means that the learners were in a further disadvantaged position given that the medium of instruction and assessment were not in their mother tongue.

At School B, nineteen learners (95%) were taught and assessed in their home language, which was English and Afrikaans, with only one learner who indicated 'other' for language. However, at School B, the challenge, according to subject adviser LZ, was that it took longer to explain the content to learners because of using a dual medium (Afrikaans and English) in the classes. School B was a traditional Afrikaans-speaking school but had to apply for dual-medium status because of the need for English LoLT in the FET (Grades 10 – 12) phase. According to subject adviser MM, more English-speaking teachers must be recruited and there must be a sincere effort by the management of both schools to promote the use of English Home Language as the teachers were struggling in the English home language classes.

The learners' questionnaire included questions related to reading and writing activities at their schools. The researcher wanted to determine how often the learners had done activities related to reading and writing. Twenty-five learners

(62,5%) indicated that they often wrote a report or essay that was never more than five pages in length. Twenty-four learners (60%) reported that they often prepared a draft of the report or essay before handing it in. Twenty-three learners (57,5%) answered that the school contributed between 80 – 100% to their growth in writing well; and twenty-four learners (60%) replied that doing written homework was very important to them.

In contrast with the above, only 14 learners (35%) responded that reading and studying for their classes were their top priorities. Two learners (5%) indicated that they were reading for themselves (reading books, magazines, newspapers, online articles, etc.) for enrichment. Eighteen learners (45%) replied that reading on their own excited or encouraged them to learn, and seventeen learners (42,5%) indicated that writing work/projects (e.g. essays) excited or encouraged them to learn.

Teacher (MN) indicated in her interview that learners must learn basic reading and writing skills and it must be consolidated in the foundation phase. She indicated:

The learners struggle with reading and writing and with questions that test insight.

The three subject advisers confirmed teacher MN's statement as they pointed out that the vocabulary of the learners (home language and second language) was poor. They stressed that good reading, listening and analytical skills must be gained at high school to be successful at university level, while subject adviser CL stated that reading skills must be practised.

The circuit manager (MM) stated in his interview that he was aware that the teachers used code-switching during lessons at School A and he pointed out that some of the teachers were also second and additional language speakers of English. Du Plessis and Louw's (2008) explanation of using code-switching due to an inadequate language vocabulary in English is applicable here. However, code-switching could also be used by the teachers to assist the learners' understanding of difficult concept, as Garcia and Wei (2014) explain. Moreover, Wildsmith-Cromarty and Turner (2018) assert that one method of how university

lecturers scaffold learning is through code-switching, especially where the majority of students are African and do not necessarily speak English or Afrikaans as a home language.

The lecturers, on the other hand, explained in their interviews that reading with comprehension in English was essential for university studies. They explained that writing essays or discussing a topic is challenging to students, as well as writing down sentences and documenting their thoughts. Lecturer WD explained:

Students have to intellectually go through the process of understanding, translating and retranslating into their native language to understand concepts in English.

As one learner at School A mentioned, he will be struggling with English at university because it was not his first language.

Another point raised was about the ability to take notes and listen effectively at university level. Lecturer WD explained:

Note-taking is a skill cultivated by understanding what is important vs supplementary information. Also, speed in noting and listening is as a consequence also affected negatively.

Lecturer AM explains that she uses additional blended teaching strategies. For example, to upload the slides, students have access to announcements, tasks and solutions online. After this was done, the students did not make notes and did not supplement the slides and that is problematic. She thinks that “the note-taking skill is part of learning and retention”.

Lecturer NH also mentioned that very few students jot down notes during lectures and are not willing to answer questions on what the lecturer just explained. Lecturer WD also added, “Students need to get a grip with the volume of reading required at university and note-taking and writing skills.”

There appears to be consensus by most of the stakeholders that the learners of both schools had poor reading and writing skills. School A’s learners were more disadvantaged than School B’s learners because the majority of them were second and additional language speakers of English. Language is central in the learning process, as it not only affects learners’ general communication abilities but, more

importantly, it will influence the learners' critical thinking ability to interpret and understand the content in their different subjects. As discussed in Section 3.2.1.1, in 45% of primary schools in South Africa not a single learner could read and make suggestions (Spaull, 2011), compared to Australia and the UK where only 18% of the learners, 19% in the USA and 29% in Ghana underachieved in reading (refer to Tables 2.1, 2.2, 2.3 and 2.4). According to Pretorius and Klapwijk (2016), multiple reasons could be given for the poor reading comprehension of South African learners, such as the role of home language (HL) and the LoLT in reading, teachers' reading perceptions and practices, teachers not knowledgeable about reading, literacy and writing, and how to teach it effectively and evocatively (Pretorius and Klapwijk, 2016). Desai (2001) and Webb (2002) suggest that the use of English as the LoLT is one of the main factors that contribute to the learners' poor reading comprehension.

Moreover, Van der Berg (2015) states that a learner's performance in Grade 4 correlates to their Grade 12 results, which means that, if learners could not read with understanding in Grade 4, they will not be able to do so in Grade 12. Songxaba et al. (2017) explain this issue aptly when they state that the home language of learners provides the foundation for the development of reading and writing behaviours, and if there is a mismatch, learners may be at a disadvantage for success in early reading tasks, and could spend the rest of their school years catching up. Therefore, the language problem and learning to read and write effectively have to be addressed in the foundation phase and be supported and nurtured throughout learners' schooling careers.

7.3.3.4 Mathematical ability

Mathematical ability is the fourth sub-dimension under the cognitive dimension. Mathematical ability is included in the readiness model because it is considered a key requirement for not only entry into higher education, but also modern knowledge-intensive jobs (Alex & Juan, 2017). As Conley (2007, 2014) and Lemmens (2010) explain, mathematical ability is very important in the learning process to solve problems and to acquire and construct new knowledge in the different subjects, both at school and university.

In their interviews, the teachers stated that Mathematics at school level will help the learners to cope at university level. Two lecturers, WD and AM, assert “to do their subject at first-year level, Mathematics is a prerequisite subject”. In the focus group discussion with the learners, one learner made the following remark about his/her career choice: “You must have Mathematics to become a Chartered Accountant.”

As discussed in Chapter 2 (refer to Tables 2.1, 2.2, 2.3 and 2.4), the percentage of Grade 8 learners reaching the international Benchmarks of Mathematics (TIMSS 2015) was the following: Australia, 64%, UK, 69%, and the USA, 70%. The percentage of Grade 9 learners reaching the international Benchmarks of Mathematics (TIMSS 2015) was 16% in Botswana and 13% in South Africa. In 47% of public high schools in South Africa, not a single learner could reach the Intermediate International Benchmark in Mathematics. In comparison, the figure for Botswana is 2% (Spaull, 2019).

According to Muller (2016), the mathematical ability of primary school teachers in South Africa is a problem as primary school teachers are trained as generalists. For example, 79% of Grade 6 Mathematics teachers could not obtain 60% in a Grade 6/7 level Mathematics test (Spaull, 2019). Moalosi (2015) and Olivier (2018) explain that the factors that contributed to the crisis in Mathematics were under-qualified, untrained teachers with a lack of subject content knowledge; learner attitude towards Mathematics; the mathematical skills deficit of learners as they progress through the school phases; and a lack of an in-service training programme to increase teacher subject content knowledge. Yet, it is in primary schools where the learning backlog begins for the learners, because a good foundation is not laid; and secondary schools struggle to retain the specialists who might be able to address the problem. Thus, there is a ripple effect as no solid mathematical grounding is laid at primary school level, which means that the learners are already at a disadvantage when they arrive in high school (Muller, 2016).

Another challenge, according to Van Staden and Motsamai (2017), is that not all schools in the South African education system offer Mathematics in the FET

band, and many of the schools that do offer Mathematics do not have the necessary facilities and equipment to provide effective Mathematics teaching and learning. Of the 512 735 learners that wrote the 2018 NSC examination, only 233 858 learners (45,6%) wrote Mathematics (Department of Basic Education, 2019(a)).

In this study, at School A, one learner had Mathematics and fourteen learners had Mathematical Literacy of the cohort of 15 learners who were selected as the study's official learner participants and who attended the interventions over the three-year period. At School B, of the cohort of 12 learners, three had Mathematics and nine had Mathematical Literacy. As discussed in Section 3.3, Mathematics is a requirement to be admitted to a B Com degree in both the three- and four-year degree programmes at South African universities. If students obtained a 2 or 3, they would be considered for the extended curriculum programme (Stellenbosch University, 2018(a)). These statistics provide evidence that the learners' aspirations to study further would have been compromised because the majority had Mathematical Literacy and not pure Mathematics, especially if they wanted to study towards a B Com degree, or a science or a medical degree for that matter. Consequently, the grounding and foundation of Mathematics in primary schools need urgent attention. If the learners have a backlog in the GET phase (Grades 7 – 9), they will not be able to master Mathematics in the FET phase (Grades 10 – 12). That is why only 45,5% of the learners in the 2018 NSC examination and only 45,6% in the 2019 final examination wrote Mathematics (Department of Basic Education, 2019(a), 2019(b)).

7.3.3.5 Communication and debating skills

Communication and debating skills are the last sub-dimension under the cognitive dimension. These skills are included in the augmented readiness model because the ability to communicate effectively (verbal and written) is the key to academic access, and it is also important for social integration as it enables people to share ideas, express their feelings and contribute to discussions and debates. As was already discussed under Section 7.3.3.3, language poses a significant barrier to

one's understanding and interpretation, and it will equally be a challenge in expressing oneself clearly and logically when one needs to debate and discuss subject content with peers, teachers and lecturers.

The learners were asked questions about their communication and debating skills in the questionnaire. Twenty-seven learners (67,5%) indicated that the school contributed a lot (80 – 100%) to their growth in speaking well and that the teachers tried hard to engage them in classroom discussions. Twenty-two learners (55%) indicated that they sometimes asked or answered questions in class. Twenty learners (50%) responded that they often received feedback from their teachers and talked to or worked with at least one learner who was different from them in terms of religion, political opinion, family income or personal values. Nineteen learners (47,5%) talked or worked with at least one learner from a different race or culture. Eighteen learners (42,5%) often talked to a teacher about classwork and discussed ideas from their classes, their reading, or their homework with friends, family members, or their community members. Fourteen learners (35%) often talked to a teacher in the school about career goals, and thirteen learners (32,5%) often talked to a teacher in school about how to apply for university. Only eight learners (20%) discussed their marks with teachers, and four learners (10%) discussed ideas from their classes, their reading, or their homework with teachers outside of class.

In addition, twenty-one learners (52,5%) indicated that they often discussed questions in class that did not have one clear answer. Eighteen learners (45%) answered that they had a voice in the classroom and/or school decisions, and agreed that they liked discussions when there was no clear right or wrong answer. Eleven learners (27,5%) indicated that their opinions were respected in the school.

The learners' responded in the focus group discussions: "It is very rare to have discussions and give opinions; it is just a few classes where it sometimes takes place." This response is contradictory to what they indicated in the two previous paragraphs, which was that the "teachers tried hard to engage them in classroom discussions" and that they "often discussed questions in class that did not have one clear answer". It is also not on par with what CAPS recommends as

classroom activities for Grade 12 learners, which are discussions, interpretations, giving practical examples, providing own opinion, debates and oral presentations (refer to Appendices F and H). Yet, all the teachers indicated in their interviews that communication is necessary to gain at high school to succeed at university level, but it does not seem as if they practised what they preached when they were in class.

The lecturers responded in their interviews that teachers should be encouraged to focus on communication (verbal – especially articulation – and written) to better prepare learners for university, especially since English is a second language and additional language for many students.

As discussed under Section 7.3.3.3, learning in a second and additional language will affect learners negatively, resulting in the learners being shy and not willing to participate in class discussions or to ask questions for clarification. The learners' responses above showed that 55% indicated that they would 'sometimes' ask questions or answer questions in class. This could mean that the remaining 45% would not feel comfortable to do so, and that, depending on the difficulty of the question asked by the teacher, or the content that had been discussed, more learners, especially in School A, would not be willing to ask questions for clarification because they did not know how to express themselves well. Thus, proficiency in a language is a requirement for effective communication in that specific language, and it will be a challenge for the 95% of learners who were second and additional language speakers of English at School A.

7.3.4 Content knowledge dimension

The content knowledge dimension is the last dimension in the augmented readiness model. It refers to the body of knowledge and information, facts, concepts, theories and principles that are taught in the different subjects in schools and post-school institutions, which represent what must be known and understood (The Glossary of Education Reform, 2015). It is not possible to separate content knowledge from academic and intellectual skills; likewise, it is impossible to learn skills without content or learn content without skills; knowledge and skills are interdependent (The Glossary of Education Reform, 2015). Four sub-dimensions

are discussed under this dimension, namely subject content, extra academic support, relevance/value of what you learn in school (quality education) for post-school opportunities, and soft skills learnt.

7.3.4.1 Subject content

Subject content is the first sub-dimension. According to Lederman and Gess-Newsome (1992:16), “subject matter knowledge pertains to a teacher’s depth and breadth of understanding and conceptualisation of his or her certification area”. In this study, it will apply to the Accounting, Business Studies and Economics teachers.

The learners responded on both reflection forms that the interventions helped them with subject/content knowledge. At School A, in both reflection forms, it helped 29 (72,5%) out of the 40 (20 plus 20) learners, and at School B, it helped 30 (81%) out of the 37 (20 plus 17) learners. As was acknowledged in the discussions under Cycles 2 and 3, the interventions helped the learners to a certain extent, but they were not sufficient to improve the learners’ academic performance in the examinations as the interventions only focused on specific sections of the content covered and not on everything.

All the learners at School B indicated in the focus group discussion that the school did not prepare them academically for university/college life. Their responses were:

We experience academic pressure before examinations because the teachers do not cover the curriculum at the prescribed times and give learners too much work at a time.

Teacher MN suggested in his interview that the content must be reduced, “so that there can be more time for the development of skills”. Subject adviser LZ pointed out that the content of the subject (Business Studies) is overloaded and that there was not sufficient time for revision.

One parent at School B stated that his son has extra classes in Mathematics. He explained:

The child is with other children from different schools. His experience [the son] is that the school is behind the other learners from other schools in terms of curriculum coverage.

Also, the parents raised the following concerns:

The teachers must give attention to all the learners, not only the learners that performed well. The curriculum is so overloaded and the pace is quick, so the teachers must make an effort that all the learners are on par, and not fall behind.

The learners' responses together with the concerns of teacher MN, the subject adviser LZ and the parents corroborate with the statement of Goetze (2016) and Maboya (2017) that some challenges (content overload and curriculum coverage) with the implementation of CAPS remain persistent, despite interventions.

In the semi-structured interviews with the teachers, the three teachers from School A (AB, MJ and TK) confirmed that the school prepares the learners for university studies because the learners get a good foundation (the content of the subjects), which is useful at university. At School B, teacher MN stated that the learners struggle with reading and writing and with questions that test insight. She also asserted that there was a lack of motivation and work ethics among learners and that they should take more responsibility for their learning. Teacher NS felt that the volume of work and the time constraints to complete the amount of work, with no time for consolidation, hinder her subject.

Two of the three subject advisers (LC and CL) believed that the school prepares the learners for university because it covers a lot of content and high analytical skills are needed.

However, a challenge indicated by the Accounting subject adviser was that all schools use different textbooks and "most of these books have many mistakes". Thus, the quality of the textbooks could hinder effective teaching and learning in the subject. Another challenge according to all three subject advisers (LZ, CL and LC), was that the school management teams (SMTs) consisted of the HODs and principals, and that there was a lack of adequate and effective moderation. They explained:

Department heads and principals cannot assist or moderate properly due to a lack of knowledge of the subject and subject-related difficulties, and they are overloaded with work, and the curriculum is mostly neglected.

The teachers stated that the subject knowledge requirements for university were:

The ability to prepare, interpret and analyse financial statements in order to compare and advise on budgets and manufacturing, which is important subject knowledge.

Teacher NS said:

Depending on the career chosen, it will determine what subject knowledge is needed, for example in Business Studies, the learners can go in the direction of starting their own business, human resources (HR), business management, administration, marketing and commerce teachers.

Teachers AB and TK explained the obstacles that the learners faced with regard to subject content:

They [the learners] find it difficult to understand and analyse graphs, to understand formats and to prepare financial statements and then they become demotivated.

Similarly, the Department of Basic Education (2018(c)) reported that there was a lack of understanding and an inability to apply subject terminology in the NSC examination of 2017 in most subjects.

Moreover, the subject advisers pointed out that quality teaching cannot occur if the learners do not grasp the concepts. They thought that “there is a gap between the language and the concepts”. Adviser LC suggested that the learners must be educated in the concepts and from there be taught how to apply the concepts in the questions. In light of this suggestion, the Department of Basic Education (2018(c)) recommended that integrated language teaching across the curriculum must be reinforced in all schools.

The lecturers answered in their semi-structured interview that the schools did not prepare learners adequately for university, because students are not well equipped to discuss concepts and apply them in different scenarios.

To be able to move from knowledge and comprehension to application and analysis, and then to synthesis and evaluation (refer to Appendix J), the key

terminology and concepts must be properly taught, and then fully understood by the learners. EMS (Grades 7 – 9) forms the foundation of the FET business, commerce and management subjects (refer to Section 3.2.1). The Umalusi 2019 report found that a lack of continuity does not allow for scaffolding and consolidation of the learning of concepts and principles, especially in Accounting (Umalusi, 2019:27). It is important to note that the learners only mentioned scaffolding of the content in the reflection forms after the interventions took place. The learners replied, “We could scaffold the content and understood that to break the work in smaller chunks it is easier to understand and could apply the work that was explained to us”. This could mean that the learners were not exposed to scaffolding in the day-to-day teaching and learning that was taking place in their different subjects.

The learners were also asked in their questionnaire to what extent they thought their school (the teachers) emphasises understanding and exploring information and ideas. Seventeen learners (42,5%) answered that the school (the teachers) very much emphasised the understanding of information and ideas, and 21 learners (52,5%) indicated that the school (teachers) emphasised exploring new ideas. Lastly, all the lecturers said that the teachers must assist the learners in applying learned knowledge and content to other scenarios. Lecturer NH stressed that teachers must use “real-life simulations and teach them how to discuss a concept with its pros and cons”.

The responses above illustrate that there were different views about whether or not the schools prepared the learners academically for university/college life. On the one hand, the responses were that the learners received a good foundation and the school covered a lot of content. On the other hand, the responses were about content overload and insufficient time for the development of skills and concepts, and problematic textbooks. These latter responses, namely content overload, curriculum coverage, ineffective moderation, and insufficient time for the development of skills, revision and consolidation inhibited the effective implementation of CAPS. It could be because of these challenges that the Department of Basic Education (2018(c)) indicated that there should be a greater

emphasis on the learning of appropriate terminology, concepts and definitions related to the various topics in all the subjects at schools. The report suggested that teachers should include terminology in all informal assessment tasks daily, and they must illustrate the meaning of new terms by using them in sentences and short scenarios (Department of Basic Education, 2018(c)).

As discussed in Section 7.3.2.3 above, the absenteeism of both learners and teachers could also be a challenge to the teaching and understanding of the content in the different subjects. If the teachers do not teach the content and the learners do not catch up on the work, the learners will only fall further behind and would consequently never be able to catch up on work missed. Equally important is language proficiency in English, because a lack thereof would also negatively affect the level of understanding of the concepts and content in the different subjects, and their application (Letshwene, 2014; Steenkamp et al., 2009). An inference could be made that all the challenges identified could be contributing factors for the low academic performance of both the sample learners and the cohort learners at School A, and why their results (thus their performance) in Business Studies decreased over the course of the year, instead of increasing (referring to the two questions asked under Cycle 1 above). And although School B's cohort learners' results in Economics for 2017 and 2018 were slightly better than those at School A, they too, did not achieve an adequate rating of 4 in Accounting and Business Studies over the three-year period in the final examination (refer to Table 6.12b). Tables 6.12a and 6.12b also reflect the decrease in Economics results over the three years at both schools. Therefore, to the question whether or not the two schools provided the learners with adequate subject content knowledge and skills over the three-year period to enable epistemological access, the answer is unfortunately that they did not.

7.3.4.2 Extra academic support provided to learners

Extra academic support is the second sub-dimension under the content knowledge dimension. Extra academic support means that the school uses different resources and extra classes after hours and on Saturday mornings to help the learners in the learning process so that they could succeed. Extra support is needed in schools

because, as Maboya (2017) explains, there are challenges for the teachers with regard to the quality of formal assessment tasks; a lack of understanding of how to use the cognitive levels and the forms of assessment as well as the weightings; teaching for assessment that is not mastered; the low reading levels of learners, and the non-development of 21st-century skills.

During the parents' focus group discussion at School A, one parent said that the learners came together at one specific home and helped each other. At School B, one parent's view was that "the learner must understand the work to be able to do the homework at home." Another parent added, "the learners do not know the steps that are necessary to get to an answer. The learners must start in the class with the homework that the teacher can assist in class, and then they will be able to do the rest at home". One parent at School B said that "the teachers must teach every day in every period in every class so that these extra classes will become redundant". The majority of the parents felt that it was the teachers' responsibility to provide their children with academic support and good teaching. One parent at School A explained:

The teacher must explain the work and elaborate on the work. The teacher must be adjustable, flexible and active. The teachers must grasp the learners' attention. There must be a relationship between the learners and teachers.

These responses from the parents indicate that they did not think that the teachers were doing a good job teaching and supporting the learners.

Moreover, the principals, the circuit manager and the subject advisers had different views on the teachers' commitment to support the learners. The principals thought that the teachers were going the extra mile for learners who were struggling with the academic programme. The circuit manager's view was that the teachers did not adequately fulfil their roles, and the subject advisers blamed the school management teams (SMTs) for not monitoring the effective implementation of the curriculum, and the higher education sector for not training future teachers well.

Principal GS explained that School A arranged accommodation at another school for learners who stay 5 km away so that they could study in the afternoons. The principal of School B (JS) explained that extra classes were offered every year for Mathematics (Gr 10 – 12), Accounting (Gr 11 and 12), Physical Science (Gr 10 – 12), and for the arts. The learners were also motivated to attend community centres in five other towns where they could work under supervision from 17:00 to 21:00. They received something to eat and were supplied with computers. The principal also said that the school contacted the parents when there was an academic problem and alerted the parents to visit the school. However, in the parent focus group discussion, one parent at School B raised his concerns about the promises made by the school in terms of extra classes and Saturday classes. He was concerned that these extra classes and winter and spring schools were only offered in certain subjects, which is clear from the above responses of the principal. Thus, the parent was rightfully concerned as the extra classes focused on the business, commerce and management subjects, and not on the other subjects (for example history or languages).

The subject advisers indicated in their interviews that they supported the teachers electronically and had professional development sessions with teachers to help them with difficult topics. Adviser LC explained that she had reflection, analysis and development sessions with her teachers at the beginning of the year. Adviser CL indicated that she had sessions with her teachers every year on how to mark correctly and that she helped them with setting up quality assessment tasks and question papers. Adviser LZ also said that he assisted the teachers with external moderation and provided the teachers with learner notes. The subject advisers indicated that they attempted to establish effective professional learning communities (PLCs) to improve teaching and learning. The argument was that if the PLCs operated effectively, it would ensure development and learning opportunities where teachers could share best practices, explain difficult content and how to teach these aspects, cluster moderation, the setting of formal assessments and memorandum discussions.

In addition, the subject advisers pointed out that they provided the teachers with support to arrange winter and spring schools; weekend camps for progressed learners; core notes and resources (for example Mind the Gap); tutor classes; class visits (one-on-one discussions or peer discussion/motivation sessions with learners and team teaching during class visits with the educators). The principals and the circuit manager also spoke about the extra academic support that was provided to both schools. However, the school principal of School B (JS) thought that the support from the district was insufficient and could be improved. He explained:

The school works on certain systems that must run, e.g. if a teacher is absent for two weeks and want to give an extra class on a Saturday, then it is not possible to give the learners food, because the district wants the application one month before the event.

Adviser CL suggested that the private sector needed to step in and help the learners, especially in rural districts.

During the interviews with the lecturers, lecturer AM made the following remarks regarding the prerequisites in terms of the Grade 12 NSC examination:

If the NSC has assessment types, for example, match the words, then teachers are going to prepare the learners for their Grade 12 final examination. Teachers are going to teach according to the examination guidelines. It is about the assessment types at school level, such as to define and match words, filling in words and writing the misnomer 'essays'. We found these assessment methods to be counter-intuitive as students then grapple with providing more depth in answering questions (those that go beyond merely defining) in the first year.

Lecturer LB suggested that teachers should teach for understanding [and not rote learning] and that they must try new ways to support learners so that they will understand the accounting topics and process, rather than teaching rote learning. She explained:

In my opinion, rote learning is easily forgotten and will therefore not give the necessary knowledge support base for studies at a higher level.

Evident from the above discussion is the fact that the teachers have a responsibility to be at the school and to teach every day, in every class, in every period. It was also evident that the district and the province provided extra

academic support to the learners and the teachers. However, as the concerned parent pointed out, the extra academic support classes were only offered in a few select subjects, and not in all the subjects at both schools, which was unfair to the learners who were doing other subjects. As was pointed out in an earlier discussion, the high teacher absenteeism is a great concern and should be addressed by the school governing body and the district because the teacher is ultimately responsible for effective teaching and learning to take place. As such, teachers should be fully trained and knowledgeable to explain the subject knowledge content, grasp the learners' attention, and facilitate the development of the learners' critical thinking skills so that the learners will be able to understand and apply the knowledge learnt. Therefore, as was stated by the circuit manager earlier and the one parent at School B, if effective teaching and learning take place in normal school time, there will be no need for extra support classes after hours and over weekends.

7.3.4.3 Relevance/value of what you learn in school for post-school opportunities

Relevance/value of what you learn in school for post-school opportunities is the third sub-dimension under the content knowledge dimension. Relevance/value has to do with the fact that teaching should not be limited to 'how' but should rather focus on the 'when' and 'why' of problem types and real life issues (Department of Basic Education, 2011(f)). Focusing on the 'when' and 'why' will enable the learners to understand how to use the knowledge and skills learnt in further education and training, and in the workplace (Department of Basic Education, 2011(f)).

When discussing the relevance/value of what is learnt in school, the reasons for attending school must be taken into consideration. Three questions were asked in the learners' questionnaire in this regard: from which grade they started attending their current school; whether they attended another school before their current one; and why they left their former school to attend the current one. At School A, six learners (30%) attended the school from Grade 8, two (10%) from Grade 9, 10 (50%) from Grade 10, and two (10%) from Grade 12. At School B, 18 learners

(90%) attended the school from Grade 8, one (5%) from Grade 10, and one (5%) from Grade 12.

Only the learners at School A provided reasons why they were attending the school. These were:

The school is near my home and my family for help and support.

My parents decided to send me to the school.

To gain knowledge.

Because transport is free.

The previous school was overcrowded and many learners failed.

To do English as a home language because it will help me with tertiary studies.

I needed quality education.

It is interesting to note that only one learner mentioned 'quality education'. The rest of the responses do not speak to quality education, but rather about the school context and the learners' parents' ability to pay school fees or not. If one considers the learners' circumstances, the fact that at School A, seven learners' parents (35%) were unemployed and two learners' parents (10%) were dependent on social grants, their choices were limited. The learners needed to gain knowledge, so they were at the school (which was a quintile 1 school) because it was free, it was close to their homes, and because transport was free.

Jointly, 26 of the 40 learners (65%) responded in the questionnaire that they received quality teaching at the schools and nine (22,5%) replied that they sometimes received quality teaching. The learners were also asked to indicate how much their experiences at the schools contributed to their growth in understanding the relevance of what they learn in school for life after school. Twenty-four learners (60%) responded that the school contributed a lot (80 – 100%) to their understanding of what is expected of them after school. Twenty-eight learners (70%) agreed that they could be creative at school and twenty-nine learners (72,5%) felt that they had opportunities to be creative in classroom assignments and projects. In contrast to this, 26 learners (65%) did not take any additional

subjects beyond what is compulsory. A possible reason according to subject adviser LZ and the parents could be that the curriculum was overloaded and there was not sufficient time for revision and consolidation. Their responses confirm Goetze's (2016) argument that the CAPS curriculum is impacting negatively on the learners because it has too much content, there is no time for consolidation, and it is inflexible.

Consequently, for learners to receive quality teaching that is relevant and have value, teachers must keep up with the ever-changing curriculum and be involved in life-long learning. Two teachers referred to this aspect in the interviews. Teacher NS explained:

I believe that teaching and learning are life-long. That a teacher is only able to give quality teaching if they are keeping up to date with ever-changing curriculum insights and in this way they are also involved in life-long learning.

Teacher TK suggested that learners must be given the knowledge that applies to their everyday lives and that would be useful in their careers. In this regard, concerns that the CAPS document is not being updated in terms of current developments in the profession were reported by Umalusi in 2014 (Umalusi, 2014(a)). Also, if some teachers are absent (refer to Tables 6.14a and 6.14b), and some of them arrive late at school, quality teaching cannot be provided to all the learners.

Subject adviser (LC) explained that quality teaching included teaching relevant content as prescribed. Two teachers (AH and NS) argued that the curriculum is designed for ideal circumstances, and that they were sitting with overcrowded classes, so it made it difficult to adhere to time and to consolidate knowledge. Teacher MN thought that the school tried to prepare the learners for higher education, but not all the learners had the resources to develop their skills. The circuit manager's perception of School A was that "it was a struggle to keep the learners in the school, to manage the teachers to complete the curricula, and to motivate the learners to study".

The responses indicate that more learners (26 – 65%) perceived their learning and teaching at the two schools as quality education, while the other participants (the circuit manager, teachers and subject advisers) had different views. A possible reason could be that the learners did not understand what quality education was and this could be attributed to their contextual circumstances (School A) of living in a poverty-stricken community. Both schools survived with little resources because School A was a no-fee school, while School B was a fee-paying school, but as the principal remarked, 50% of the parents did not pay the children's school fees. If the schools lack committed teachers, involved parents and sufficient resources, it will not be easy to provide quality education that can equip learners with sufficient subject content knowledge and skills for post-school opportunities, or the workplace.

7.3.4.4 Soft skills learnt

Soft skills learnt are the last sub-dimension under the content knowledge dimension. Soft skills can be interpreted as social and interpersonal skills and form part of interpersonal communication, which is very important for human beings' relationships and wellbeing (Spitzberg & Cupach, 2011). Soft skills include effective communication, non-verbal communication, listening, negotiation and problem-solving skills, teamwork, responsibility, empathy and respect, among others (Spitzberg & Cupach, 2011).

In the learners' questionnaire, they were asked how much their experiences at the school contributed to their growth. Twenty-eight learners (70%) indicated that the school contributed to their growth in terms of understanding people of other racial and ethnic backgrounds, and treating people with respect. Twenty-two (55%) said that it assisted them to work well with others, and 19 (47,5%) said that it developed skills needed for work when they finished school. Seventeen (42,5%) responded that it raised their awareness of conditions in the community outside the school, and 15 (37,5%) indicated that they participated in community service or volunteer work.

However, in the focus group discussions the learners reported that their schools did not prepare them socially for university/college life. At School A, the learners made the following remarks:

The teachers only dictate and command the learners.

It is very rare to work in groups, to have discussions and give opinions.

It is in just a few classes where it sometimes takes place.

The responses of the learners at School B were more or less similar to those at School A. They added:

There is an attempt in the Life Orientation class.

No discussions take place except in orals.

The learners also responded that the school did not prepare them to work independently.

In their interviews, the teachers indicated that most of the learners struggled to work independently, while the principal of School B (JS) stated that one of the challenges was that the learners did not work independently and one of the reasons could be the learners' social disadvantages.

The lecturers mentioned soft skills of the students as a challenge in their interviews. Lecturer VG explained:

First-year is fraught with social and interpersonal skills, especially so when students also come from another city and struggle to find a residence. However, with assimilation into a group of ethical, hard-working students, the student can acquire good social and interpersonal skills and feel supported.

Lecturer WD stated that there was a big gap related to a lack of confidence, and advanced verbal presentation and writing skills in students. He explained that it was not only about the learners' cognitive ability, but also about their ability to be socially, ethically and environmentally aware. Lecturer NH observed that in class, the students make some noise and chat with friends, but when they need to answer questions in class, they become mute.

Lecturer VG explained that with the #feesmustfall protests in 2015 and 2016, there was a significant shift to e-mail consultation instead of face-to-face consultation. Thus, the e-mail level of communication was not professional, because the students did not address anybody and wrote without punctuation. She further explained that at the beginning of 2018 there was a discussion during orientation and introduction on e-mail communication, how it is done professionally and what is expected in the world of work. The lecturers also remarked that an ability to work independently was necessary to succeed at university level.

The responses of the learners, the teachers, the principals and the lecturers indicated that the learners lacked soft skills. Soft skills are not explicitly stated as part of the curriculum, and that could be the reason why the learners responded that the teachers did not prepare them socially for university/college life. Soft skills are graduate attributes that should be embedded as part of the curriculum for all the subjects. An inference could be made that the teachers were not aware that they should embed soft skills as part of what and how they teach because it was not explicitly stated in the CAPS curricula. It could also be that in the training that was provided to them, soft skills were not foregrounded as important, and that could be another reason why they did not include or focus on soft skills in their teaching. It is therefore safe to conclude that the learners in this study were able to develop some of the soft skills through the activities they reported to have been involved in, but that it was not focused on or emphasised in the teaching and education they received from the two schools. Not developing their soft skills place learners at another disadvantage because they will not know how to apply the soft skills at university level, or in the workplace if they try to find employment instead of continuing with post-school studies.

7.4 SYNTHESIS OF DISCUSSIONS AND CONCLUSION

The analysis of the data in the preceding sections according to the three cycles and the dimensions and sub-dimensions of the study's conceptual framework provided answers to the study's aim, which was the fact that the learner participants did not have the required subject content knowledge and skills that could have prepared

them adequately for university studies. The discussion and interpretations of the results also highlighted the challenges that the learners faced in the three business-related subjects of Accounting, Business Studies and Economics, which provided mitigating circumstances for the learners' low academic performance in their Grade 12 final examination in 2019.

Nevertheless, based on the discussions and interpretations in the preceding sections, the first observation is that in all three cycles the learner participants at School A did not have the required entry-level subject content knowledge and skills (generic and subject-related) for the grades they were in. This was evident both in the control tests that were written at the beginning of each year, and the pre-test results before the interventions took place. At School B, they did not have the required entry-level subject content knowledge and skills in Accounting and Economics in Grade 10 (2017), in Accounting and Business Studies in Grade 11 (2018), and in Accounting in Grade 12 (2019). Their November 2019 examination average results reflected that the learners at both schools ended their Grade 12 year with a lack of subject content knowledge and skills as they could not achieve an adequate rating of 50% and above in any one of the three subjects.

The second observation is that the post-test results (after the interventions took place) were much better than the pre-test results. One reason why that happened was the fact that the interventions focused on a specific section of the content in the three subjects that were already taught. This means that the interventions reinforced those specific sections of the content for the learners. However, the last intervention's post-test results in 2019 were very low in all three subjects at School A, and in Accounting and Business Studies at School B.

A third observation is that the majority of the learners at both schools (95% and 94%) indicated that the interventions helped them to improve their marks in the three subjects (refer to Section 6.4.2). The learners also stated that the interventions strengthened their ability to answer questions, and that their writing, research and study skills, independent learning, time management, self-confidence, and analysis and interpretation of questions had improved. They also reported that the interventions assisted in the development of their subject/content

knowledge, language and logical thinking skills, application skills, critical analysis, problem-solving, debating and communication skills, research skills, and mathematical skills. As such, the learners' responses illustrated that the interventions did assist them to improve their understanding of the specific subject knowledge and skills that were focused on. However, it was clear that challenges such as a persistent lack of content knowledge and skills, a language barrier, learner and teacher absenteeism, and other social challenges were overwhelming. Hence, the interventions were a drop in the ocean and could not provide adequate academic support for the sample learners and the cohort learners at both schools to achieve an adequate pass rating of 4 in all three subjects in their Grade 12 November examination in 2019.

A fourth observation is that, at School A, both the sample learners and the cohort learners' November examination (and their control test and June examination) results over the three-year period showed a fluctuation in Accounting, a gradual increase in Business Studies, and a gradual decrease in Economics. At School B, the sample learners' results fluctuated across the three subjects over the three-year period, while the cohort learners' results gradually decreased in Accounting, gradually increased in Business Studies, and fluctuated in Economics. A general trend observed was that when the learners were assessed on less work (a term's work), they did better (their results increased), but when they were assessed on the whole year's work, their results decreased.

A fifth observation is that the cohort learners' bachelor's pass rate was 13% at the end of 2019 at School A and 41,2% at School B, while the overall bachelor's pass rate of all the Grade 12 learners at the end of 2019 was 27,8% at School A, and 37,7% at School B. As such, there was a bigger percentage difference (28%) between the two groups of learner participants of the study, while there was only a 10% difference between all the Grade 12 learners at School A and School B. The sample learners at School B also consistently did better than School A's learners over the three-year period, even though both groups of learners received the same academic support in the interventions. This observation illustrates that the

expectation that learners at quintile 4 schools perform better than learners at quintile 1 schools is correct to a certain extent.

Observation number six relates to the discussions under the contextual dimension of the augmented readiness model. It consisted of three sub-dimensions – the school context and parent circumstances and involvement, university requirements, and socio-cultural factors. The discussion of the results under the school context and parent circumstances identified four challenges, namely:

1. School A was a quintile 1 school (a no-fee school) and School B was a quintile 4 school where parents were supposed to pay school fees, but the school struggled to collect the money from the parents. As a result, neither of the schools had sufficient resources to provide in all the needs of the learners.
2. The management of resources by the teachers and SMT were problematic at both schools. They did not know how to optimally use what they had.
3. There was no consensus that the schools adequately prepared learners for university studies, but the responses that the schools were not preparing the learners for university studies were more than those who agreed that the schools were preparing the learners.
4. In the case of this study, even though the parents acknowledged that they should be communicating with the school and be involved in their children's schools, they were not. It was also not clear whether they supported and encouraged their children in their schooling careers.

Observation number seven is about the second sub-dimension under the contextual dimension, which was the university context and requirements. Seven issues were highlighted:

1. It was clear from the learners' responses that they had an idea that university and school were different, that university would be challenging, that hard work would be needed and that they would have to become independent.

2. The learners at School B received career counselling and information about post-school studies during their Life Orientation classes, while the learners at School A did not.
3. All six teachers indicated that the learners should gain communication skills, time management skills, financial skills, mathematical skills, research skills, presentation skills, and problem-solving and interpretation skills at high school level. They also noted that the learners should have integrity and loyalty, and they should develop the ability to work under pressure, to read in limited time with comprehension, and to work independently. These skills were similar to the skills that the lecturers thought learners should have to succeed at university level.
4. The three subject advisers indicated that it was important for the learners to gain the content knowledge of the specific subjects from Grade 10 to Grade 12, the knowledge of action words and interpretation of knowledge, and good reading skills and analytical skills. The learners should also develop good listening skills, self-reliance, self-motivation, diligence and perseverance, and time-on-task skills at school level to succeed at university level.
5. The lecturers were concerned about the low pass requirements at school level (30%) compared to the pass requirement of at least 50% at university level. It was pointed out that if learners have a bachelor's pass (adequate rating of 4 (50 – 59%)) in four of the seven subjects and 30% in the other three subjects, they could lack up to 70% of subject content knowledge and skills in the other subjects that they passed with 30%. It meant that the learners would have 'bigger gaps' in some of their subject content knowledge, which will be problematic at university level because it will mean that they do not have a solid foundational knowledge base on which to construct and acquire advanced knowledge creation at university level.
6. The lecturers were also concerned about rote learning at school level because it meant that the learners did not understand the content, and would forget what they had memorised, which in the end means that they do not possess the

necessary subject content knowledge when they start with their university studies. They explained that there is a difference between the National Senior Certificate (NSC) and the National Benchmark Test (NBT). The NSC examination tests how well the learners meet the Grade 12 curriculum expectations. If the learner passes, he/she will obtain an NSC certificate. The NBT on the other hand tests the learners' readiness for the demands of tertiary studies about Academic Literacy, Quantitative Literacy and Mathematics.

7. Lastly, the discussion and interpretation of the results under this sub-dimension demonstrated that the learners in this study were not adequately prepared for post-school studies, even though the sample learners at School B performed slightly better than their counterparts at School A.

Observation number eight relates to the third sub-dimension under the contextual dimension, which was social-cultural factors. The discussion of the results revealed that the school context was not a conducive and safe learning environment in which teaching and learning could take place, and that the learners and staff at both schools most probably lived in fear because of peer pressure, drug and substance abuse, and gangsterism.

Observation number nine speaks to the second dimension in the augmented readiness model, i.e. the ownership of learner. It had five sub-dimensions. The first sub-dimension was about the learners' aspiration/vision for themselves. It was evident from the learners' responses that they were inspired to further their education to improve their standard of living. They were also aware that having only a Grade 12 certificate will not secure them a good-paying job and a brighter future. Equally important for these learners was the fact that a post-school qualification will alleviate their impoverished circumstances. However, a concern was the low overall bachelor's pass rate of 27,8% at School A and 37,7% at School B at the end of 2019. Thus, some of the learners who participated in this study would be disappointed, as they did not meet the minimum admission requirement for university study.

Observation number ten is about the second sub-dimension under the ownership of the learning dimension, which focused on the learners' self-efficacy. The learners' responses indicated that they felt comfortable at the school and believed that the school instilled positive values in them. It seemed as if the school managed to create a degree of stability for the learners despite the social challenges.

Observation number eleven relates to the third sub-dimension, which focused on the learners' attitude and effort towards their learning. Absenteeism and the late-coming of both the learners and the teachers were challenges. The argument was that if learners were absent and arrived late for school, it did not show that they were committed to their learning. Also, although most of the learners indicated that they were committed to their schoolwork, the teachers and principals reported that the learners had a poor work ethic and that they were not motivated and did not take responsibility for their learning. The circuit manager also pointed out that there was a high tendency of class-cutting behaviour by staff, and that holding staff accountable for the lack of commitment was non-existent amongst management.

Observation number twelve speaks to the third sub-dimension, which focused on time management. The responses of the learners indicated that they did not plan and manage their time effectively as they were spending a lot of time on 'the like to do things' instead of on their schoolwork. A concern was the fact that some of them had to travel two hours to get to school, which meant that there was an even greater need for effective planning and time management in order to spend time on their academic work as well. The discussions also showed that planning and time management were not explicitly taught to the learners and that these were essential skills that the learners needed to have at university level.

Observation number thirteen is about the fourth sub-dimension, which focused on the use of ICT at the two schools. Half of the learners said that the schools encouraged the use of computers and the internet, but the other half did not agree. School B's principal acknowledged that not all the teachers were proficient in using technology, and that internet access was not sufficient for the school. The

argument was made that if learners were not exposed to ICT skills at school level, they would be unprepared for university and more importantly, for the 4th industrial revolution.

Observation number fourteen relates to the last sub-dimension under the ownership of the learning dimension, which focused on collaborative learning (teamwork). The discussions illustrated that neither of the schools provided the learners with opportunities to work in groups. It was argued that if schools were not encouraging the teachers to find group work activities for the learners, the learners would not learn how to work effectively in groups and their interpersonal skills would not be developed. The learners would be further disadvantaged as they would not know how to work in groups when they are at university, or they would not have developed the interpersonal skills to prepare them for the greater diversity of students in higher education and, one day, in their respective workplaces.

Observation number fifteen is about the third dimension in the augmented readiness model, which was the cognitive dimension. The first sub-dimension focused on critical and analytical thinking. The discussions showed that the learners' ability to analyse and interpret information or to solve problems was not developed at either of the schools. It was pointed out that the development of problem-solving and critical thinking skills should be implemented from primary school level and be further developed and cultivated throughout their secondary schooling to ensure that a solid foundation is laid for higher education studies.

Observation number sixteen relates to the second sub-dimension, which focused on research skills. The teachers mentioned that it was necessary to gain research skills at high school to succeed at university level, but they did not explain or mention how they attempted to develop these skills in the learners as the discussion showed that they focused on rote learning for the NSC examination.

Observation number seventeen speaks to the third sub-dimension, which is language and logical thinking skills (reading and writing). There was consensus amongst most of the stakeholders that the learners of both schools had poor

reading and writing skills. School A's learners were further disadvantaged than School B's learners because the majority of them were second and additional language speakers of English. It was argued that language is central in the learning process, as it not only affects learners' general communication abilities, but more importantly, it will influence the learners' critical thinking ability to interpret and understand the content in their different subjects.

Observation number eighteen is about the fourth sub-dimension, which focused on the learners' mathematical ability. The statistics provided in the discussion illustrated that the learner participants' aspirations to study further would be compromised because the majority had Mathematical Literacy and not pure Mathematics, especially if they wanted to study towards a B Com degree or a science degree.

Observation number nineteen relates to the last sub-dimension under the cognitive dimension, which focused on the learners' communication and debating skills. It was concluded in the discussion that proficiency in a language is a requirement for effective communication in that specific language, and that it will be a challenge for the 95% of learners who were second and additional language speakers of English at School A.

Observation number twenty speaks about the last dimension of the augmented readiness model, which was the content knowledge dimension. The first sub-dimension under this dimension was subject content. The discussions on the subject content knowledge and the provision thereof to the learner participants illustrated that there were different views about whether or not the schools prepared the learners academically for university/college life. On the one hand, the responses were that the learners get a good foundation and the school covers a lot of content. On the other hand, the responses were about content overload and insufficient time for the development of skills and concepts, and problematic textbooks. These latter responses, namely content overload, curriculum coverage, ineffective moderation, and insufficient time for the development of skills, revision and consolidation inhibited the effective implementation of CAPS at both schools.

The absenteeism of both the learners and teachers and not being proficient in the English language were identified as obstacles that negatively affected the learners' understanding of the concepts and content in the three subjects, which could have been the reasons why some of them did not achieve an adequate rating of 4 at either of the schools. These challenges could have also been the reason why the learners' subject content knowledge and skills decreased over the course of the year in Business Studies at School A, and why their November examination results in Economics gradually decreased over the three-year period. At School B, the cohort learners' Accounting and Economics results also decreased over the three-year period. It was argued that both schools did not provide the learners with adequate subject content knowledge and skills, and as such did not enable epistemological access for them.

Observation number twenty-one relates to the second sub-dimension, which was extra academic support that was provided to the learners. The discussions demonstrated that the district and the province provided extra academic support to the learners and the teachers at both schools. However, as the concerned parent pointed out, the extra academic support classes were only offered for a select few subjects, and not for all the subjects at both schools, which was unfair to the learners who were doing these subjects. As was pointed out already, the high teacher absenteeism was problematic because the teacher is ultimately responsible for effective teaching and learning to take place. The argument was that if effective teaching and learning took place in normal school time, there would be no need for extra support classes after hours and over weekends.

Observation number twenty-two focuses on the third sub-dimension, which was about the relevance/value of what is learnt in school for post-school opportunities. There were two different views from the discussions. More than half of the learner participants at the two schools perceived their learning and teaching as quality education, while three of the other participant groups did not agree. It was noted that both schools survived with little resources because School A was a no-fee school, while School B was a fee-paying school, but 50% of the parents did not pay the children's school fees. An argument was made that, if the schools lacked

committed teachers, involved parents and sufficient resources, it would not be easy to provide quality education to equip learners with sufficient subject content knowledge and skills for post-school opportunities, or the workplace.

The final observation speaks to the last sub-dimension under the content knowledge dimension, which was about the soft skills that the learners had learnt at the two schools. It was concluded that the learners in this study were able to develop some of the soft skills through the activities they reported to be involved in, but that it was not focused on or emphasised in the teaching and education they received at the two schools. A final argument was made that the non-development of the learners' soft skills was yet another disadvantage because they would not have developed the soft skills they could have used and built on at university level, or in the workplace.

In conclusion, this chapter required the researcher to apply rigour in the discussion and interpretation of the results, which was challenging and demanding. It also required the researcher to work carefully through the volume of data gathered to draw similarities and differences, and to synchronise the information as best as she could. Perhaps some readers of this dissertation will differ on the manner in which she has done this, but both the researcher and her two supervisors thought it best to present and discuss the results in this format.

Chapter 8, the final chapter of this dissertation in which the study is drawn to a close, is presented next.

CHAPTER 8

FINDINGS, RECOMMENDATIONS AND CONCLUSION

8.1 INTRODUCTION

This is the final chapter of this dissertation in which the researcher draws the study to a close. The discussion starts with restating the aim and objectives of the study and listing the findings. Thereafter, the findings are related to the literature discussion chapters and the study's conceptual framework to ascertain whether the study achieved its objectives. The contribution that this study makes to the creation of new knowledge is presented next, followed by recommendations for the different stakeholders involved in education. Finally, the researcher concludes this chapter by noting the limitations of the study, proposing possibilities for future research, and writing a final reflection on what the study meant to her.

8.2 AIM AND OBJECTIVES OF THE STUDY

As the purpose of this study was to contribute to the body of knowledge in the form of a readiness model that educators in the business, commerce and management sciences subjects in public high schools could use to lay a solid foundational knowledge and skills base for learners in Grade 10 to 12, the aim of the study was twofold. Firstly, it investigated whether Grade 10 to 12 learners who were in the further education and training (FET) phase at two public high schools had adequate subject content knowledge and skills in Accounting, Business Studies and Economics. Secondly, it wanted to identify the challenges that the two schools and the learners were experiencing in these subjects.

The study had three objectives, namely to:

- Identify the knowledge and skills gaps, and the challenges that the learners experience in the three subjects in order to develop appropriate intervention strategies that would assist them to overcome the challenges;

- Implement the intervention strategies over three years (2017 to 2019) to strengthen the learners' subject content knowledge and skills so that a solid foundation could be laid in these subjects; and
- Develop a readiness model that could be used in public high schools in South Africa.

The aim and objectives of the study were realised throughout the discussions and interpretations in the different chapters. In Chapter 2, literature about the challenges of education in a global context (developed and developing countries) was reviewed to ascertain what was happening in education globally, in comparison to the current state of education in South Africa. Chapter 3 presented a detailed discussion of the challenges in South Africa's public schooling system. The challenges were divided into four main categories, namely challenges that applied to learners, to teachers, to the school context and to the broader community.

In Chapter 4, the researcher narrowed the focus to the business-related subjects, Accounting, Business Studies and Economics, as well as Mathematics in public high schools in South Africa. The discussion focused on each subject's aim and objectives, and the subject content knowledge and skills according to the CAPS curricula that learners should have mastered at Grade 12 exit level. Thereafter, the challenges encountered in the implementation of the business-related subjects and Mathematics were discussed, as well as the requirements for admission to a B Com degree, factors influencing epistemological access, and the conceptual framework, which was an augmented readiness model based on the review of three different student readiness models.

Chapter 5 was the research methodology chapter of the study. Justification was provided for the research decisions taken and the methods applied in this study. Chapter 6 presented the results that were collected from the different participant groups. The results were discussed and interpreted under the three cycles and based on the dimensions and sub-dimensions of the augmented readiness model in Chapter 7. The discussions and interpretations were synthesised into 22

observations at the end of Chapter 7. These observations are now reported as the study's findings in the next section.

8.3 FINDINGS

Based on observations at the end of the previous chapter, the findings of the study are listed below. It should be noted that the observations that dealt with similar factors are grouped under a specific finding, and those that are different are reported separately.

Finding One

In all three cycles, the learner participants in School A did not have an adequate rating of 4 (50% and above) required for entry-level subject content knowledge and skills (generic and subject-related) in the three subjects for the grades they were in at the beginning of each year, that is, in Grade 10 in 2017, Grade 11 in 2018, and Grade 12 in 2019. This was evident both in the control tests that were done at the beginning of each year, and the pre-test results before the interventions took place. At School B, they did not have the required entry-level subject content knowledge and skills in Accounting and Economics in Grade 10 in 2017, in Accounting and Business Studies in Grade 11 in 2018, and Accounting in Grade 12 in 2019. The November 2019 examination average results reflected that the learners at both schools ended their Grade 12 year with a lack of adequate subject content knowledge and skills, as they could not achieve an adequate rating of 50% and above in any one of the three subjects.

Finding Two

At both schools, the sample learners' post-test results after the interventions took place were much better than those of their pre-test results. One reason why that happened was the fact that the interventions focused on a specific section of the content in the three subjects that were already taught. This means that the interventions reinforced those specific sections of the content for the learners. However, in 2019, the last intervention's post-test results were very low in all three subjects at School A, and in Accounting and Business Studies at School B.

Finding Three

The majority of the learners at both schools (95% and 94,2% respectively) indicated that the interventions helped them to improve their marks in the three subjects. The learners also stated that the interventions strengthened their ability to answer questions, and their writing, research and study skills, independent learning, time management, self-confidence, and analysis and interpretation of questions improved. They also reported that the interventions assisted the development of their subject/content knowledge, language and logical thinking skills, application skills, critical analysis, problem-solving, debating and communication skills, research skills and mathematical skills. As such, the learners' responses illustrated that the interventions did assist them to improve their understanding of the specific subject content knowledge and skills that were focused on. However, it was clear that challenges such as a persistent lack of subject content knowledge and skills, a language barrier, learner and teacher absenteeism, and other social factors negatively affected their final examination results. Thus, the interventions were not sufficient and did not provide adequate academic support to enable the learner participants to achieve an adequate pass rate of 4 (50% and above) in all three subjects in their Grade 12 final examination in 2019.

Finding Four

At School A, both the sample learners and the cohort learners' November examination (and their control test and June examination) results fluctuated over the three years in Accounting. It gradually increased in Business Studies to above 30%, and gradually decreased in Economics, also in the 30% margin. At School B, the sample learners' results fluctuated across the three subjects over the three years, while the cohort learners' results in Accounting gradually decreased (from 46,2% in 2017 to 33,2% in 2019), increased in Business Studies (from 32% in 2017 to 41% in 2019), and fluctuated in Economics. A general trend was observed that when the learners were assessed on less work (a term's work), they did better (their results increased), but when they were assessed on the whole year's work, their results decreased.

Finding Five

The cohort learners at School A's Bachelor pass rate at the end of 2019 was 13% and at School B, 41,2%. The overall bachelor's pass rate of all the Grade 12 learners at the end of 2019 was 27,8% at School A and 37,7% at School B. As such, there was a bigger percentage difference (28,2%) between the two groups of learner participants of the study, while there was only a 10% difference between all the Grade 12 learners at School A and those at School B. The sample learners at School B also did consistently better than School A's learners over the three years, even though both groups of learners received the same academic support in the interventions. This observation illustrates that the expectation that learners at quintile 4 schools perform better than learners at quintile 1 schools is correct to a certain extent.

Finding Six

The first set of challenges was identified from the discussions under the school context and parent circumstances and involvement sub-dimension, and the cognitive dimension. These were:

1. School A was a quintile 1 school (a no-fee school) and School B was a quintile 4 school where parents were supposed to pay school fees, but the school struggled to collect the money from the parents. As a result, neither of the schools had sufficient resources to provide in all the needs of the learners.
2. The management of resources by the teachers and SMT was problematic at both schools. They did not know how to optimally use what they had.
3. There was no consensus that the schools adequately prepared learners for university studies, but the responses that the schools were not preparing the learners for university studies were more than those who agreed that the schools were preparing the learners.
4. In the case of this study, even though the parents acknowledged that they should be communicating with the school and be involved in their children's

schools, they were not. It was also not clear whether they supported and encouraged their children in their schooling careers.

5. The discussion of the results revealed that the school context was not a conducive and safe learning environment in which teaching and learning could take place and that the learners and staff at both schools most probably lived in fear because of peer pressure, drug and substance abuse and gangsterism (social factors).
6. The circuit manager reported that there was a high tendency of class-cutting behaviour by the staff (the teachers) and that holding staff accountable for the lack of commitment was non-existent amongst management.
7. There seemed to be a lack of ICT at the two schools. Half of the learners said that the schools encouraged the use of computers and the internet, but the other half did not agree. School B's principal acknowledged that not all the teachers were proficient in using technology and that internet access was not sufficient for the school. The argument was made that if learners were not exposed to ICT skills at school level, they would be unprepared for university and the 4th industrial revolution.
8. The discussions under the collaborative learning (teamwork) sub-dimension illustrated that neither of the schools provided the learners with opportunities to work in groups. It was argued that if schools were not encouraging the teachers to find group work activities for the learners, the learners would not learn how to work effectively in groups and their interpersonal skills would not be developed. The learners would be further disadvantaged as they would not know how to work in groups when they are at university, or they would not have developed the interpersonal skills to prepare them for the greater diversity of students in higher education and, one day, in their respective workplaces.
9. The discussions under the cognitive dimension focused on critical and analytical thinking. The discussions showed that the learners' ability to analyse and interpret information or to solve problems was not developed at

either of the schools. It was pointed out that the development of problem-solving and critical thinking skills should be implemented from primary school level, and further developed and cultivated throughout their secondary schooling to ensure that a solid foundation is laid for higher education studies.

10. The discussions under the extra academic support sub-dimension demonstrated that the district and the province provided extra academic support to the learners and the teachers at both schools. However, as the concerned parent pointed out, the extra academic support classes were only offered for a select few subjects, and not for all the subjects at either of the schools, which was unfair to the learners who were doing these subjects. The high teacher absenteeism and the class-cutting were also problematic because the teacher is ultimately responsible for effective teaching and learning to take place. The argument was that if effective teaching and learning took place in normal school time, there would be no need for extra support classes after hours and over weekends.

11. The discussion under the relevance/value of what is learnt in school for post-school opportunities sub-dimension highlighted two different perspectives. More than half of the learner participants at the two schools perceived their learning and teaching as quality education, while three of the other participant groups did not agree. It was noted that both schools survived with little resources because School A was a no-fee school, while School B was a fee-paying school but 50% of the parents did not pay the children's school fees. An argument was made that if the schools lacked committed teachers, involved parents and sufficient resources, it would not be easy to provide a quality education to equip learners with sufficient subject content knowledge and skills for post-school opportunities or the workplace.

The second set of challenges was identified from the discussions under the university context and requirements sub-dimension. These were:

1. The learners at School A did not receive career counselling and information about post-school studies.

2. The lecturers were concerned about the low pass requirements at school level (30%) compared to the pass requirement of at least 50% at university level. It was pointed out that if learners have a bachelor's pass (adequate rating of 4 (50 – 59%)) in four of the seven subjects and 30% in the other three subjects, they could lack up to 70% of subject content knowledge and skills in the other subjects they have passed with 30%. It meant that the learners would have 'bigger gaps' in some of their subject content knowledge, which will be problematic at university level because it will mean that they do not have a solid foundational knowledge base on which to construct and acquire advanced knowledge at university level.
3. The lecturers were also concerned about rote learning at the schools because it meant that the learners did not understand the content and would forget what they had memorised, which in the end means that they do not possess the necessary subject content knowledge when they start with their university studies. They explained that there is a difference between the National Senior Certificate (NSC) and the National Benchmark Test (NBT). The NSC examination tests how well the learners meet the Grade 12 curriculum expectations. If the learner passes, he/she will obtain an NSC certificate. The NBT, on the other hand, tests the learners' readiness for the demands of tertiary studies about Academic Literacy, Quantitative Literacy and Mathematics.
4. The teachers mentioned that it was necessary to gain research skills at high school to succeed at university level, but they did not explain or mention how they attempted to develop these skills in the learners as the discussion showed that they focused on rote learning for the NSC examination.
5. The discussions under the subject content knowledge sub-dimension (which formed part of the content knowledge dimension) and the provision thereof to the learner participants illustrated that there were different views about whether or not the schools prepared the learners academically for university/college life. On the one hand, the responses were that the learners received a good foundation and the school covered a lot of content. On the

other hand, the responses were about content overload and insufficient time for the development of skills and concepts, and problematic textbooks. These latter responses, namely content overload, curriculum coverage, ineffective moderation and insufficient time for the development of skills, revision and consolidation inhibited the effective implementation of CAPS at both schools.

Also, the absenteeism of both the learners and teachers and not being proficient in the English language were identified as further obstacles that negatively affected the learners' understanding of the concepts and content in the three subjects, which may have been further reasons why they did not achieve an adequate rating of 4 in their Grade 12 examination. These challenges could have also been the reason why the learners' subject content knowledge and skills decreased over the year in Business Studies at School A, and why their November examination results in Economics gradually decreased over the three years. At School B, the cohort learners' Accounting and Economics results also decreased over the three years. It was argued that neither of the schools provided the learners with adequate subject content knowledge and skills over the three years.

6. The discussion under the soft skills sub-dimension showed that the learners in this study were able to develop some of the soft skills through the activities they reported to be involved in, but that it was not focused on or emphasised in the teaching and education they received at both schools. An argument was made that the non-development of the learners' soft skills was yet another disadvantage because they would not have developed the soft skills they could have used and built on at university level, or in the workplace.

Finding Seven

The research participants identified the following factors that were needed at university level:

1. The learner participants had an idea that university and school were different, that university would be challenging, that hard work would be needed, and that they would have to become independent.

2. The teachers and the lecturers suggested that the learners should gain communication skills, time management skills, financial skills, mathematical skills, research skills, presentation skills, and problem-solving and interpretation skills at high school level. They also noted that the learners should have integrity and loyalty, and should develop the ability to work under pressure, to read in limited time with comprehension, and to work independently.
3. The three subject-advisers indicated that it was important for the learners to gain the content knowledge of the specific subjects from Grade 10 to Grade 12, the knowledge of action words and interpretation of knowledge, and good reading skills and analytical skills. The learners should also develop good listening skills, self-reliance, self-motivation, diligence and perseverance, and time-on-task skills at school level to succeed at university level.

Finding Eight

The ownership of the learning dimension and the cognitive dimension focused on the learners themselves. The factors identified were:

1. The first sub-dimension was about the learners' aspirations/visions for themselves. It was evident from the learners' responses that they were inspired to further their education to improve their standard of living. They were also aware that having only a Grade 12 certificate would not secure them a good-paying job and a brighter future. Equally important for these learners, was the expectation that a post-school qualification would alleviate their impoverished circumstances. However, a concern was the low bachelor's pass rate of 27,8% at School A and 37,7% at School B at the end of 2019. Thus, some of the learners who participated in this study would have been disappointed, as they did not meet the minimum admission requirement for university study.
2. The second sub-dimension focused on the learners' self-efficacy. The learners' responses indicated that they felt comfortable at the school and believed that the school instilled positive values in them. It seemed as if the

school managed to create a degree of stability for the learners despite the social challenges.

3. The third sub-dimension was about the learners' attitude and effort towards their learning. Absenteeism and the late-coming of both the learners and the teachers were challenges. The argument was that if learners were absent and arrived late at school, it did not show that they were committed to their learning. Also, even though most of the learners indicated that they were committed to their schoolwork, the teachers and principals reported that the learners had a poor work ethic and that they were not motivated and did not take responsibility for their learning.
4. The fourth sub-dimension focused on time management. The responses of the learners indicated that they did not plan and manage their time effectively as they were spending a lot of time on the 'like to do things' instead of on their schoolwork. A concern was the fact that some of them had to travel two hours to get to school, which meant that there was an even greater need for effective planning and time management in order to spend time on their academic work as well. The discussion further showed that planning and time management were not explicitly taught to the learners and that these were essential skills that the learners needed to have at university level.
5. The discussion under the sub-dimension, language and logical thinking skills (reading and writing) that formed part of the cognitive dimension, showed that there was consensus amongst most of the research participants that the learners of both schools had poor reading and writing skills. School A's learners were more disadvantaged than School B's learners as the majority of them were second and additional language speakers of English. It was argued that language is central in the learning process, as it not only affects learners' general communication abilities but, more importantly, it will influence the learners' critical thinking ability to interpret and understand the content in their different subjects.

6. The sub-dimension communication and debating skills is closely related to language and logical thinking skills. It was concluded in the discussion that proficiency in the language of teaching and learning is a requirement for effective communication and that it will be a challenge for the 95% of learners who were second and additional language speakers of English at School A.
7. The statistics provided under the mathematical ability sub-dimension showed that the learner participants' aspirations to study further would be compromised because the majority had Mathematical Literacy and not pure Mathematics, especially if they wanted to study towards a B Com degree or a science-related degree at a university.

Finding Nine

Overall, based on the discussions and interpretations of all the results, it was concluded that the learners in this study were not adequately prepared for post-school studies, even though the sample learners at School B performed slightly better than their counterparts at School A. As such, an argument was made that neither of the schools provided the learners with epistemological access.

In the next section, the above findings are now interpreted and related to the literature reviewed and the conceptual framework to ascertain if the study attained its aim and objectives.

8.4 RELATING THE FINDINGS TO THE LITERATURE REVIEWED AND THE CONCEPTUAL FRAMEWORK

As stated in Section 1.1, this study was about the provision of epistemological access to Grade 10 to 12 learners in the business-related subjects of Accounting, Business Studies and Economics at public high schools. Thus, it was about high school learners' academic achievement and university readiness. The main research question was: *How should learners in Accounting, Business Studies and Economics be equipped with epistemological access so that their chances of succeeding in a business degree programme at university level are strengthened?*

Three sub-questions guided the data collection and analysis process, namely:

- Which subject content knowledge and skills were learners lacking in Accounting, Business Studies and Economics in the FET phase?
- What were the challenges that learners experience in these subjects, and why?
- How should the learners and schools be assisted to overcome these challenges so that the learners will acquire the necessary subject content knowledge and skills to become university ready?

To ascertain if the study achieved its aim and objectives, the interpretation of the findings will be done per sub-question below.

8.4.1 Which subject content knowledge and skills were learners lacking in Accounting, Business Studies and Economics in the FET phase?

The answer to this question lies in the responses from the different research participants, which are reflected in Findings Six, Seven and Eight. Finding Six illustrates that the learners lacked ICT skills, interpersonal skills (working collaboratively) (which were sub-dimensions of the ownership of learning dimension), and critical and analytical thinking and problem-solving skills (a sub-dimension of the cognitive dimension). Finding Seven entails a list of knowledge, generic and character skills that the teachers, lecturers and subject advisers identified and suggested the learners should develop at school level. An inference can be made that they were of the view that the learner participants at neither of the two schools developed these skills. Finding Eight identifies a lack of planning and time management skills, language and logical thinking skills that included reading and writing skills, communication and debating skills, and a lack of mathematical skills (which are sub-dimensions of the cognitive dimension).

In addition, the learner participants' academic performance was tracked over the three years and is reflected in Finding One. This finding indicates that the learners at School A did not have adequate subject content knowledge and skills in the three subjects for the grades they were in at the beginning of each year, while the learners at School B's results fluctuated. Overall, the November 2019 examination results of the learners at both schools reflected that they ended their Grade 12 with inadequate subject content knowledge and skills in all three subjects as they did

not achieve an adequate rating of 4 (50% and above). Thus, this finding demonstrates how much of the subject knowledge and skills the learners were lacking in the three subjects.

It is acknowledged that each of the three subjects has its discipline-specific concepts and jargon as reflected in Tables 4.1, 4.2 and 4.3. The information presented in these tables also included the generic skills the learners were supposed to develop in each grade. Furthermore, the information illustrated that the content in one grade builds on and is further scaffolded in the next grade. As such, subject content knowledge and skills are interrelated and interconnected; one cannot separate gaining knowledge from skills or vice versa. This fact was demonstrated in Fadel (2015) – Learning and Teaching Framework (refer to Figure 4.1), Kereluik et al. (2013) – 21st Learning Framework (refer to Figure 4.2), and the World Economic Forum (2015) – 21st-century Skills Framework (refer to Figure 4.3).

As explained by Conley (2007, 2014), key content (content knowledge) comprises skills that are inherently part of specific high school subjects, such as critical reading skills, while academic success depends on developing and using key cognitive strategies to achieve content knowledge, together with academic behaviours and contextual skills and awareness. These are the knowledge and skills that are included in the three frameworks and these are the factors that Conley (2007, 2014) argues are needed for successful learning at university. The researcher shares his view that an absence of any part/skill could lead to failure in the learning process similar to what deficits in reading and writing could do. Consequently, the learners in this study not only lacked key content knowledge, but also generic and behavioural skills, and contextual skills and awareness.

This means that the learner participants in this study (more so at School A), even if they were able to pass their Grade 12 with a bachelor's pass and were admitted to a degree programme at a university, would not succeed and most likely become part of the failure and dropout statistics in higher education. If that happens, they will not be able to find a good-paying job that may assist them in improving their standard of living and rising above poverty. They could end up being unemployed

and becoming a liability to the government. The public schooling sector failed the learners, as the schools did not do what President Ramaphosa suggests, which is “it is essential to equip our learners to succeed in education, in work, and life, to overcome poverty, unemployment and inequality” (Ramaphosa, as cited in Cooper, 2019).

8.4.2 What were the challenges that learners experienced in these subjects, and why?

The learners at both schools experienced a multitude of challenges, which emerged from the data collected. The challenges and the reasons why they occurred are identified in Findings One, Six, Eight and Nine. As was pointed out under the previous sub-question, Finding One reflected that the learners did not have adequate subject content knowledge and skills for the grades they were in, and they did not pass the three subjects in Grade 12 with an adequate rating of 4. This finding resorts under the content knowledge dimension and could be traced back to the literature that was reviewed in Chapters 2, 3 and 4.

The literature reviewed in these chapters indicated the significance of all the phases, from early childhood development, the foundation phase, the intermediate phase, the senior phase and the further education and training phase. The discussions emphasised the importance of a solid and strong foundation that should be laid in literacy and numeracy in the first two phases of learners’ primary schooling. If that does not happen, the learners will have a lack of subject content knowledge and skills in the further phases, and they will not be able to ‘catch up’ – they will continue to fall behind and the little knowledge and skills they had could also diminish, as was the case with the learners in this study.

Finding Four illustrates that the learners’ November results fluctuated over the three years and decreased in some of the subjects, which meant that their subject content knowledge and skills decreased between 2017 and 2019 (refer to Tables 12a and 12b). Thus, as Du Plessis and Louw (2008), Songxaba et al. (2017), Spaul and Kotze (2015) and others advocate, the learners’ lack of literacy and numeracy skills in early childhood development deprived them of a strong knowledge and skills foundation, which remained as they progressed from one

phase to the other. In this study, the learners' poor reading and writing skills were identified as a challenge, as well as a language barrier and the fact that the majority of the learners had Mathematical Literacy and not pure Mathematics (Finding Eight). These challenges were part of the language and logical thinking sub-dimension, which could have been further reasons why their academic performance fluctuated and decreased, and why they could not pass the three subjects with an adequate rating of 4 in Grade 12.

It is argued that language is fundamental in reading and writing, in understanding and interpretation, and in applying critical and analytical thinking. Consequently, as was discussed in Sections 2.3, 3.2.1.1 and 3.2.1.2, South Africa does not compare well with other countries in terms of learners' literacy (reading with comprehension) and numeracy levels. A possible reason could be the language policy of South Africa, which is that learners are taught in their first language from Grade 1 to 3 and must switch over to English as the language of instruction from Grade 4 onwards (Department of Basic Education, 2010; Du Plessis & Louw, 2008). This practice negatively affects the learners' literacy and numeracy development as it prevents the scaffolding and building of a solid and strong foundation in one language (Pretorius & Klapwijk, 2016; Songxaba et al., 2017; Spaul, 2019). Moreover, it does not only affect the learners but the teachers as well, because many of them are second or additional speakers of English too, which is why they use code-switching and code-mixing as was pointed out by the circuit manager in this study (Desai, 2001; Du Plessis & Louw, 2008).

Furthermore, the learners' absenteeism and their lack of commitment were also identified as challenges under Finding Eight, which resorts under the ownership of the learning dimension. As was discussed under Section 3.2.1.3, learners will fall behind if they are absent, and if no catchup sessions are arranged by the school it could lead to poor academic performance. This was evident in the one Business Studies learner who was absent for 48 days in 2017, and 52 days in 2018. He achieved 28% in the November 2017 and 2018 examinations and did not write the June examination in 2019. Thus, not only did the learners have inadequate subject content knowledge and skills for the grades they were in, but some of them were

frequently absent, which meant that they were falling even further behind. Consequently, absenteeism could have been another reason why their subject content knowledge and skills could not be developed and strengthened as the year progressed.

An argument could be made that these learners were not committed to their education and that their self-efficacy was weak. However, as was pointed out by Coetzee and Venter (2016), the learners' absenteeism could have been due to their social and economic circumstances. Some of them could have had valid reasons such as missing the school bus and not having money for taxi fare, or that the train was delayed or did not arrive at all, or that they had to look after their younger siblings because their mother was a single parent and she had to go to work. These are some of the socio-economic challenges that learners in public schools are experiencing daily (Coetzee & Venter, 2016; Mboweni, 2014).

Finding Six identified challenges that emerged from the contextual dimension, which were insufficient resources and ineffective management of resources at both schools; a lack of parental involvement; an unsafe learning environment; a lack of commitment from teachers and management; teacher absenteeism and class cutting; and a lack of career counselling and information about post-school studies and subject choices. All these challenges provide mitigating evidence for the learners' poor academic performance in their Grade 12 final examination, and they direct attention to broader systemic issues that still exist after twenty-six years of democracy in South Africa.

Due to South Africa's apartheid past, many public schools are dysfunctional, which negatively affects the learners, as was discussed in Chapter 3. Accordingly, the challenges identified in this study reflect the reality of many public schools. Moreover, as was pointed out by many researchers and the Department of Basic Education, the public schooling sector does not develop the learners' knowledge, skills and qualities, and that is why the learners cannot do well (Department of Basic Education, 2019(b); Letseka, 2014; Rantsi, 2016; Spaul, 2013(a); The National Centre for Public Policy and Higher Education, 2010).

As a result of all the challenges identified in this study, the researcher concluded in Finding Nine that neither of the two schools provided the learners with epistemological access that Morrow (1994, 2009) and others argue for. Hence, neither of the schools prepared the learners for university studies. Her conclusion corresponds with Letseka (2014), Rantsi (2016), Spaul (2013(a)) and the National Centre for Public Policy and Higher Education's (2010) arguments that the majority of the public schools do not equip the learners with the necessary subject content knowledge and skills needed to succeed in higher education.

The broader systemic issues such as poverty, the fragmentation of family structures, and high levels of crime and violence in African and Coloured communities are current realities that need to be urgently addressed by the democratic government to ensure that children's rights to quality education are protected and enhanced.

8.4.3 How should the learners and schools be assisted to overcome these challenges so that the learners will acquire the necessary subject content knowledge and skills to become university ready?

Findings Two, Three, Four, Five and Seven provide partial answers to this question, while the augmented readiness model illustrated in Table 8.1 below provides a more comprehensive answer to this question. Finding Two showed that the learners' post-test results were much better than their pre-test results at both schools after the extra academic support was provided through the interventions. Finding Three supports Finding Two as the learners at both schools indicated that the interventions helped them to improve their marks and it assisted them with the development of subject content knowledge and skills. The latter part of Finding Four reflected that, when the learners were assessed on less work (a term's work), they did better (their results increased), but when they were assessed on the whole year's work, their results decreased. All three findings resort under the content knowledge dimension.

These findings direct attention to two issues – (i) that the learners need ongoing academic support, and (ii) that the learners should be assessed regularly on specific sections of the work covered. The discussions under Sections 7.2.1, 7.2.2

and 7.2.3 illustrated that a few interventions during the FET phase are not sufficient academic support. As such, the answer to this question lies in the provision of ongoing academic support from primary school level throughout the learners' schooling careers. It is suggested that extra academic support should start at primary school level because of the systemic issues that still exist and that will not be resolved soon. The damage caused by apartheid was too deep and severe, and it will take many more years, resources and a stronger economic system – all of which South Africa does not have readily available (Chetty & Pather, 2015; Equal Education, 2017; Spaul & Kotze, 2015). Also, the support should include both language support and subject-specific support for all learners – and not only for the top-performing learners as was pointed out by a parent participant. Regular assessments on specific sections of the work covered should be implemented, as well as a scaffolded approach in which the assessments should be linked and connected so that the assessments are gradually increased to cover more complex content and skills. Having a scaffolded approach will assist in preparing the learners adequately for the final examination at the end of each year. However, it should be noted that much more support should be provided to learners attending quintile 1 schools. The sample learners' results at School B were consistently higher over the three years than those of their counterparts at School A. As the poverty margin is higher at a quintile 1 school, those learners will have more needs.

Finding Five showed that less than 50% of the learners at both schools achieved a bachelor's pass rate at the end of Grade 12. This finding resorts under the content knowledge dimension. Finding Seven revealed the subject content knowledge and skills, and the academic behaviours and contextual skills and awareness that the participants of this study suggested learners should gain and develop at a high school for university readiness. These issues pertain to the ownership of learning and the cognitive dimensions. The challenges identified and discussed in the previous sub-question provided reasons and justification for the learners' poor academic achievement at both schools. The suggestions made in Finding Seven endorsed the fact that the schools did not provide the learners with quality

education, a supportive learning environment, and sufficient resources that could have functioned as enabling factors.

These suggestions, together with all the other findings, direct the attention to the study's augmented conceptual framework and the discussion in the latter part of Section 4.5.1. The discussions in the preceding chapters, the results that emerged from the data collected and the findings as listed in Section 8.3 illustrate that learning and teaching is a socially constructed process. As was stated in Section 4.5.1, university readiness for South African learners is based on a social constructivist approach in this study (Dewey, 1916, 2011; Vygotsky, 1994). The learners, as the most important role-players in the learning process, need to be enabled and supported in order to gain a solid subject knowledge and skills base together with the 21st century's skills at the end of their high school studies, to be university ready, or ready for the workplace. The discussion and interpretation of the results in Chapter 7 and the findings identified emphasised the crucial role that the contextual dimension plays in the education of learners at public high schools in South Africa. The school context and parental circumstances and involvement that include their socio-economic backgrounds, and the socio-cultural factors, which are sub-dimensions under the contextual dimension, are key factors that will affect the learners' academic achievement and university readiness.

Based on the augmented readiness model that the researcher developed in this study, Table 8.1 illustrates the strategies that should be in place under each dimension and sub-dimension so that the learners could acquire the necessary subject content knowledge and skills to become university ready.

Table 8.1 Augmented Readiness Model: Strategies that should be in place at public schools in South Africa

Dimension	Sub-dimensions	What should be in place in public schools. Schools should provide:
1: Contextual dimension	School context and parental circumstances and involvement University context and requirements Socio-cultural factors	Clear and open communication between the schools and the parents/families and the broader communities where the schools are situated A safe and conducive learning environment Programmes to involve and empower parents so that they will understand the importance of assisting and supporting their children Assistance to learners regarding subject choices, information about career options and university requirements
2: Ownership of learning dimension	Aspirations/vision Self-efficacy Attitude and effort towards learning Time management Integrated communications technology (ICT) Collaborative learning	A structured, safe and enabling environment that will promote learners' well-being and development in the context of learning Personal development programmes for the learners to promote good values and ethical behaviour for personal growth and development Clear guidance and opportunities to learners for the development and application of planning and time management skills 21 st -century skills into the curriculum delivery to allow the development and growth of these skills in the learners Enabling learning spaces and opportunities for learners to engage in individual and team learning (group work) activities
3: Cognitive dimension	Critical and analytical thinking Research skills Language and logical thinking skills (reading and writing) Mathematical ability Communication and debating skills (presenting)	Training and development opportunities to primary school teachers so that they will be knowledgeable and have the confidence to teach and develop the learners' literacy and numeracy skills so that a strong foundation could be laid in the early schooling phases Structure and plan meaningful tasks and create real-life activities within the classroom environment for learners to acquire effective listening, speaking, reading and writing skills And engage all learners in simple thinking activities, which should become more complex as the learners move from one grade to the other, to develop their critical and analytical thinking and problem-solving skills All learners with ample and equitable opportunities to develop their interpersonal, speaking, listening and presentation skills in large and small group discussions Assessment tasks that include competencies that cannot be assessed in an examination, for example, evidence of a learner's research skills from Grade 5 onwards Sufficient time and resources for the teaching of Mathematics from Grade 7 onwards so that the learners will acquire and develop their mathematical skills
4: Content knowledge dimension	Subject content Extra academic support Relevance/value of what you learn in school for post-school opportunities Soft skills learnt	Ongoing support, both language- and subject-specific, to all learners at all levels each year Real-life scenarios relevant to the classroom and everyday life as part of the lessons and in the activities to bridge the gap between theory and practice for learning to become more relevant and meaningful A monitoring and evaluation system that will ensure that the subject content has been taught and assessed at the required levels, and that teachers liaise and work together so that they know how to build on the content in the next grade Opportunities to develop the learners' soft skills and collaborate with universities so that the soft skills needed at university level be developed in learners from Grade 8 onwards

Hence, the answer to the question *did the study achieve its aim and objectives*, is yes, it did. Therefore, as Chetty and Pather (2015), Dewey (1916, 2011), McGhie (2012), Naong (2009) and Nyamupangedengu (2017) advocate, a holistic approach inclusive of quality education, the provision of ongoing extra language and academic support, financial support and other resources, has to form an integral part of the Department of Basic Education and the other role-players' commitment to equip the learners with epistemological access throughout their schooling careers.

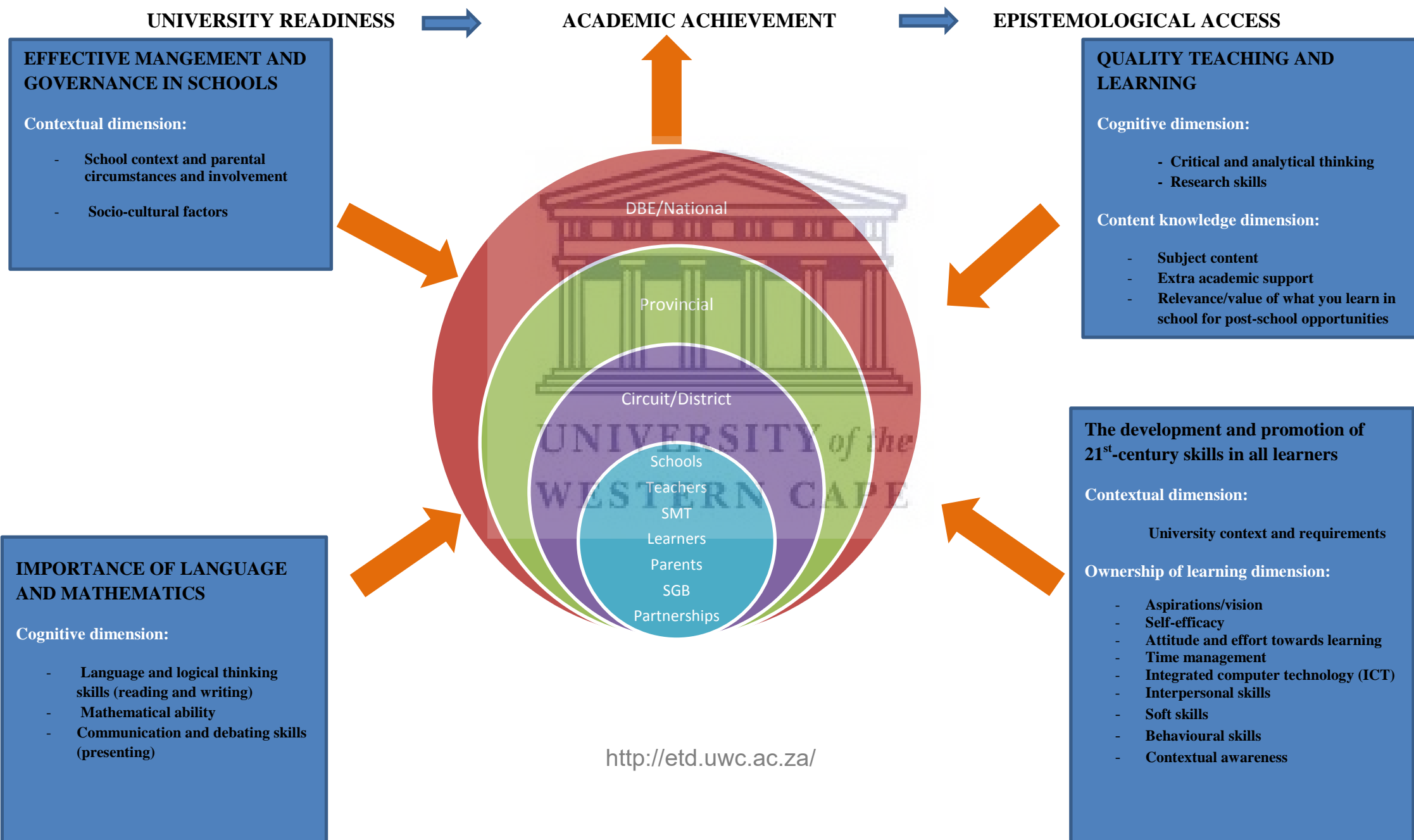
8.5 CONTRIBUTION TO THE CREATION OF NEW KNOWLEDGE

The significance of the study was explained in Section 1.6. Three reasons were provided for why this study was important. Firstly, the study had most of the stakeholders involved in the learning context as part of its research participants. Secondly, it was an empirical study conducted over three years with the learner participants when they were in Grade 10 in 2017 until they reached Grade 12 in 2019. Thirdly, the researcher designed an augmented readiness model that assisted her in arriving at a South African university readiness model that schools could use as a blueprint to prepare the learners for post-school studies and/or the workplace. As such, the contribution to the creation of new knowledge made by this study is a South African university readiness model with a step-by-step process of how the strategies should be implemented and monitored in public schools. Four specific principles should be adhered to when the process is implemented. These are (i) effective management and governance in schools; (ii) quality teaching and learning; (iii) the importance of language and Mathematics, and (iv) the development and promotion of 21st-century skills in all learners.

The above principles should be implemented on all levels, namely schools (teachers, SMT, learners, parents and SGB), districts and at the local, national and provincial levels of the Department of Basic Education (DBE) to bridge the articulation gap and to provide learners with epistemological access for success in post-school studies.

The readiness model is illustrated in Figure 8.1.

Figure 8.1 University Readiness Model for public schools in South Africa



Each of these principles is explained below and recommendations are proposed on each level that should be implemented to equip learners with a solid and strong subject content knowledge and skills foundation so that they will be ready for university studies.

8.5.1 Principle 1: Effective management and governance in schools

Effective management and governance in schools' resort under the contextual dimension, which has to do with the school context and parental circumstances and involvement, and socio-cultural factors. Learners' academic performance is directly linked to the abilities and commitment of principals and governing bodies at schools. As such, a lack of effective leadership is one of the main reasons for underperformance and dysfunctionality in schools (Department of Basic Education, 2019(d)). As discussed in Chapter 7, at both schools, the principals were in acting roles for the past four years, there was a lack of decisive leadership and the principals did not receive support from all the staff and the SMT in the management of the schools. Principals should have permanent positions to be committed leaders who will work collaboratively with the school governing bodies to manage and govern all aspects of the schools effectively and decisively.

Moreover, the Department of Basic Education has clear roles and responsibilities for principals. These include that principals should ensure that their schools' ethos is conducive for effective teaching and learning to take place; that there are clear, measurable goals for the learning and academic improvement of the learners; that there are attendance policies with clear guidelines for learners, parents and educators, including the monitoring and reporting of absenteeism; that the security at schools is effective so that disruptions and gang-related activities be curbed to ensure a safe and conducive learning environment; and that the learners' parents be involved and included in the discipline of their children (Mampane, 2013; Mwel, 2019; National Planning Commission, 2011).

8.5.2 Principle 2: Quality teaching and learning

Quality teaching and learning are spread over the content knowledge and cognitive dimensions. As discussed in Chapter 7, and as the findings revealed,

quality teaching and learning did not take place at the two schools. Several factors influence the quality of teaching and learning and hence, in the two schools' defense, they are not solely to be blamed. The role of national, provincial and local education authorities, the principal, the school governing body, parental involvement, staff development and participation, teachers' qualifications, teaching methodology, content, and pedagogical knowledge, assessments, classroom management, resources, class sizes, and socio-economic circumstances all influence the quality of teaching and learning.

Kozak and Elliot (2014) state that the significance of teaching is about inclusivity and knowledge integration. According to them, each learning strategy should:

- link environmental, economic and social issues within subjects and across subjects;
- link learners to each other, their home life, their schools, and their community;
- link knowledge, skills, and perspectives through learner engagement and action; and
- provide a meaningful context to address [and develop] numeracy, literacy, character [building], and other educational expectations (Kozak & Elliot, 2014).

Thus, quality teaching and learning presuppose that all the role-players in the learning context should play their part as learning and the acquisition and construction of knowledge are a socially situated and imbedded process (Dewey 2011; McGhie, 2012; Vygotsky, 1994).

8.5.3 Principle 3: The importance of language and Mathematics

Language and Mathematics fall under the cognitive dimension. Finding Eight revealed that the learners of both schools had poor reading and writing skills and that 95% of the learners at School A were second and additional language speakers of English. It was also pointed out that the majority of the learners at both schools had Mathematical Literacy and not Mathematics. Consequently, the aim should be to develop the learners' language and Mathematics skills in the

early childhood and foundation phases and throughout primary school level so that a good foundation is laid for the secondary and higher education bands.

There should be an investment in training language and Mathematics teachers who will know how to teach effectively. Also, ongoing language and numeracy support should be provided from Grade 1 onwards, and schools should be provided with the necessary resources needed to enable the learners to succeed. Lastly, the language policy should be revised so that learners could continue to learn and construct new knowledge in their first language throughout their schooling careers.

8.5.4 Principle 4: The development and promotion of 21st-century skills in all learners

The quality and improvement of learners' 21st-century skills resort under the contextual dimension, the ownership of the learning dimension, and the content knowledge dimension. As discussed in Chapter 4, gaining an education is more than just the acquisition of knowledge and skills; it is also about the utilisation of knowledge, skills, attitudes and values to be prepared for the 21st-century demands in a global space (OECD, 2018). Research shows that the new world of work requires skills that would not normally be embedded in a typical curriculum (Department of Basic Education, 2018(a); Fadel, 2015; Kereluik et al., 2013). Solving highly complex problems requires that learners have both fundamental skills (reading, writing and Mathematics) and 21st-century skills (teamwork, problem-solving, research-gathering, time-management, information synthesising, utilising high tech tools) (Department of Basic Education, 2018(a)). They also need the skill sets contained in Figures 4.1, 4.2 and 4.3 (Fadel, 2015; Kereluik et al., 2013; World Economic Forum, 2019).

Currently, a national programme called the Employability, Entrepreneurship, and Education (Ecubed) Programme is implemented in 600 schools from Grade R – 12 in South Africa. This national initiative is about strengthening the implementation of the curriculum to develop an entrepreneurial and employability mindset in the learners. The aim is to enhance teachers' collaborative teaching methodologies so that the learners will develop entrepreneurial, problem-solving,

and action-oriented mindsets; and that learners are provided with more opportunities to develop into practical, creative, caring, competent and confident young men and women (Department of Basic Education, 2018(a)). Therefore, the development of 21st-century skills should happen throughout the learners' schooling careers and it should be explicitly taught. Doing so will not only assist the learners to navigate their way through university studies, but it will also make them ready for the workplace if they do not want to continue with post-school studies.

Recommendations for the different role-players are proposed in the next section.

8.6 RECOMMENDATIONS

Based on the university readiness model, recommendations are proposed on each level that should be implemented to equip the learners with a good and solid subject content knowledge and skills foundation so that they will be ready for university studies, or the world of work. The recommendations are presented in Tables 8.2, 8.3, 8.4 and 8.5.

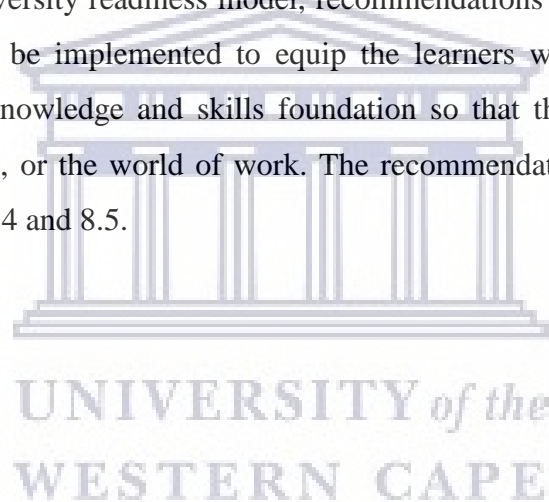


Table 8.2 Recommendations on each level for effective governance and management in public schools

SCHOOLS	CIRCUIT/DISTRICT/LOCAL	PROVINCIAL	DBE/NATIONAL
<p>TEACHERS SHOULD: Ensure that the content and curriculum are taught during school time and that the curriculum is covered (catch up when you return to school if you were absent) Make an effort to bring learners up to date when the learners were absent</p>	<p>The district officers should:</p> <p>Play an active role in the monitoring of attendance and absenteeism at schools</p>	<p>The provincial department should:</p> <p>Analyse and report on the absenteeism information of the districts</p>	<p>The DBE should:</p> <p>Also play a dynamic role to reduce absenteeism, by holding schools and teachers accountable for attendance</p>
<p>SCHOOL MANAGEMENT TEAMS (SMT) SHOULD: Have clear and conclusive policies regarding the management of teacher and learner absenteeism Deal effectively with teacher absences and where required, use disciplinary sanctions that include a formal warning, suspension of salary, demotion, transfer to another school and temporary dismissal</p>	<p>Made a systematic attempt to analyse, report and use the information on learner and teacher absenteeism to follow up with schools</p>	<p>Follow up with schools where there are problems to reduce absenteeism</p>	<p>Expected from schools to set and meet attendance targets and the worst-performing schools should be monitored and assisted to overcome the challenge</p>
<p>LEARNERS SHOULD: Attend school punctually and regularly Have respect for and listen to their parents, teachers and principals</p>	<p>Visit schools and intervene where problems are evident and of an exceptional nature</p>	<p>Set a limit on the number of times a principal is called away from school to a meeting during school time</p>	<p>Have the responsibility to monitor and support the implementation of intervention programmes for learners in every grade and every subject</p>
<p>PARENTS SHOULD: Ensure that their children attend school, and arrive at school on time Communicate with the school if a learner is going to be late or absent and assist their children to make up for time lost Be actively involved in their children's schoolwork and activities</p>	<p>Track and monitor the learners against academic progress and code of conduct wrongdoings</p>	<p>Reduce the number of days educators are away from school on official business</p>	<p>Assist schools with the management and administration of school record-keeping functions</p>
<p>SCHOOL GOVERNING BODIES (SGB) SHOULD: Be vigorously involved in the attendance of learners and support the principal in the management of the school, the teachers and learners</p>	<p>Support the learners and empower the parents as identified in the absenteeism plan</p>	<p>Ensure that, for the 80 hours of professional development, the workshops take place outside the formal schools hours</p>	
<p>PARTNERSHIPS SHOULD: Work closely with the district, provincial and national departments Be keenly involved with the parents and communities in the schools and should assist to reduce learners' absenteeism In cases where the learner is not being supported by the parents, the safety fieldworker should contact the social services for assistance</p>		<p>Implement and monitor focused interventions at schools where absenteeism was recognised as a problem</p>	

Table 8.3 Recommendations on each level for quality teaching and learning

SCHOOLS	CIRCUIT/DISTRICT/LOCAL	PROVINCIAL	DBE/NATIONAL
<p>TEACHERS SHOULD: Be passionate to initiate/support learning Be driven by a deep understanding of pedagogy and subject knowledge Use evidence to improve teaching and learning Create vibrant and caring environments that inspire learning Be ethically bound to responsibility and accountability Take responsibility for their own development and empowerment</p>	<p>The district officers should:</p> <p>Assist school principals and educators to improve the quality of teaching and learning in their institutions through school visits, classroom observation, consultation, cluster meetings, and suitable feedback reports</p> <p>Lead and inspire teachers to improve through effective collaboration, innovation and professional learning</p> <p>Empower teachers to use their professional knowledge, skills and expertise to deliver the curriculum effectively</p>	<p>The provincial department should:</p> <p>Train teachers at all public schools (ordinary and special) on content, curriculum support, monitoring, assessment and moderation, IT to facilitate e-learning, including knowledge on the use of technology</p> <p>Provide access to, as well as information on digital resources in the district</p> <p>Monitor the creation and use of e-Content</p> <p>Digitise CAPS</p> <p>Create digital resources and assessment items</p> <p>Create videos – screen casting, WhatsApp, video clips</p> <p>Assist with technology and pedagogy integration</p>	<p>The DBE should:</p> <p>Develop an item bank system that provides teachers with a variety of high-quality assessment items for each subject and grade</p> <p>Focus on assessment in the entire FET phase rather than just Grade 12</p> <p>Ensure that the number of informal assessments is infused in the daily preparations for effective teaching and learning</p> <p>Ensure that the informal assessments speak to the formal assessments</p> <p>Review the scope and depth of what is taught in a subject</p> <p>Review the quality of textbooks</p> <p>Address language barriers that hamper progress and performance</p>
<p>SCHOOL MANAGEMENT TEAMS (SMT) SHOULD: Provide leadership and management in all areas of the school to enable the creation and support of conditions under which high-quality teaching and learning take place and that promote the highest possible standards of learner achievement Provide feedback to the teachers on the moderation findings to improve the quality of the assessment tasks</p>			
<p>LEARNERS SHOULD: Be responsible and committed to produce good results and contribute to their academic success Be accountable and do their classwork and homework Develop and demonstrate life skills such as initiative, self-direction and accountability</p>			
<p>PARENTS SHOULD: Support their children’s learning and academic progress Attend parental and governing body meetings and actively participate and contribute to the enhancement of the school Assist the school with fundraising events and be involved in extramural activities of their children</p>	<p>Focus on raising standards within and between all schools</p> <p>Be responsible for the verification of moderation at school level</p> <p>Ensure the reliability, validity, fairness, and practicability of the SBA in terms of administration of the assessment task and moderation of the learner evidence</p>		
<p>SCHOOL GOVERNING BODIES (SGB) SHOULD: Ensure that schools provide quality teaching and learning Assist the principal to protect teaching time, as required to enable teaching and learning to take place as planned</p>			
<p>PARTNERSHIPS SHOULD: Be formed to connect learners and families to community programmes or services to afford learners opportunities in mentorship, internship and on-site and experiential learning</p>			

Table 8.4 Recommendations on each level for the importance of Language and Mathematics

SCHOOLS	CIRCUIT/DISTRICT/LOCAL	PROVINCIAL	DBE/NATIONAL
<p>TEACHERS SHOULD: Establish learners' prior knowledge of new content/themes and their language ability Identify new terminology and concepts and scaffold these while teaching Use the correct mathematical terminology and encourage strategies that address objectives of language in Mathematics as an essential tool for developing and conveying meaning in all phases</p>	<p>The district officers should:</p> <p>Assist educators to identify, assess and meet the needs of learners (provide professional leadership)</p> <p>Support initiatives to improve numeracy, literacy and information technology as well as access to the wider curriculum</p>	<p>The provincial department should:</p> <p>Have a clear, comprehensive strategy that will contribute to our learners receiving proper pre-school education</p>	<p>The DBE should:</p> <p>Provide ICT equipment, workshops, teacher development, and learner and teacher support materials</p>
<p>SCHOOL MANAGEMENT TEAMS (SMT) SHOULD: Improve content knowledge and pedagogical content knowledge of the teachers in languages and Mathematics via professional development and regular training Provide a deep understanding of curriculum continuity and progression across grades and phases</p>	<p>Contribute to, implement and participate in staff development programmes</p>	<p>Ensure that the majority of learners entering Grade 1 have the necessary knowledge, skills and attitude to engage in formal education</p>	<p>Provide learning materials that are accessible to learners, are at the right level and language, and should train teachers to use them</p>
<p>LEARNERS SHOULD: Receive regular homework/revision so that they can identify areas in which they need more help from their teachers and learners should do homework and take ownership of their learning</p>	<p>Organise tutoring for Mathematics and languages</p>	<p>Focus on the development of a manual/handbook/training programme for parents to prepare their children for formal education</p>	<p>Provide information that sets out parents' responsibilities regarding their children's education</p>
<p>PARENTS SHOULD: Assist and support their children so that teachers can do their job efficiently and effectively</p>	<p>Facilitate training of SMTs to enable them to drive the provincial language and Mathematics strategy in their school</p>	<p>Conduct research to identify the learners' challenges</p>	<p>Look into translating papers into mother tongue and making full access to the curriculum available in the mother tongue language of the learner</p>
<p>SCHOOL GOVERNING BODIES (SGB) SHOULD: Work with and support the principals to create a conducive atmosphere for learning As part of their commitment to support curriculum delivery and provide critical parental support, empower and develop parents' literacy and numeracy levels</p>	<p>Provide adequate and appropriate training of language and Mathematics teachers and HODs</p> <p>Guide and mentor schools through language and numeracy policy planning and implementation</p>	<p>Conduct research that focuses on the effects of language on learner performance</p>	<p>Increase capacity and accountability</p>
<p>PARTNERSHIPS SHOULD: Be established with NGOs, HEIs and the private sector to promote participation and performance in Mathematics and languages</p>	<p>Guide and mentor teachers to teach learners in all types of learning environments, in setting learning programmes and maintaining these at a suitable pace and level so that learning is optimised, and should support teachers with classroom management so that language teaching is properly managed</p>	<p>Ensure that teacher development forms part of the provincial plan</p> <p>Develop, edit and evaluate learning and support materials</p>	

Table 8.5 Recommendations on each level for the development and promotion of 21st-century skills in all learners

SCHOOLS	CIRCUIT/DISTRICT/LOCAL	PROVINCIAL	DBE/NATIONAL
<p>TEACHERS SHOULD: Integrate digital technology and resources flexibly and seamlessly during teaching in which learners use 21st-century skills to construct knowledge Guide the learners to recognise and explore connections between classroom knowledge and realities outside in ways that create personal meaning and highlight the significance of the knowledge and 21st-century skills application to contribute towards a better world Expand and entrench opportunities for learners to practise and develop 21st-century skills in a practical manner Build learner ownership by promoting self-efficacy and scaffold learning of both academic and social behaviours to guide them in assuming ownership and responsibility for their learning Display life skills such as initiative, self-direction and accountability</p>	<p>The district officers should:</p> <p>Assist at class visits to integrate technology with pedagogy</p> <p>Train the teachers and empower and equip the teachers with the skills needed to operate in the rapidly changing world so that they can equip the learners for the 4th industrial revolution and the 21st century</p>	<p>The provincial department should:</p> <p>Focus its strategic direction on the development and use of 21st-century skills</p> <p>Ensure development of cutting-edge curriculum knowledge and skills, teaching methodology and training of curriculum officials and teachers</p> <p>Provide families with information related to child development and create supportive learning environments</p> <p>Provide workshops, materials and training for parents on typical development and appropriate parent and school expectations for various age groups as well as on how to improve children's study skills or learning in various academic subjects</p> <p>Encourage and empower parents to acquire and use approved software programs and electronic resources at home to support learners</p>	<p>* The DBE should:</p> <p>Give clear guidance about the practical implementation of the curriculum of how skills (research, communication, presentation, and time-management) should be applied</p> <p>Emphasise the inclusion of knowledge, skills, attitudes and values in the curriculum so that teachers can explicitly teach the development of skills in the different subjects</p> <p>Work collaboratively with universities on cognitive and subject requirements, and soft skills that learners need to be successful at university</p> <p>With the DHET should strengthen digital education with ICT resources to equip teachers and learners with ICT skills required, adapting to the 21st-century school environment</p>
<p>SCHOOL MANAGEMENT TEAMS (SMT) SHOULD: Expect all teachers to be highly committed to the continuous improvement of their teaching and to be focused on the development of knowledge and 21st-century skills required to improve student/learner learning Promote the value of the professional learning communities (PLCs) for sharing of best practices</p>	<p>Emphasise curriculum and teaching and develop benchmark assessments that are used to identify problems with learner mastery of content and skills. The accent should be on ensuring that problems are identified and addressed quickly</p>		
<p>LEARNERS SHOULD: Be encouraged and motivated to learn and develop their contextual skills and awareness, and their ICT and digital skills, and information literacy skills</p>	<p>Enable all district staff to focus their time and other resources on activities that support schools' pursuit of deeper learning</p>		
<p>PARENTS SHOULD: Be encouraged and motivated to be completely involved with their child's physical, moral, intellectual, emotional and social development</p>			
<p>SCHOOL GOVERNING BODIES (SGB) SHOULD: Be provided with proper 21st-century skills training and they should be educated, and trained on the soft skills and digital age to meet learners' needs and expectations</p>	<p>Provide schools with e-resources support for differentiated learning and deepen learners' knowledge and understanding of concepts and skills</p>		
<p>PARTNERSHIPS SHOULD Liaise with schools and communicate with all the relevant stakeholders to develop and promote the 21st century skills in learners and to maximise the quality of learning</p>			

8.7 LIMITATIONS OF THE STUDY

There are always limitations in research studies undertaken, and this study is no different. The first limitation of this study was the fact that it had seven different participant groups. The result was that a large amount of data was collected, which made the analysis process time consuming and complicated. It also resulted in much longer chapters. Also, as a result of the amount of data, the researcher had to make a conscious decision to focus on what she and her supervisors' thought was most important because it was not possible to discuss everything. However, despite this limitation, the richness of the data and that which was focused on assisted the researcher to achieve the study's aim and objectives.

Another limitation was the absenteeism of some of the learners who were originally selected as the learner participants of the study in 2017. Because some of them were absent, the learner participants decreased from 60 learners to 27. Also, because of the absenteeism, other learners who were not selected as the research participants became part of the group of learner participants. The result was that the researcher had to explain the different learner participants in Section 5.5.3, and why there were variations in the number of responses for the different data sets. This could be confusing to some readers of the dissertation, but these events were beyond the researcher's control. She attempted to explain it as clearly as possible in Section 5.5.3 and in Chapters 6 and 7. In the end, the data that were collected and analysed provided more than sufficient results, together with the other research participants' data.

In addition, the interventions could not be conducted at both schools during the same period (week) as was originally planned so that the same section of the content could have been the focus in the extra academic support sessions. This was because of logistical and other school-related reasons. One such reason, for example, was the fact that the researcher made all the arrangements and when the tutors arrived at one school, the learners were not present, and the date had to be changed. Notwithstanding this challenge, all the interventions took place, and it assisted with the pre- and post-test results, which were not much different in the end.

The last limitation was that this study was only conducted in two schools in the Western Province. The research could have also been done in high schools in other provinces as well. However, doing so would have added to logistical and resource challenges. It would have also added more data to the already huge amount of data collected. It was for these reasons that the research sites were limited to two high schools in one province.

Overall, despite these limitations, the study achieved its aim and objectives.

8.8 POSSIBILITIES FOR FUTURE RESEARCH

From the literature reviewed and discussed, three areas for further research were identified. As this study focused on the business-related subjects, the first area in which further research could be conducted is in other subjects such as Physics, Biology, Geography, and languages in the FET phase. Future studies could use the readiness model that was developed in this study to investigate the learners' readiness in these subjects.

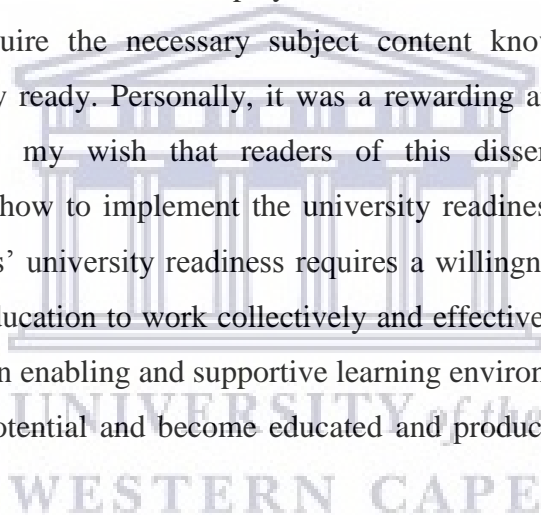
The second area for possible research could be at high schools across the three quintiles (1, 2 and 3) as this study was conducted at a quintile 1 and quintile 4 school only. Researching the three quintile schools could provide further insights into what is happening at these schools and whether or not there are differences in the learners' challenges and academic performance.

A last possible research area could be to investigate whether Grade 12 learners who do not continue with post-school studies are adequately equipped with the skills and knowledge to find a good paying job or to start their own small business. Such a study could assess the learners' knowledge, attitudes, and generic and behavioural skills, and contextual skills and awareness. The findings could assist the Department of Education, schools and youth development organisations on how to best prepare and develop these skills in the learners in order to overcome the socio-economic problem of youth unemployment.

8.9 FINAL REFLECTION

With this study, I have attempted to contribute to the body of knowledge in education in South Africa. One fact is certain – we must prepare our learners for an unpredictable future. They need 21st-century skills to adapt, evolve and innovate. In addition, the socially embedded context in which education takes place is a fundamental factor that will influence learners' academic performance and university or work readiness. The issues discussed in this study underscore the inequality that still exists in education today. The learners' right to quality education should be upheld and supported by everyone in education.

I have attempted to contribute to this process by developing a university readiness model to assist the different role-players to overcome the challenges so that learners will acquire the necessary subject content knowledge and skills to become university ready. Personally, it was a rewarding and humbling learning experience. It is my wish that readers of this dissertation will gain an understanding of how to implement the university readiness' principles in other contexts. Learners' university readiness requires a willingness from the different stakeholders in education to work collectively and effectively in order to provide all learners with an enabling and supportive learning environment so that they will reach their full potential and become educated and productive citizens of South Africa.



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AIMS AND OBJECTIVES OF THE BCM SUBJECTS AND MATHEMATICS

Accounting focuses on measuring performance, and processing and communicating financial information about economic sectors. This discipline ensures that principles such as ethical behaviour, transparency and accountability are adhered to. It deals with the logical, systematic and accurate selection and recording of financial information and transactions, as well as the compilation, analysis, interpretation and communication of financial statements and managerial reports for use by interested parties. The subject encompasses accounting knowledge, skills and values that focus on the financial accounting, managerial accounting and auditing fields. These fields cover a broad spectrum of accounting concepts and skills to prepare learners for a variety of career opportunities.

The subject Business Studies deals with the knowledge, skills, attitudes and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors. The subject encompasses business principles, theory and practice that underpin the development of entrepreneurial initiatives, sustainable enterprises and economic growth.

Economics is the study of how individuals, businesses, governments and other organisations within our society choose to use scarce resources to meet their numerous needs and wants in a manner that is efficient, equitable and sustainable.

Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships. It is a human activity that involves observing, representing and investigating patterns and qualitative relationships in physical and social phenomena and between mathematical objects themselves. It helps to develop processes that enhance logical and critical thinking, accuracy and problem solving that will contribute to decision making. Mathematical problem solving enables us to understand the world (physical, social and economic) around us and, most of all, to teach us to think creatively (Department of Basic Education, 2011(a); 2011(b); 2011(c); 2011(d):8).

TOPICS, KNOWLEDGE AND SKILLS THAT BCM AND MATHEMATICS LEARNERS MUST GAIN IN HIGH SCHOOL (GRADES 10 – 12)

The following table shows the BCM topics for the Further Education and Training phase.

Table 4.5 BCM: FET phase (Grades 10 – 12)

BCM: FET PHASE		
ACCOUNTING	BUSINESS STUDIES	ECONOMICS
Financial accounting (25%)	Business environments (25%)	Macroeconomics (25%)
Managerial accounting (20 – 25%)	Business ventures (25%)	Microeconomics (25%)
Managing resources (20 – 25%)	Business roles (25%)	Economic pursuits (25%)
	Business operation (25%)	Contemporary economic issues (25%)

The subject Mathematics in the FET phase forges the link between the senior phase and the higher/tertiary education band. All learners passing through this phase acquire a functioning knowledge of the mathematics that empowers them to make sense of society. It ensures access to an extended study of the mathematical sciences and a variety of career paths. In the FET phase, learners should be exposed to mathematical experiences that give them many opportunities to develop their mathematical reasoning and creative skills in preparation for more abstract mathematics in higher/tertiary education institutions.

The subject Mathematics in the FET phase (Grades 10 – 12) consists of ten main content areas. Each content area contributes to the acquisition of specific skills. Table 4.6 below shows the main topics in the FET phase.

Table 4.6 The main topics in the FET Mathematics curriculum

1	Functions	6	Probability
2	Number patterns, sequences, series	7	Euclidean geometry and measurement
3	Finance, growth and decay	8	Analytical geometry
4	Algebra	9	Trigonometry
5	Differential calculus	10	Statistics

The skills and specific aims of the FET curriculum are the following:

- to develop fluency in computation skills without relying on the usage of calculators;
 - mathematical modelling is an important focal point of the curriculum;
 - real-life problems should be incorporated into all sections whenever appropriate;
 - examples used should be realistic and not contrived;
 - contextual problems should include issues relating to health, social, economic, cultural, scientific, political and environmental issues whenever possible;
 - to provide the opportunity to develop in learners the ability to be methodical, to generalise, make conjectures and try to justify or prove them and to be able to understand and work with number systems;
 - to show Mathematics as a human creation by including the history of Mathematics;
 - to promote accessibility of mathematical content to all learners;
 - it could be achieved by catering for learners with different needs;
 - to develop problem-solving and cognitive skills;
 - teaching should be not be limited to “how”, but should rather feature the “when” and “why” of problem types;
 - learning procedures and proofs without a good understanding of why they are important will leave learners ill-equipped to use their knowledge in later life;
 - to prepare the learners for further education and training as well as the world of work.
- (Department of Basic Education, 2011(a); 2011(a); 2011(b); 2011(c); 2011(f):9).

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Table 4.7 Content topics examined at exit (Grade 12) (Umalusi, 2014(a):61)

FINANCIAL ACCOUNTING OF COMPANIES	
Accounting concepts and the unique accounts of companies	Accounting concepts and accounts unique to companies
GAAP principles	International Financial Reporting Standards (IFRS) and Generally Accepted Accounting Practice (GAAP) Specific GAAP principles
Bookkeeping of companies	Journals
	Ledger
	Trial Balance
	Including the new concepts of selling shares at an issue price and no longer par value, repurchasing of shares at a price higher than the weighted average price, dividends and tax.
Unique accounts: Companies	Ordinary share capital
	Retained income
	SARS (Income tax)
	Shareholders for dividends
	Ordinary share dividends
	Appropriation
Accounting equation	The effect of transactions on the accounting equation of a company: All transactions affecting a company up to financial statements including adjustments.
Year-end adjustments	Pre-adjustment Trial Balance
	Application of GAAP principles
	Year-end adjustments in the general journal
	General ledger
	Post-adjustment trial balance
	Particular emphasis on Grade 12 company adjustments but includes all prior learned adjustments including reversals.
Closing transfers, final accounts and trial balances	Closing transfers
	General ledger
	Final accounts: <ul style="list-style-type: none"> • Trading account • Profit and Loss account • Appropriation account
	Post-closing trial balance
Financial statements	Financial statements: <ul style="list-style-type: none"> • Income Statement • Balance Sheet

	<ul style="list-style-type: none"> • Cash Flow Statement
	Notes to the financial statements
	Analyse a director's report
	Analyse an auditor's report
Analysis and interpretation of financial statements: Companies	Calculations of ratios
	Company: Earnings per shares; dividends per share; net asset value per share; return on shareholders' equity
	Gearing and risk: debt: equity; return on total capital employed
	Profitability, liquidity and solvency from previous years
	Analysis and interpretation of the information above
Cash flow statements- preparation and interpretation	Cash flow statement and accompanying notes
	Analyse and interpret the information from the cash flow statement
Analyse published financial statements and audit reports	Analyse and interpret this information
RECONCILIATIONS	
Bank reconciliations	Reconciliations of bank statements with cash journals from Grade 11
	Analyse and interpret the bank reconciliation process
Reconciliations to control accounts	Reconcile the control accounts to the subsidiary ledgers
	Correct errors and omissions via journal entries
	Analyse and interpret reconciliations
Age analysis – interpretation	Analyse and interpret the age analysis for debtors
Creditors reconciliations to creditors' statement – prepare	Reconcile the individual creditors' accounts to the creditors' statement
	Correct errors and omissions via journal entries
	Ledger
	Creditors reconciliation statement
	Analyse and interpret creditors reconciliations
VALUE ADDED TAX (VAT)	
VAT concepts	Basic concepts of VAT
VAT calculations	VAT calculations
	Effect of bad debts, discounts and goods returned on VAT
VAT recording	VAT control account
	Amount owing/receivable from SARS
COST ACCOUNTING	
Cost concepts	Accounting concepts unique to a manufacturing business
Production Cost Statement	Production Cost Statement
	Notes to the Production Cost Statement
	Analyse, interpret the Production Cost Statement

	Report on the Production Cost Statement
Manufacturing: Short form Income Statement and notes – preparation and interpretation	Short form of Income Statement with notes
	Analyse, interpret and report on the above
Unit costs, break-even point, variable and fixed costs	Calculation and comment on cost items including break-even, direct material, direct labour, factory overhead, administration and selling, and distribution costs.
	Analyse, interpret and report on these costs
BUDGETING	
Budget concepts	Basic concepts
Cash budget	Presenting cash budget
	Analyse, interpret and compare cash budget of a sole trader
	Analyse, interpret and compare cash budget of a company
Projected Income Statement	Presenting Projected Income Statement of a sole trader
	Analyse, interpret and compare Projected Income Statement of a sole trader
	Analyse, interpret and compare Projected Income Statement of a company
FIXED ASSETS	
Concepts of fixed assets	Understanding the concept of a tangible/fixed asset register
	Acquisition of tangible/fixed assets
Depreciation	Depreciation <ul style="list-style-type: none"> • on cost price (straight-line method) • diminishing balance method.
	Understanding how tangible/fixed assets are recorded when they are fully depreciated
	General ledger
	Fixed Asset Register
Asset disposal	Calculations
	Disposal of tangible/fixed assets (cash, credit, trade-in): <ul style="list-style-type: none"> • at the beginning of a financial year • during a financial year • at the end of a financial year
	General ledger
	Update the fixed asset register
Interpretation and reporting on fixed assets	Fixed asset note
	Analysing and interpretation based on the fixed asset note and asset disposal account.
INVENTORY SYSTEMS	
Concepts of inventory systems	Explain the perpetual stock system
	Explain the periodic stock system

	Difference between the two stock systems with advantages and disadvantages
Periodic inventory system – preparation	Transactions relevant to the periodic stock system in the subsidiary journals
	General ledger
	Trading account
	Trading statement
Inventory validation – FIFO and weighted average and specific identification method	Calculate the closing stock and gross profit using FIFO or weighted average or specific identification methods.
	Integrate with either periodic or perpetual stock systems
CODE OF ETHICS AND GOVERNANCE	
Code of ethics and governance	Ethical behaviour in the financial environment
	King Code and Companies Act
Professional bodies	The role of professional bodies
	The role of the code of professional conduct
INTERNAL CONTROL AND INTERNAL AUDIT	
Internal control and internal audit processes	Internal control and audit processes
	Internal control and audit processes in the business environment.
	Difference between the roles of the internal and external auditors

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Table 4.8 Skills in recommended classroom activities for Grade 12 (Umalusi, 2014(a):64)

Language and logical skills	Define concepts relating to companies
	Explain the purpose of the Companies Act – a broad overview
	Explain the need for and role of professional bodies
	Explain the need for and role of International Financial Reporting Standard in the context of Generally Accepted Accounting Practice
	Identify and explain corporate governance issues in ethical and internal control contexts
	Explain the role of professional accounting bodies
	Explain the need for and nature of internal control processes, including documentation, authorisation, division of duties and stock and fixed asset registers and subsidiary ledgers
	Explain the need for and roles of independent auditors and internal auditors
	Explain cost concepts
	Explain budgeting concepts
	Explain VAT concepts
Bookkeeping application skills	Prepare entries according to the perpetual inventory system
	Prepare entries according to the periodic inventory system
	Prepare unique ledger accounts of companies
	Identify accounts debited and credited (table format)
	Post figures from journals to ledgers
	Prepare trial balances
	Calculations relating to VAT Control account
	Post to debtors and creditors subsidiary ledgers
	Prepare debtors' and creditors' lists
	Prepare closing transfers and post to ledger
Financial reporting application skills	Process year-end adjustment entries
	Prepare Income Statement, Balance Sheet and Notes to financial statements
	Prepare Cash Flow Statements
	Prepare Production cost statements, Abridged Income Statements, and Notes

Projection application skills	Prepare Cash Budgets and Projected Income Statements
	Prepare Debtors Collection and Creditors Payment Schedules
Reconciliation skills	Reconcile control accounts to debtors' and creditors' lists
	Reconcile bank transactions to bank statements
	Reconcile creditors' transactions to creditors' statements
Analytical skills	Calculate financial indicators
	Analyse bookkeeping entries in terms of the Accounting Equation
	Analyse and interpret cash flow statements
	Analyse and interpret debtors' collection schedules
	Analyse unit costs, variable costs and fixed costs
Evaluation skills	Evaluate financial indicators across financial periods and across different companies
	Evaluate and interpret published financial statements and independent auditors' reports
Valuation skills	Value trading stock according to specific identification, weighted average and first-in-first-out methods
	Depreciate fixed assets according to straight-line and diminishing balance methods
Creative problem-solving skills	Identify problems from given figures and financial indicators
	Provide valid solutions

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Table 4.9 Content topics examined at exit (Grade 12) (Umalusi, 2014(a):98)

BUSINESS ENVIRONMENT	
Macro environment: Impact of recent legislation on a business	The impact of recent legislation, developed in response to demands for redress and equity, on small and large business operations
	Skills Development Act No. 97 of 1998
	Labour Relations Act No. 66 of 1995
	Employment Equity Act No. 55 of 1998
	Basic Conditions of Employment Act No. 75 of 1997
	Compensation for Occupational Injuries and Diseases Act No. 61 of 1997
	Black Economic Empowerment
	Broad-Based Black Economic Empowerment
	National Credit Act No. 34 of 2005
	Consumer Protection Act No. 68 of 28 April 2009
Macro environment: Business strategies	Advanced problem-solving skills
	Skills to be used in strategy formulation, e.g. use any creative thinking technique to: devise business strategies, generate business ideas, resolve conflict and solve any business-related problems
	Devising business strategies: use only the following industry analysis tools: SWOT analysis and Porter's Five Forces
	SWOT analysis of the business environments (including PESTLE)
	Formulation of strategies
	Implementation of strategies
	Integration strategies – Forward integration, backward integration, and horizontal integration
	Intensive strategies
	Market penetration, market development and product development
	Diversification strategies
	Concentric diversification, horizontal diversification and conglomerate diversification
	Defensive strategies
	Retrenchment, divestiture and liquidation
Other strategies: the company repositions itself by replacing one or more individuals; revising a business mission; establishing or revising	

	objectives; devising new policies; issuing stock to raise capital; adding an additional salesperson; allocating resources differently; developing new performance incentives
	Evaluate these strategies and make recommendations for their improvement
	Three activities of strategy evaluation: an examination of the underlying bases of a business strategy; comparison of expected performance (measure business performance); taking corrective action where necessary
Business sector and its environment	Selecting a business from each sector, and describing the three environments related to these sectors and the extent to which a business can control these environments
	Describing the three business environments related to the three economic sectors, and the extent to which a business can control these environments
BUSINESS VENTURES	
Management and leadership	The difference between leadership and management
	Leadership styles, e.g. democratic, autocratic
	Theories of management and leadership, e.g. leaders and followers, situational leadership, transitional and transformational leadership
	The role of personal attitude in success and leadership
Investment: Securities	Distinguish between a range of available business investment opportunities
	Distinguish between assurance and insurance (both compulsory and non-compulsory), and discuss the viability and relevance of these to both individuals and businesses
	Types of business investments, the Johannesburg Stock/Security exchange, types of shares, unit trusts, government retail bond
	Returns, e.g. dividends and interest calculations (interest, etc.), the difference between compound interest and simple interest
Investment: Insurance	Compulsory and non-compulsory insurance
	Understanding life insurance and retirement annuities
	Insurance of goods (compulsory and non-compulsory)
	Calculation of over-insurance and under-insurance
	Unemployment Insurance Fund (UIF)
	Road Accident Fund (RAF)
Forms of ownership	Determining the extent to which a particular form of ownership can contribute to the success or failure of a business
	The characteristics, advantages, disadvantages, and comparison of forms of ownership, i.e. sole trader, partnership, close corporation,

	private company, and public company – focus on issues of capacity, taxation, management, capital, division of profits and legislation (recap)
	Forms of ownership (e.g. sole trader, company), and their impact on the success of a business
Presentation and data response	Accurate and concise verbal and non-verbal presentation of a variety of business-related information (including graphs)
	Respond professionally to questions and feedback, and amend the information as necessary
	Recap presentation of business information in verbal format (the use of support materials i.e. audiovisuals, hand-outs, transparencies/slides, posters, including layout), and nonverbal format (including tables, graphs, diagrams, and illustrations)
	Description of the criteria for a logical and effective presentation of information, e.g. know your audience, put most important information first, use tables, graphs, charts or diagrams that include symbols and pictures, suitable section title, headings, subheadings and bullets
	Process and style of presentation using visual aids, e.g. position to allow clear vision, immediate display, and change of transparencies/slides; use of a pointer to focus attention
	Responding in a non-aggressive and professional manner to questions about work and presentations, e.g. answer all questions, make notes, do not argue, apologise for errors
	Handling of feedback, amend plans and documents accordingly and integrate these into future plans and activities
	Identify areas for improvement
BUSINESS ROLES	
Ethics and professionalism	The meaning of ethical behaviour and business practice
	Ethical and unethical business practice with practical examples, e.g. fair and unfair advertisements
	Professional and unprofessional business practices with practical examples, e.g. good use of work time and abusing work time
	The relationship between ethical and professional behaviour
	Ways in which professional, responsible, ethical and effective business practice should be conducted (e.g. not starting a venture at the expense of someone else, payment of fair wages, regular payment of tax)
	Reflection of the business environment and issues that could challenge ethical and professional behaviour (e.g. taxation, sexual harassment, pricing of goods in rural areas, unfair advertising, unauthorised use of funds, abusing work time) and ways/strategies that could be used to address these issues

Creative thinking	Acquiring advanced problem-solving skills
	Application of creative thinking to solve complex business problems in case studies and given scenarios
Social responsibility and corporate citizenship/corporate social responsibility (CSR)	The concept of social responsibility and its implications for both business and communities
	Meaningful contribution of time and effort to advancing the well-being of others in a business context
	Definition of social responsibility (recap – examinable)
	Meaningful (as an individual) contribution of time and effort to advancing the well-being of others in a business context
	Ways in which a business project can contribute towards the community
	CSR: Definition; nature and process; benefits to business and community; problems/challenges: business and community; components, e.g. environment, ethical corporate social investment, health, and safety
	<p>Corporate social investment (CSI): Definition, nature of CSI, CSI projects (including human rights issues), responsible business practices, challenges to the business: A challenge to meet the longer-term needs of the society within which they operate, legislative requirements, e.g.</p> <ul style="list-style-type: none"> • Employment Equity Act • Skills Development Act • BEE and compliance <p>The National Skills Development Strategy and Human Resources Development Strategy</p>
Human rights, inclusivity, and environmental issues	The extent to which a business venture addresses issues such as human rights, inclusivity and environmental issues
	Assess a business venture against criteria to measure human rights, inclusivity and environmental issues
	Human rights issues as defined in the Constitution of the Republic of South Africa
	Diversity in the business – issues of diversity such as poverty, inequality, race, gender language, age, disability, and other factors
	Environmental protection and human health
	Issues of equality, respect, and dignity
	Other economic social, and cultural rights
Team performance assessment Conflict management and problem- solving	Collaboration with others to contribute towards the achievement of specific objectives
	Self-assessment and team performance assessment according to team criteria, e.g. interpersonal attitudes and behavior, shared values,

	communication
	How to effectively perform a specific role within a team
	Problem-solving and the management of problems that arise from working with others or in teams (include steps in resolving conflict)
	Correct procedures to deal with grievances
	Different ways of dealing with difficult people (personalities)
	Examination of workplace scenarios where workers are expected to complete projects in teams, work together on the line, etc.
	Criteria for successful team performance (recap)
BUSINESS OPERATIONS	
Human resources function	Analysis of human resources activities, (e.g. recruitment and selection, contracts, induction, salaries, and other benefits)
	Procedures are related to recruitment, selection and interviewing
	Labour Relations Act (LRA) No. 66 of 1995, Basic Conditions of Employment Act (BCEA) No. 75 of 1997, Employment Equity Act (EEA) No. 55 of 1998, Compensation for Occupational Injuries and Diseases Act (COIDA) No. 61 of 1997 (recap – examinable)
	Legalities of employment contracts
	Procedures of screening and placement
	Interviewing, selection and induction
	Salary determination (piecemeal and time-related), including personal tax; link to basic conditions of employment
	Employee benefits: pension, medical, other (recap – examinable)
	Skills Development Act (SDA) No. 97 of 1998 and the link with SETAs, learnerships, skills programmes, qualifications, National Qualifications Framework, SAQA, etc.
Quality of performance	How quality of performance within the business functions can influence the success or failure of a business
	The concept of quality (definition) – (recap content from Grade 10 – examinable)
	The relation between quality and the various business functions (recap content from Grade 10 – examinable)
	The impact of quality on different business structures (e.g. sole traders versus large businesses) e.g. taking into account the element of total quality management (TQM): continuous skills development, total client satisfaction, continuous skills development, total client satisfaction, continuous improvements to processes and system.

Table 4.10 Skills in recommended classroom activities for Grade 12 (Umalusi, 2014(a):102)

Critical analysis and problem-solving skills	Analyse and interpret the impact of legislation on the macro environment
	Apply the strategic management process to solve business-related problems
	Devise/develop/analyse/formulate strategies
	Analysis and application of case studies
	Critically analyse the implications/positives and negatives of the pillars on businesses
	Evaluate business strategies
	Justify, e.g. the introduction of B-BBEE in relation to BEE
	Evaluate types of investments
	Analyse the risk factor of each type of investment opportunity
	Make recommendations for e.g. the improvement of businesses
	Distinguish between leadership styles, management and leadership
	Evaluate situations and reflect on issues/situations in terms of ethical/professional behaviour in given scenarios/case studies that pose challenges in the business environments
	Assess a business venture
	Assess according to a list of criteria, e.g. assess self and team according to team criteria/characteristics for successful teams, e.g. interpersonal attitudes and behaviours, shared values, communication
	Deal with application-type questions, e.g. correlation with practice, justification with reasoning, make predictions, suggest improvements, compile reports, provide recommendations, deduce, establish, evaluate, apply
Debating and communication skills	Discuss, interpret and debate business news, case studies and other media information
	Discuss the types of shares, their preference, rights and limitations
	Discuss the functions of the Johannesburg Securities Exchange (JSE)
	Explain/discuss/compare
	Motivate statements

	Giving practical examples of e.g. ethical and unethical business practice, e.g. using fair vs unfair advertising techniques
	Originality of discussion – provide own opinion
	Handling of feedback
	Reflection of current business news
Practical skills	Analysis and evaluation of a case study, e.g. SWOT analysis, Porter's Five Forces and Pestle analysis
	Stay abreast of current issues in the business environment and of changes in legislation
	Present/interpret/evaluate business information (verbally and non-verbally) in a professional manner
	Compile written reports/scenarios/case studies for presentations
	Create a variety of types of graphs, e.g. line, pie, bar charts, and other non-verbal types of information, e.g. pictures and photographs
	Plan and use of visual aid, including multimedia
	Apply the King Code on ethics and professionalism in case studies/scenarios
	Reflect on contemporary issues in the business environment
	Apply creative thinking skills to solve complex business problems
	Identify and discuss causes of conflict from given scenarios/case studies
	Give recent examples
Mathematical skills	Calculation and basic numerical skills
	Calculate and understand investment factors
	Distinguish between compound interest and simple interest
	Calculate the compound and simple interest from given scenarios
	Calculate the return on investment (ROI)
	Calculate investment term/period
	Calculate tax implications and the influence of the inflation rate on investment
	Recommend types of investments based on the calculations
	Make calculations in the case of under-insurance
Research skills	Investigate, e.g. a range of available business investment opportunities
	Apply theories, e.g. team dynamics theories
	Consult recent business news from e.g. the media and online

	resources
	Present research results – posters, reports, verbal
Language and logical thinking skills	Read for comprehension
	Write clearly, appropriately and coherently
	Analyse and explain
	Distinguish
	Justify
	Identify
	Determine
	Explain
	Answer in short paragraphs/longer and essay type questions
	Note-taking skills
	Knowledge of content and contexts, e.g. know the rights of road users in terms of the RAF, know the rights of workers registered for UIF
	Name/state/list/answer briefly
	Select
	Compare/contrast/differentiate/analyse
	Organise information on a topic systematically
	Systematic reasoning
	Characterise
	Apply theories and criteria
	Verbal/communication skills, e.g. debate, discuss, present
	Listening skills, e.g. discussion and debate, discuss, present
	Listening skills, e.g. discussion and debate about business issues
	Give own viewpoints with substantiation
	Integrate content and deductions where appropriate
	Draw conclusions

Table 4.11 Content topics examined at exit (Grade 12) (Umalusi, 2014(a):131)

TOPICS	BROAD DETAILS OF CONTENT
Quantitative elements	Derive, define and apply quantitative elements in the circular flow
	Identify and explain current economic phenomena
Economic issues of the day	Identify and explain current economic phenomena
Circular flow – open economy	Present the circular flow diagram to illustrate the flows of variables, leakages and injections in an open economy
The multiplier	Present the circular flow model as a macroeconomic model, analysing national account aggregates and apply the multiplier effect in an open economy
Protectionism and free trade	Discuss and evaluate protectionism and free trade in terms of South African trade policies and protocols
Business cycles – analysis and forecasting	Explain and analyse business cycles and how they are used in forecasting
Perfect markets	Examination of the dynamics of perfect markets
Imperfect markets	Examination of the dynamics of imperfect market structures (monopolies; oligopolies; monopolistic competition)
Market failures	Explanation of the reasons for and consequences of market failures, reflecting on cost-benefit analysis
Role of the public sector	Evaluation of the role of the public sector in the economy with special reference to its socio-economic responsibility in the South African context (including the Laffer curve)
Public sector failure	Evaluation of the reasons for public sector failure
SA economic growth, development – international benchmarking	Comparison of the South African growth and development policies in terms of international benchmarks; highlighting the North/South divide and evaluate the approaches used in South Africa
Economic growth and development policies	Explain the appropriateness of South Africa's economic and growth development strategies
SA economic growth, development – industrial development policies	Discussion of South Africa's regional industrial development policies and their suitability in terms of international best practice
Economic and social indicators	Analysis of the South African economic and social performance indicators and their uses benchmarking against international indicators

SA's economic importance in Africa	Discussion of the economic importance of South Africa in the African continent
Economic growth – foreign exchange market	Examine the foreign exchange market, exchange rates and balance of payments
Inflation	Analysis and investigation of inflation and the policies used to combat it
Tourism	Debating the economic importance of tourism to South Africa and suggesting policies to promote it
Environmental sustainability	Analysis of environmental sustainability, investigating recent international agreements in this regard



Table 4.12 Skills in recommended classroom activities for Grade 12 (Umalusi, 2014(a):132)

Graphical skills	<p>Draw, analyse and interpret diagrams</p> <p>Construct graphs</p> <p>Interpret tables and graphs</p> <p>Read maps</p>
Mathematical skills	<p>Calculate</p> <p>Apply formulae</p> <p>Apply coefficients</p>
Data interpretation skills	<p>Interpretation of information</p> <p>Evaluation of information</p> <p>Identify assumptions</p>
Problem-solving skills	<p>Apply appropriate strategies to solve problems related to multi-step operations</p> <p>Apply complex procedures and show understanding of concepts when interpreting or analysing data</p>
Economic reasoning skills	<p>Predict and forecast</p> <p>Estimate</p> <p>Differentiate</p> <p>Apply and use background knowledge as a basis and engage in abstract reasoning</p> <p>Make critical judgements</p> <p>Interpret details, relationships, patterns and results</p> <p>Synthesise and evaluate</p> <p>Argue logically, i.e. cause and effect (recognising an argument, identify reasons, identify conclusions)</p> <p>Discriminate between fact and opinion</p>
Language skills	<p>Reading and comprehension</p> <p>Communicate effectively (debate, oral presentation)</p> <p>Engage the discourse of economics</p>
Research skills	<p>Access data sources</p> <p>Evaluate data sources</p> <p>Conduct basic research</p> <p>Investigate</p>
Citizenship skills	<p>Engage in ethical issues</p> <p>Social justice dispositions (access, redress, human values, sustainability)</p>

Table 4.13 *The Mathematics topics across the phase and the exit-level outcomes associated with each topic* (Umalusi, 2014(b):49)

Exit-level outcomes for Mathematics topics in the CAPS	
FET phase topic (CAPS)	Exit-level outcomes for FET (content/skills/competencies)
Functions	Know the concept of a function and inverse function
	Identify the features of a function, including domain, range, intercepts with the axes, asymptotes, symmetry, intervals of increase and decrease average gradient
	Be able to convert flexibly between representations of functions as tables, graphs, words and formulae where the functions are $f(x)=x$, $f(x)=x^2$, $f(x)=1/x$, $f(x)=b^x$, and of functions of the form $y=afk(x+p)+q$ where $f(x)$ is one of the functions listed in this block
	Determine and sketch the graph of the inverses of $y=ax+q$, $y=b^x$, $y=ax^2$
	Sketch cubic polynomials showing turning points and points of inflection
	Use different representations of functions to model and/or solve contextual and mathematical problems
Number patterns, sequences, series	Investigate number patterns: linear, quadratic and geometric
	Find the general terms of arithmetic, quadratic and geometric sequence
	Derive the formula for the sum of arithmetic and geometric series
	Convergence and divergence of geometric series
	Apply the formulae for the sums of arithmetic and geometric series, including sum to infinity
	Read and understand expressions written using sigma notation
Finance, growth and decay	Solve problems on simple and compound growth and decay including nominal and effective interest rates
	Solve problems on foreign exchange
	Solve problems on present value and future value annuities
	Compare investment and loan options
Algebra	Recognise and describe numbers as real or non-real, and as belonging to one or more subset of real numbers
	Accurately compare and order numbers as well as round, estimate and approximate in the context of computations
	Factorise integers
	Read and understand algebraic expressions
	Transform algebraic expressions by using legitimate algebraic computations including finding products and factors of expressions.

	Factorisation of polynomials limited to quadratics and simple cubics (where one root is an integer) and expressions that can be reduced to these
	Read, understand and solve equations that include linear, quadratic, cubic, rational and exponential functions
	Read, understand and solve simultaneous equations (limited to two linear equations, or a linear equation and quadratic equation)
	Read, understand and solve linear and quadratic inequalities and represent the solutions on a number line and using algebraic notation
	Understand the relations between the sign of a product and the signs of values composing the product
	Use algebra to be able to deduce or extract information about the nature of relations between variables from the form of algebraic expressions and from graphs, for example, whether a function is increasing on an interval, establishing direct or indirect proportion, determining the maximum value of a function
	Express relations described in word problems using algebraic expressions, including as equations, and solve such problems using algebra
Calculus	Understand the intuitive idea of a limit
	Differentiate by first principles the following functions $f(x)=c$, $f(x) = ax^2 + bx + c$, $f(x) = ax^3$, $f(x)=a/x$
	Differentiate expressions involving powers of x using rules (excluding product, quotient and chain rule)
	Find the equation of tangent line to a curve
	Use the second derivative to determine concavity
	Solve problems in a context involving optimisation, rate of change and the calculus of motion
Probability	Understand the relationship between relative and theoretical probability
	Determine probability in a variety of ways e.g. using Venn diagrams and tree diagrams
	Use the fundamental counting principle
	Understand what constitutes independent and mutually exclusive events and be able to calculate the associated probabilities
Euclidean geometry and measurement	Work with geometric definitions and deductive reasons to prove theorems and riders
	Work with the geometry of triangles and similarity and proportionality in the study of triangles deductively
	Work with the geometry of quadrilaterals deductively
	Work with the geometry of circles deductively
	Understand congruency and similarity

	Calculate perimeters, areas and volumes
Analytical geometry	Given a pair of points in a Cartesian plane, determine the distance between them, the inclination and the equation of and the midpoint of the line segment that connects them
	Given two lines, determine whether they are parallel or perpendicular to each other. Find angles between two intersecting lines
	Calculate the equations, centre and radii of circles
	Find equations of tangents to circles
	Solve problems geometry using algebra and the results derived above
Trigonometry	Knowing the definitions of sin, cos and tan and their inverses, for angles between -360° and 360° but work only with the sin, cos and tan functions
	Know how to solve triangles given an appropriate subset of the 6 angles and sides
	Know the standard identities in trigonometry
	Know how to simplify complex trigonometric expressions using standard trigonometry identities with arbitrary angles that are positive or negative, compound angles and double angle formulae
	Be able to sketch trigonometry graphs and make deductions from them
	Know how to determine all solutions of (solvable) trigonometry equations
	How to determine lengths and heights of immeasurable quantities like heights of buildings, mountains, etc., by using measurable quantities like horizontal distances and angles of elevations and depressions
Statistics	Collect, organise and interpret univariate and bivariate data
	Know that data are skewed or symmetrical, determine the type of skewness and interpret this in context
	Calculate measures of central tendency and dispersion by hand or calculator with grouped and ungrouped data and interpret these in contexts
	Represent data using histograms, frequency polygons, ogives and box, and whisker diagrams
	Use scatterplots, regression and correlation to analyse bivariate data and interpret them in context

ASSESSMENT IN THE BCM SUBJECTS AND MATHEMATICS

Assessment is a continuous, planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps: Generating and collecting evidence of achievement; evaluating this evidence; recording the findings; and using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching. Assessment should be both informal (assessment for learning) and formal (assessment of learning). In both cases, regular feedback should be provided to learners to enhance the learning experience.

Informal or daily assessment is the monitoring of learners' progress. This is done through observations, discussions, practical demonstrations, learner-teacher conferences, informal classroom interactions, etc. Informal assessment may be as simple as stopping during the lesson to observe learners or to discuss with learners how learning is progressing. Informal assessment should be used to provide feedback to the learners and to inform planning for teaching, but need not to be recorded. It should not be seen as separate from the learning activities taking place in the classroom. Learners or teachers can mark these assessment tasks. Self-assessment and peer assessment actively involve learners' in the assessment. This is important as it allows learners to learn from and reflect on their own performance. The results of the informal daily assessment tasks are not formally recorded unless the teacher wishes to do so. The results of daily assessment tasks are not taken into account for promotion and certification purposes. All assessment tasks that make up a formal programme of assessment for the year are regarded as formal assessment. Formal assessment tasks are marked and formally recorded by the teacher for progression and certification purposes. All formal assessment tasks are subject to moderation for the purpose of quality assurance and to ensure that appropriate standards are maintained. The formal assessment provides teachers with a systematic way of evaluating how well learners are progressing in a grade and in a particular subject. Examples of formal assessments include tests, examinations, practical tasks, projects, oral presentations, demonstrations, performances, etc. Formal assessment tasks form part of a year-long formal programme of assessment in each grade and subject (Department of Basic Education, 2011(a):40):

The requirements (number and nature of tasks) for Accounting are indicated below (Department of Basic Education, 2011(a):42):

Grade 10 Programme of Assessment

	Term 1		Term 2		Term 3		Term 4		
Assessment	Presentation	Test	Project	Midyear examination	Case study	Test	Yearmark	Endofyear examination	Total
Total marks	50	100	50	200	50	100		300	
Convert to a mark out of:	10 (50 ÷ 5)	20 (100 ÷ 5)	20 (50 ÷ 2.5)	20 (200 ÷ 10)	10 (50 ÷ 5)	20 (100 ÷ 5)	100	300	400

Grade 11 Programme of Assessment

	Term 1		Term 2		Term 3		Term 4		
Assessment	Written report	Test	Project	Midyear examination	Presentation	Test	Yearmark	Endofyear examination	Total
Total marks	50	100	50	300	50	100		300	
Convert to a mark out of:	10 (50 ÷ 5)	20 (100 ÷ 5)	20 (50 ÷ 2.5)	20 (300 ÷ 15)	10 (50 ÷ 5)	20 (100 ÷ 5)	100	300	400

Grade 12 Programme of Assessment

	Term 1		Term 2		Term 3			Term 4		
Assessment	Written report	Test	Project	Midyear examination	Test	Case study	Trial examination	Yearmark	Endofyear examination	Total
Total marks	50	100	50	300	100	50	300		300	
Convert to a mark out of:	10 (50 ÷ 5)	10 (100 ÷ 10)	20 (50 ÷ 2.5)	20 (300 ÷ 15)	10 (100 ÷ 10)	10 (50 ÷ 5)	20 (300 ÷ 15)	100	300	400

The requirements (number and nature of tasks) for Business Studies are indicated below (Department of Basic Education, 2011(b):46):

The Programme of Assessment in Grade 10

	Term 1		Term 2		Term 3			Term 4	
Assessment	Assignment	Test	Presentation	Mid-year	Project	Test	Year mark	Final exam	Total
Total marks	50	100	50	200	50	100	550	300	
Converted to a mark out of:							$550 \div 5.5 = 100$	300	400

The Programme of Assessment in Grade 11

	Term 1		Term 2		Term 3			Term 4	
Assessment	Assignment	Test	Presentation	Mid-year	Project	Test	Year mark	Final exam	Total
Total marks	50	100	50	300	50	100	650	300	
Converted to a mark out of:							$650 \div 6.5 = 100$	300	400

The Programme of Assessment in Grade 12:

	Term 1		Term 2		Term 3				Term 4	
Assessment	Assignment	Test	Presentation	Mid-year	Project	Test	Trial exam	Year mark	Final exam	Total
Total marks	50	100	50	300	50	100	300	$950 \div 9.5$	300	
Converted to a mark out of:								100	300	400

The requirements (number and nature of tasks) for Economics are indicated below
(Department of Basic Education, 2011(c):40):

The Programme of Assessment in Grade 10

	Term 1		Term 2		Term 3			Term 4	
Assessment	Assignment	Test	Project	Midyear	Case Study	Test	Year mark	Final exam	Total
Total marks	50	100	50	200	50	100	550	300	
Converted to a mark out of:							$550 \div 5.5 = 100$	300	400

The Programme of Assessment in Grade 11

	Term 1		Term 2		Term 3			Term 4	
Assessment	Assignment	Test	Project	Midyear	Case Study	Test	Year mark	Final exam	Total
Total marks	50	100	50	300	50	100	650	300	
Converted to a mark out of:							$650 \div 6.5 = 100$	300	400

The Programme of Assessment in Grade 12

	Term 1		Term 2		Term 3			Term 4		
Assessment	Assignment	Test	Project	Mid-year	Case Study	Test	Trial exam	Year mark	Final exam	Total
Total marks	50	100	50	300	50	100	300	$950 \div 9.5$	300	
Converted to a mark out of:								100	300	400

In Grade 12, the assessment consists of two components: A programme of assessment that makes up 25% of the total mark for Accounting, Business Studies and Economics, and an external examination that makes up the remaining 75%. The programme of assessment consists of seven tasks that are assessed internally. The external examinations are externally set and moderated (Department of Basic Education, 2011(a), (b), (c)).

Furthermore, formal assessments in Mathematics must cater for a range of cognitive levels and abilities of learners. The forms of assessment used should be age- and developmental-

level appropriate. The design of these tasks should cover the content of the subject and include a variety of activities designed to achieve the objectives of the subject. Formal assessments need to accommodate a range of cognitive levels and abilities of learners. The four cognitive levels used to guide all assessment tasks are: knowledge (20%); routine procedures (35%); complex procedures (30%); problem-solving (15%).

In Grades 10, 11 and 12, 25% of the final promotion mark is a year mark and 75% is an examination mark. All assessments in Grades 10 and 11 are internal while in Grade 12 the 25% year mark assessment is internally set and marked but externally moderated and the 75% examination is externally set, marked and moderated (Department of Basic Education, 2011(f):52, 53).

Table 4.14 *Cognitive levels of the BCM subjects* (Department of Basic Education, 2011(a):40; Department of Basic Education, 2011(b):44; Department of Basic Education, 2011(c):39)

Subject	Cognitive levels	Activity	Percentage of task
Accounting and Economics	Knowledge and comprehension Levels 1 & 2	Basic thinking skills (e.g. factual recall, low-level comprehension and low-level application)	30%
	Application and analysis Levels 3 & 4	Middle-order thinking skills (e.g. more advanced application, interpretation and low-level analysis)	40%
	Synthesis and evaluation Levels 5 & 6	High-order thinking skills (e.g. advanced analytical skills, synthesis, evaluation and creative problem solving)	30%
Business Studies	Knowledge and comprehension Levels 1 & 2	Basic thinking skills (e.g. factual recall, low-level comprehension, and low-level application)	30%
	Application and analysis Levels 3 & 4	Moderately high thinking skills (e.g. more advanced application, interpretation and low-level analysis)	50%
	Synthesis and evaluation Levels 5 & 6	High-order thinking skills (e.g. advance analytical skills, synthesis and evaluation)	20%

EXAMINATIONS IN THE BCM SUBJECTS AND MATHEMATICS

Table 4.15 *End-of-year examinations for Accounting* (Department of Basic Education, 2011(a):45)

Grades 10 – 12 should write a 3-hour examination of 300 marks as a final examination. The following is an outline of how the topics should be covered in the end-of-year-examinations.

	Paper	Time	Marks	Financial Accounting	Managerial Accounting	Managing Resources
Grade 10	1	3 hours	300	60 – 70%	5 – 10%	25 – 30%
Grade 11	1	3 hours	300	50 – 60%	20 – 25%	20 – 25%
Grade 12	1	3 hours	300	50 – 60%	20 – 25%	20 – 25%

Table 4.16 *End of year examinations for Business Studies* (Department of Basic Education, 2011(b):50)

Grades 10 – 12 should write a 3-hour examination of 300 marks as a final examination. The following is an outline of how the topics should be covered in the end-of-year-examinations.

	Paper	Time	Marks	Business Environment	Business Venture	Business Role	Business Operation
Grade 10 – 12	1	3 hours	300	25%	25%	25%	25%

Table 4.17 *End of year examinations for Economics* (Department of Basic Education, 2011(c):44)

All grades in the FET band should write 2 x 1½-hour examination papers of 150 marks each as a final examination. The following is an outline of how the topics should be covered in the end-of-year-examinations.

	Paper	Time	Marks	Macroeconomics & economic pursuits	Microeconomics & contemporary economic issues
Grade 10 – 12	2	1 hour 30 minutes	150	25% & 25%	25% & 25%

The end-of-year examinations for Mathematics are illustrated in the following table.

Table 4.18 *Mark distribution for Mathematics NCS end-of-year papers: Grades 10 – 12*
(Department of Basic Education, 2011(f):55).

PAPER 1			
Description	Grade 10	Grade 11	Grade 12
Algebra and equations (and inequalities)	30	45	25
Pattern and sequences	15	25	25
Finance and growth	10		
Finance, growth and decay		15	15
Functions and graphs	30	45	35
Differential calculus			35
Probability	15	20	15
TOTAL	100	150	150
PAPER 2			
Description	Grade 10	Grade 11	Grade 12
Statistics	15	20	20
Analytical geometry	15	30	40
Trigonometry	40	50	40
Euclidean geometry and measurement	30	50	50
TOTAL	100	150	150

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School A & B: Interventions implemented from 2017 to 2019

School	Grade	Dates	Content covered and rationale
School A School B	10	16 September and 21 October 2017	Accounting: Concepts and effect of transactions on the accounting equation. To lay a solid foundation of basic concepts and terminology because prior knowledge must be established before engaging in applications could be accomplished.
		23 September and 28 October 2017	Business Studies: Concepts with regard to environments; SWOT analysis and essay questions. Learners need to understand and explain basic concepts and terminology about each topic to be able to answer essay questions and questions where a longer answer was required.
			Economics: Concepts, data response and essay questions. Learners need to understand and explain basic concepts and terminology about each topic to be able to answer essay questions and questions where a longer answer was required.
School A School B	11	20 April, 25 May and 3 August 2018	Accounting: Asset disposal; adjustments for partnerships; analysis and interpretation of financial statements. Importance of these topics for preparation for the Grade 12 NSC examination.
		23 April, 1 June and 9 November 2018	Business Studies: Business strategies; ethics and professionalism; creative thinking and problem solving. Importance of these topics for preparation for the Grade 12 NSC examination.
			Economics: Economics concepts; calculation of total, average and marginal cost and income; inequality of wealth and income. Importance of these topics for preparation for the Grade 12 NSC examination.
School A School B	12	5 April and 10 May 2019	Accounting: Financial statements and notes of companies; Cash flow statement of companies. Topics were addressed because they form part of the content that will be examined in the Grade 12 NSC examination.
		3 May and 17 May 2019	Business Studies: Human resources; acts and quality. Topics were addressed because they form part of the content that will be examined in the Grade 12 NSC examination.
			Economics: Circular flow/multiplier; market structure. Topics were addressed because they form part of the content that will be examined in the Grade 12 NSC examination.

Table 5.1 Evaluation of School A and School B for 2017 – 2019

Interventions	Inputs	Activities	Outcomes	Responsibility (execution and monitoring)	Impact (notes on progress)
Cycle 1: 2017 (Grade 10)	Each learner got a book for notes and a pencil case with the necessary stationery. Pre- and post-tests, PowerPoint presentations, notes, activities, data response questions, copy of the exam guidelines, Accounting toolkit (Dralix), and mind maps.	Learners wrote a pre-test, explanation followed by notes, PowerPoints, mind maps and Dralix toolkits and practical activities. The learners wrote a post-test at the end of the session.	Language and logical thinking skills (differentiate between concepts), application skills, critical analysis, and creative problem-solving skills, debating and communication skills, research skills (mind mapping skills, essay writing) and mathematical skills.	Continuously asked questions and explained the concepts. Took examples out of practice and integrated real-life scenarios into the teaching of the concepts for relevancy so that the learners could understand it better. Monitored the completion of activities and gave feedback to the learners, pre- and post-tests.	Basic concepts were not properly addressed in Grades 7 – 9. These basic concepts are also applicable in Grade 12 and must be part of the learners’ basic knowledge. It is very difficult to master complex questions and applications if the solid foundation is not mastered. In the essay type of questions, the learners found it difficult to come up with their own introduction and conclusion. After practising, the learners could do both with more confidence. After the explanation and revision of the PowerPoint, there was an improvement in the marks between the pre- and post-test.

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Interventions	Inputs	Activities	Outcomes	Responsibility (execution and monitoring)	Impact (notes on progress)
Cycle 2: 2018 (Grade 11)	Each learner got a pre- and post-worksheet or test on which they could answer on the worksheet. They also received notes on the topic and a mind map where they could make their own simplified notes. The resources were a data projector, green board and chalk, whiteboard and whiteboard markers and the electronic memo.	Learners wrote a pre-test, explanation of the content followed by PowerPoints, flashcards, worksheets, and notes. The learners wrote a post-test at the end of the session.	Language and logical thinking skills (identify, explain, differentiate, communicate and participate in explanations); application skills (apply the answers to make conclusions, evaluations and synthesis); critical analysis and problem-solving skills (apply it in real-life situations/ scenarios to identify solutions); debating and communication skills (to support their answers and opinions); research and mathematical skills (calculation with x to solve a problem, calculate ratios, mathematical calculation, e.g. percentages and ratios).	Continuously asked questions and explained the concepts. Took examples out of practice and integrated real-life scenarios into the teaching of the concepts for relevancy so that the learners could understand it better. Monitored the completion of activities, graphs, questions, and calculations and gave feedback to the learners, pre- and post-tests.	Learners struggled with basic concepts, calculations and graphs. The basic concepts were not addressed prior to this grade – the application then became difficult because the learners did not understand and grasp the content. After practising, the learners could do it with more confidence. After the explanation and revision, there was an improvement in the marks between the pre- and post-test.

Interventions	Inputs	Activities	Outcomes	Responsibility (execution and monitoring)	Impact (notes on progress)
<p>Cycle 3: 2019 (Grade 12)</p>	<p>Each learner got a pre- and post-worksheet or test on which they could answer on the worksheet. They also received notes on the topic and a mind map where they could make their own simplified notes. The resources were a data projector, green board and chalk, whiteboard and whiteboard markers and the electronic memo.</p>	<p>Learners wrote a pre-test, explanation of the content followed by PowerPoints, flashcards, worksheets, notes and an electronic memo. The learners wrote a post-test at the end of the session.</p>	<p>Language and logical thinking skills (identify, explain, differentiate, communicate and participate in explanations; draw the different graphs pertaining to market structures); application skills (apply the answers to make conclusions, evaluations and synthesis; able to interpret the circular flow model); critical analysis and problem-solving skills (apply it in real-life situations/scenarios to identify solutions); debating and communication skills (to support their answers and opinions).</p>	<p>Continuously asked questions and explained the content; learners participated in the discussions. Took examples out of practice and integrated real-life scenarios into the teaching of the content for relevancy so that the learners could understand it better. Revised the circular flow and all the components as well as the leakages and injections and concepts related to the circular flow. Illustrated to learners the different ways the circular flow can be asked in the question paper.</p>	<p>Learners struggled with the basic concepts that were not addressed prior to this grade. Therefore it made it more difficult for learners to grasp and understand. Some learners had the advantage of being quick to learn and grasped the concepts quicker than others. After practising, the learners could do it with more confidence. After the explanation and revision, there was an improvement of the marks between the pre- and post-test.</p>

Interventions	Inputs	Activities	Outcomes	Responsibility (execution and monitoring)	Impact (notes on progress)
<p>Cycle 3: 2019 (Grade 12)</p>			<p>To have a thorough understanding of the business's equilibrium position over the long and short term; research skills and mathematical skills (calculation with x to solve a problem, calculate ratios, mathematical calculation e.g. percentages and ratios); calculate leakages and injections in the circular flow; calculate the multiplier when marginal propensity is given; calculate profit or loss for different markets.</p>	<p>Explained the multiplier and the different formulas to calculate it. Explained the equilibrium positions for different markets in the long and short term. Illustrated the drawing of relevant graphs step by step. Explained the formulas for calculation of income, profit, loss and cost of businesses. Learners had to know the format of the financial statements. Monitored the completion of activities, graphs, questions and calculations and gave feedback to the learners, pre- and post-tests.</p>	<p>During the interventions in the subject Accounting the learners did not know the format of the financial statements and therefore the impact was slight between the marks of the pre- and post-test, because the learners did know how to calculate the amounts, but not where to put the amounts. In Economics, the middle order and higher-order questions and the drawing of graphs were still a challenge for the learners.</p>

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CLEARANCE LETTER FROM THE UNIVERSITY AND PERMISSION LETTER



UNIVERSITY of the
WESTERN CAPE

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES



15 August 2017

Dear Sir/Madam

PERMISSION TO CONDUCT RESEARCH AT TWO HIGH SCHOOLS

This letter serves to inform you that Ms Antoinette Venter (student number 3766109) is a register PhD student in the Faculty of Economic and Management Sciences at the University of the Western Cape. The title of her dissertation is: The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the further education and training (FET) phase.

Her research proposal was approved for ethical clearance at the University's Ethics Committee (please see letter attached). Please grant Ms Venter permission to conduct her research at the two schools in the Malmesbury District. Her study will make a valuable contribution to the learners' success in the Business Education Learning Area.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Venicia McGhie'.

Dr Venicia McGhie

Main Supervisor

A place of quality,
a place to grow, from hope
to action through knowledge

TO PRINCIPALS

The Principal
MALMESBURY
7299

25 August 2017

Dear

APPLICATION TO CONDUCT RESEARCH AT YOUR SCHOOL

I am currently a D Phil student at the above-mentioned institution at the faculty of Economic and Business Sciences under the supervision of Dr Venicia McGhie and Dr Dos Reis. My thesis is titled: The provision of epistemological access for successful student learning at university: Towards an intervention model for BCM learners in the Further Education and Training (FET) Phase. In my capacity as a Senior Education Specialist (SES), I am confronted daily with learners who are not prepared for tertiary studies and especially in the BCM discipline.

This study seeks to make a contribution in the form of an intervention model that educators in the BCM Learning Area could use to lay a solid foundational knowledge base for learners in Grade 10 to 12. In so doing, it will assist the learners not only to pass their BCM subjects well but equally important, it will provide learners with the required subject knowledge and skills (thus empowering them with epistemological access) to pursue a degree in BCM at the university level.

The research sites will include your high school in the Western Cape Province. The aim of the study is twofold. Firstly, it seeks to evaluate Grade 10 to 12 learners' knowledge and skills in the BCM learning area. Secondly, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com degree at university.

The study has three objectives, namely to:

1. Identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.
2. Implement and evaluate interventions from September 2017 until September 2019 to identify the learners' challenges and to develop appropriate strategies

to overcome these challenges with the vision to equip them with the knowledge and skills required by universities offering degrees in Accounting, Business, and Economics.

3. Develop an intervention model based on the findings of this study that could be implemented in high schools throughout South Africa.

The research participants will include five groups. The first group of participants will be 30 Grade 10 BCM learners (10 for Accounting, 10 for Business Studies and 10 for Economics) at your school. These learners will be monitored and tracked across all three grades – Grade 10 (2017), Grade 11 (2018) and Grade 12 (2019). Three teachers (one from each subject) and the principal will form the second group of participants. The last group will consist of a representative sample of the learners' parents from your school.

The research in your school will be conducted on the following conditions:

1. The principal, educators and learners are under no obligation to assist me in my research.
2. The principal, educators, learners and schools would not be identifiable in any way from the results of the research.
3. I will make all the arrangements concerning my research.
4. Educators' programmes will not be interrupted.
5. There will also be a letter submitted to the Principal where permission has been granted by the Western Cape Education Department to conduct my research.

Yours sincerely



Venter

Senior Education Specialist (West Coast District)

PERMISSION OF THE WESTERN CAPE EDUCATION DEPARTMENT



Directorate: Research

Audrey.wyngaard@westerncape.gov.za
 tel: +27 021 467 9272
 Fax: 0865902282
 Private Bag x9114, Cape Town, 8000
 wced.wcape.gov.za

REFERENCE: 20170818 –4031
ENQUIRIES: Dr A T Wyngaard

Mrs Antoinette Venter
 Eikelaan 12
 Wellington
 7655

Dear Mrs Antoinette Venter

RESEARCH PROPOSAL: THE PROVISION OF EPISTEMOLOGICAL ACCESS FOR SUCCESSFUL STUDENT LEARNING AT UNIVERSITY: TOWARDS AN INTERVENTION MODEL FOR BUSINESS EDUCATION LEARNERS IN THE FURTHER EDUCATION AND TRAINING (FET) PHASE

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions.

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **01 September 2017 till 30 June 2019**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December)
7. Should you wish to extend the period of your survey, please contact Dr A.T. Wyngaard at the contact numbers above quoting the reference number?
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:
The Director: Research Services
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000

We wish you success in your research.

Kind regards,
 Signed: Dr Audrey T Wyngaard
 Directorate: Research
 DATE: 18 August 2017

Lower Parliament Street, Cape Town, 8001
 tel: +27 21 467 9272 fax: 0865902282
 Safe Schools: 0800 45 46 47

Private Bag X9114, Cape Town, 8000
 Employment and salary enquiries: 0861 92 33 22
www.westerncape.gov.za

INFORMATION SHEETS



**Institute for Social Development, Faculty of
Economic and Management Sciences**

Participation information sheet for learners: questionnaire

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Learner

My name is Antoinette Venter, I am a doctoral student (student number 3766109) in the Faculty of Economic and Management Sciences at the University of the Western Cape.

You are asked to be part of my study, because I am looking at how I can help you to be successful in Accounting, Business Studies and Economics.

Before we start I will explain to you what my study is about, how I will help you to overcome your difficulties in learning and what we will do.

You can take this form with you to your parents, you can discuss it with them and also with your teachers if you want to. You can ask me any questions if you do not understand something before you agree to be part of this study.

PURPOSE OF THE STUDY

There are two reasons why I want to do this study. The first reason is, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. The second reason is, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

I want to achieve three things with this study. The first thing (objective) is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second thing (objective) is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019 so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and last thing (objective) is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.



CONFIDENTIALITY

You can be assured that I will not reveal your identity to anyone and I will treat the information that you provide to me as confidential. Also, I will respect you as a learner, listen to you and assist you in the process. Please know that you can stop me at any point to ask questions if you do not understand something and if you do not want to answer something that will also be fine. I will keep everything in a safe locked place in order to protect your identity and rights.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Please know if you agree to be part of my study, you will do so out of your own free will and I cannot force you to be part of the study. This means that if you do not want to be part of this study, you can let me know and I will not force you to be part of the study. And even if you agree to be part of this study, but you decide on a later stage you don't want to continue anymore, you are free to stop and inform me about your decision. If there is any question that you feel uncomfortable to answer, know that you do not have to answer it. Also know if there is anything that is not clear, or you want me to explain it to you further, feel free to ask me to do so.

PAYMENT FOR PARTICIPATION

Please note that you will not receive any money to be part of this study. You are doing it out of your own free will.

INFORMED CONSENT

Before we can start, you must please sign the form to give me your permission that you want to help me with my study. The information form in which I explained what my study is about is yours to keep.

QUESTIONS:

Should you have further questions or wish to know more, you can contact me as follows:

Student Name : Antoinette Venter
Student Number : 3766109
Mobile Number : 0823046675
Work Number : 021 860 1200
Email : Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors : Dr Venicia McGhie
Telephone : +27 21 959 3041
Fax : +27 21 959 3780
Email : Vfmcghie@uwc.ac.za

Telephone : Dr Karen Dos Reis
+27 21 959 3431
Email : kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for learners: questionnaire

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Umfundi othandekayo

Igama lam ngu-Antoinette Venter, Ndingumfundi ogqirha (inombolo yomfundi 3766109) kwi-Faculty yoQoqosho noLawulo lweNzululwazi kwiYunivesithi yeNtshona Koloni.

Ucelwa ukuba ube yinxalenye yesifundo sam, kuba ndikhangele indlela endinokukunceda ngayo ukuba uphumelele kwi-akhawunti, I-Business Studies ne-Economics.

Ngaphambi kokuba siqale ndiza kukuchazela oko ndifunda ngako, ndokukunceda njani ukunqoba ubunzima bakho ekufundeni nento esiya kuyenza.

Unokuthatha le fomu kunye nabazali bakho, unokuxoxa ngayo nabo kunye nootitshala bakho ukuba ufuna. Unokubuza nayiphi na imibuzo ukuba awuqondi into ethile ngaphambi kokuba uvume ukuba yinxenye yale sifundo.

INJONGO YOKUFUNDA

Kukho izizathu ezibini zokuba ndifuna ukwenza le sifundo. Isizathu sokuqala kukuba, sifuna ukuvavanya ulwazi lwabafundi beBakala 10 – 12 kwizakhono zeeNkxaso zeMfundo kwiZiko ezimbini eziphakamileyo kwiPhondo leNtshona Koloni. Isizathu sesibini kukuba, siya kuphinda sihlolisise iimfuno kunye nolwazi olufunekayo kubafundi bokuqala bonyaka kufuneka baphumelele i-B Com Degree eyunivesithi.

Ndifuna ukufezekisa izinto ezintathu ngolu cwaningo. Into yokuqala (injongo) ukuchonga izikhalazo ezifunyenwe yiYunivesithi ezingenakho kwikharithulam yezikolo, kunye nemingeni kunye neengxaki ezinokuthi abafundi bajamelane nazo esikolweni.

Into yesibili (injongo) kukufezekisa nokuvavanya ukungenelela ngexesha lokwesiqingatha sesibini se-2017 de kube sekupheleni kwe-Oktoberha 2019 ukwenzela ukuba abafundi banqobe imingeni kunye neengxaki ezintle, kwaye baxhotyiswe ngolwazi olufunekayo kunye nezakhono ezifunekayo liyunivesithi kwi-Accounting, Studies Business and Disciplines.

Into yesithathu neyokugqibela (injongo) kukuphuhlisa imodeli yokungenelela esekelwe kwiziphumo kunye nokuvavanywa okungaqaliswa kwizikolo eziphakamileyo kulo lonke elaseMzantsi Afrika.

UKUPHUMA

Unokuqiniseka ukuba andiyi kubhengeza ubunikazi bakho kubani nabani na kwaye ndiya kuyiphatha ingcaciso on dibonelayo njengemfihlo. Kwakhona, ndiya kukuhlonipha njengomfundi, ndikuphulaphule kwaye kukuncedise kwinkqubo. Nceda uyazi ukuba



undiyeke kumaphi na ukubuza imibuzo ukuba awuyiqondi into kwaye ukuba awufuni ukuphendula into eya kuhamba kakuhle. Ndiza kugcina yonke into kwindawo ekhuselekileyo yokugcina ukukhusela i-identity yakho namalungelo.

UKUQHUBEKA KWENKQUBO KUNYE NOKUBHALWA

Nceda uyazi ukuba uyavuma ukuba yinxalenye yesifundo sam, uya kwenza oku ngaphandle kwakho kwaye andinakukunyanzela ukuba ube yinxalenye yesifundo. Oku kuthetha ukuba ukuba awufuni ukuba yinxalenye yale sifundo, undivumele ukuba ndiyazi kwaye andiyi kukuphoqa ukuba ube yinxalenye yesifundo. Kwaye nangona uvuma ukuba yingxenywe yale sifundo, kodwa ugqibe kwisithuba esilandelayo awufuni ukuqhubeka uqhubeka, ukhululekile ukuma uze undixelele ngesigqibo sakho. Ukuba kukho nayiphi na umbuzo ongaziva ukhululekile ukuphendula, yazi ukuba akufanele uphendule. Kwakhona uyazi ukuba kukho nayiphi na into engacacile, okanye ufuna ukuba ndikuchazele ngakumbi, zikhululeke ukuba undicele ukuba wenze njalo.

UKUHLAWULWA KWENKQUBO

Nceda uqaphele ukuba awuyi kufumana nayiphi na imali yokuba yinxalenye yale sifundo. Uyenza ngaphandle kwakho ngokwakho.

NGOKWENZA

Ngaphambi kokuba siqale, kufuneka uncede ungayine ifom ukuze unginjike imvume yakho ukuba ufuna ukuncedisa ngokufunda kwam. Ifom yeenkcukacha apho ndichazile oko ndikufundayo ngokukwenu kungokwakho ukugcina.

IMIBUZO:

Ukuba unemibuzo eminye okanye unqwenela ukwazi ngakumbi, ungachagamshelana nam ngale ndlela:

Student Name	: Antoinette Venter
Student Number	: 3766109
Mobile Number	: 0823046675
Work Number	: 021 860 1200
Email	: Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors	: Dr Venicia McGhie
Telephone	: +27 21 959 3041
Fax	: +27 21 959 3780
Email	: Vfmcghie@uwc.ac.za

Telephone	: Dr Karen Dos Reis
	: +27 21 959 3431
Email	: kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for learners: focus groups

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Learner

My name is Antoinette Venter, I am a doctoral student (student number 3766109) in the Faculty of Economic and Management Sciences at the University of the Western Cape.

You are asked to be part of my study, because I am looking at how I can help you to be successful in Accounting, Business Studies and Economics.

Before we start I will explain to you what my study is about, how I will help you to overcome your difficulties in learning and what we will do.

You can take this form with you to your parents, you can discuss it with them and also with your teachers if you want to. You can ask me any questions if you do not understand something before you agree to be part of this study.

PURPOSE OF THE STUDY

There are two reasons why I want to do this study. The first reason is, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. The second reason is, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

I want to achieve three things with this study. The first thing (objective) is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second thing (objective) is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019 so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and last thing (objective) is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.



UNIVERSITY of the
WESTERN CAPE

CONFIDENTIALITY

You can be assured that I will not reveal your identity to anyone and I will treat the information that you provide to me as confidential. Also, I will respect you as a learner, listen to you and assist you in the process. Please know that you can stop me at any point to ask questions if you do not understand something and if you do not want to answer something that will also be fine. I will keep everything in a safe locked place in order to protect your identity and rights.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Please know if you agree to be part of my study, you will do so out of your own free will and I cannot force you to be part of the study. This means that if you do not want to be part of this study, you can let me know and I will not force you to be part of the study. And even if you agree to be part of this study, but you decide on a later stage you don't want to continue anymore, you are free to stop and inform me about your decision. If there is any question that you feel uncomfortable to answer, know that you do not have to answer it. Also know if there is anything that is not clear, or you want me to explain it to you further, feel free to ask me to do so.

PAYMENT FOR PARTICIPATION

Please note that you will not receive any money to be part of this study. You are doing it out of your own free will.

INFORMED CONSENT

Before we can start, you must please sign the form to give me your permission that you want to help me with my study. The information form in which I explained what my study is about is yours to keep.

QUESTIONS:

Should you have further questions or wish to know more, you can contact me as follows:

Student Name : Antoinette Venter
Student Number : 3766109
Mobile Number : 0823046675
Work Number : 021 860 1200
Email : Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors : Dr Venicia McGhie
Telephone : +27 21 959 3041
Fax : +27 21 959 3780
Email : Vfmcghie@uwc.ac.za

Telephone : Dr Karen Dos Reis
Email : +27 21 959 3431
kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for learners: focus groups

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Umfundi othandekayo

Igama lam ngu-Antoinette Venter, Ndingumfundi ogqirha (inombolo yomfundi 3766109) kwi-Faculty yoQoqosho noLawulo lweNzuzulwazi kwiYunivesithi yeNtshona Koloni.

Ucelwa ukuba ube yinxalenye yesifundo sam, kuba ndikhangele indlela endinokukunceda ngayo ukuba uphumelele kwi-akhawunti, i-Business Studies ne-Economics.

Ngaphambi kokuba siqale ndiza kukuchazela oko ndifunda ngako, ndokukunceda njani ukunqoba ubunzima bakho ekufundeni nento esiya kuyenza.

Unokuthatha le fomu kunye nabazali bakho, unokuxoxa ngayo nabo kunye nootitshala bakho ukuba ufuna. Unokubuzisa nayiphi na imibuzo ukuba awuqondi into ethile ngaphambi kokuba uvume ukuba yinxalenye yale sifundo.

INJONGO YOKUFUNDA

Kukho izizathu ezibini zokuba ndifuna ukwenza le sifundo. Isizathu sokuqala kukuba, sifuna ukuvavanya ulwazi lwabafundi beBakala 10-12 kwizakhono zeeNqosiso zeMfundo kwiZiko ezimbini eziphakamileyo kwiPhondo leNtshona Koloni. Isizathu sesibini kukuba, siya kuphinda sihlolisise iifom kunye nolwazi olufunekayo kubafundi bokuqala bonyaka kufuneka baphumelele i-B Com-Degree eyunivesithi.

Ndifuna ukufezekisa izinto ezintathu ngolu cwaningo. Into yokuqala (injongo) ukuchonga izikhalazo ezifunyenwe yiunivesithi ezingenakho kwikharithulam yezikolo, kunye nemingeni kunye neengxaki ezinokuthi abafundi bajamelane nazo esikolweni.

Into yesibini (injongo) kukufezekisa nokuvavanya ukungenelela ngexesha lokwesiqingatha sesibini se-2017 de kube sekupheleni kwe-Oktobha 2019 ukwenzela ukuba abafundi banqobe imingeni kunye neengxaki ezintle, kwaye baxhotyiswe ngolwazi olufunekayo kunye nezakhono ezifunekayo liyunivesithi kwi-Accounting, Studies Business and Disciplines.

Into yesithathu neyokugqibela (injongo) kukuphuhlisa imodeli yokungenelela esekelwe kwiziphumo kunye nokuvavanywa okungaqaliswa kwizikolo eziphakamileyo kulo lonke elaseMzantsi Afrika.

UKUPHUMA

Unokuqiniseka ukuba andiyi kubhengeza ubunikazi bakho kubani nabani na kwaye ndiya kuyiphatha ingcaciso on dibonelayo njengemfihlo. Kwakhona, ndiya kukuhlonipha njengomfundi, ndikuphulaphule kwaye kukuncedise kwinkqubo. Nceda uyazi ukuba



undiyeka kumaphi na ukubuza imibuzo ukuba awuyiqondi into kwaye ukuba awufuni ukuphendula into eya kuhamba kakuhle. Ndiza kugcina yonke into kwindawo ekhuselekileyo yokugcina ukukhusela i-identity yakho namalungelo.

UKUQHUBEKA KWENKQUBO KUNYE NOKUBHALWA

Nceda uyazi ukuba uyavuma ukuba yinxalenye yesifundo sam, uya kwenza oku ngaphandle kwakho kwaye andinakukunyanzela ukuba ube yinxalenye yesifundo. Oku kuthetha ukuba ukuba awufuni ukuba yinxalenye yale sifundo, undivumele ukuba ndiyazi kwaye andiyi kukuphoqa ukuba ube yinxalenye yesifundo. Kwaye nangona uvuma ukuba yingxenywe yale sifundo, kodwa ugqibe kwisithuba esilandelayo awufuni ukuqhubeka uqhubeka, ukhululekile ukuma uze undixelele ngesigqibo sakho. Ukuba kukho nayiphi na umbuzo ongaziwa ukhululekile ukuphendula, yazi ukuba akufanele uphendule. Kwakhona uyazi ukuba kukho nayiphi na into engacacile, okanye ufuna ukuba ndikuchazele ngakumbi, zikhululeke ukuba undicele ukuba wenze njalo.

UKUHLAWULWA KWENKQUBO

Nceda uqaphele ukuba awuyi kufumana nayiphi na imali yokuba yinxalenye yale sifundo. Uyenza ngaphandle kwakho ngokwakho.

NGOKWENZA

Ngaphambi kokuba siqale, kufuneka uncede ungayine ifom ukuze unginike imvume yakho ukuba ufuna ukuncedisa ngokufunda kwam. Ifom yeenkcukacha apho ndichazile oko ndikufundayo ngokukwenu kungokwakho ukugcina.

IMIBUZO:

Ukuba unemibuzo eminye okanye unqwenela ukwazi ngakumbi, ungachagamshelana nam ngale ndlela:

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Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for teachers and principals

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Participant

You are invited to participate in a research study conducted by Antoinette Venter with student number 3766109. It is in partial completion of the researcher's thesis towards the PhD Degree at the Faculty of Economy and Management Sciences, at the University of the Western Cape.

You will be expected to partake in two individual interviews of a hour long (one at the start of the data collection period and one after the intervention took place).

Before you decide to participate, it is important for you to understand the purpose of the research and what it would entail. Please take time to read the following information carefully and discuss it with others if you wish. If you are unclear of anything, I would be happy to answer any questions you have.

PURPOSE OF THE STUDY

The aim of the study is two-fold. Firstly, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. Secondly, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

The study has three objectives. The first objective is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second objective is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019 so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and final objective is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.



CONFIDENTIALITY

Please be advised that the results of the study will neither divulge the business school's particulars nor the individual particulars, as maintain confidentiality at all times. Any information that can connect the responses to an individual or business school will be disclosed only with your permission. The researcher shall keep all records and tapes of participation, including a signed consent form which is required from you should you agree to participate in this research study, and locked away at all times.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your participation in this research is entirely voluntary, which means that you are free to decline from participation. It is your decision whether or not to take part. If you volunteer to be in study, you may withdraw at any time without consequences of any kind. If you decide to participate in the study, you are free to withdraw at any time – and without giving a reason. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.

PAYMENT FOR PARTICIPATION

There are no costs to the participant for partaking in the study and there is no monetary gain as a participant in this study.

INFORMED CONSENT

Your signed to consent to participate in this research study is required before I proceed to interview you. I have included the consent form with this information sheet so that you will be able to review this consent form and then decide whether you would like to participate in this study or not.

QUESTIONS:

Should you have further questions or wish to know more, I can be contacted as follows:

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Telephone : Dr Karen Dos Reis
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Email : kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for parents

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Parents

My name is Antoinette Venter, I am a doctoral student (student number 3766109) in the Faculty of Economic and Management Sciences at the University of the Western Cape.

You are asked to be part of my study because I am looking at ways in which I could help your children to be successful in the Accounting, Business Studies and Economics subjects in grades 10, 11 and 12.

I will explain to you what my study is about, and how I intend helping your children to overcome their difficulties in these subjects.

After I explained everything, this form will be given to you, and you are free to discuss it further with your wife/husband/other family members and your children at home. Please feel free to ask me any other questions you may have or if you do not understand something before you agree to be part of this study.

PURPOSE OF THE STUDY

There are two reasons why I want to do this study. The first reason is, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. The second reason is, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

I want to achieve three things with this study. The first thing (objective) is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second thing (objective) is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019 so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and last thing (objective) is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.



CONFIDENTIALITY

You can be assured that I will not reveal your identity to anyone and I will treat the information that you provide to me as confidential. Also, I will respect you as a parent, listen to you and assist you in the process.

Please know that you can stop me at any point to ask questions if you do not understand something and if you do not want to answer something that will also be fine. I will keep everything in a safe locked place in order to protect your identity and rights.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Please know if you agree to be part of my study, you will do so out of your own free will. This means that if you do not want to be part of this study, you can let me know and I will not force you to be part of the study. And even if you agree to be part of this study, but you decide at a later stage you don't want to continue anymore, you are free to stop and inform me about your decision. If there is any question that you feel uncomfortable to answer, know that you do not have to answer it. Also know if there is anything that is not clear, or you want me to explain it to you further, feel free to ask me to do so.

PAYMENT FOR PARTICIPATION

Please note that you will not receive any money to be part of this study. You are doing it out of your own free will.

INFORMED CONSENT

Before we can start, you must please sign the form to give me your permission that you want to help me with my study. The information form in which I explained what my study is about is yours to keep.

QUESTIONS:

Should you have further questions or wish to know more, you can contact us as follows:

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Telephone	: Dr Karen Dos Reis
Email	: +27 21 959 3431
	: kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for parents: focus group

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Bazali A bathandekayo

Igama lam ngu-Antoinette Venter, Ndingumfundi ogqirha (inombolo yomfundi 3766109) kwi-Faculty yoQoqosho noLawulo lweNzululwazi kwiYunivesithi yeNtshona Koloni.

Ucelwa ukuba ube yinxalenye yesifundo sam kuba ndijonga iindlela endinokukunceda ngazo abantwana bakho ukuba baphumelele kwi-Accounting. Izifundo zezoBuchule kunye nezoQoqosho kwizifundo 10, 11 no-12.

Ndiza kukuchazela oko ndikufundayo, kwaye ndizimisele njaniukunceda abantwana bakho banqobe ubunzima babo kwezi zifundo.

Emva kokuba ndichaze yonke into, le fomu iya kunikwa, kwaye ukhululekile ukuxubusha ngoku ngakumbi nomfazi / umyeni / amanye amalungu omndeni kunye nabantwana bakho ekhaya. Nceda uzive ukhululekile ukundibuza nayiphi na imibuzo onokuyenza okanye ukuba awuqondi into ethile ngaphambi kokuba uvumele ukuba yinxenye yale sifundo.

INJONGO YOKUFUNDA

Kukho izizathu ezibini zokuba ndifuna ukwenza le sifundo. Isizathu sokuqala kukuba, sifuna ukuvavanya ulwazi lwabafundi beBakala 10 - 12 kwizakhono zeeNkxaso zeMfundo kwiZiko ezimbini eziphakamileyo kwiPhondo leNtshona Koloni. Isizathu sesibini kukuba, siya kuphinda sihlolisise iifundo kunye nolwazi olufunekayo kubafundi bokuqala bonyaka kufuneka baphumelele i-B Com Degree eyunivesithi.

Ndifuna ukufezekisa izinto ezintathu ngolu cwaningo. Into yokuqala (injongo) ukuchonga izikhhalazo ezifunyenwe yiYunivesithi ezingenakho kwikharithulam yezikolo, kunye nemingeni kunye neengxaki ezinokuthi abafundi bajamelane nazo esikolweni.

Into yesibini (injongo) kukufezekisa nokuvavanya ukungenelela ngexesha lokwesiqingatha sesibini se-2017 de kube sekupheleni kwe-Oktobha 2019 ukwenzela ukuba abafundi banqobe imingeni kunye neengxaki ezintle, kwaye baxhotyiswe ngolwazi olufunekayo kunye nezakhono ezifunekayo liyunivesithi kwi-Accounting, Studies Business and Disciplines.

Into yesithathu neyokugqibela (injongo) kukuphuhlisa imodeli yokungenelela esekelwe kwiziphumo kunye nokuvavanywa okungaqaliswa kwizikolo eziphakamileyo kulo lonke elaseMzantsi Afrika.

UKUPHUMA

Unokuqiniseka ukuba andiyi kubhengeza ubunikazi bakho kubani nabani na kwaye ndiya kuyiphatha ingcaciso on dibonelayo njengemfihlo. Kwakhona, ndiya kukuhlonipha njengoko Umzali, akuphulaphule kwaye akuncedise kwinkqubo.



Nceda uyazi ukuba undiyeka kumaphi na ukubuza imibuzo ukuba awuyiqondi into kwaye ukuba awufuni ukuphendula into eya kuhamba kakuhle. Ndiza kugcina yonke into kwindawo ekhuselekile yokugcina ukukhusela i-identity yakho namalungelo.

UKUQHUBEKA KWENKQUBO KUNYE NOKUBHALWA

Nceda wazi ukuba uyavuma ukuba yinxalenye yesifundo sam, uya kwenza oko ngaphandle kwakho. Oku kuthetha ukuba ukuba awufuni ukuba yinxalenye yale sifundo, undivumele ukuba ndiyazi kwaye andiyi kukuphoqa ukuba ube yinxalenye yesifundo. Kwaye nangona uvuma ukuba yingxenywe yale sifundo, kodwa ugqibe kwisithuba esilandelayo awufuni ukuqhubeka kwakhona, ukhululekile ukuyeka uze undixelele ngesigqibo sakho.

Ukuba kukho nayiphi na umbuzo ongaziva ukhululekile ukuphendula, yazi ukuba akufanele uphendule. Kwakhona uyazi ukuba kukho nayiphi na into engacacile, okanye ufuna ukuba ndikuchazele ngakumbi, zikhululeke ukuba undicele ukuba wenze njalo.

UKUHLAWULWA KWENKQUBO

Nceda uqaphele ukuba awuyi kufumana nayiphi na imali yokuba yinxalenye yale sifundo. Uyenza ngaphandle kwakho ngokwakho.

NGOKWENZA

Ngaphambi kokuba siqale, kufuneka uncede ungayine ifom ukuze unginike imvume yakho ukuba ufuna ukuncedisa ngokufunda kwam. Ifom yeenkcukacha apho ndichazile oko ndikufundayo ngokukwenu kungokwakho ukugcina.

IMIBUZO:

Ukuba unemibuzo eminye okanye unqwenela ukwazi ngakumbi, unokugqagamshelana nathi ngale ndlela:

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Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for lecturers/coordinators

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Participant

You are invited to participate in a research study conducted by Antoinette Venter with student number 3766109. It is in partial completion of the researcher's thesis towards the PhD Degree at the Faculty of Economic and Management Sciences, at the University of the Western Cape.

You will be expected to partake in two individual interviews of a hour long (one at the start of the data collection period and one after the intervention took place).

Before you decide to participate, it is important for you to understand the purpose of the research and what it would entail. Please take time to read the following information carefully and discuss it with others if you wish. If you are unclear of anything, I would be happy to answer any questions you have.

PURPOSE OF THE STUDY

The aim of the study is two-fold. Firstly, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. Secondly, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

The study has three objectives. The first objective is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second objective is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019, so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and final objective is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.

CONFIDENTIALITY

Please be advised that the results of the study will neither divulge the business school's particulars nor the individual particulars, as maintain confidentiality at all



times. Any information that can connect the responses to an individual or business school will be disclosed only with your permission. The researcher shall keep all records and tapes of participation, including a signed consent form which is required from you should you agree to participate in this research study, and locked away at all times.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

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PAYMENT FOR PARTICIPATION

There are no costs to the participant for partaking in the study and there is no monetary gain as a participant in this study.

INFORMED CONSENT

Your signed to consent to participate in this research study is required before I proceed to interview you. I have included the consent form with this information sheet so that you will be able to review this consent form and then decide whether you would like to participate in this study or not.

QUESTIONS:

Should you have further questions or wish to know more, I can be contacted as follows:

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Institute for Social Development, Faculty of Economic and Management Sciences

Participation information sheet for subject advisers/circuit manager

RESEARCH TITLE:

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

Dear Participant

You are invited to participate in a research study conducted by Antoinette Venter with student number 3766109. It is in partial completion of the researcher's thesis towards the PhD Degree at the Faculty of Economic and Management Sciences, at the University of the Western Cape.

You will be expected to partake in two individual interviews of a hour long (one at the start of the data collection period and one after the intervention took place).

Before you decide to participate, it is important for you to understand the purpose of the research and what it would entail. Please take time to read the following information carefully and discuss it with others if you wish. If you are unclear of anything, I would be happy to answer any questions you have.

PURPOSE OF THE STUDY

The aim of the study is two-fold. Firstly, it seeks to evaluate Grade 10 – 12 learners' knowledge and skills in the Business Education Learning Areas at two high schools in the Western Cape Province. Secondly, it will also examine the skills and knowledge requirements that prospective first-year students should have to pursue a B Com Degree at university.

The study has three objectives. The first objective is to identify the gaps which universities have identified that are lacking in the schools' curriculum, and the challenges and problematic areas that the learners are struggling with at school.

The second objective is to implement and evaluate interventions during the course of the second half of 2017 until the end of October 2019 so that the learners could overcome the challenges and problematic areas, and be equipped with the necessary knowledge and skills required by universities in the Accounting, Business Studies and Economic Disciplines.

The third and final objective is to develop an intervention's model based on the findings and evaluations that could be implemented in high schools throughout South Africa.

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PAYMENT FOR PARTICIPATION

There are no costs to the participant for partaking in the study and there is no monetary gain as a participant in this study.

INFORMED CONSENT

Your signed consent to participate in this research study is required before I proceed to interview you. I have included the consent form with this information sheet so that you will be able to review this consent form and then decide whether you would like to participate in this study or not.

QUESTIONS:

Should you have further questions or wish to know more, I can be contacted as follows:

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CONSENT FORMS



**Institute for Social Development, Faculty of
Economic and Management Sciences**

Consent form for learners

Title: The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.

I have read the information presented in the information letter about a study being conducted by **Antoinette Venter**, for a doctoral programme in the Faculty of Economic and Management Sciences, at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered.

Acknowledging the foregoing, I, _____
(full names of a parent/guardian), parent and/or legal guardian of the under-mentioned, over whom I have custody and control, hereby consent to my son/daughter/(full names) _____
to participate in this study.

I understand that my child's identity will not be disclosed and was informed that he/she may withdraw at any time by advising the student researcher. With full knowledge of all foregoing, I agree that my child can participate in this study.

Parent/guardian's name & surname : _____
Parent/guardian ID : _____
Parent/guardian's signature : _____
Date : _____
Place : _____

Student Researcher : Antoinette Venter
Student Research Signature: 
Student Number : 3766109
Mobile Number : 082 304 6675
Email : Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors : Dr Venicia McGhie
Telephone : +27 21 959 3041
Fax : +27 21 959 3780
Email : Vfmcghie@uwc.ac.za
: Dr Karen Dos Reis
Telephone : +27 21 959 3431
Email : kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Consent form for teachers and principals

Title: **The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.**

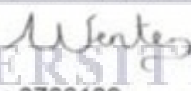
I have read the information presented in the information letter about a study being conducted by **Antoinette Venter** for a doctoral programme in the Faculty of Economic and Management Sciences, at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered.

I understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher. With full knowledge of all foregoing, I agree to participate in this study.

Participant Name : _____
Participant ID Number : _____
Participant Signature : _____
Date : _____
Place : _____

Student Researcher : Antoinette Venter

Student Research Signature: 
Student Number : 3766109
Mobile Number : 082 304 6675
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: kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Consent form for parents

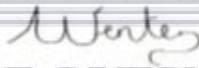
Title: **The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.**

I have read the information presented in the information letter about a study being conducted by **Antoinette Venter** for a doctoral programme in the Faculty of Economic and Management Sciences, at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered.

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Participant Name	:	_____
Participant ID Number	:	_____
Participant Signature	:	_____
Date	:	_____
Place	:	_____
Student Researcher	:	Antoinette Venter

Student Research Signature:	
Student Number	: 3766109
Mobile Number	: 082 304 6675
Email	: Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors	: Dr Venicia McGhie
Telephone	: +27 21 959 3041
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Email	: Vfmcghie@uwc.ac.za

Telephone	: Dr Karen Dos Reis
Email	: +27 21 959 3431
	: kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Consent form for subject advisers/circuit manager

Title: **The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.**

I have read the information presented in the information letter about a study being conducted by **Antoinette Venter** for a doctoral programme in the Faculty of Economic and Management Sciences, at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered.

I understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher. With full knowledge of all foregoing, I agree to participate in this study.

Participant Name _____
Participant ID Number _____
Participant Signature _____
Date _____
Place _____

Student Researcher : Antoinette Venter

Student Research Signature: *Antoinette Venter*
Student Number : 3766109
Mobile Number : 082 304 6675
Email : Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors : Dr Venicia McGhie
Telephone : +27 21 959 3041
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Email : Vfmcghie@uwc.ac.za

Telephone : Dr Karen Dos Reis
: +27 21 959 3431
Email : kdosreis@uwc.ac.za



Institute for Social Development, Faculty of Economic and Management Sciences

Consent form for university lecturers/coordinators

Title: **The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase.**

I have read the information presented in the information letter about a study being conducted by **Antoinette Venter** for a doctoral programme in the Faculty of Economic and Management Sciences, at the University of the Western Cape.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered.

I understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher. With full knowledge of all foregoing, I agree to participate in this study.

Participant Name	:	_____
Participant ID Number	:	_____
Participant Signature	:	_____
Date	:	_____
Place	:	_____

Student Researcher : Antoinette Venter

Student Research Signature:

Student Number

Mobile Number

Email

: 3766109

: 082 304 6675

: Antoinette.venter@westerncape.gov.za

I am accountable to my supervisors

Telephone

Fax

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: Dr Venicia McGhie

: +27 21 959 3041

: +27 21 959 3780

: Vfmcghie@uwc.ac.za

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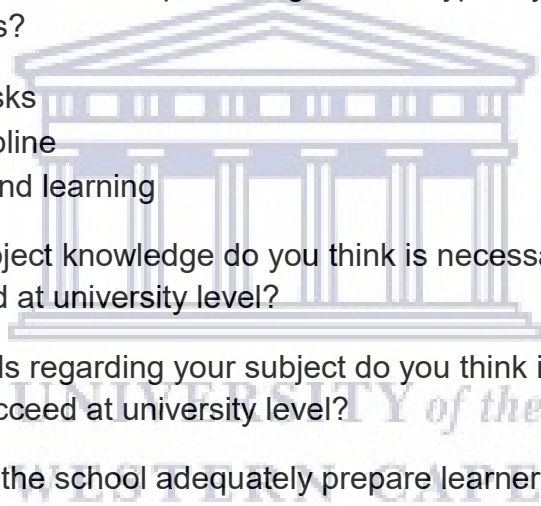
: kdosreis@uwc.ac.za

STRUCTURED INTERVIEW SCHEDULE

INTERVIEW QUESTIONS: ACCOUNTING/BUSINESS STUDIES/ECONOMICS TEACHERS

DISCUSSION POINTS:

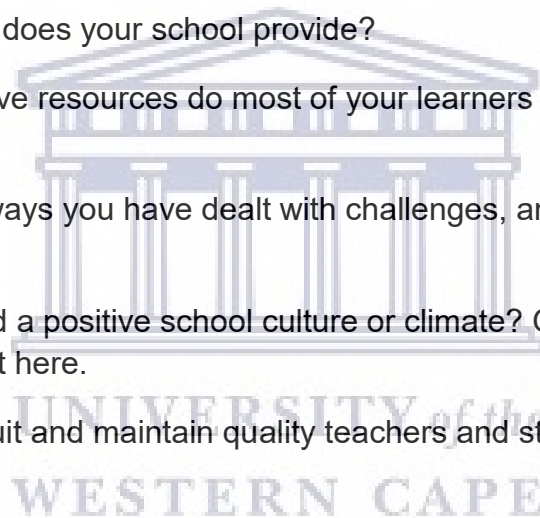
1. We would like to ask about your personal beliefs on teaching and learning.
2. Was the teaching of your subject part of your academic training?
3. Please estimate the broad percentage of learners whose first language is different from the language(s) of instruction.
4. For your specific class, what percentage time is typically spent on each of the following activities?
 - Administrative tasks
 - Maintaining discipline
 - Actual teaching and learning
5. What specific subject knowledge do you think is necessary to gain at high school to succeed at university level?
6. What specific skills regarding your subject do you think is necessary to gain at high school to succeed at university level?
7. Do you think that the school adequately prepare learners for university studies?
8. What type of challenges and problems are learners experiencing in your subject in Grades 10 – 12?
9. How can the learners be assisted to overcome the challenges and problematic areas in your subject so that they will acquire a good foundation for university studies?



INTERVIEW QUESTIONS: PRINCIPALS

DISCUSSION POINTS:

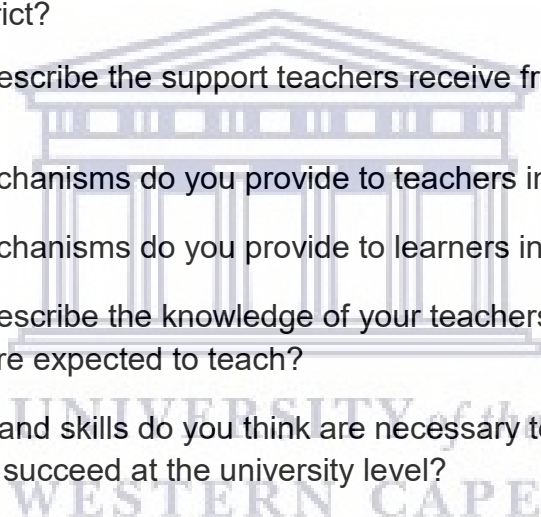
1. Indicate the importance your school gives to each of the following in setting grades for learners, e.g. effort, class participation and completing homework assignments and so on.
2. Please indicate the degree to which the parents of your learners are involved in the following activities relating to your school, e.g. parent meetings and other informal parent-teacher contacts and so on.
3. Please indicate the degree to which each of the following is a problem with learners in your school, e.g. absenteeism, class cutting, gang activity and so on.
4. Which resources does your school provide?
5. Which of the above resources do most of your learners have access to at home?
6. What are some ways you have dealt with challenges, and how did you find solutions?
7. How did you build a positive school culture or climate? Give examples of how you would do that here.
8. How do you recruit and maintain quality teachers and staff members?



INTERVIEW QUESTIONS: SUBJECT ADVISERS

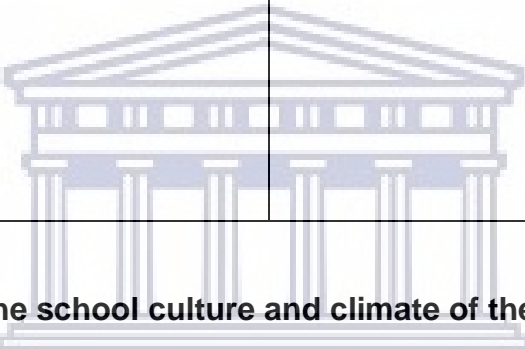
DISCUSSION POINTS:

1. How long have you been in the advisory service?
2. How would you describe quality teaching in your subject?
3. To what extent is quality teaching taking place in your district?
4. What factors obstruct quality teaching of the subject in Grades 10 – 12?
5. From your experience with beginner teachers, to what extent does initial teacher training prepare teachers for teaching the subject?
6. To what extent are your teachers in your district confident in all content areas of the subject?
7. To what extent are your teachers able to design and compile assessment tasks in your district?
8. How would you describe the support teachers receive from their HOD/principal?
9. What support mechanisms do you provide to teachers in your district?
10. What support mechanisms do you provide to learners in your district?
11. How would you describe the knowledge of your teachers in terms of the curriculum they are expected to teach?
12. What knowledge and skills do you think are necessary to gain at high school in your subject to succeed at the university level?
13. Do you think that the school adequately prepares learners in your subject for university studies?
14. What type of challenges and problems are learners experiencing in your subject in Grades 10 – 12?
15. How can the learners be assisted to overcome the challenges and problematic areas in your subject so that they will acquire a good foundation for university studies?

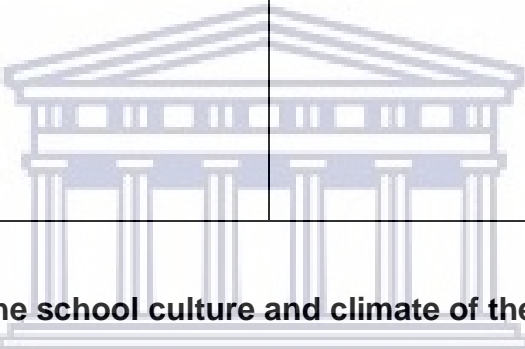


INTERVIEW QUESTIONS: CIRCUIT MANAGER: DISCUSSION POINTS

1. Please give a general impression of the two high schools in your circuit with regard to their functionality and performance.

School A	School B
	

2. Please discuss the school culture and climate of these two schools.

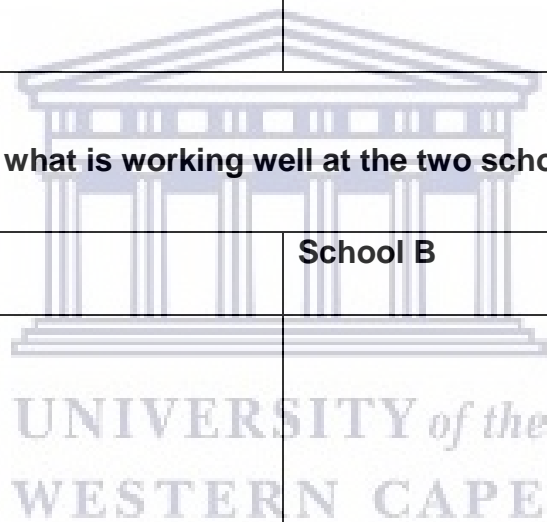
School A	School B
 <p>UNIVERSITY of the WESTERN CAPE</p>	

3. How could the school culture and climate be improved in both schools?

School A	School B

4. In your opinion, what is working well at the two schools?

School A	School B



5. What are the challenges and what solutions could you suggest?

SCHOOL A

CHALLENGES		SOLUTIONS
Absenteeism: learners		
Absenteeism: teachers		
Class cutting (when you don't attend a class or show up, for which your presence is expected without an excuse).		

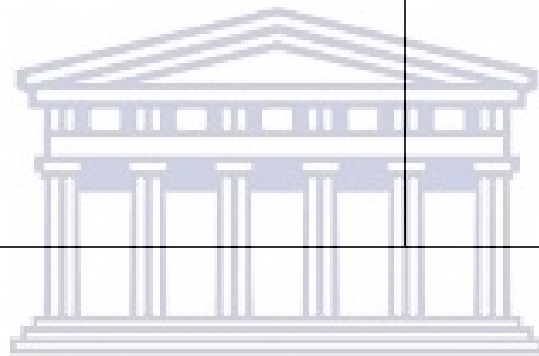


CHALLENGES		SOLUTIONS
Gang activity		
Parent involvement		
Resources		
Teacher: learner ratio		



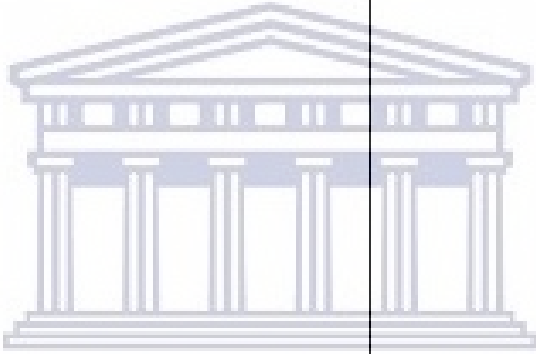
CHALLENGES		SOLUTIONS
Language and mathematical knowledge and skills of the teachers		
Language and mathematical knowledge and skills of the learners		
Quality teaching and learning		

CHALLENGES		SOLUTIONS
The number and quality of passes in Grade 12 or NSC for the last five years		



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SCHOOL B

CHALLENGES		SOLUTIONS
Absenteeism: learners		
Absenteeism: teachers	 UNIVERSITY of the WESTERN CAPE	
Class cutting (when you don't attend a class or show up, for which your presence is expected without an excuse).		

CHALLENGES		SOLUTIONS
Gang activity		
Parent involvement		
Resources		
Teacher: learner ratio		



CHALLENGES		SOLUTIONS
Language and mathematical knowledge and skills of the teachers		
Language and mathematical knowledge and skills of the learners		
Quality teaching and learning		

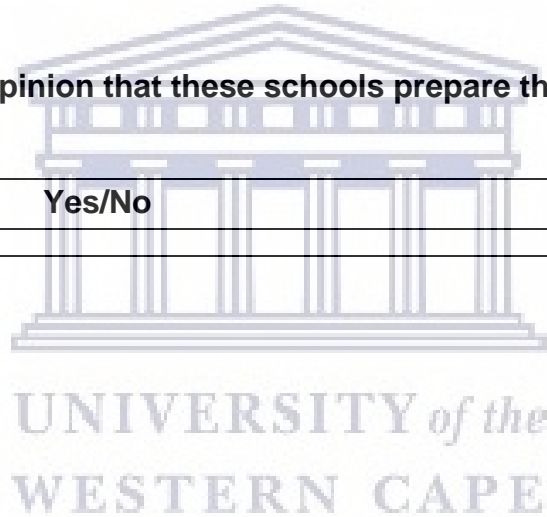


CHALLENGES		SOLUTIONS
The number and quality of passes in Grade 12 or NSC for the last five years		

6. Are you of the opinion that these schools prepare the learners for post-school studies?

School A: Yes/No


Reasons:



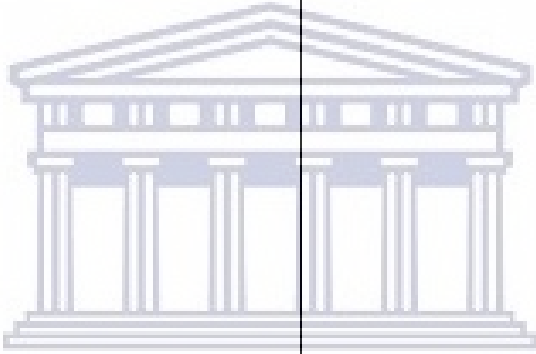
School B: Yes/No

Reasons:

7. Are these two schools compliant as to what is expected of them according to the Curriculum Assessment Policy Statement (CAPS)?

School A	School B
 <p>The logo of the University of the Western Cape, featuring a classical building with a pediment and columns, with the text "UNIVERSITY of the WESTERN CAPE" below it.</p>	

8. Any other comments or remarks about these two schools?

School A	School B
 <p>UNIVERSITY <i>of the</i> WESTERN CAPE</p>	

INTERVIEW QUESTIONS: UNIVERSITY LECTURERS/COORDINATORS

DISCUSSION POINTS:

1. How many years, including the current one, have you been teaching at a university?
2. What subject(s) do you teach?
3. In your opinion, does the school curriculum adequately prepare Grade 12 learners for your course/discipline at university level?

If yes, how? If not, why not?
4. What subject knowledge in your discipline is essential to gain in high school to be prepared for first-year university studies?
5. What advice (e.g. teaching, curriculum, guidance) would you give to high school teachers to help learners prepare for university studies?
6. Are you currently involved in any projects to assist high school learners in preparing them for university?
7. In your opinion, are learners coming to university studies with the following skills? Please explain/support your answer.
 - 7.1 Time management and identification of priorities
 - 7.2 Independent working
 - 7.3 Problem-solving skills
 - 7.4 Logical and conceptual work, structuring arguments
 - 7.5 Communication skills, in particular, sustained writing and report writing
 - 7.6 Reading, note-taking and listening
 - 7.7 Some aspects of social and interpersonal skills
8. What type of intervention strategies do you have in place for students who are at risk of failing your module?

Description for the data collection method

1. Questionnaire and reflection forms

As stated in the previous section, a questionnaire was administered to the learner participants of both schools during the third cycle of term 1 in 2019. Babbie (2004:444) defined a questionnaire as “a document containing questions and other types of items designed to solicit information appropriate for analysis”. The purpose of the questionnaire was to elicit responses from the learners with regard to their biographical information, the way they experience their school conditions and environment, and to determine their ownership of learning. Their responses were used to answer the first two sub-questions of this study.

The questionnaire consisted of six sections. The first section had two quantitative questions in which the researcher wanted to track what year the learners started and what subject they were enrolled for. The second section was about the learners’ biographical information and it had nine questions, eight quantitative and one qualitative. The third section was about questions related to their school and consisted of 61 quantitative questions. The fourth section was about questions related to time management and consisted of 34 quantitative questions. Section five was about questions on their beliefs about learning and consisted of 14 quantitative questions. The last section was general questions, consisting of seven questions of which two were quantitative and five were qualitative (refer to Appendix S).

Of the 30 learners selected in 2017 at School A, only 20 learners completed the questionnaire in 2019 (Accounting = 5; Business Studies = 8; and Economics = 7). Similarly for School B, only 20 learners of the 30 learners completed the questionnaire (Accounting = 7; Business Studies = 3; and Economics = 10).

There were various reasons why the cohorts selected decreased from 30 learners in 2017 to 20 in 2019, i.e. some learners failed their grade and dropped out of school; some went to another school; some changed their subjects; some were not motivated to attend all the interventions over the course of the three years; and some learners were absent from school.

Two reflection forms were also administered to the learner participants. The reflection forms consisted of questions about the impact or effect that the past interventions had on the following aspects: subject/content knowledge, language, and logical thinking skills,

application skills, critical analysis, problem-solving, debating and communication skills, research skills and mathematical skills. The reflection forms consisted of 13 questions, 11 quantitative and two qualitative. The first reflection form was completed on the same day as the questionnaires during school time on 1 March 2019 at School A and on 5 April 2019 at School B. The purpose of the first reflection form was for the learners to reflect on the five intervention sessions that were implemented in 2017 (two) and 2018 (three). The same learners who completed the questionnaire also completed the first reflection form (refer to Appendix T).

The second reflection form (with the same questions) was completed on 10 May 2019 at School A and on 17 May 2019 at School B. The purpose of this reflection form was to reflect on the two interventions sessions of 2019. Similar to the first reflection form, there was also a decrease in the cohort of 30 learners in 2017 to 20 in 2019 at School A and from 30 learners in 2017 to 17 in 2019 at School B. The distribution of the learners across the three subjects was also different in 2019 compared to when the learners were selected in 2017 (refer to Section 5.6.3). There were four Accounting learners, six Business Studies learners and 10 Economics learners at School A, and seven Accounting learners, two Business Studies and eight Economics learners at School B.

2. Interventions implemented to increase the learners' skills and knowledge

As stated in Section 5.5.1, three interventions were implemented to increase the learners' skills and knowledge. Kaggwa (2003) explains academic performance as the quality and quantity of knowledge, skills, techniques and positive attitudes, behaviours, and philosophies that learners achieve. He also defined intervention as a systematic and explicit instruction provided to accelerate growth in an area of identified need (Kaggwa, 2003). The interventions took place in three cycles: In 2017 when the learners were in Grade 10, in 2018 when they were in Grade 11 and the last intervention took place in 2019 when the learners were in Grade 12.

The dates were chosen due to the twofold aim of the interventions. It was to facilitate learning with regard to the knowledge that the learners were lacking, and to provide additional academic support on the content of CAPS that the teachers already covered so that learners' chances of performing well in the major examinations in June and November could be strengthened.

The interventions took place on a Saturday morning in 2017. Transport was arranged for all the learners. The researcher conducted the interventions for the Accounting subject, and two tutors (qualified teachers) assisted with the Business Studies and Economic subjects. However, interventions took place on a Friday afternoon in 2018 and 2019 as it was more convenient for the learners who were living far from the school. The two tutors who assisted with the interventions in 2017 were not able to assist in 2018 and 2019, and two new tutors (qualified teachers) conducted the interventions in Business Studies and Economics in 2018 and 2019.

Similar to the reflections, not all the learners who were selected to participate in the study attended the interventions. It should be noted that other learners who were not selected also participated in the interventions as the teachers invited all the learners to the interventions. This was done because the teachers wanted all the learners to benefit from the extra classes and the researcher agreed to that arrangement. The researcher was only able to determine how many of the learners who were originally selected in 2017 had attended all the interventions over the three-year period per school in 2019 when the last interventions took place. For School A, 15 of the 30 learners (four Accounting, eight Business Studies and three Economics learners) attended all the interventions from 2017 to 2019. For School B, only 12 of the 30 learners (five Accounting, one Business Studies and six Economics learners) attended all the interventions from 2017 to 2019. Appendix L reflects the three cycles, the dates that the interventions took place, and the content that was covered, as well as the rationale for why the specific content was covered in each of the three subjects, per school.

Challenges were identified in both schools during the interventions. For School A, the interventions could not start on time due to the learners arriving late on the Saturday morning in 2017, some learners did not show up despite the fact that transport was arranged for them, and a language barrier (most of the learners in School A were second or additional speakers of English). The background of the learners in terms of prior knowledge was lacking and the learners did not know the formats of the financial statements (if you do not know the formats, you will not be able to complete the financial statements in Accounting for example). The learners found it challenging when confronted with the circular flow drawn in another way, and they struggled to draw and interpret graphs.

Another key challenge was experienced at School A. The learners were not informed of the date of the last intervention at the school in 2019. The result was that some of the learners

who were supposed to be there went home and the teacher then randomly invited learners who were still on the school premises to attend the intervention as it took place on Friday afternoon directly after the school day ended. This occurred despite the fact that the researcher sent numerous communication and reminders about the dates and times of the interventions. The teachers did not realise that the same cohort of learners who were selected to participate in the study in 2017 were supposed to attend all the interventions.

At School B, the challenges were poor attendance of the learners and the fact that the class was bilingual (Afrikaans and English), which meant that it took longer to teach and explain the content in both languages. The learners lacked prior knowledge and background information in the subjects, and they did not have a proper understanding of the content and struggled to draw and interpret graphs. Two Business Studies learners left after the pre-test, and one learner joined the group at the last intervention in 2019 for the first time. Based on all the above challenges encountered during the interventions, it should be noted that only 27 of the 60 learners' data that were collected and presented in Chapter 6, were discussed and interpreted in Chapter 7. This was due to the fact that all the learners who attended the interventions completed the pre-test and the post-test, and it was only after the last interventions in 2019 that the researcher sorted the data and matched it to the cohort of learners who were originally selected to participate in the study in 2017.

3. Focus group discussions

3.1 Focus group discussions: Learners

Six focus group discussions with the learners (three per school, one per subject) were conducted and two with the parents (one per school). Silverman (2016:84) explains that a focus group methodology is a way of collecting qualitative data, typically engaging a small number of people in an informal group discussion (or discussions), "focused" around a particular topic or set of issues. The aim of the six focus group discussions with the learners was to determine what the learners' expectations were of university and if the schools provided guidance and career counselling to the learners. PowerPoint slides were used with the questions in English and Afrikaans to help the learners understand the questions (refer to Appendix U).

The three focus group discussions with the learners took place at School A on 10 May 2019 and the other three at School B on 17 May 2019. At School A, the first group consisted of six

Accounting learners, the second group of seven Business Studies learners and the third group comprised 10 Economics learners, totalling 23. At School B, the first group consisted of six Accounting learners, the second group of eight Business Studies learners and the third group of 10 Economics learners, totalling 24.

During the focus group discussions, the researcher recorded the learners' verbal responses and wrote notes as well (McBurney, 1994). Each participant in the group was given an opportunity to answer the questions to avoid dominance by individual participants, as suggested by Mills (2007).

3.2 Focus group discussion: Parents

At the start of the focus group discussion with the parents, the researcher first explained the study and gave the background and the aim of the study and obtained their consent (refer to Appendix P; this is the consent form by ethical consideration). The overall purpose of the questions for the focus group discussion with the parents was to determine the role and responsibilities of the school and parents to prepare the learners for post-school studies. Similar to the learners, PowerPoint slides were used with the questions in English, Afrikaans and isiXhosa to help the parents understand the questions (refer to Appendix U).

The first focus group discussion with School B's parents took place on Saturday, 6 April 2019. Twenty parents attended the meeting. The second focus group discussion with School A occurred on Wednesday, 17 April 2019 and thirty parents attended this meeting. Arranging the date and time of the parent meeting with the department head and principal at School A was a challenge. It was also arranged for 6 April 2019 but could not take place. To confirm another date entailed several e-mails and cell phone messages. The department head had a meeting with the learners to obtain the parents' contact numbers and to convince the parents to attend the meeting. The department head gave the learners letters to give to their parents. Fortunately, 30 parents attended this meeting. At the focus group meeting with the parents, the researcher had an isiXhosa teacher who translated everything into isiXhosa. The communication was difficult because the researcher could not understand isiXhosa, but the translator tried to translate for the parents into isiXhosa and for the researcher into English.

4. Semi-structured interviews

A semi-structured interview schedule consisting of a list of open-ended questions based on the topic being researched was used to collect qualitative data in the study. Creswell (2012)

explains that in qualitative research, open-ended questions allow participants to voice their experiences unconstrained by perspectives of the researcher or past research findings. Semi-structured schedules offer the value of using fixed questions, as in a structured interview, while allowing enough flexibility for the interviewee to speak freely about any topic raised during the interview (Wahyuni, 2012:74). Another advantage or strength of using semi-structured interviews is that it allows questions to be explained or rephrased where respondents are unclear about the wording. Common steps in interviewing across the methodological range are that interviews should be recorded and transcribed so that there is a solid database for analysis (Flick, 2014).

Eighteen semi-structured interviews were conducted with the six teachers, three subject advisers, two principals, one circuit manager and six lecturers. This made it possible to ask the participants the same core questions with the opportunity to ask follow-up or probing questions built on initial responses received (Brenner, 2006). The interviews were conducted from April 2018 to March 2019.

In the initial stages of data collection, appointments were scheduled with the participants. A brief background of the research project was provided (see Appendix O for the information sheets and Appendix P for the consent forms). All interviews were completed at times convenient to participants. All of the interviews took between 45 – 60 minutes to complete. Interviews were audio recorded and transcribed; each manually coded and then analysed to reveal data obtained from interviews. Recording interviews are useful because one can check that the verbatim quotations of the participants were accurately transcribed (Bell, 1987).

QUESTIONNAIRE: LEARNERS

When did you start with these interventions?

2017	
2018	
2019	

BIOGRAPHICAL

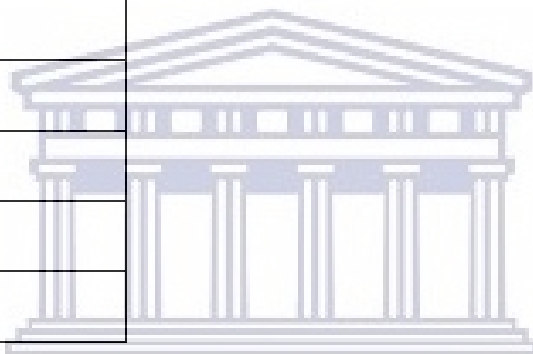
INFORMATION

Which subject are you attending at the interventions?

Accounting	
Business Studies	
Economics	

1. How old are you?

15 years	
16 years	
17 years	
18 years	
19 years	
20 years	



2. From which grade did you start attending this school?

Grade 8	
Grade 9	
Grade 10	
Grade 11	
Grade 12	

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3. If you attended another school before this one, why did you leave and come to this school?

4. What is your racial or ethnic identification?

White	
Coloured	
Black	
Other	

5. What is your home language?

Afrikaans	
English	
IsiXhosa	
Other	

6. Do you live with your parents/grandparents/sister(s)/brother(s)/other family members?

Parents	
Grandparents	
Sister(s)	
Brother(s)	
Another family member	

7. If you live with your parents, are they employed or unemployed, or do they receive a social grant from the government?

Employed	
Unemployed	
Social grant	
Other	

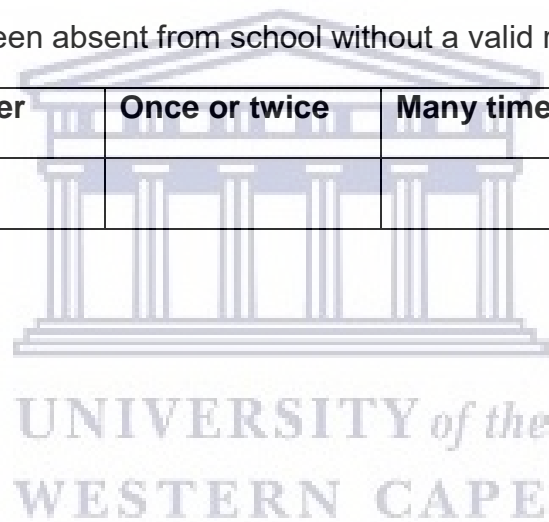


8. What is the highest level of education obtained by any of your immediate family members?

University/college	
Matric	
Grade 10 – 11	
Grade 7 – 9	
Grade 4 – 6	
Grade R – 3	
I don't know	

9. Have you ever been absent from school without a valid reason?

Never	Once or twice	Many times



1. QUESTIONS RELATED TO YOUR SCHOOL

How do you feel about each of the following statements related to your school?	Yes	No	Sometimes	Not sure
1.1 I have a voice in classroom and/or school decisions				
1.2 My opinions are respected in this school				
1.3 Teachers try to engage me in classroom discussions				
1.4 I am challenged academically by my classwork				
1.5 I have opportunities to be creative in classroom assignments and projects				
1.6 I received good quality teaching at this school				
1.7 I can be who I am at this school				
1.8 This school makes me feel confident about who I am				
1.9 I am involved in different activities at my school				
During this school year, how often have you done each of the following?	Often	Sometimes	Only once or twice	Never
1.10 Asked or answered questions in class				
1.11 Talked to a teacher about your classwork				
1.12 Made a class presentation				
1.13 Received helpful feedback from teachers on your work				
1.14 Discussed questions in class that do not have one clear answer				
1.15 Used what you have learned in one class (or subject area) to enrich your work in another class (or subject area)				
1.16 Written a report, essay, etc. of fewer than five pages				
1.17 Written a report, essay, etc. of more than five pages				
1.18 Worked on a project during which you needed to find information not available in your textbooks				
1.19 Written tests with multiple-choice questions				
1.20 Written tests with longer answers such as paragraphs, essay questions or problems that you need to solve				

During this school year, how often have you done each of the following?	Often	Sometimes	Only once or twice	Never
1.21 Worked on a project during which you needed to interact with people outside of your school (for example, conduct interviews in your community)				
1.22 Worked on a project in a group with other learners				
1.23 Discussed your marks with teachers				
1.24 Discussed ideas from your classes, your reading, or your homework with teachers outside of class				
1.25 Discussed ideas from your classes, your reading, or your homework with other people outside of class (e.g. friends, family, members of your community, etc.)				
1.26 Talked to or worked with at least one learner from a different race or culture				
1.27 Talked to or worked with at least one learner who is different from you in terms of religion, political opinion, family income, or personal values				
1.28 Talked to a teacher in the school about career goals				
1.29 Talked to a teacher in the school about how to apply for university				
1.30 Attended class with all your homework completed				
1.31 Attended class with no homework completed				
1.32 Prepared a draft of a report, essay, etc. before handing it in				

To what extent do you think your school emphasises the following?	Very much	Sometimes	Seldom	Never
1.33 Memorising facts and figures				
1.34 Understanding information and ideas				
1.35 Analysing ideas in depth				
1.36 Exploring new ideas				
1.37 Using computers for school work				
1.38 Spending a lot of time studying, doing schoolwork or doing homework				
1.39 Spending a lot of time preparing for the end-of-year tests or exams				
1.40 Continuing to study after school (i.e. FET College, university, etc.)				
1.41 Participating in school events and activities (sport, plays, choir, etc.)				
How much has your experience at this school contributed to your growth in the following areas?	A lot (80-100%)	Average (60-40%)	Very little (20%)	Not at all (0%)
1.42 Thinking critically				
1.43 Solving real-world problems				
1.44 Speaking well				
1.45 Writing well				
1.46 Reading and understanding difficult material				
1.47 Using computers and the internet				
1.48 Being an independent learner				
1.49 Understanding yourself				
1.50 Working well with others				
1.51 Developing skills needed for work when you have finished school				
1.52 Gaining awareness of conditions in the community outside of school				
1.53 Developing clear career goals				
1.54 Understanding the relevance of what you learn in school for life after school				
1.55 Understanding people of other racial and ethnic backgrounds				
1.56 Treating people with respect				
1.57 Developing personal beliefs and values				

Which of the following have you done during high school? (Please select either 'yes' or 'no' for each of the options)	Yes	No
1.58 Participated in community service or volunteer work		
1.59 Participated in work experience programme(s)		
1.60 Taken part in any educational activities or programme(s) offered by a local university		
1.61 Taken any additional subjects beyond what is compulsory		

2. QUESTIONS RELATED TO TIME MANAGEMENT

How many hours do you spend on average per week (Monday-Sunday) doing each of the following activities?	None	1 or fewer	2 – 5	6 – 9	10 or more
2.1 Doing written homework					
2.2 Reading and studying for class					
2.3 Reading for yourself (books, magazines, newspapers, online articles, etc.)					
2.4 Participating in school-sponsored activities (clubs, sport, learner governance, etc.)					
2.5 Practising a sport and/or musical instrument and/or rehearsing for a performance					
2.6 Working for pay					
2.7 Doing volunteer work (not for pay)					
2.8 Exercising					
2.9 Watching television, playing video games					
2.10 Surfing the internet or chatting online					
2.11 Talking on the phone (including cell phones)					
2.12 Hanging out or socialising with friends outside of school					
2.13 Travelling to and from school by taxi					
2.14 Travelling to and from school by bus					
2.15 Walking to and from school					
2.16 Taking care of family members (ill parents, younger siblings, grandparents and so on)					
2.17 Doing chores at home (preparing food, cleaning, washing clothes, etc.)					

How important are each of these activities to you?	Not at all	A little	Somewhat important	Very important	Top priority
2.18 Doing written homework					
2.19 Reading and studying for class					
2.20 Reading for yourself (books, magazines, newspapers, online articles, etc.)					
2.21 Participating in school-sponsored activities (clubs, sport, learner governance, etc.)					
2.22 Practising a sport and/or musical instrument and/or rehearsing for a performance					
2.23 Working for pay					
2.24 Doing volunteer work (not for pay)					
2.25 Exercising					
2.26 Watching television, playing video games					
2.27 Surfing the internet or chatting online					
2.28 Talking on the phone (including cell phones)					
2.29 Hanging out or socialising with friends outside of school					
2.30 Travelling to and from school by taxi					
2.31 Travelling to and from school by bus					
2.32 Walking to and from school					
2.33 Taking care of family members (ill parents, younger siblings, grandparents and so on)					
2.34 Doing chores at home (preparing food, cleaning, washing clothes, etc.)					

3. QUESTIONS RELATED TO YOUR BELIEFS ABOUT LEARNING

How do you feel about the following statements related to your beliefs about learning?	Strongly disagree	Disagree	Agree	Strongly Agree
3.1 Learning is very important to me				
3.2 I have the skills and ability to complete my work successfully				
3.3 I try very hard when doing my school work				
3.4 I am motivated to do my school work because I want to learn new things				
3.5 I like it when I can be creative at school				
3.6 I like working on problems that are difficult and require a lot of thinking				
3.7 My school work makes me curious to learn about other things				
3.8 I like discussions when there is no clear right or wrong answer				
3.9 My marks are important to me				
3.10 I feel good about myself as a learner				
3.11 I feel good about myself as person				

To what extent does each of the following types of activity excite or encourage you to learn?	Not at all	A little	Some	Very much
3.12 Reading on my own				
3.13 Writing work/projects (e.g. essays)				
3.14 Research work/projects				

4. GENERAL QUESTIONS

4.1 In what category do MOST of your marks fall THIS YEAR? (Mark one option only)	
Achievement level 7 (80% – 100%)	
Achievement level 6 (70% – 79%)	
Achievement level 5 (60% – 69%)	
Achievement level 4 (50% – 59%)	
Achievement level 3 (40% – 49%)	
Achievement level 2 (30% – 39%)	
Achievement level 1 (0% – 29%)	
Don't know	

4.2 What are your plans after completing Grade 12?

Go to university/college	
Look for work	
I don't know	

4.2.1 List the university/college funding opportunities you know of, e.g. bank loans, bursaries, other types of financial support.

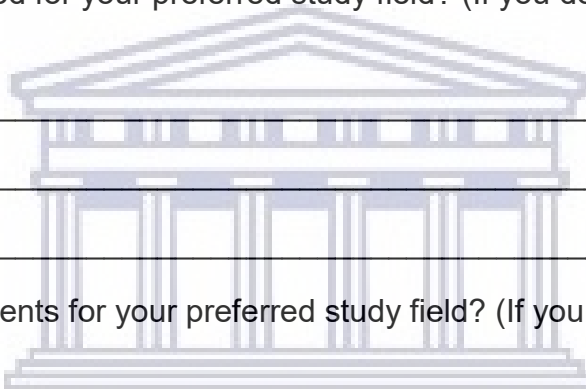
4.2.2. If you selected university/college above:

(a) What would you like to study?

(b) Why do you want to study it?

(c) What subject choices are required for your preferred study field? (If you do not know you can simply write, "I don't know".

(d) What are the minimum requirements for your preferred study field? (If you do not know you can simply write, "I don't know").



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Thank you for taking the time to complete the questionnaire.

REFLECTION FORM: LEARNERS

When did you start with these interventions?

2017	
2018	
2019	

Which subject are you attending at the interventions?

Accounting	
Business Studies	
Economics	

What impact or effect did past interventions have on the following aspects?

Indicate just one answer per question with a cross (x)

1.1 Subject/content knowledge

Did the teaching of facts, concepts, principles, and theories in the extra classes help you to understand the content better in the textbook, tests



No, it did not help me



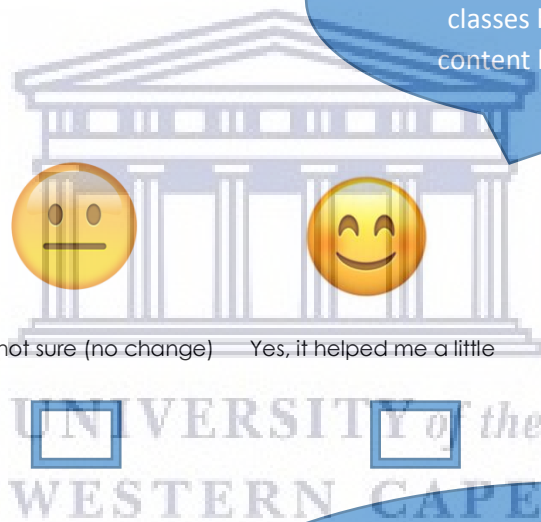
I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot



1.2 Language and logical thinking skills

Language skills are listening, speaking, reading and writing. Logical thinking (reasoning) skills are the ability to focus on the presented task by following the chain of the thought process by relating one statement after another, until finding the most logical conclusion/answer.



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

1.3 Application skills

Application skills are the application of facts, rules, concepts, and ideas in situations and circumstances in order to show that you can use what you have learned in different ways.



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

1.4 Critical analysis

Critical analysis means that you break down information into smaller parts, and are able to distinguish between facts and opinions.



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

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1.5 Problem solving

Problem solving is a process of working through details of a problem or situation in order to find a solution.



No, it did not help me



I am not sure (no change)

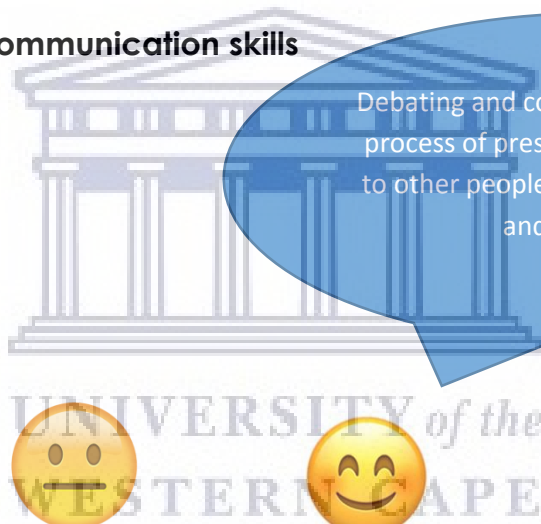


Yes, it helped me a little



Yes, it helped me a lot

1.6 Debating and communication skills



Debating and communication skills are a process of presenting ideas or opinions to other people with accurate grammar and vocabulary.



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

1.7 Research skills

Research skills mean that you can search for answers to questions and problems.



No, it did not help me



I am not sure (no change)

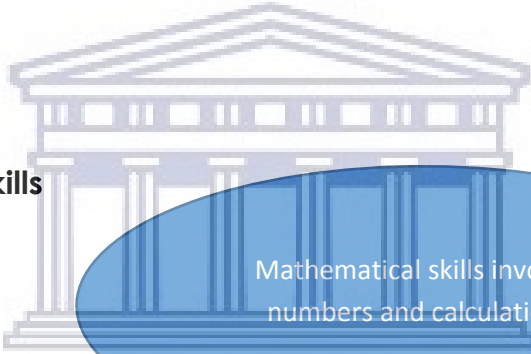


Yes, it helped me a little



Yes, it helped me a lot

1.8 Mathematical skills



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Mathematical skills involved numbers and calculations.



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

2. Did the extra classes help you to improve the marks of your specific subject or subjects?



No, it did not help me



I am not sure (no change)



Yes, it helped me a little



Yes, it helped me a lot

3. Is there anything else that you have learnt? If yes, please explain it in a few sentences.

4. Do you have any other comments or suggestions?



Thank you!

INSIGGEWENDE VORM: LEERDERS

Wanneer het jy met die intervensies begin?

2017	
2018	
2019	

Watter vak het jy bygewoon met die intervensies?

Rekeningkunde	
Besigheidstudies	
Ekonomie	

Watter impak of uitwerking het die vorige intervensies op die volgende afdelings gehad? Merk slegs een antwoord per vraag met 'n kruisie (x).

1.1 Vak/inhoudskennis:

Het die onderrig van feite, konsepte, beginsels en teorieë in die ekstra klasse jou gehelp om die inhoud in die handboek, toetse en eksamens beter te verstaan?



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.2 Taal- en logiese denkvaardighede

Taalvaardighede is luister, spraak, lees en skryf. Logiese denkvaardighede (redenasië) is die vermoë om te fokus op die taak, deur die ketting van die denkproses te volg deur een stelling aan die ander te koppel, totdat die mees logiese gevolgtrekking/antwoord gevind word.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.3 Toepassingsvaardighede

Toepassingsvaardighede is die toepassing van feite, reëls, konsepte en idees in situasies en omstandighede om te wys dat jy dit wat jy geleer het , op verskillende maniere kan gebruik.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.4 Kritiese ontleding

Kritiese ontleding beteken dat jy inligting in eenvoudiger dele afbreek, en tussen feite en opinies kan onderskei.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.5 Probleemoplossing

Probleemoplossing is 'n proses om deur die besonderhede van 'n probleem te werk om 'n oplossing te bereik.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.6 Debattering en kommunikasievaardighede

Debattering en kommunikasievaardighede is 'n proses om idees of menings met behulp van korrekte taalgebruik en woordeskat aan ander mense voor te stel.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.7 Navorsingsvaardighede

Navorsingsvaardighede beteken dat jy vir antwoorde op vroe en probleme kan soek.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

1.8 Wiskundige vaardighede

Wiskundige vaardighede behels getalle en berekeninge.



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

2. **Het die ekstra klasse jou gehelp om jou spesifieke vak of vakke se punte te verbeter?**



Nee, dit het my nie gehelp nie Ek is nie seker nie (geen verandering) Ja, dit het my gehelp Ja, dit het my baie gehelp

3. **Is daar enige iets anders wat jy geleer het? Indien ja, verduidelik dit kortliks.**

4. **Het jy enige ander kommentaar of voorstelle?**



Dankie

IFOM YOKUZIKISA UKUCINGA: ABAFUNDI

Uqale nini na ngamanyathelo

2017	
2018	
2019	

Nguwuphi na umxholo oya kwiindlela zokungenelela?

Ukuphendula	
Izifundo zoShishino	
Qoqosho	

1. Ungenelelo ngoncedo oludlulileyo lube nezphi iimpembelelo okanye iziphumo kule miba ilandelayo? Bonisa impendulo enye yombuzo ngamnye ngononxa (x).

1.1 Ulwazi/Ikhontenti yesifundo

Ngaba ukufundiswa kwemiba eyinyani, imigaqo, kunye neengcamango kwiiklasi ezongezelelweyo kukunceda uqonde umxholo ngcono kwiincwadi zezifundo,



Hayi, akuzange kuncede



Andiqiniseki (akukho tshintsho)



Ewe, kwandinceda kancinane



Ewe, kwandinceda kakhulu

1.2 Izakhono zolwimi kunye nezokucinga ngokusengqiqweni

Izakhono zolwimi zikukuphulaphula, ukuthetha, ukufunda nokubhala. Izakhona zokucinga (ingqiqo) zizakhono zokukwazi ukugxila emsebenzini owenziwe ngokulandela inkqubo yokucinga elungeleleneyo



Hayi, akuzange kuncede



Andiqiniseki (akukho tshintsho)



Ewe, kwandinceda kuncinane



Ewe, kwandinceda kakhulu

1.3 Izakhono zoSetyenziso

Izakhono zosetyenziso kukusetyenziswa kwemiba eyinyani, imigaqo, iingcamango, neemeko, ukwenzela ukubonisa ukuba unokusebenzisa oko ukufunde ngeendlela ezahlukileyo.



Hayi, akuzange kuncede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kancinane Ewe, kwandinceda kakhulu

1.4 Ukuhlalutya ingcaciso

Indlela yokuhlalutya ingcaciso ngokwezigaba ezincinane nokubanako ukwahlula phakathi kwemiba eyinyani nezimvo.



Hayi, akuzange kuncede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kuncinane Ewe, kwandinceda kakhulu

1.5 Ukusombulula ingxaki

Ukusombulula ingxaki yinkqubo yokusebenza ngeenkukacha zengxaki okanye imeko ethile ukwenzela ukufumana isisombululo.



Hayi, akuzange kuncede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kancinane Ewe, kwandinceda kakhulu

1.6 Izakhono zokuxoxa nokunxibelelana

Izakhono zokuxoxa nokunxibelelana yinkqubo yokuchaza iingcamango okanye izimvo kwabanye abantu ngegama nesigama esichanekileyo



Hayi, akuzange kuncede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kancinane Ewe, kwandinceda kakhulu

1.7 Izakhono zophando:

Izakhono zophando zithetha ukuba unokukhangela iimpendulo kwimibuzo nakwiingxaki



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1.8 Izakhono zeMathematika:

Izakhono zemathematika zibandakanya amanani nezibalo.



Hayi, akuzange kuncede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kancinane Ewe, kwandinceda kakhulu

2. Ingaba iiklasi ezongezelelweyo zakunceda ukuba uphucule amanqaku akho esifundo okanye izifundo ezithile?



Hayi, akuzange zinede Andiqiniseki (akukho tshintsho) Ewe, kwandinceda kancinane Ewe, zandinceda kakhulu

3. Ingaba ikhona enye into oyifundileyo? Ukuba ngu-ewe, nceda cacisa ngezivakalisi ezimbalwa.

4. Ingaba unawo nawaphi na amazwi okanye iingcebiso onazo?

Ndiyabulela.



FOCUS GROUP DISCUSSIONS: PARENTS AND LEARNERS

The provision of epistemological access for successful student learning at university: Towards an intervention model for business education learners in the Further Education and Training (FET) Phase

Antoinette Venter
Focus Group Discussions: parents
Wednesday 17 April 2019






Overview

Purpose

- Interventions from 2017
- Support the learners to be assisted and equipped to be able to access higher education.
- Buy-in of parents to developed an intervention model to be implemented in all schools

Explanation of study
Discussion points
Questions

Explanation of study

The skills and knowledge that learners in public high schools develop are not enough to help them when they go to university or college.




Explanation of study



- This study is trying to strengthen the learners' skills and knowledge so that they pass their business education subjects and be ready for university or college



Explanation of study

This study seeks to make a contribution in the form of an intervention model that all the stakeholders in the Business Education Learning Area could use to lay a solid foundation for learners in Grade 10 – 12.

Intervention Model

Discussion points



Discussion points: Parenting



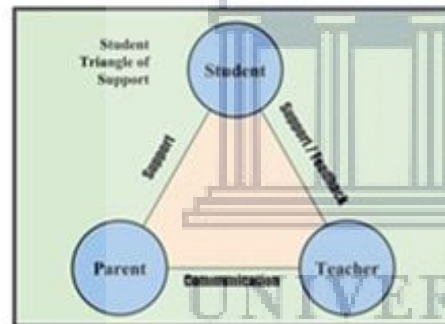
Discussion points		
How successful is your school in terms of?	Hoe suksesvol is jou skool in terme van?	Ingakanani impumelelo yesikolo sakho malunga nale mibandelayo?
Parenting (does this school provide continuous advice to be a better parent?)	Ouerskap (kry u raad van die skool om 'n beter ouer te wees?)	Ubuzali (ingaba isikoli siyakunika ingcebiso ekoxhasayo ekuphuculeni ubuzali bakho?)

Discussion point: Communication



Discussion points		
How efficient is the school in terms of?	Hoe doeltreffend is die skool in terme van?	Ingakanani impumelelo yesikolo malunga nale mibandelayo?
Communication (from the school to you as parents) e.g. letters, marks, sms's, meetings and absenteeism etc.	Kommunikasie (vanaf die skool met jou as ouers) bv. briewe, punte, sms's, vergaderings en afwesighede ens.	Unxibelelwano (olusuka esikolweni lusiza kwe njengomzali) umz. iileta, amanqaku, iisms, iintlanganisio kunye nokungahanjwa kwesikolo nj.nj.

Discussion point: Communication



Discussion point: Volunteering



Discussion points		
How efficient is the school in terms of?	Hoe doeltreffend is die skool in terme van?	Ingakanani impumelelo yesikolo malunga nale mibandelayo?
Volunteering (does the school give you the chance to be involved) e.g. sports days, functions etc.	Vrywillige diens (gee die skool vir jou as ouer 'n kans om betrokke te wees) bv. sportdae, funksies ens.	Ukuzivolontya (ingaba isikoli siyakunika iithuba lokuthatha inkxhaba) umz. ngentsuku zemidlalo, ngeminye imisebenzisa yesikolo nj.nj.

Discussion point: Learning at Home



Discussion points		
How efficient is the school in terms of?	Hoe doeltreffend is die skool in terme van?	Ingakanani impumelelo yesikolo malunga nale mibandelayo?
Learning at home (does the school motivate the learners to study at home?)	Besluitneming (help die skool die leersers om bv. die regte vakke te kies)?	Ukufunda/inkqubo yokufunda ekhaya (ingaba isikoli siyabakhuthaza abafundi ukuba bacinike iithuba lokufunda ekhaya?)

Discussion point: Decision Making



Discussion points		
How efficient is the school in terms of?	Hoe doeltreffend is die skool in terme van?	Ingakanani impumelelo yesikolo malunga nale mibandelayo?
Decision making (does the school help the learners e.g. to decide on subject choices?)	Besluitneming (help die skool die leersers om bv. die regte vakke te kies)?	Ukuthatha izigqibo (ingaba isikoli siyabanceda abafundi umz. ukuthathela izigqibo xa bekhetha iifundo)?

Discussion point: Decision Making



Discussion points



Are you supporting and involved in your child(ren)' schooling? Please explain your answer.	Is u ondersteunend en betrokke in u kind(ers) se skoolonderrig? Verduidelik asseblief jou antwoord.	Ingaba niyoyinika inkcaso kwaye niyazibandakanya kwimfundo yom/yabantwana? Nceda unika ingcaciso ngempendulo yakho.
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Discussion points



How well does the school's academic program, social climate, and organizational structure match your child(ren)' needs?	Hoe goed pas die skool se akademiese program, sosiale klimaat en organisatoriese struktuur by jou kind(ers) se behoeftes?	Ingaba inkqubo yesemfundo, imo yesentsha, kunye nobume besikolo zinxulumana njani nezidingo (nom)zabantwana wakho?
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Discussion point: Collaborating with the community



How efficient is the school in terms of ?	Hoe doeltreffend is die skool in terme van ?	Ingakanani impumelelo yesikolo malunga nale miba ilandelayo?
Collaborating with the community (does the school and the community form a partnership for the benefits of the learners)?	Samewerking met die gemeenskap (vorm die skool en gemeenskap 'n vennootskap tot voordeel van die leerders)?	Intsebenziswano nabantu basekuhlaleni (ingaba isikolo nabantu basekuhlaleni bayasebenzisana ekuncedeni abafundi kwimfundo yabo)?

Discussion point: Parents' view of the school



How do you as parents view your school regarding academic and social standards (does the school prepare your children for the world of work or further studies)?	Hoe beskou u as ouers u skool aangaande akademiese en sosiale standaarde (berei die kind(ers) voor vir die wêreld van werk of verdere studies)?	Lothini ulona bejomo malunga nezemfundo kunye nesingapho pesantolwengaba tsibalo ekuncedeni abafundisa (amantso)? Ukusifing'iselwa lesitha tsibalo egqibazekeni okanye ukufingisa imfundo yemqanda kwimfundo eyakaminyazi?
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Discussion point: role of the parent



How do you as parents view your roles in different aspects of your child's schooling?	Hoe beskou u as ouers u roole in verskillende aspekte van u kind se skoolopleiding?	Niyibona njani indima yom kwimako ezahlukeneyo kwimfundo yomntwana?
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Discussion points: Parental support



Discussion point: answer the school in your child's particular needs?



Discussion point: role of teachers



Discussion points



How do you as parents view the 'teacher's' roles in different aspects of your child's schooling?
 Hoe beskou u as ouers die rolle van verskillende aspekte van 'n kind se skoolopleiding?
 Njyona ngqo indima yona ngqoqobakazi kakhulu ezibukanyisweni kwinkqubo yomsebenzi?

Thank You!



The provision of epistemological access for successful student learning at university: Towards an Intervention model for business education learners in the Further Education and Training (FET) Phase
 Antoinette Venter
 Post-Graduate Lecturer, Teachers

Discussion points

1. Do you want to finish school/ complete Grade 12? Why?

1. Wil jy graag klaarmaak met skool/ Graad 12 voltooi? Hoekom?



Discussion points

2. Do you want to continue studying at a university or a college once you completed your Grade 12? Or do you want to find work? Please explain your answer

2. Wil jy nadat jy jou Graad 12 voltooi het, verder gaan studeer by 'n universiteit of kollege? Of wil jy werk gaan soek? Verduidelik asseblief jou antwoord.

Discussion points

3. Do you have an idea of what you want to become one day? OR Which career you would like to go and study for at a university or a college? Please explain why?

3. Het jy 'n idee wat jy wil word eendag? Of Watter loopbaan jy wil gaan studeer by 'n universiteit of 'n kollege? Verduidelik asseblief hoekom?

Discussion points

4. Do you know if the subjects that you currently have are the right ones for the career that you want to study for? If yes, how do you know that?

4. Weet jy of die vakke wat jy op die oomblik het, die regte vakke vir jou loopbaan is wat jy wil studeer? Indien ja, hoe weet jy dit?



Discussion points

5. Do your school offer career counselling?

5. Bied jou skool beroepsvoorligting aan?



Discussion points

6. Did your school help you to select your subjects for Grades 10-12? If yes, how did the school help you? If no, why not?

6. Het die skool jou gehelp om jou vakkeuses te maak vir Graad 10-12? Indien ja, hoe het die skool jou gehelp? Indien nee, hoekom nie?



Discussion points

8. Did your school assist/prepare you socially for university or college life?

8. Het jou skool jou sosiaal voorberei vir universiteit of kollege?



Discussion points



9. Has your school provided you with information about university and college and how to apply?

9. Het die skool vir jou met inligting rakende die universiteit of kollege voorsien en hoe om aansoek te doen?



Discussion points



10. Did your school help you on how to select a university or college?

10. Het jou skool jou ge help om 'n universiteit of kollege te kies?



Discussion points



11. Did your school help you on how to select your career choice?

11. Het jou skool jou ge help om jou loopbaankeuse te maak?



Discussion points



12. Has your school assisted you on how to apply for NSFAS or other bursaries and loans?

12. Het jou skool jou ge help om aansoek te doen vir NSFAS of ander bourse en lenings?



Discussion points



13. Do you think that school and university/college are the same? Or will it be different? If yes, why do you think so?

If they are same, why?

13. Dink jy dat skool en universiteit/kollege dieselfde is? Of gaan dit verskillende wees? Indien ja, hoekom dink jy so? Indien dit dieselfde is, hoekom?

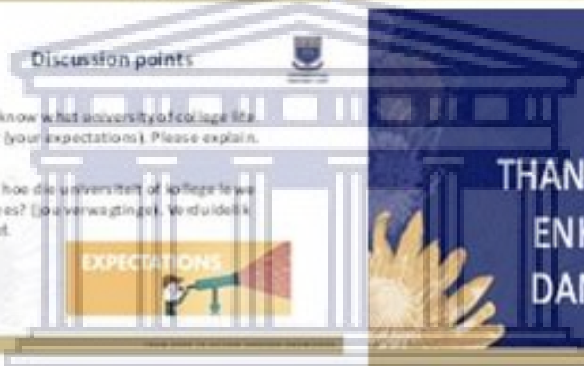


Discussion points



14. Do you know what university/college life will be? (your expectations). Please explain.

14. Weet jy hoe die universiteit of kollege lewe gaan wees? (jou verwagtinge). Verduidelik asseblief.



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EXAMPLE OF ANALYSIS WITH ATLAS.TI

Project: Interviews

Report created by on 2018-11-20

Codes Report

Selected codes (15)

○ **Challenge - classroom management CA**

Created by on 2018-11-20

1 Quotations:**D 5: INTERVIEW QUESTIONS - 5:2 Discipline (877:886)**

Discipline

○ **Challenge - curriculum overload CA**

Created by on 2018-11-20

1 Quotations:**D 5: INTERVIEW QUESTIONS - 5:4 Content of the subject is overloaded. No time for revision (915:972)**

Content of the subject is overloaded. No time for revision

○ **Challenge - lack of adequate teacher training CA**

Created by on 2018-11-20

5 Quotations:**D 6: INTERVIEW QUESTIONS - 6:3 Not proper training of some educators (795:831)**

Not proper training of some educators

D 6: INTERVIEW QUESTIONS - 6:6 To what extent are your teachers able to design and compile assessment... (1375:1593)

To what extent are your teachers able to design and compile assessment tasks in your district?

Most teachers are quite capable, but everyone can do with more training. Especially task that includes rubrics.

D 7: INTERVIEW QUESTIONS SA - 7:5 From your experience with beginner teachers, to what extent does initi... (1110:1443)

From your experience with beginner teachers, to what extent does initial teacher training prepare teachers for teaching the subject?

Higher education at some universities are not adequate to ensure teachers are prepared to teach EMS and/or Economics. Teachers are not fully prepared in discipline management, pedagogy and methodology

D 7: INTERVIEW QUESTIONS SA - 7:6 To what extent are your teachers in your district confident in all con... (1449:1942)

To what extent are your teachers in your district confident in all content areas of the subject?

Most teachers are confident in teaching all applicable Economics content. Some teachers are not confident in either one of the four main topics.

EMS teachers are not confident in teaching Financial Literacy, especially when they did not have EMS as one of their subjects during tertiary studies.

Teachers who did Accounting 2nd year at university level are capable of teaching all facets of EMS.

D 7: INTERVIEW QUESTIONS SA - 7:7 To what extent are your teachers able to design and compile assessment... (1947:2336)

To what extent are your teachers able to design and compile assessment tasks in your district?

Most teachers are not able to design and compile quality assessments tasks. Most use the exemplars (recent and outdated).

Most copy and paste from past examination papers or use the same papers of the past few years.

Only a few teachers are creative in setting new, quality assessments each year

○ **Challenge - lack of managerial support CA**

Created by on 2018-11-20

4 Quotations:

D 5: INTERVIEW QUESTIONS - 5:9 How would you describe the support teachers receive from their HOD/pri... (2120:2497)

How would you describe the support teachers receive from their HOD/principal?

Support not always properly done. Principals and HODs not always on par with the content/challenges of the subject.

HODs and principals cannot assist or moderate properly due to a lack of knowledge of the subject.

HODs and principals are overloaded with work and the curriculum are mostly neglected

D 6: INTERVIEW QUESTIONS - 6:4 Negative attitude of educators because of management problems at schoo... (835:906)

Negative attitude of educators because of management problems at schools

D 6: INTERVIEW QUESTIONS - 6:7 How would you describe the support teachers receive from their HOD/pri... (1800:2013)

How would you describe the support teachers receive from their HOD/principal?

Differs from school to school. Most principal so busy with admin work, that they forget to look at the curriculum side of the school.

D 7: INTERVIEW QUESTIONS SA - 7:8 How would you describe the support teachers receive from their HOD/pri... (2342:2614)

How would you describe the support teachers receive from their HOD/principal?

Most teachers receive good support from HOD' s and principals.

In some cases, the HOD is not trained in EMS/Economics, thus not being able to assist the teacher with subject related difficulties.

○ Challenge - lack of resources CA

Created by on 2018-11-20

1 Quotations:

D 5: INTERVIEW QUESTIONS - 5:7 Lack of equipment like data projectors No proper Wi-fi for learners/ t... (1083:1344)

Lack of equipment like data projectors

No proper Wi-fi for learners/ teachers to watch telematics/e-lessons.

Lack of a proper text book for BS. Teachers must use the core notes and Mind the Gap from notes. Schools don't have proper finances to copy the notes.

○ Challenge - language barrier CA

Created by on 2018-11-20

1 Quotations:

D 5: INTERVIEW QUESTIONS - 5:3 Two languages in one class (888:913)

Two languages in one class

○ Challenge - large classes

Created by on 2018-11-20, modified by on 2018-11-20

Comment by

CA

1 Quotations:

D 5: INTERVIEW QUESTIONS - 5:1 Big classes (865:875)

Big classes

○ Challenge - social problems

Created by on 2018-11-20, modified by on 2018-11-20

Comment by

CA

4 Quotations:

D 5: INTERVIEW QUESTIONS - 5:5 Social problems at home - absentees (975:1009)

Social problems at home - absentees

D 6: INTERVIEW QUESTIONS - 6:12 14. What type of challenges and problems are learners experiencing in... (3023:3206)

14. What type of challenges and problems are learners experiencing in your subject in Grades 10 - 12?

Mostly social problems which causes them not to be able to study or work at home

D 7: INTERVIEW QUESTIONS SA - 7:3 At other schools in volatile areas gang-related disruptions impact on... (660:856)

At other schools in volatile areas gang-related disruptions impact on quality of teaching where the main focus sometimes shifts to protecting the learners, rather than teaching when incidents occur

D 7: INTERVIEW QUESTIONS SA - 7:13 14. What type of challenges and problems are learners experiencing in... (4068:4743)

14. What type of challenges and problems are learners experiencing in your subject in Grades 10 - 12?

Challenges and problems include: drug use, pregnancy, absenteeism, transport problems, poverty (no food/money).

15. How can the learners be assisted to overcome the challenges and problematic areas in your subject so that they will acquire a good foundation for university studies?

Caring parents - teaching their children the basic values

Caring teachers - using teaching time productively, discipline management to ensure effective teaching

Caring districts - through SLES and curriculum support where and when needed.

Provision of study methods, studying techniques, etc.

○ **Challenge - teacher pedagogical content knowledge CA**

Created by on 2018-11-20

2 Quotations:

D 5: INTERVIEW QUESTIONS - 5:12 11. How would you describe the knowledge of your teachers in terms of... (2950:3354)

11. How would you describe the knowledge of your teachers in terms of the curriculum they are expected to teach?

Teachers know the content for the grade that they are teaching.

A lack of communication between Grade 10, 11 and 12 teachers causes problems, because teachers in Grade 10 and 11 don't know what to focus on properly to prepare learners for Grade 12. SA has to fill the gap with PD sessions.

D 7: INTERVIEW QUESTIONS SA - 7:11 11. How would you describe the knowledge of your teachers in terms of... (3283:3546)

11. How would you describe the knowledge of your teachers in terms of the curriculum they are expected to teach?

Most teachers have sufficient knowledge in all content of Economics.

Most EMS novice teachers do not have sufficient knowledge of Financial Literacy.

○ **Challenge - teacher work overload CA**

Created by on 2018-11-20

3 Quotations:

D 5: INTERVIEW QUESTIONS - 5:6 Teachers must teach a variety of subject – cannot focus on one subject... (1011:1081)

Teachers must teach a variety of subject - cannot focus on one subject.

D 5: INTERVIEW QUESTIONS - 5:8 To what extent are your teachers able to design and compile assessment... (1874:2115)

To what extent are your teachers able to design and compile assessment tasks in your district?

Teachers teach a variety of subjects and don't always have the time to set proper tasks with the cognitive levels grids on their own.

D 6: INTERVIEW QUESTIONS - 6:5 To what extent are your teachers in your district confident in all con... (1140:1369)

To what extent are your teachers in your district confident in all content areas of the subject? Some are quite confident, but not all. I believe the volume of work they have to teach scares them and doesn't help with confidence

○ **Challenge - textbook quality CA**

Created by on 2018-11-20

1 Quotations:

D 6: INTERVIEW QUESTIONS - 6:2 . What factors obstruct quality teaching of the subject in grades 10... (606:792)

What factors obstruct quality teaching of the subject in grades 10 - 12? Textbooks - as all schools are using different textbooks and most of these books have so many mistakes in it.

○ **Learner Interventions - CA**

Created by on 2018-11-20

3 Quotations:

D 5: INTERVIEW QUESTIONS - 5:11 10. What support mechanisms do you provide to learners in your district... (2645:2947)

10. What support mechanisms do you provide to learners in your district? Winter school for Learners at Risk (Level 1 - 3)
Weekend Camp for Progressed learners
Core Notes for learners (level 1 - 4)
Mind the Gap for learners (level 1 - 4). Only available in English. Still busy translating the Afrikaans

D 6: INTERVIEW QUESTIONS - 6:9 10. What support mechanisms do you provide to learners in your district... (2247:2441)

10. What support mechanisms do you provide to learners in your district? Tutor on a Saturday, Weekend camps, Winter and Spring schools as well as class visits where I tag teach with educators.

D 7: INTERVIEW QUESTIONS SA - 7:10 What support mechanisms do you provide to learners in your district? L... (3007:3280)

What support mechanisms do you provide to learners in your district? Learners are being assisted during school visits - either one-on-one discussions or peer discussion/motivation sessions.
Tutoring at holiday schools to assist learners to improve the quality of performance

○ **Learner preparation needs for university - CA**

Created by on 2018-11-20

8 Quotations:

D 5: INTERVIEW QUESTIONS - 5:13 12. What knowledge and skills do you think is necessary to gain at hig... (3356:3577)

12. What knowledge and skills do you think is necessary to gain at high school in your subject to succeed at university level?

Knowledge of action words and interpretation of knowledge

Good reading skills

Analytical skills

D 5: INTERVIEW QUESTIONS - 5:14 13. Do you think that the school adequately prepare learners in your s... (3579:3842)

13. Do you think that the school adequately prepare learners in your subject for university studies?

According to my opinion the subject is very well structured to prepare learners for university - it covers a lot of content and highly analytical skills are needed

D 5: INTERVIEW QUESTIONS - 5:15 14. What type of challenges and problems are learners experiencing in... (3845:4274)

14. What type of challenges and problems are learners experiencing in your subject in Grades 10 - 12?

The subject is very well structured to prepare learners for university, but not even 80% of the learners that has the subject, is going to study further at a tertiary institute. This causes poor results and demotivated learners, because the subject is used as a dumping ground for learners that cannot choose another subject.

D 5: INTERVIEW QUESTIONS - 5:16 15. How can the learners be assisted to overcome the challenges and pr... (4276:4640)

15. How can the learners be assisted to overcome the challenges and problematic areas in your subject so that they will acquire a good foundation for university studies?

The interpretation of scenario's must be practiced and well as the reading skills.

Learners must be educated in the concepts and from there being taught who to apply the concepts in the questions

D 6: INTERVIEW QUESTIONS - 6:10 What knowledge and skills do you think is necessary to gain at high sc... (2635:2914)

What knowledge and skills do you think is necessary to gain at high school in your subject to succeed at university level?

I think in Accounting, university and high school should move closer to each other, as our learners do not need to know most of these things for university

D 6: INTERVIEW QUESTIONS - 6:11 Do you think that the school adequately prepare learners in your subje... (2921:3021)

Do you think that the school adequately prepare learners in your subject for university studies?

Yes

D 6: INTERVIEW QUESTIONS - 6:13 15. How can the learners be assisted to overcome the challenges and pr... (3209:3483)

15. How can the learners be assisted to overcome the challenges and problematic areas in your subject so that they will acquire a good foundation for university studies?

I think the Private sector needs to step in and help our learners, especially here in the rural district

D 7: INTERVIEW QUESTIONS SA - 7:12 12. What knowledge and skills do you think is necessary to gain at hig... (3548:4066)

12. What knowledge and skills do you think is necessary to gain at high school in your subject to succeed at university level?

Knowledge - Grade 10, 11 and 12 content.

Skills - good listening skills, self-reliance, self-motivation, diligence, perseverance, time-on-task.

13. Do you think that the school adequately prepare learners in your subject for university studies?

Most schools do not prepare learners adequately for tertiary studies.

Learners are not given the proper guidance and advice from Grade 8 to 12.

○ Quality teaching - CA

Created by on 2018-11-20

4 Quotations:

D 6: INTERVIEW QUESTIONS - 6:1 How would you describe quality teaching in your subject? Quality teac... (121:307)

How would you describe quality teaching in your subject?

Quality teaching is where an educator prepares him/herself on a daily basis to teach the learners. They come prepared to teach.

D 7: INTERVIEW QUESTIONS SA - 7:1 How would you describe quality teaching in your subject? Quality teach... (121:457)

How would you describe quality teaching in your subject?

Quality teaching includes using teaching time productively, teaching relevant content as prescribed, creating a learning environment where maximum learning can take place, to ensure improvement in the quality of results. It includes quality assessments to ensure quality results.

D 7: INTERVIEW QUESTIONS SA - 7:2 To what extent is quality teaching taking place in your district? Qual... (463:657)

To what extent is quality teaching taking place in your district?

Quality teaching happens where teachers are in attendance regularly, using time on task productively, e.g. former Model C schools

D 7: INTERVIEW QUESTIONS SA - 7:4 What factors obstruct quality teaching of the subject in grades 10 - 1... (863:1103)

What factors obstruct quality teaching of the subject in grades 10 - 12?

Teacher and learner absenteeism.

Learner apathy towards quality results.

Ill-discipline on side of learners and teachers (at some schools).

Gangsterism in certain areas

○ Teacher interventions - CA

Created by on 2018-11-20

3 Quotations:

D 5: INTERVIEW QUESTIONS - 5:10 What support mechanisms do you provide to teachers in your district? R... (2504:2643)

What support mechanisms do you provide to teachers in your district?

RAD sessions beginning of year

PD sessions in Term 2

Electronic support

D 6: INTERVIEW QUESTIONS - 6:8 What support mechanisms do you provide to teachers in your district?... (2019:2245)

What support mechanisms do you provide to teachers in your district?

Professional development sessions start of a term to help with difficult topics. How to mark correctly and even helping with setting up of question papers.

D 7: INTERVIEW QUESTIONS SA - 7:9 What support mechanisms do you provide to teachers in your district? A... (2620:3001)

What support mechanisms do you provide to teachers in your district?

Assist with external moderation, suggestions, recommendations to improve teaching and learning, and setting proper quality assessments.

Provision of learner notes, PowerPoint presentations to enhance teaching and learning.

Economics PLC structure in place; PLC papers are compiled with contribution from teachers.



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QUESTIONNAIRE (Biographical Information: School A)

When did you start with the intervention?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	2017	20	100,0	100,0	100,0

Which subjects are you attending at the intervention?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Accounting	5	25,0	25,0	25,0
	Business Studies	8	40,0	40,0	65,0
	Economics	7	35,0	35,0	100,0
	Total	20	100,0	100,0	

Age of learners					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	17 years	1	5,0	5,0	5,0
	18 years	6	30,0	30,0	35,0
	19 years	7	35,0	35,0	70,0
	20 years	6	30,0	30,0	100,0
	Total	20	100,0	100,0	

From which grade did you start attending this school?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Grade 8	6	30,0	30,0	30,0
	Grade 9	2	10,0	10,0	40,0
	Grade 10	10	50,0	50,0	90,0
	Grade 12	2	10,0	10,0	100,0
	Total	20	100,0	100,0	

What is your racial or ethnic identification?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Black	20	100,0	100,0	100,0

What is your home language?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	isiXhosa	19	95,0	95,0	95,0
	Other	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Who do you live with?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Parents	11	55,0	55,0	55,0
	Grandparents	2	10,0	10,0	65,0
	Sister(s)	2	10,0	10,0	75,0
	Brother(s)	1	5,0	5,0	80,0
	Another family member	3	15,0	15,0	95,0
	Unanswered	1	5,0	5,0	100,0
	Total		20	100,0	100,0

What is your parent's/guardian's employment status?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Employed	8	40,0	40,0	40,0
	Unemployed	7	35,0	35,0	75,0
	Social grant	2	10,0	10,0	85,0
	Unanswered	3	15,0	15,0	100,0
	Total		20	100,0	100,0

Immediate family highest educational level					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	University/college	2	10,0	10,0	10,0
	Matric	8	40,0	40,0	50,0
	Grade 10-11	4	20,0	20,0	70,0
	I don't know	2	10,0	10,0	80,0
	Unanswered	4	20,0	20,0	100,0
	Total		20	100,0	100,0

		Absent without valid reason			
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Never	9	45,0	45,0	45,0
	Once or twice	6	30,0	30,0	75,0
	Many times	3	15,0	15,0	90,0
	Unanswered	2	10,0	10,0	100,0
	Total	20	100,0	100,0	



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QUESTIONNAIRE (Biographical Information: School B)

When did you start with the intervention?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	2017	20	100,0	100,0	100,0

Which subjects are you attending at the intervention?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Accounting	7	35,0	35,0	35,0
	Business Studies	3	15,0	15,0	50,0
	Economics	10	50,0	50,0	100,0
	Total	20	100,0	100,0	

Age of learners					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	16 years	1	5,0	5,0	5,0
	17 years	15	75,0	75,0	80,0
	18 years	3	15,0	15,0	95,0
	19 years	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

From which grade did you start attending this school?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Grade 8	18	90,0	90,0	90,0
	Grade 10	1	5,0	5,0	95,0
	Grade 12	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

What is your racial or ethnic identification?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Coloured	18	90,0	90,0	90,0
	Black	2	10,0	10,0	100,0
	Total	20	100,0	100,0	

What is your home language?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Afrikaans	17	85,0	85,0	85,0
	English	2	10,0	10,0	95,0
	isiXhosa	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Who do you live with?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Parents	19	95,0	95,0	95,0
	Grandparents	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

What is your parent's/guardian's employment status?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Employed	16	80,0	80,0	80,0
	Unemployed	3	15,0	15,0	95,0
	Social Grant	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Immediate family highest educational level					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	University/college	4	20,0	20,0	20,0
	Matric	9	45,0	45,0	65,0
	Grade 10-11	3	15,0	15,0	80,0
	Grade 4-6	1	5,0	5,0	85,0
	I don't know	3	15,0	15,0	100,0
	Total	20	100,0	100,0	

Absent without valid reason					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Never	12	60,0	60,0	60,0
	Once or twice	7	35,0	35,0	95,0
	Many times	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

SPSS TABLES OF QUESTIONNAIRES

I have a voice in the classroom and/or school decisions					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	18	45,0	45,0	45,0
	No	4	10,0	10,0	55,0
	Sometimes	14	35,0	35,0	90,0
	Not sure	2	5,0	5,0	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

My opinions are respected in this school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	11	27,5	27,5	27,5
	No	8	20,0	20,0	47,5
	Sometimes	13	32,5	32,5	80,0
	Not sure	8	20,0	20,0	100,0
	Total	40	100,0	100,0	

Teachers try hard to engage me in classroom discussions					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	27	67,5	67,5	67,5
	No	2	5,0	5,0	72,5
	Sometimes	9	22,5	22,5	95,0
	Not sure	1	2,5	2,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I am challenged academically by my classwork					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	17	42,5	42,5	42,5
	No	4	10,0	10,0	52,5
	Sometimes	15	37,5	37,5	90,0
	No answer	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

I have opportunities to be creative in classroom assignments and projects					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	29	72,5	72,5	72,5
	No	2	5,0	5,0	77,5
	Sometimes	6	15,0	15,0	92,5
	Not sure	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

I received good quality teaching at this school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	26	65,0	65,0	65,0
	No	2	5,0	5,0	70,0
	Sometimes	9	22,5	22,5	92,5
	Not sure	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

I can be who I am at this school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	30	75,0	75,0	75,0
	No	1	2,5	2,5	77,5
	Sometimes	6	15,0	15,0	92,5
	Not sure	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

This school makes me feel confident about who I am					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	17	42,5	42,5	42,5
	No	9	22,5	22,5	65,0
	Sometimes	9	22,5	22,5	87,5
	Not sure	3	7,5	7,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

I am involved in different activities at my school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	15	37,5	37,5	37,5
	No	17	42,5	42,5	80,0
	Sometimes	4	10,0	10,0	90,0
	Not sure	1	2,5	2,5	92,5
	No answer	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Asked or answered a question in class					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	15	37,5	37,5	37,5
	Sometimes	22	55,0	55,0	92,5
	Only once or twice	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Talked to a teacher about your classwork					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	17	42,5	42,5	42,5
	Sometimes	10	25,0	25,0	67,5
	Only once or twice	9	22,5	22,5	90,0
	Never	3	7,5	7,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Did a class presentation					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	18	45,0	45,0	45,0
	Sometimes	9	22,5	22,5	67,5
	Only once or twice	5	12,5	12,5	80,0
	Never	5	12,5	12,5	92,5
	No answer	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Received helpful feedback from teachers on your work					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	20	50,0	50,0	50,0
	Sometimes	13	32,5	32,5	82,5
	Only once or twice	6	15,0	15,0	97,5
	Never	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Discussed questions in class that you do not have clear answer on					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	21	52,5	52,5	52,5
	Sometimes	14	35,0	35,0	87,5
	Only once or twice	2	5,0	5,0	92,5
	No answer	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Used what you have learned in one class/or subject area to enrich your work in another class					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	16	40,0	40,0	40,0
	Sometimes	12	30,0	30,0	70,0
	Only once or twice	4	10,0	10,0	80,0
	Never	5	12,5	12,5	92,5
	No answer	3	7,5	7,5	100,0
Total	40	100,0	100,0		

Written a report or essay, etc. of fewer than five pages					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	22	55,0	55,0	55,0
	Sometimes	11	27,5	27,5	82,5
	Only once or twice	2	5,0	5,0	87,5
	Never	5	12,5	12,5	100,0
	Total	40	100,0	100,0	

Written a report or essay, etc. of more than five pages					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	5	12,5	12,5	12,5
	Sometimes	9	22,5	22,5	35,0
	Only once or twice	1	2,5	2,5	37,5
	Never	25	62,5	62,5	100,0
	Total	40	100,0	100,0	

Worked on a project for which you needed to find information not available in your textbook					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	22	55,0	55,0	55,0
	Sometimes	12	30,0	30,0	85,0
	Only once or twice	6	15,0	15,0	100,0
	Total	40	100,0	100,0	

Written test with multiple-choice questions					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	27	67,5	67,5	67,5
	Sometimes	10	25,0	25,0	92,5
	Only once or twice	2	5,0	5,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Written test with longer answers just as paragraphs, essay questions or problems that you need to solve					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	27	67,5	67,5	67,5
	Sometimes	8	20,0	20,0	87,5
	Only once or twice	3	7,5	7,5	95,0
	Never	1	2,5	2,5	97,5
	Not answered	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Worked on a project during which you needed to interact with people outside of your school (conducted interviews in your community)

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	8	20,0	20,0	20,0
	Sometimes	10	25,0	25,0	45,0
	Only once or twice	11	27,5	27,5	72,5
	Never	10	25,0	25,0	97,5
	Not answered	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Worked on a project in a group with other learners

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	14	35,0	35,0	35,0
	Sometimes	17	42,5	42,5	77,5
	Only once or twice	5	12,5	12,5	90,0
	Never	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Discussed your marks with teachers

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	8	20,0	20,0	20,0
	Sometimes	11	27,5	27,5	47,5
	Only once or twice	12	30,0	30,0	77,5
	Never	9	22,5	22,5	100,0
	Total	40	100,0	100,0	

Discussed ideas from your classes, your reading, or your homework with teachers outside of class

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	4	10,0	10,0	10,0
	Sometimes	15	37,5	37,5	47,5
	Only once or twice	8	20,0	20,0	67,5
	Never	11	27,5	27,5	95,0
	Not answered	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Discussed ideas from your class, your reading, or your homework with other people outside of class (friends, family members, your community, etc.)

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	17	42,5	42,5	42,5
	Sometimes	14	35,0	35,0	77,5
	Only once or twice	7	17,5	17,5	95,0
	Never	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Talked to or worked with at least one learner from a different race or culture

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	19	47,5	47,5	47,5
	Sometimes	14	35,0	35,0	82,5
	Only once or twice	4	10,0	10,0	92,5
	Never	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Talked to or worked with at least one learner who is different from you in terms of religion, political opinion, family income, or personal values

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	20	50,0	50,0	50,0
	Sometimes	15	37,5	37,5	87,5
	Only once or twice	3	7,5	7,5	95,0
	Never	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Talked to a teacher in the school about career goals

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	14	35,0	35,0	35,0
	Sometimes	11	27,5	27,5	62,5
	Only once or twice	9	22,5	22,5	85,0
	Never	6	15,0	15,0	100,0
	Total	40	100,0	100,0	

Talked to a teacher in the school about how to apply for university					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	13	32,5	32,5	32,5
	Sometimes	11	27,5	27,5	60,0
	Only once or twice	8	20,0	20,0	80,0
	Never	8	20,0	20,0	100,0
	Total	40	100,0	100,0	

Attended class with all your homework completed					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	17	42,5	42,5	42,5
	Sometimes	21	52,5	52,5	95,0
	Only once or twice	1	2,5	2,5	97,5
	Never	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Attended class with no homework completed					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	3	7,5	7,5	7,5
	Sometimes	14	35,0	35,0	42,5
	Only once or twice	12	30,0	30,0	72,5
	Never	11	27,5	27,5	100,0
	Total	40	100,0	100,0	

Prepared a draft of a report, essay, etc. before handing it in					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Often	24	60,0	60,0	60,0
	Sometimes	12	30,0	30,0	90,0
	Only once or twice	3	7,5	7,5	97,5
	Never	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Memorising facts and figures					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	21	52,5	52,5	52,5
	Sometimes	16	40,0	40,0	92,5
	Seldom	1	2,5	2,5	95,0
	Not answered	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Understanding information and ideas					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	17	42,5	42,5	42,5
	Sometimes	19	47,5	47,5	90,0
	Seldom	2	5,0	5,0	95,0
	Not answered	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Analysing ideas in depth					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	13	32,5	32,5	32,5
	Sometimes	16	40,0	40,0	72,5
	Seldom	7	17,5	17,5	90,0
	Never	1	2,5	2,5	92,5
	Not answered	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Exploring new ideas					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	21	52,5	52,5	52,5
	Sometimes	15	37,5	37,5	90,0
	Seldom	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Using computers for school work					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	8	20,0	20,0	20,0
	Sometimes	17	42,5	42,5	62,5
	Seldom	4	10,0	10,0	72,5
	Never	11	27,5	27,5	100,0
	Total	40	100,0	100,0	

Spending a lot of time studying, doing schoolwork or doing homework					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	15	37,5	37,5	37,5
	Sometimes	21	52,5	52,5	90,0
	Seldom	3	7,5	7,5	97,5
	Never	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Spending a lot of time preparing for the end-of-year tests or exams					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	20	50,0	50,0	50,0
	Sometimes	16	40,0	40,0	90,0
	Seldom	2	5,0	5,0	95,0
	Never	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Continuing to study after school (i.e. FET College, University, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	27	67,5	67,5	67,5
	Sometimes	5	12,5	12,5	80,0
	Seldom	4	10,0	10,0	90,0
	Never	2	5,0	5,0	95,0
	Not answered	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Participating in school events and activities (sports, plays, choir, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very much	17	42,5	42,5	42,5
	Sometimes	12	30,0	30,0	72,5
	Seldom	3	7,5	7,5	80,0
	Never	7	17,5	17,5	97,5
	Not answered	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Thinking critically					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	17	42,5	42,5	42,5
	Average (60-40%)	22	55,0	55,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Solving real-world problems					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	10	25,0	25,0	25,0
	Average (60-40%)	23	57,5	57,5	82,5
	Very little (20%)	4	10,0	10,0	92,5
	Not at all (0%)	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Speaking well					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	27	67,5	67,5	67,5
	Average (60-40%)	11	27,5	27,5	95,0
	Very little (20%)	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Writing well					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	23	57,5	57,5	57,5
	Average (60-40%)	14	35,0	35,0	92,5
	Very little (20%)	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Reading and understanding difficult material					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	17	42,5	42,5	42,5
	Average (60-40%)	17	42,5	42,5	85,0
	Very little (20%)	5	12,5	12,5	97,5
	Not at all (0%)	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Using computers and the internet					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	10	25,0	25,0	25,0
	Average (60-40%)	10	25,0	25,0	50,0
	Very little (20%)	13	32,5	32,5	82,5
	Not at all (0%)	7	17,5	17,5	100,0
	Total	40	100,0	100,0	

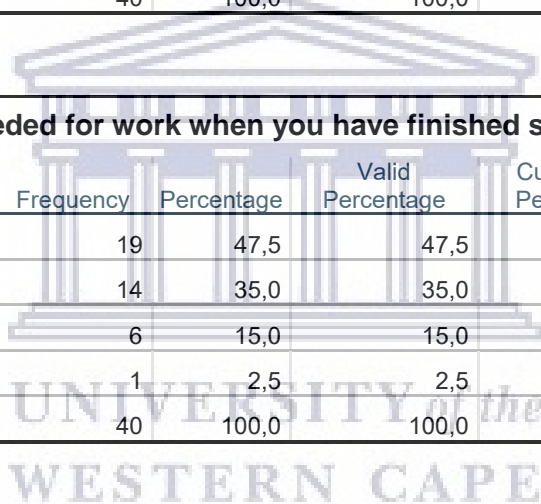
Being an independent learner					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	14	35,0	35,0	35,0
	Average (60-40%)	19	47,5	47,5	82,5
	Very little (20%)	4	10,0	10,0	92,5
	Not at all (0%)	2	5,0	5,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Understanding yourself					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	29	72,5	72,5	72,5
	Average (60-40%)	8	20,0	20,0	92,5
	Very little (20%)	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Working well with others					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	22	55,0	55,0	55,0
	Average (60-40%)	17	42,5	42,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Developing skills needed for work when you have finished school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	19	47,5	47,5	47,5
	Average (60-40%)	14	35,0	35,0	82,5
	Very little (20%)	6	15,0	15,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Gaining awareness of conditions in the community outside of school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	17	42,5	42,5	42,5
	Average (60-40%)	11	27,5	27,5	70,0
	Very little (20%)	10	25,0	25,0	95,0
	Not at all (0%)	2	5,0	5,0	100,0
	Total	40	100,0	100,0	



Developing clear career goals					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	27	67,5	67,5	67,5
	Average (60-40%)	10	25,0	25,0	92,5
	Not at all (0%)	2	5,0	5,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Understanding the relevance of what you learn in school for life after school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	24	60,0	60,0	60,0
	Average (60-40%)	15	37,5	37,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Understanding people of other racial and ethnic backgrounds					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	28	70,0	70,0	70,0
	Average (60-40%)	7	17,5	17,5	87,5
	Very little (20%)	4	10,0	10,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Treating people with respect					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	32	80,0	80,0	80,0
	Average (60-40%)	6	15,0	15,0	95,0
	Not at all (0%)	1	2,5	2,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Developing personal beliefs and values					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	A lot (80-100%)	30	75,0	75,0	75,0
	Average (60-40%)	6	15,0	15,0	90,0
	Very little (20%)	3	7,5	7,5	97,5
	No answer	1	2,5	2,5	100,0
Total		40	100,0	100,0	

Participated in community service or volunteer work					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	15	37,5	37,5	37,5
	No	25	62,5	62,5	100,0
	Total	40	100,0	100,0	

Participated in work experience programme(s)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	14	35,0	35,0	35,0
	No	26	65,0	65,0	100,0
	Total	40	100,0	100,0	

Taken part in any educational activities or programme(s) offered by a local university					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	22	55,0	55,0	55,0
	No	18	45,0	45,0	100,0
	Total	40	100,0	100,0	

Taken any additional subjects beyond what is compulsory					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	14	35,0	35,0	35,0
	No	26	65,0	65,0	100,0
	Total	40	100,0	100,0	

Doing written homework					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	1 hour or fewer	9	22,5	22,5	22,5
	2 - 5 hours	18	45,0	45,0	67,5
	6 - 9 hours	9	22,5	22,5	90,0
	10 or more hours	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Reading and studying for class					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	2	5,0	5,0	5,0
	1 hour or fewer	7	17,5	17,5	22,5
	2 - 5 hours	11	27,5	27,5	50,0
	6 - 9 hours	14	35,0	35,0	85,0
	10 or more hours	6	15,0	15,0	100,0
	Total	40	100,0	100,0	

Reading for yourself (books, magazines, newspapers, online articles, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	8	20,0	20,0	20,0
	1 hour or fewer	11	27,5	27,5	47,5
	2 - 5 hours	8	20,0	20,0	67,5
	6 - 9 hours	5	12,5	12,5	80,0
	10 hours or more	8	20,0	20,0	100,0
	Total	40	100,0	100,0	

Participating in school-sponsored activities (clubs, sports, learner governance, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	19	47,5	47,5	47,5
	1 hour or fewer	6	15,0	15,0	62,5
	2 - 5 hours	3	7,5	7,5	70,0
	6 - 9 hours	7	17,5	17,5	87,5
	10 hours or more	5	12,5	12,5	100,0
	Total	40	100,0	100,0	

Practising a sport and/or musical instrument and/or rehearsing for a performance					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	17	42,5	42,5	42,5
	1 hour or fewer	10	25,0	25,0	67,5
	2 - 5 hours	3	7,5	7,5	75,0
	6 - 9 hours	3	7,5	7,5	82,5
	10 hours or more	7	17,5	17,5	100,0
	Total	40	100,0	100,0	

Working for pay					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	24	60,0	60,0	60,0
	1 hour or fewer	3	7,5	7,5	67,5
	2 - 5 hours	7	17,5	17,5	85,0
	6 - 9 hours	1	2,5	2,5	87,5
	10 hours or more	4	10,0	10,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Doing volunteer work (not for pay)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	23	57,5	57,5	57,5
	1 hour or fewer	5	12,5	12,5	70,0
	2 - 5 hours	4	10,0	10,0	80,0
	6 - 9 hours	6	15,0	15,0	95,0
	10 hours or more	1	2,5	2,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Exercising					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	8	20,0	20,0	20,0
	1 hour or fewer	17	42,5	42,5	62,5
	2 - 5 hours	8	20,0	20,0	82,5
	6 - 9 hours	3	7,5	7,5	90,0
	10 or more hours	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Watching television, playing video games					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	3	7,5	7,5	7,5
	1 hour or fewer	6	15,0	15,0	22,5
	2 - 5 hours	18	45,0	45,0	67,5
	6 - 9 hours	5	12,5	12,5	80,0
	10 or more hours	8	20,0	20,0	100,0
	Total	40	100,0	100,0	

Surfing the internet or chatting online					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	6	15,0	15,0	15,0
	1 hour or fewer	6	15,0	15,0	30,0
	2 - 5 hours	17	42,5	42,5	72,5
	6 - 9 hours	5	12,5	12,5	85,0
	10 or more hours	5	12,5	12,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Taking on the phone (including cell phone)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	7	17,5	17,5	17,5
	1 hour or fewer	13	32,5	32,5	50,0
	2 - 5 hours	15	37,5	37,5	87,5
	6 - 9 hours	3	7,5	7,5	95,0
	10 or more hours	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Hanging out or socialising with friends outside of school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	7	17,5	17,5	17,5
	1 hour or fewer	7	17,5	17,5	35,0
	2 - 5 hours	14	35,0	35,0	70,0
	6 - 9 hours	5	12,5	12,5	82,5
	10 or more hours	3	7,5	7,5	90,0
	No answer	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Travelling to and from school by taxi					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	27	67,5	67,5	67,5
	1 hour or fewer	3	7,5	7,5	75,0
	2 - 5 hours	2	5,0	5,0	80,0
	6 - 9 hours	2	5,0	5,0	85,0
	10 or more hours	5	12,5	12,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Travelling to and from school by bus					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	19	47,5	47,5	47,5
	1 hour or fewer	10	25,0	25,0	72,5
	2 - 5 hours	1	2,5	2,5	75,0
	6 - 9 hours	1	2,5	2,5	77,5
	10 or more hours	8	20,0	20,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Walking to and from school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	17	42,5	42,5	42,5
	1 hour or fewer	14	35,0	35,0	77,5
	6 - 9 hours	4	10,0	10,0	87,5
	10 or more hours	4	10,0	10,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Taking care of family members (ill parents, younger siblings, grandparents and so on)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	16	40,0	40,0	40,0
	1 hour or fewer	7	17,5	17,5	57,5
	2 - 5 hours	2	5,0	5,0	62,5
	6 - 9 hours	7	17,5	17,5	80,0
	10 or more hours	8	20,0	20,0	100,0
	Total	40	100,0	100,0	

Doing chores at home (preparing food, cleaning, washing clothes, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	None	7	17,5	17,5	17,5
	1 hour or fewer	6	15,0	15,0	32,5
	2 - 5 hours	6	15,0	15,0	47,5
	6 - 9 hours	6	15,0	15,0	62,5
	10 or more hours	15	37,5	37,5	100,0
	Total	40	100,0	100,0	

Doing written homework					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	1	2,5	2,5	2,5
	A little	1	2,5	2,5	5,0
	Somewhat important	4	10,0	10,0	15,0
	Very important	24	60,0	60,0	75,0
	Top priority	9	22,5	22,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Reading and studying for class					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	4	10,0	10,0	10,0
	A little	1	2,5	2,5	12,5
	Somewhat important	3	7,5	7,5	20,0
	Very important	18	45,0	45,0	65,0
	Top priority	14	35,0	35,0	100,0
	Total	40	100,0	100,0	

Reading for yourself (books, magazines, newspapers, online articles, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	2	5,0	5,0	5,0
	A little	6	15,0	15,0	20,0
	Somewhat important	17	42,5	42,5	62,5
	Very important	12	30,0	30,0	92,5
	Top priority	2	5,0	5,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Participating in school-sponsored activities (clubs, sports, learner governance, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	9	22,5	22,5	22,5
	A little	14	35,0	35,0	57,5
	Somewhat important	8	20,0	20,0	77,5
	Very important	7	17,5	17,5	95,0
	Top priority	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Practising a sport and/or musical instrument and/or rehearsing for a performance					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	10	25,0	25,0	25,0
	A little	13	32,5	32,5	57,5
	Somewhat important	9	22,5	22,5	80,0
	Very important	7	17,5	17,5	97,5
	Top priority	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Working for pay					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	12	30,0	30,0	30,0
	A little	11	27,5	27,5	57,5
	Somewhat important	6	15,0	15,0	72,5
	Very important	5	12,5	12,5	85,0
	Top priority	6	15,0	15,0	100,0
	Total	40	100,0	100,0	

Doing volunteer work (not for pay)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	11	27,5	27,5	27,5
	A little	15	37,5	37,5	65,0
	Somewhat important	4	10,0	10,0	75,0
	Very important	6	15,0	15,0	90,0
	Top priority	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

Exercising					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	4	10,0	10,0	10,0
	A little	12	30,0	30,0	40,0
	Somewhat important	12	30,0	30,0	70,0
	Very important	6	15,0	15,0	85,0
	Top priority	5	12,5	12,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Watching television, playing video games					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	6	15,0	15,0	15,0
	A little	13	32,5	32,5	47,5
	Somewhat important	13	32,5	32,5	80,0
	Very important	7	17,5	17,5	97,5
	Top priority	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Surfing the internet or chatting online					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	8	20,0	20,0	20,0
	A little	12	30,0	30,0	50,0
	Somewhat important	10	25,0	25,0	75,0
	Very important	7	17,5	17,5	92,5
	Top priority	2	5,0	5,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Taking on the phone (including cell phone)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	10	25,0	25,0	25,0
	A little	15	37,5	37,5	62,5
	Somewhat important	10	25,0	25,0	87,5
	Very important	3	7,5	7,5	95,0
	Top priority	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

Hanging out or socialising with friends outside of school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	8	20,0	20,0	20,0
	A little	9	22,5	22,5	42,5
	Somewhat important	10	25,0	25,0	67,5
	Very important	9	22,5	22,5	90,0
	Top priority	1	2,5	2,5	92,5
	No answer	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

Travelling to and from school by taxi					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	24	60,0	60,0	60,0
	A little	5	12,5	12,5	72,5
	Somewhat important	4	10,0	10,0	82,5
	Very important	3	7,5	7,5	90,0
	Top priority	4	10,0	10,0	100,0
	Total	40	100,0	100,0	

		Travelling to and from school by bus			
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	14	35,0	35,0	35,0
	A little	4	10,0	10,0	45,0
	Somewhat important	4	10,0	10,0	55,0
	Very important	7	17,5	17,5	72,5
	Top priority	9	22,5	22,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

		Walking to and from school			
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	12	30,0	30,0	30,0
	A little	6	15,0	15,0	45,0
	Somewhat important	3	7,5	7,5	52,5
	Very important	9	22,5	22,5	75,0
	Top priority	7	17,5	17,5	92,5
	No answer	3	7,5	7,5	100,0
	Total	40	100,0	100,0	

		Taking care of family members (ill parents, younger siblings, grandparents and so on)			
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	7	17,5	17,5	17,5
	A little	3	7,5	7,5	25,0
	Somewhat important	5	12,5	12,5	37,5
	Very important	7	17,5	17,5	55,0
	Top priority	17	42,5	42,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Doing chores at home (preparing food, cleaning, washing clothes, etc.)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	4	10,0	10,0	10,0
	A little	2	5,0	5,0	15,0
	Somewhat important	7	17,5	17,5	32,5
	Very important	9	22,5	22,5	55,0
	Top priority	17	42,5	42,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Learning is very important to me					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Agree	11	27,5	27,5	27,5
	Strongly agree	28	70,0	70,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I have the skills and ability to complete my work successfully					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	1	2,5	2,5	2,5
	Agree	19	47,5	47,5	50,0
	Strongly agree	19	47,5	47,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I try very hard when doing my school work					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	1	2,5	2,5	2,5
	Agree	20	50,0	50,0	52,5
	Strongly agree	18	45,0	45,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I am motivated to do my school work because I want to learn new things					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Agree	22	55,0	55,0	55,0
	Strongly agree	17	42,5	42,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I like it when I can be creative at school					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	2	5,0	5,0	5,0
	Agree	28	70,0	70,0	75,0
	Strongly agree	9	22,5	22,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I like working on problems that are difficult and require a lot of thinking					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Strongly disagree	3	7,5	7,5	7,5
	Disagree	8	20,0	20,0	27,5
	Agree	17	42,5	42,5	70,0
	Strongly agree	11	27,5	27,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

My schoolwork makes me curious to learn about other things					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	10	25,0	25,0	25,0
	Agree	19	47,5	47,5	72,5
	Strongly agree	10	25,0	25,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Doing chores at home, like discussions when there is no clear right or wrong answer					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Strongly disagree	1	2,5	2,5	2,5
	Disagree	7	17,5	17,5	20,0
	Agree	18	45,0	45,0	65,0
	Strongly agree	13	32,5	32,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

My marks are important to me					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	1	2,5	2,5	2,5
	Agree	14	35,0	35,0	37,5
	Strongly agree	24	60,0	60,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I feel good about myself as a learner					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Agree	15	37,5	37,5	37,5
	Strongly agree	24	60,0	60,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

I feel good about myself as a person					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Disagree	1	2,5	2,5	2,5
	Agree	13	32,5	32,5	35,0
	Strongly agree	25	62,5	62,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Reading on my own					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	2	5,0	5,0	5,0
	A little	7	17,5	17,5	22,5
	Some	12	30,0	30,0	52,5
	Very much	18	45,0	45,0	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Writing work/projects (e.g. essays)					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	2	5,0	5,0	5,0
	A little	7	17,5	17,5	22,5
	Some	13	32,5	32,5	55,0
	Very much	17	42,5	42,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

Research work/projects					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	2	5,0	5,0	5,0
	A little	6	15,0	15,0	20,0
	Some	16	40,0	40,0	60,0
	Very much	15	37,5	37,5	97,5
	No answer	1	2,5	2,5	100,0
	Total	40	100,0	100,0	

In which category do MOST of your marks fall THIS YEAR?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Achievement level 7 (80-100%)	7	17,5	17,5	17,5
	Achievement level 6 (70-79%)	10	25,0	25,0	42,5
	Achievement level 5 (60-69%)	15	37,5	37,5	80,0
	Achievement level 4 (50-59%)	4	10,0	10,0	90,0
	Achievement level 3 (40-49%)	1	2,5	2,5	92,5
	Don't know	1	2,5	2,5	95,0
	No answer	2	5,0	5,0	100,0
	Total	40	100,0	100,0	

What are your plans after completing Grade 12?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Go to university/college	36	90,0	90,0	90,0
	Look for work	1	2,5	2,5	92,5
	I don't know	3	7,5	7,5	100,0
Total		40	100,0	100,0	



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SPSS TABLES OF REFLECTION FORMS (SCHOOL A & B)

Reflection form 1: School A

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid NQ1	20	100,0	100,0	100,0

Start intervention				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid 2017	20	100,0	100,0	100,0

Subject				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Accounting	4	20,0	20,0	20,0
Business studies	11	55,0	55,0	75,0
Economics	5	25,0	25,0	100,0
Total	20	100,0	100,0	

Subject knowledge/skills				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid No, it did not help me	1	5,0	5,0	5,0
I am not sure (no change)	1	5,0	5,0	10,0
Yes, it helped me a little	9	45,0	45,0	55,0
Yes, it helped me a lot	9	45,0	45,0	100,0
Total	20	100,0	100,0	

Language and logical thinking skills				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid I am not sure (no change)	1	5,0	5,0	5,0
Yes, it helped me a little	5	25,0	25,0	30,0
Yes, it helped me a lot	14	70,0	70,0	100,0
Total	20	100,0	100,0	

Application skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	6	30,0	30,0	40,0
	Yes, it helped me a lot	12	60,0	60,0	100,0
	Total	20	100,0	100,0	

Critical analysis					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,0	5,0	5,0
	I am not sure (no change)	6	30,0	30,0	35,0
	Yes, it helped me a little	5	25,0	25,0	60,0
	Yes, it helped me a lot	8	40,0	40,0	100,0
	Total	20	100,0	100,0	

Problem solving					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	8	40,0	40,0	50,0
	Yes, it helped me a lot	10	50,0	50,0	100,0
	Total	20	100,0	100,0	

Debating and communication skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	5	25,0	25,0	35,0
	Yes, it helped me a lot	13	65,0	65,0	100,0
	Total	20	100,0	100,0	

Research skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	5	25,0	25,0	35,0
	Yes, it helped me a lot	13	65,0	65,0	100,0
	Total	20	100,0	100,0	

Mathematical skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	4	20,0	20,0	20,0
	Yes, it helped me a little	9	45,0	45,0	65,0
	Yes, it helped me a lot	7	35,0	35,0	100,0
	Total	20	100,0	100,0	

Did the extra classes help?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	3	15,0	15,0	25,0
	Yes, it helped me a lot	15	75,0	75,0	100,0
	Total	20	100,0	100,0	



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Reflection form 1: School B

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid NQ4	20	100,0	100,0	100,0

Start intervention				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid 2017	20	100,0	100,0	100,0

Subject					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Accounting	8	40,0	40,0	40,0
	Business studies	3	15,0	15,0	55,0
	Economics	9	45,0	45,0	100,0
	Total	20	100,0	100,0	

Subject knowledge/skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes, it helped me a little	10	50,0	50,0	50,0
	Yes, it helped me a lot	10	50,0	50,0	100,0
	Total	20	100,0	100,0	

Language and logical thinking skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	10	50,0	50,0	55,0
	Yes, it helped me a lot	9	45,0	45,0	100,0
	Total	20	100,0	100,0	

Application skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	13	65,0	65,0	70,0
	Yes, it helped me a lot	6	30,0	30,0	100,0
	Total	20	100,0	100,0	

Critical analysis					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	10,0	10,0	10,0
	Yes, it helped me a little	9	45,0	45,0	55,0
	Yes, it helped me a lot	9	45,0	45,0	100,0
	Total	20	100,0	100,0	

Problem solving					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	13	65,0	65,0	70,0
	Yes, it helped me a lot	5	25,0	25,0	95,0
	No answer	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Debating and communication skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	6	30,0	30,0	30,0
	Yes, it helped me a little	10	50,0	50,0	80,0
	Yes, it helped me a lot	4	20,0	20,0	100,0
	Total	20	100,0	100,0	

Research skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,0	5,0	5,0
	I am not sure (no change)	3	15,0	15,0	20,0
	Yes, it helped me a little	13	65,0	65,0	85,0
	Yes, it helped me a lot	3	15,0	15,0	100,0
	Total	20	100,0	100,0	

Mathematical skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,0	5,0	5,0
	I am not sure (no change)	3	15,0	15,0	20,0
	Yes, it helped me a little	11	55,0	55,0	75,0
	Yes, it helped me a lot	5	25,0	25,0	100,0
	Total	20	100,0	100,0	

Did the extra classes help?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	10	50,0	50,0	55,0
	Yes, it helped me a lot	9	45,0	45,0	100,0
	Total	20	100,0	100,0	



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Reflection form 2: School A

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid NQ1	20	100,0	100,0	100,0

Start intervention				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid 2017	20	100,0	100,0	100,0

Subject				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Accounting	4	20,0	20,0	20,0
Business Studies	6	30,0	30,0	50,0
Economics	10	50,0	50,0	100,0
Total	20	100,0	100,0	

Subject knowledge/skills				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid I am not sure (no change)	2	10,0	10,0	10,0
Yes, it helped me a little	7	35,0	35,0	45,0
Yes, it helped me a lot	11	55,0	55,0	100,0
Total	20	100,0	100,0	

Language and logical thinking skills				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Yes, it helped me a little	11	55,0	55,0	55,0
Yes, it helped me a lot	9	45,0	45,0	100,0
Total	20	100,0	100,0	

Application skills				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid No, it did not help me	2	10,0	10,0	10,0
I am not sure (no change)	5	25,0	25,0	35,0
Yes, it helped me a little	7	35,0	35,0	70,0
Yes, it helped me a lot	5	25,0	25,0	95,0
No answer	1	5,0	5,0	100,0
Total	20	100,0	100,0	

Critical analysis					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	3	15,0	15,0	15,0
	Yes, it helped me a little	9	45,0	45,0	60,0
	Yes, it helped me a lot	8	40,0	40,0	100,0
	Total	20	100,0	100,0	

Problem solving					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	2	10,0	10,0	10,0
	Yes, it helped me a little	7	35,0	35,0	45,0
	Yes, it helped me a lot	10	50,0	50,0	95,0
	No answer	1	5,0	5,0	100,0
	Total	20	100,0	100,0	

Debating and communication skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	3	15,0	15,0	15,0
	I am not sure (no change)	1	5,0	5,0	20,0
	Yes, it helped me a little	8	40,0	40,0	60,0
	Yes, it helped me a lot	8	40,0	40,0	100,0
	Total	20	100,0	100,0	

Research skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,0	5,0	5,0
	Yes, it helped me a little	7	35,0	35,0	40,0
	Yes, it helped me a lot	12	60,0	60,0	100,0
	Total	20	100,0	100,0	

Mathematical skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	2	10,0	10,0	10,0
	I am not sure (no change)	3	15,0	15,0	25,0
	Yes, it helped me a little	7	35,0	35,0	60,0
	Yes, it helped me a lot	8	40,0	40,0	100,0
	Total	20	100,0	100,0	

Did the extra classes help?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes, it helped me a little	6	30,0	30,0	30,0
	Yes, it helped me a lot	13	65,0	65,0	95,0
	No answer	1	5,0	5,0	100,0
	Total	20	100,0	100,0	



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Reflection form 2: School B

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	NQ4	17	100,0	100,0	100,0

Start intervention					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	2017	17	100,0	100,0	100,0

Subject					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Accounting	7	41,2	41,2	41,2
	Business Studies	2	11,8	11,8	52,9
	Economics	8	47,1	47,1	100,0
	Total	17	100,0	100,0	

Subject knowledge/skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	2	11,8	11,8	11,8
	Yes, it helped me a little	10	58,8	58,8	70,6
	Yes, it helped me a lot	5	29,4	29,4	100,0
	Total	17	100,0	100,0	

Language and logical thinking skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,9	5,9	5,9
	Yes, it helped me a little	15	88,2	88,2	94,1
	Yes, it helped me a lot	1	5,9	5,9	100,0
	Total	17	100,0	100,0	

Application skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	6	35,3	35,3	35,3
	Yes, it helped me a little	9	52,9	52,9	88,2
	Yes, it helped me a lot	2	11,8	11,8	100,0
	Total	17	100,0	100,0	

Critical analysis					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	3	17,6	17,6	17,6
	Yes, it helped me a little	9	52,9	52,9	70,6
	Yes, it helped me a lot	5	29,4	29,4	100,0
	Total	17	100,0	100,0	

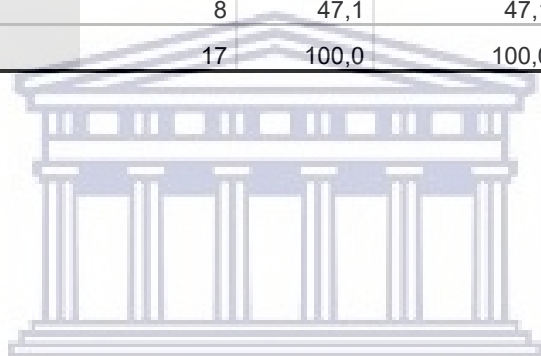
Problem solving					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,9	5,9	5,9
	I am not sure (no change)	1	5,9	5,9	11,8
	Yes, it helped me a little	11	64,7	64,7	76,5
	Yes, it helped me a lot	4	23,5	23,5	100,0
	Total	17	100,0	100,0	

Debating and communication skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	2	11,8	11,8	11,8
	I am not sure (no change)	6	35,3	35,3	47,1
	Yes, it helped me a little	7	41,2	41,2	88,2
	Yes, it helped me a lot	2	11,8	11,8	100,0
	Total	17	100,0	100,0	

Research skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,9	5,9	5,9
	I am not sure (no change)	2	11,8	11,8	17,6
	Yes, it helped me a little	9	52,9	52,9	70,6
	Yes, it helped me a lot	5	29,4	29,4	100,0
	Total	17	100,0	100,0	

Mathematical skills					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No, it did not help me	1	5,9	5,9	5,9
	I am not sure (no change)	3	17,6	17,6	23,5
	Yes, it helped me a little	9	52,9	52,9	76,5
	Yes, it helped me a lot	4	23,5	23,5	100,0
	Total	17	100,0	100,0	

Did the extra classes help?					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I am not sure (no change)	1	5,9	5,9	5,9
	Yes, it helped me a little	8	47,1	47,1	52,9
	Yes, it helped me a lot	8	47,1	47,1	100,0
	Total	17	100,0	100,0	



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