

RESEARCH ARTICLE

Business Education Learners in the Further Education and Training Phase: Towards the Development of a South African Readiness Model to Strengthen Learners' Academic Performance

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Abstract

African and coloured students continue to perform poorly both at public schools and institutions of higher learning. There are two main reasons for their weak performance – a lack of literacy and numeracy skills, and being under-prepared. This article reports on two findings of a study that was conducted at two high schools in the Western Cape Province. The one high school was a quintile 1, and the other a quintile 4 school. The study aimed to implement intervention strategies over a three-year period for Grade 10 to 12 learners in the business-related subjects, Accounting, Business Studies, and Economics. The objective was to develop a readiness model that public schools in South African could use to overcome the challenges so that learners could be equipped with a strong foundation in their primary schooling. The study was situated within a critical education science paradigm and used a critical participatory action research design. Two groups of 30 learners formed the main research participants. Interventions strategies were implemented with the learners when they were in Grade 10 in 2017, in Grade 11 in 2018, and in Grade 12 in 2019. The results show that both groups of learners did not have an adequate rating of 50% and more subject content knowledge and skills when they arrived in Grade 10 in 2017 in all three subjects, and they did not manage to obtain a 50% or more rating in the three subjects in their final examinations at the end of Grade 12 in 2019. Based on the four key principles of the readiness model, recommendations are proposed that would assist public schools to develop and support the learners during the early childhood and foundation phase so that a solid foundation in literacy and numeracy skills could be laid.

Keywords

academic performance; high school; learners; readiness model

Introduction

The effects of South Africa's history of apartheid are still prevalent today, 26 years after democracy. The result is low throughput and high drop-out rates at public schools and post-school institutions for African and coloured students. Mlachila and Moeletsi (2019), and

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Spaull 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) 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 drop-out rate of 46.9%. However, only 534 484 learners wrote the Grade 12 examination (Department of Basic Education, 2017), which means that the 'actual' drop-out rate is 54.9%. We agree with Spaull (2019) who argues that education ministers need to accept that high drop-out rates and underperformance in Grade 12 are imbedded in weak foundations in primary schools, and specifically in the early childhood development and foundation phases.

In addition to the learners' weak foundation, is the challenge of progression. The policy on progression has been applicable in the General Education and Training (GET) phase since Curriculum 2005 and has been applied to the Further Education and Training (FET) phase since 2013 (Department of Basic Education, 2017). 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 (Department of Basic Education, 2017). The rationale behind the progression policy was to minimise the high drop-out rate and maximise school retention while providing additional support to these learners (Polity, 2019). However, 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), equating to 55.1%. The progression policy implications are that the gaps between what the learners do know and should know (subject content knowledge and required skills) become increasingly wider. As learners progressed to the next grade, they 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 dropping out (Spaull, 2013).

A further challenge lies in the business-related subjects: Accounting, Business Studies and Economics. Many learners find these subjects challenging, and opt for 'easier subjects' or drop out of school completely (Spaull, 2013). 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 BCom 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, intervention strategies to address these challenges in the early childhood and foundation phase are urgently needed as that is where the problem arises, and consequently, that is the area where interventions and academic support should be provided. This article reports on two findings of a study that was conducted at two high schools in the Western Cape Province. The study aimed to implement intervention strategies over a three-year period for learners who were in Grades 10 to 12, from 2017 to 2019. The objective was to develop a readiness model that public schools in South African could use to overcome the

challenges so that learners could be equipped with a strong foundation in their primary schooling, which should be built on throughout their secondary schooling, so that they will have the necessary subject content knowledge and skills at the end of Grade 12 and be ready for further studies.

We proceed by discussing relevant literature about the learners' weak foundation and underperformance, as well as the conceptual framework that was used in the study. We then discuss the research approach and research design, the research sites and the research participants. This is followed by a brief explanation of the data collection methods and how the data were analysed. Thereafter, the learner participants' results are presented and discussed, and we conclude the article with policy considerations and recommendations, as well as areas for further research.

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 and is one of the most important reasons for the learners' underperformance. South Africa was the lowest-performing country (mean score of 320) out of 50 countries in the 2016 Progress in International Reading Literacy Study (PIRLS) (Howie 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" (Howie et al., 2017). This means that learners could not understand what they were reading. The percentage in the United Kingdom was 3%. On the PIRLS scale, approximately 40 score points are equal to a year's schooling. The implication is that South African learners' may be six years behind the top-performing countries' learners (Howie et al., 2017).

The lack of basic literacy skills combined with a poor grasp of a second language (English) further constrains their ability to master literacy skills in the transition to a second language from Grade 4 (the school's language policy is that learners are taught in their first language until Grade 3, and must be taught in English from Grade 4 onwards). As a result, their struggle to read for meaning or comprehend the curriculum is worsened.

Moreover, early numeracy skills are equally important for learners' mathematics learning at school. However, not many African and coloured learners have opportunities to learn and practice early numeracy skills. Hence, these learners perform poorly at the beginning of primary school and continuously perform poorly in Mathematics throughout their schooling career (Spaull & Kotze, 2015). 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 assessments, particularly in Mathematics (Centre for Development and Enterprise, 2013). As such, it is too late to correct a lack of literacy and numeracy skills in Grade 12. These skills should be developed from Grade R onwards. For Accounting, Business Studies, and Economics, mathematical ability and reading with comprehension are paramount for abstract thinking and problem-solving (Spaull & Kotze, 2015).

Under-Preparedness of Learners

The consequence of poor-quality early childhood development and foundation phase education, together with progression, 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, which continues until they reach Grade 12, resulting in under-prepared learners. 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, 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 independent or creative thought; their inability to cope with analytical, evaluative and problem-solving type questions; and the poor language skills of a vast majority who sat for 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.

Moreover, there is a discrepancy between the pass requirements at school and university. It is generally known that learners only need 30% to pass at school, but at university, they need 50%. 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 schooling system that does not prepare them to enter either higher education or the labour market (Isdale et al., 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.

The under-preparedness of first-time entering students results in an inability to adapt to unfamiliar pedagogies and new and challenging assessment requirements, preparing notes, and dealing with a heavy workload, applying effective study techniques, and planning and time management skills, and to cope without family support (Mahlangu & Fraser, 2017; Nyamupangedengu, 2017). The learners' inability to adapt to the demands of higher education is referred to as the 'articulation gap' and has been identified as a key factor for student failure and drop out, especially for students from disadvantaged educational backgrounds (Council on Higher Education, 2016). It is for this reason that Morrow (2009) argues that widening formal access to higher education studies does not guarantee meaningful social and academic engagement, levels of retention and/or attainment of success in higher education studies. Thus, according to Morrow, public schooling is not providing learners with epistemological access.

Readiness Models Reviewed

Since the study concerns the readiness of Grade 12 learners for university study, three readiness models were reviewed. The first readiness model 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. Lemmens (2010) based his theoretical underpinnings for readiness for university education on various theories and models as well as psychological perspectives related to academic success. He constructed his readiness and retention model on the work of Conley (2007). Lemmens 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. The main findings of his study revealed that the readiness characteristics showed a direct relationship with academic success and intention to withdraw.

The third and last readiness model is that of Conley (2007; 2014). Conley 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. To provide a functional representation of the key aspects of HE readiness, Conley stresses the fact that in practice these components are not mutually exclusive or perfectly nested as portrayed in the model, but that they interact and overlap with one another. 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.

A commonality amongst the three models is the fact that all three included not only cognitive and academic skills but also contextual factors about the learners' socio-economic backgrounds and their abilities and attributes. Thus, they demonstrate that gaining an

education is a socially constructed process. As such, following Dewey (1916) and Vygotsky (1994), we argue 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 post-school institutions.

However, 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 this reason that some of the dimensions and categories of the three readiness models reviewed were combined to arrive at a simplified augmented readiness model for the South African public schooling context. We argue that a South African readiness model 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 low-paying jobs, that learner has no choice but to attend 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 for successful learning to take place as they are surrounded by gangsterism, drug and alcohol abuse, and crime. These circumstances are the lived realities for many African and coloured learners in poor and rural communities, which could negatively influence the learners' aspirations, self-efficacy and attributes. Aspirations, self-efficacy, attributes and skills development are sub-dimensions of the ownership of the learning dimension, which is placed second in the augmented readiness model. The cognitive dimension is placed as the third category 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 in order to gain the necessary subject content knowledge and skills in the different grades.

The last dimension in the augmented readiness model, content knowledge, places the focus on the school and its ability to provide for 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 started with the contextual dimension and ended with the content knowledge dimension to arrive at the learners' academic achievement in Grade 12, and was used as the study's conceptual framework.

Research Methodology

A critical education science paradigm was used as the research approach for the action research study. It was used because proponents of this paradigm state that 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; Ryo & McLaren, 2010). Ryo and McLaren (2010) explain that critical theory is concerned with empowering people to overcome social circumstances. Similarly, Carr and Kemmis (1986: 156) explain that “critical education science has the aim of transforming education; it is directed at educational change and allows for participation and collaboration by stakeholders who are involved in education”.

Following a critical education science paradigm, the study used a critical participatory action research (CPAR) design because it was not only about implementing interventions over a three-year period, but the CPAR design embodied the goals and principles of a critical education science research approach (Kemmis et al., 2014).

The research sites included two high schools in the Western Cape Province. High School A was a quintile 1 school (no fee-paying school), situated in a semi-rural African community. High School B was a quintile 4 school (a fee-paying school), situated in a more affluent community.

The study had seven different participant groups, but for this article, only one participant group, the learners who were the main participant group, is used. Ten Grade 10 learners in each of the three business-related subjects, Accounting, Business Studies, and Economics were purposively selected in 2017 at each school, totalling 60 learners. The code distribution system (Code 1 = 0-30%, Code 2 = 30-39%, Code 3 = 40-49% and Code 5 = 50-59%) that teachers use for grading the formal assessments were used to select the learners. All the learners at School A were African, with isiXhosa as first language, while most of the learners at School B were coloured, with Afrikaans (24) and English (4) as first language, and 2 learners were African, with isiXhosa as first language.

As already mentioned, it was a three-year action research process with the selected sample of learners that started in 2017 when they were in Grade 10, continued in 2018 when they were in Grade 11, and ended in 2019 when they were in Grade 12. Two intervention strategies were implemented with the learners 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 that was already covered by the teachers during normal school time. The reason why the interventions were on content that had already been 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.

The data collection methods for the learner participant group included a self-reflective questionnaire, pre-tests, interventions and post-tests in each of the three years, the learners’

academic results, two reflection forms and six focus group discussions. For this article, the learners' average marks in the March Control Test for the three years in each of the three subjects are presented and discussed, as well as their November examination results for the three years also in each of the three subjects. Both the test results and the examination results were analysed through Excel and SPSS software. The learners' answer to the question whether the interventions assisted them to understand the work better are also included in the discussion, as well as the reflections of the main researcher at the end of the data analysis process.

It should be noted that ethical clearance was obtained for the bigger study from the institution where the study was registered. Fundamental ethical principles such as obtaining the necessary permission for accessing the research sites, obtaining consent from participants, explaining the purpose of the study, and protecting and ensuring participants' confidentiality and anonymity were strictly adhered to.

Results and Discussion

The learner participants' average March Control tests, and their average November examination results over the three years in each of the three subjects at both schools are presented below.

Table 1: March Control Test average marks in percentages: 2017-2019

Subject	School A: Learners' average marks in percentages			School B: Learners' average marks in percentages		
	March control test 2017	March control test 2018	March control test 2019	March control test 2017	March control test 2018	March control test 2019
Accounting	24.2	32.3	34.0	35.8	42.2	41.9
Business Studies	36.8	27.0	38.0	45.2	46.0	54.4
Economics	31.1	41.0	25.0	29.3	75.3	62.8

Table 2: November examination average percentage marks: 2017-2019

Subject	School A: Learners' average marks in percentages			School B: Learners' average marks in percentages		
	Nov exams 2017	Nov exams 2018	Nov exams 2019	Nov exams 2017	Nov exams 2018	Nov exams 2019
Accounting	31.6	25.0	33.5	42.0	51.6	35.0
Business Studies	19.1	26.6	32.8	55.3	36.2	39.2
Economics	33.4	32.8	32.4	50.0	79.5	44.4

For School A, the learners' March Control Test average marks show that in all three cycles, they did not have an adequate rating of 4 (50% and above) required for entry-level subject content knowledge and skills in the three subjects for the grades they were

in at the beginning of each year. 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.

Table 1 also reflects that for School A, the learners' March Control Test average marks in Accounting gradually increased in 2018 and 2019, while their Business Studies and Economics average marks fluctuated. There was a decrease in their Business Studies' result in 2018, which increased again in 2019, but for Economics, it increased in 2018 and decreased in 2019 below than what it was in 2017 when they arrived in Grade 10.

For School B, the learners' March Control Test average marks increased gradually over the three years for Business Studies, but the marks fluctuated for Accounting and Economics. There was a significant mark increase for Economics in 2018, from 29.3% in 2017 to 75.3% at the beginning of 2018, but it decreased to 62.8% at the beginning of 2019.

Table 2 shows an increase in the 2017 November examination average percentage marks for Accounting and Economics for the learners in School A. However, their average marks for Business Studies decreased from 36.8% in the March Control Test in 2017 to 19.12% in the November examination. There was a similar decrease in their November examination average results in all three subjects in 2018 and for Accounting and Business Studies in 2019. For the learners of School B, the November examination average percentage marks show an increase in all three subjects in 2017, but a decrease in Business Studies in 2018, and a decrease in all three subjects 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. This happened despite the interventions that were conducted with the learners in 2017, 2018, and 2019. And while the learners indicated in the self-reflective question that the interventions helped them to understand the work covered better, overall, the interventions could not provide the learners with the necessary academic support that they needed. A conclusion in the bigger study was reached that the interventions were a drop in the ocean – too little, too late.

These results reflect three important factors. First, that the learners were not adequately prepared in the previous grades; that was why they did not have a solid knowledge and foundational base when they arrived in Grade 10. An argument could be made that the learners at School A were at a further disadvantaged because they were not first language speakers of English. However, the learners at School B received instruction in their first language, but they too, could not pass the three subjects with 50% and above in 2019.

The learners' results (and thus, their performance) provide evidence for the discussion in the introduction and the literature review sections; the two schools did not prepare the learners adequately and they could not catch up, despite having received extra academic support. As Spaul (2013) suggests, the learners' learning gaps were not addressed and became learning deficits that cannot be alleviated in the FET phase.

Second, the learners' results in the March Control tests were better than some of their November examination marks in 2017 and 2018, but for 2019, all their March Control Tests results were better than their November examination results. This means that the learners' subject content knowledge and skills decreased over the academic year instead of increased. It also illustrates that the learners did better when a smaller portion of the work was assessed (the March Control Test focuses only on the first term's worked covered) than when the whole year's work is assessed in the examinations in November. In the bigger study, the main researcher reflected on this finding and made the inference that, because of the weak foundation that both groups had, the learners needed academic and language support throughout the academic year and not only two or three interventions.

The third factor pertains to the fact that the learners' results at School B were better than the learners' results at School A, and that they managed to obtain an adequate rating of 50% and above in Business Studies in 2017, and in Accounting and Economics in 2018. Their performance could be ascribed to the fact that they were attending a quantile 4 school and that they received instruction in their first language, while the learners at School A were at a quantile 1 school and they had to learn in a second and/or additional language.

The two quantile schools draw attention to the conceptual framework's contextual dimension that includes the school context, and the learners' socio-economic backgrounds. However, even though the learners at School B performed better than the learners at School A, they too, did not achieve an adequate rating of a 50% and above in all three subjects at the end of 2019 when they were in Grade 12. An inference could be made that, because they did not have a solid knowledge and foundational base when they arrived in Grade 10 in 2017, and despite having managed to obtain an adequate rating of 50% in some of the subjects in 2017 and 2018, their foundation was not strong enough to carry them through in the November 2019 examination. The two findings and discussion underscore what Spaul and Kotze (2015) and Chetty and Pather (2015) advocate about learners in public high schools not having a strong foundational base to succeed and progress to higher education studies.

In the bigger study, the main researcher reflected on the findings and the discussions and interpretations thereof, and concluded that learners who attend quantile 1 schools need much more academic and language support in each year of schooling because of having to learn in a second or additional language, and their socio-economic backgrounds.

Conclusions, Policy Considerations and Areas for Further Research

The literature reviewed in the earlier sections indicated the importance of a solid and strong foundation that should be laid in literacy and numeracy in the first two phases of learners' primary school education. The learners' academic performance illustrated that a few interventions during the FET phase are not sufficient academic support. Consequently, the first principle in a South African readiness model is the development of 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.

The second principle in the readiness model is the provision of ongoing language and numeracy support from Grade 1 onwards, which means that public schools should be provided with the necessary resources needed to enable the learners to succeed. 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).

Principle number three requires a revision in the current school's language policy. Learners should be allowed to continue to learn and construct new knowledge in their first language throughout their schooling careers. The fact that the current language policy requires learners to switch to English from Grade 4 onwards contributes to their poor literacy and numeracy skills, and ultimately, to their under-preparedness and weak academic results. Equally important, the progression rule should be removed, because as the statistics in the introductory section illustrated, progressed learners' have a backlog in the subject content knowledge and skills that they cannot overcome, which eventually leads to failure and dropping out.

Principle number four is that 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 academic and language support should be provided to learners attending quintile 1 schools as the poverty margin is higher at quintile 1 schools than at quintile 4 schools.

Finally, future research should be conducted at public primary schools across the five quintiles as this study was conducted at a quintile 1 and quintile 4 high school. The four principles of the readiness model could be used to effect positive change for learners at these schools. Researching the three quintile primary schools and applying the readiness principles will also test the effectiveness of the principles, and could provide insight on how the readiness model could be improved.

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