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**Improving the Reading Comprehension and Motivation Level of Struggling
Adolescent Readers**

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Desma Jeriffe

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Abstract

Adolescents from many parts of the world are struggling to read and comprehend text at their appropriate grade level. As a result of their repeated failure in reading comprehension tasks, many of these struggling adolescent readers lose their motivation to read and consequently become disengaged with reading. The aim of this research project was to determine the effectiveness of a reading intervention programme at improving the reading comprehension and motivation level of struggling adolescent readers. The intervention was designed based on the Concept Oriented Reading Instruction (CORI) Programme developed by John Guthrie and colleagues. The four week intervention which included a total of 15 forty minute lessons was carried out with seven struggling adolescent readers from the Caribbean island of Saint Lucia. The research project utilized a mixed-method approach in which both quantitative and qualitative data was collected. The Neale Analysis of reading ability was used to assess the reading comprehension level of the students while a motivation questionnaire was used to assess the motivation level of the students. A pre-test and post-test method was used in administering these instruments. Field notes were also taken based on general observations of the participants exposed to the intervention. The results from the data indicated that there was a general improvement in students' reading comprehension and motivation level at the end of the intervention.

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Dedication

*I dedicate this research project to my
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to get the job done!!!!*

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Chapter 1: Introduction

Reading comprehension is an essential skill necessary to handle the demands of the 21st century. Consequently, it needs to be developed from the early grades and nurtured as students progress through school (Moore, Bean, Birdyshaw, Rycik, 1999; Biancarosa, 2012). This continued support and nurturing is necessary because as students move up to higher grades, their ability to read, comprehend and acquire knowledge from a variety of texts becomes increasingly vital in determining their ability to be successful in all academic subjects (Mancilla-Martinez, Keiffer, Biancarosa, Christodoulou & Snow, 2009).

The reality though, is that many adolescents struggle with reading comprehension. This is further compounded by evidence that shows that growth in reading comprehension slows during the middle school years (Mancilla-Martinez et al., 2009). The increasing dilemma of struggling adolescent readers is not confined to any particular region or country but it is an increasing problem throughout many parts of the world. In the United States alone for example, research suggests that approximately 6 million high school and middle school students read below their grade level and fewer students graduate from high school than was thought, heralding a national crisis that demands a national response (Wise, 2009).

The effects associated with struggling adolescent readers are not just personal but also contribute to economic strains on nations, as those students are unable to find jobs to maintain themselves, consequently impacting on the social and economic fabric of their nation. Struggling adolescent readers threaten the security of a country as some of them resort to crime, increasing their chances of being incarcerated at least once during their lifetime (Guthrie, 2008; Wise, 2009).

Middle and high school students who struggle with reading have very few positive experiences with reading and so their motivation to read is very low (Ivey & Guthrie, 2008). The problem with struggling adolescent readers can therefore be seen as being two-fold as many of them who struggle to read are also demotivated, apathetic, or expressly resistant to school reading (Guthrie, 2008). Demotivated readers are most likely disengaged readers. Reading engagement and reading achievement however, interact with each other indicating that adolescents, who are highly engaged in reading, read more and become high achievers while those who are less engaged in reading, read less and achieve less (Guthrie, 2008). To improve student achievement through reading comprehension, students must be provided with the reading skills and must be motivated to engage with a variety of texts (Douglas & Guthrie, 2008).

The need to help struggling adolescent readers in a small developing Caribbean island like Saint Lucia is even more critical with its limited natural resources and its high reliance on the development of its human resources. Reports from the national exams written by all Grade six students entering secondary schools in Saint Lucia, however, reveal a wide gap between high and low performing students. In addition to that, in 2012, grade six students exhibited their worst performance in reading comprehension, failing to reach a mean score of 50%.

Warrican (2006) speaking from a Caribbean perspective sheds some light on this phenomenon. He speaks to factors based on the Caribbean school system that contribute to problems associated with reading amongst adolescent students. He describes these students as being trapped in a cycle of repeating classes and plunging further down into academic groupings and streams leading to the negative perception that students have of themselves as readers. He also laments about the situation which exists where school systems allow adolescents to reach this far in the educational system without ensuring that they are equipped with adequate reading skills. Adolescents therefore, can no longer be

short-changed and they need nothing less than a comprehensive effort to support their continued development as readers (Moore et al., 1999).

Rationale of the Study

The aim of this study therefore, was to determine the effectiveness of a reading intervention influenced by the Concept Oriented Reading Instruction (CORI) programme developed by John Guthrie and colleagues in improving the reading comprehension and motivation level of struggling adolescent readers in the Caribbean island of Saint Lucia. It was hoped that through this intervention, the reading comprehension measured in terms of accuracy, comprehension and fluency of form one students would improve. Similarly, it was hoped that the students' motivation in terms of their reading self-efficacy and intrinsic motivation towards reading would also be improved.

The Study

This present study followed a mixed method design in which both quantitative and qualitative data were examined. Quantitative data in the form of the Neale Analysis of reading ability was used to assess students' reading comprehension level while a motivation questionnaire was used to assess the motivation level of the students. A pre-test and post-test method was used to administer both of these instruments. Field notes were also taken by the researcher based on the general observation of the students exposed to the intervention.

To improve the reading comprehension of students, direct and explicit instruction was given in reading strategies, vocabulary and word-study. To improve student motivation, reading was incorporated with a science theme and students were provided with texts at their independent and instructional level. Some level of choice was provided to students with regards to the selection of some of the texts that they read, the peers whom they worked with and the means through which they represented their learning.

The study included seven form one participants between the ages of 12-14. They all formed part of a remedial reading class in which they received instruction in reading from a specialist reading teacher. The intervention included fifteen 40-minute lessons over a four week period with additional days before and after the intervention to administer pre and post-tests, assessing the reading comprehension and motivation levels of students.

Overview

This study consists of five chapters. Chapter two, the literature review, examines the issues related to this study. The first issue which is examined is the plight of struggling adolescent readers and characteristics which define a struggling adolescent reader. The simple view of reading is then examined providing the theoretical underpinnings for some of the components included in the intervention geared towards struggling adolescent readers. Reading comprehension is then examined highlighting the need to provide direct and explicit strategy instruction to readers to help them become actively involved in creating meaning from texts read. A case is then made for strategy instruction providing evidence related to the cognitive development of adolescents that make these years suitable for such instruction. The need to consider the motivation of struggling adolescent readers is then examined. Specific focus is directed towards the self-efficacy and intrinsic motivation of adolescents towards reading. The connection is then made between the influences of motivation on reading comprehension. A description is then given of the CORI programme. A case is made to show how its integrated form of instruction caters to both the development of reading comprehension and the motivation of students and how an intervention based on this programme could be beneficial to struggling adolescent readers in Saint Lucia.

Chapter three in this study describes the educational system in Saint Lucia. It describes the site selected to conduct this research and provides reasons for its selection. A description of the participants and why they were chosen is also examined. All data collection instruments are described and issues of validity and reliability of these instruments are discussed. The intervention implemented is described to give a feel of the instruction provided to students. Finally, ethical considerations are discussed in chapter three.

Chapter four provides details on the findings based on the quantitative and qualitative data collected. The data was analysed to determine whether the research aims were met and the research questions answered.

Chapter five discusses the findings in relation to relevant literature and draws conclusions about the relationship between reading motivation and reading comprehension amongst struggling adolescent readers. The limitations, Implications for research and implications for educational practice are then discussed based on the findings of this study.

Chapter 2: Literature Review

Struggling Adolescent Readers

There is a growing problem in schools around the world, of adolescents who are experiencing difficulty in reading and comprehending text at their appropriate grade level (Boardman, Roberts, Vaughn, Wexler, Murray, Kosanovich, 2008; Cantrell, Almasi, Carter, Rintamaa, Madden, 2010; Fisher & Ivey, 2006; Greenleaf & Hinchman, 2009; Pope, 2007). Pope (2007) explains this situation by stating that while extended efforts are placed on teaching students to read in the early years, there is a lull in the middle to secondary school years and consequently, struggling readers emerge. Pope (2007) warns against the misconception held by many that all adolescents can read. In the same vein, Cantrell et al. (2010) posit that while much effort and research has been placed on the development of reading and comprehension in young learners that insufficient research has dealt with adolescent readers. They highlight the fact that reading and comprehension is a complex process and consequently, it can pose problems for learners at all different points in the developmental continuum (Moore, Bean, Birdyshaw & Rycik, 1999).

Guthrie and Davis's (2003) view of a struggling reader however, goes beyond just the traditional conceptualization of a low achiever who simply lacks the cognitive ability to read and comprehend text successfully. They view the struggling reader as a learner who is also disengaged with reading, who has low self-efficacy, who is more extrinsically, rather than intrinsically, motivated and consequently does not engage in reading for mere enjoyment. This situation with struggling adolescent readers has implications for the family, school and society since one of the responsibilities of the school is to adequately prepare individuals for the future and to equip them with the skills, knowledge and attitudes necessary to handle the

many challenges that come with an ever changing world (Moore, Bean, Birdyshaw & Rycik, 1999; Wise, 2009; Biancarosa, 2012).

That is why Pope (2007) reminds us of the changing goal of reading in schools from simply developing the ability to reproduce words from a text orally to a need for learners to be more analytical and critical thinkers during the reading process. Consequently, struggling adolescent readers need instruction in more than just decoding words and understanding their literal meanings, they also need help in understanding the types of texts that they are exposed to daily (Greenleaf & Hinchman, 2009). The ultimate goal of reading therefore, should be to get students engaged in using higher order thinking skills (Allington, 2006). A concept that he describes as thoughtful literacy where students are taught how to go beyond simply recalling details from the text to skills such as summarizing, analysing, synthesising and evaluating details. Allington (2006) posits that while the development of higher order comprehension skills are rare in many classrooms; they are even more unlikely to occur in the reading instruction for those students who are struggling.

The Simple View of Reading

The simple view of reading by Gough and Tunmer (1986) proposes that reading comprehension is the product of two but equally important components which entail decoding and language comprehension. Decoding refers to the ability to identify words quickly and accurately while language comprehension is an individual's ability to derive meaning from spoken language (Hoover & Gough 1990, 2001; Gough and Tunmer, 1986). The conclusion can be drawn that to improve reading comprehension, careful consideration must be given to the efficiency of learners in both decoding and language comprehension.

Hoover and Gough (1990) established that both decoding ability and language comprehension correlate to reading comprehension. They conclude that while in the early grades, the two constructs are unrelated; decoding has a greater correlation with reading

comprehension. In the later grades however, it was found that language comprehension and decoding become more strongly related and language comprehension has the stronger correlation with reading comprehension. Similarly, Vellutino, Tunmer, Jaccard and Chen (2007) concluded that phonological decoding skills would be the greater determinant of success for beginning readers but as learners become proficient in word level skills then language comprehension and the processes involved in language comprehension become the determining factor for reading comprehension success as students get older. They attribute this finding to the fact that older students are exposed to more complex reading material which requires the use of many higher order thinking and language skills.

The above findings indicate that the focus for helping to improve the reading comprehension level of adolescents would be best directed towards developing skills that would be vital in improving their language comprehension, since many of them have already developed some basic skills in decoding. Language comprehension processes however, will not become fully developed until the individual has acquired not just the basic but sufficient word recognition skills to help them comprehend in writing what they can comprehend from listening to the spoken word (Vellutino et al., 2007). This means that while more attention should be given to improving older students' language comprehension there must also be a deliberate effort in helping struggling adolescent readers develop sufficient decoding skills. These skills would be vital in helping adolescents decode the novel, multisyllabic words that they encounter in their secondary textbooks, thus reducing the possibility of them failing to learn from the material because they cannot identify the words (Archer, Gleason & Vachon, 2003).

The development of decoding and language comprehension skills in adolescents

Decoding

For adolescents, decoding skills can be taught through word study, since the ability of the learner to identify words and their meanings provides a basic foundation upon which they can become effective and engaged readers (Baker, 2000). Students who have difficulty identifying words tend to have difficulty with fluency in reading and are “trapped in a world of word-by-word reading” that is meaningless thus making the process of reading frustrating (Vacca, Vacca, Gove, Burkey, Lenhart & McKeon, 2009, p.241). Word study however, cannot be interpreted as skills that need to be taught devoid of meaning since phonics, spelling patterns, word structure and word meanings can be incorporated within a literature based program (Baker 2000). When students are equipped with word study skills, they become more effective in decoding words and consequently improve their reading comprehension (Scammacca, Roberts, Vaughn, Edmonds, Wexler, Reutebuch & Torgesen, 2007; Davis, 2007). Effective word study practices for adolescent struggling readers assist them in learning the letter patterns and structural features associated with predictable speech sounds and provide them with an understanding of appropriate strategies that can be used for analysing words by the meaning and structure of their parts. The effective use of such decoding practices serves as a precursor for becoming a fluent reader (Boardman et al., 2008).

Allington (2006) highlights the need to help students become fluent readers since fluency in reading makes it easier for students to develop higher-order literacy proficiencies such as inferring, summarising and synthesising. The main method of helping struggling readers to become fluent readers is to provide them with numerous opportunities to practice their reading (Thomas &Wexler, 2007). When a student is able to decode automatically with little

difficulty and appropriate expression, they are then able to focus their cognitive effort on understanding the text rather than on struggling with the demands of figuring out each word (Boardman et al., 2008; Thomas & Wexler, 2007).

While fluency does not automatically lead to comprehension, it can be considered an important aspect leading into successful reading experiences for learners. According to Boardman et al (2008), students who struggle to read may also often struggle with fluency. Therefore, successful reading comprehension is linked to the ability to read accurately and automatically. The ability to read fluently is therefore vital for adolescent readers who at this stage in their educational experiences encounter a wide range of complex reading material in various content areas. There is a call however, for more research on practices that are suited to help older students achieve fluency in reading as much of the practices recommended have mostly been tried with younger readers (Boardman et al, 2008; Thomas & Wexler, 2007).

Language Comprehension

Using the simple view of reading, Wren (2001) developed a model of reading in which he illustrates the skills necessary to efficiently develop the two main components which are necessary to facilitate improved reading comprehension. The focus on his model in this discussion however, will be on the language comprehension component since this aspect is more directly related to older students' reading comprehension (Hoover & Gough, 1990; Vellutino et al., 2007). In his model, language comprehension involves the development of linguistic knowledge and background knowledge. The acquisition of linguistic knowledge entails the knowledge of the phonology of the language which involves the sound structure, the syntax of the language which involves the grammatical rules which determine how words are arranged in sentences and the semantics of the language which deals with understanding the meanings conveyed from the word level to discourse level (Moats, 2010).

Developing struggling adolescent readers' vocabulary especially specialised vocabulary that they may encounter, become important in developing semantic knowledge. While vocabulary and other semantic knowledge are important elements in determining language and comprehension skills in both younger and older readers, the relationship between vocabulary and reading comprehension is even stronger for older readers (Vellutino et al., 2007). They also suggest that vocabulary knowledge facilitates comprehension at the sentence level and that this semantic knowledge further contributes to the acquisition of syntactic knowledge (Tunmer & Chapman, 2012).

Thomas and Wexler (2007) contend that vocabulary is one of the least taught components of reading instruction. Yet they, like many others, believe that possessing wide vocabulary knowledge is an integral aspect of reading and comprehension. When a reader is able to understand the meaning conveyed by a word in a text or when they are equipped with the appropriate skills and strategies to figure out the meaning of an unknown word, this empowers them to unlock the meaning of the text since that meaning is conveyed through words (Boardman et al., 2008; Davis, 2007). Boardman et al., (2008, p.13) view vocabulary knowledge as involving more than simply understanding the meaning of words in text but as developing word consciousness for which it is described as being aware of the "richness and varied use of language."

Simply defining words however, and then using them in sentences, proves to be an ineffective strategy in helping develop the vocabulary of struggling readers (Vacca et al., 2009). Instead vocabulary instruction is most effective when students are provided with a number of opportunities to see the words being used in a variety of contexts (Baker, 2000; Vacca et al., 2009). Alongside this, they should be given the opportunity to interact with these new words, to understand and construct their meanings, remember the words and use them appropriately in their oral and written language (Davis, 2007).

The other aspect of language comprehension, according to Wren (2001), is the development of students' background or prior knowledge which helps students develop schemas which can then be used in understanding a text. Background or prior knowledge refers to all the skills, knowledge, ideas and experiences that a student comes into the learning process possessing (Vacca et al. 2009; Cameron, 2009). This knowledge is particularly important in dealing with students who come with diverse backgrounds in a multi-cultural environment since activating their background knowledge could help them relate to or identify with a text being read (Vacca et al. 2009).

Reading Comprehension

Learning to read is a very complex activity requiring the use of knowledge, skills and strategies (Davis 2011). It involves a "process of simultaneously extracting and constructing meaning" (Sweet & Snow, 2003, p. 1). While it has been established, that the ability of the learner to decode words from the text is important (Gough & Tunmer, 1986; Wren, 2001; Sweet & Snow, 2003), the essential goal however, is for students to become strategic readers, actively involved in constructing meaning from the text they read. In fact, Savage (2001) suggests that the most effective approach to help improve the comprehension level of students is to attend to the higher order cognitive difficulties that students may encounter. Many students with listening and reading comprehension difficulties fail to use effective strategies that facilitate the use of higher order thinking skills (Savage, 2001).

Similarly, many researchers have come to the conclusion that for students to become successful readers, they need to utilise their metacognitive skills and become cognitively engaged in the reading process (Blachowicz & Ogle, 2008; Davis, 2011; Davis; 2007; Vacca et al., 2013; Biancarosa, 2012; Harvey & Goudvis, 2013). While researchers such as Harvey and Goudvis (2013) believe in promoting the use of students' metacognition in reading, they do not prescribe to the view that educators can teach students to think. Their idea is that

human beings are born thinkers and it is the role of educators to teach students about their own thinking in order to enable them to become active and strategic readers. This requires that students be taught how to be conscious of their thought processes during reading. They need to be taught how to monitor their own reading and decide when there is a breakdown in text comprehension.

This is essential, since reading comprehension is like a dialogue between the reader and the author in which the author is trying to communicate his/her thoughts and ideas through the text while the reader uses metacognitive and cognitive strategies to understand the text and construct meaning and so, readers must learn to ask questions, respond to the content of the text and even challenge the thoughts and ideas expressed by the author (Vacca et al., 2009). If adolescents are not taught how to deal with the evolving complexities of the texts that they are exposed to then they will continue to struggle with reading (Biancarosa, 2012).

Reading comprehension however, does not occur in a vacuum as it involves the reader, the text and the activity of reading that is further influenced by the learners' sociocultural context (Sweet & Snow, 2003). The socio cultural context for readers may be characterised by the home, school, community and peer groups. Sweet and Snow (2003) describe the varying beliefs that students bring into the classroom about reading and learning which are influenced by the school, home and community environment. They also identify the disparity which may exist in terms of the availability of books, computers, educational resources and the quality of teachers based on the economic standing of students. They argue that from a socio cultural perspective, these social issues can have an effect on both the way reading instruction is delivered as well as the content of what is delivered to the learner. Socio-cultural learning theories propose however, that social interaction, whether from family members or peers is vital in the learning process as more able students can assist the less able ones to use and develop the skills and strategies that are essential for learning (Alexander, 2006).

The students themselves impact on their reading comprehension in that every student comes into the reading process with their individual characteristics. Adolescents in particular come with their own prior experiences, ideas, knowledge and skills. Many of them have had their personal experiences with failures and successes in reading. They have their own interests and motivation or lack of motivation to read. All of these differences contribute to some students coming into the reading process better prepared than others (Sweet & Snow, 2003). The text, whether print or electronic also affects the reading process as texts can be difficult or easy to understand based on the features of the text itself and the background knowledge that the reader brings into the reading process. The reading activity affects students' reading comprehension and it involves the purpose set for reading, the use of strategies to process the text and the consequences derived from being involved in the reading activity (Sweet & Snow, 2003).

Blachowicz and Ogle (2008) identify the comprehension process as being one that is purposeful, constructive, motivated, skilful and strategic as well as self-monitored. For a student to develop competency in reading comprehension there must be an authentic purpose set for reading. In classrooms, the purpose can be set by the reader or the teacher and should be interesting and motivating for the reader. Reading comprehension is a process that is socially constructed within a community of learners in which students work together. Learning to read and use appropriate strategies should therefore be carefully scaffolded by teachers to ensure that students develop those skills and eventually gain independence whereby they can effectively apply appropriate strategies before, during and after the process of reading (Vacca et al., 2009). In doing so, students must think about their thought processes while reading as they monitor and use self-regulating strategies to assist them in comprehending the text (Blachowicz & Ogle 2008).

To engage in such thought processes the learner must become a strategic reader. A strategic reader refers to the ability to think about one's reading in order to improve understanding and facilitate deep lifelong learning (Harvey & Goudvis, 2013). To be a strategic reader one must be able to apply appropriate strategies during the reading process. Strategies are therefore conscious behaviours utilised by readers before, during and after reading to help the reader derive meaning from the text. In order to help struggling learners develop and use these strategies, direct and explicit strategy instruction should be implemented (Davis, 2007; 2011; Duffy, 2009; Vacca et al., 2009; Scammarca et al, 2007). Direct strategy instruction is necessary as the years of failure experienced by struggling readers have proven that they are unable to automatically apply the complex reading strategies that are typical of expert readers of the same age level (Guthrie & Davis, 2003). Some of the strategies that are vital in developing learners who are able to understand text include activating background or prior knowledge to make connections, monitoring, questioning, making predictions, visualising, inferring and summarising a text (Allington, 2006; Davis, 2007; 2011; Duffy, 2009; Graves & Liang, 2008; Vacca et al., 2009; Scammarca et al., 2007).

Reading Strategies for struggling adolescent readers

Struggling adolescent readers must be equipped with a well-developed, repertoire of reading strategies (Moore et al., 1999). Providing students with strategies which they can use before, during and after reading sets the foundation for them to become independent readers (Thomas & Wexler, 2007) The following are the reading strategies explicitly taught as part of the reading intervention They also represent some of the strategies that are essential in assisting students to read and comprehend texts read (Allington, 2006; Davis, 2007; 2011; Duffy, 2009; Graves & Liang, 2008; Vacca et al., 2009; Scammarca et al.,, 2007).

Activating background knowledge to make connections

Background knowledge as discussed previously refers to all the skills, knowledge and experiences that students bring into the reading process (Vacca et al., 2009; Cameron, 2009). Background knowledge is an essential component necessary to help students make sense of the text before, during and after reading (Davis, 2011). This knowledge enables students to make connections between what they already know and the information encountered in the text. Students may also build on each other's knowledge by sharing their own ideas and experiences with other learners (Cameron, 2009).

When readers are able to make connections with what they already know, they are able to utilise their existing schemas as they read and discuss the text. In doing so, they may include new information to their existing schemas, make connections to various things that they have experienced, read about or seen thus making connections and eliminating or correcting any misconceptions (Davis, 2007). Therefore, when teachers are aware of the students' prior knowledge and experiences both in and out of school, it provides them with useful information that has the potential to guide the instruction (Davis 2011).

Predicting

Predicting is a comprehension strategy used by skilled readers in which they make educated guesses about the events, actions or ideas that will be featured in the text. Predicting is a strategy that can be used before and during reading (Davis, 2007; 2011). Before reading learners can make predictions based on their own experiences or they can preview the text for the title, pictures, graphics and other pertinent information and set a purpose in their minds for reading (Blachowicz & Ogle, 2008; Davis, 2007; 2011; Duffy, 2009; Cameron, 2009).

Monitoring, questioning and repredicting

Duffy, (2009, p.108) describes the processes of monitoring, questioning and repredicting as being “the strategic heart of the comprehension process” as a skilled reader possesses the ability to perform these mental activities simultaneously and naturally with very little effort unlike the struggling reader who believes that their ability to understand the text will happen naturally as they decode the words. Monitoring one’s reading entails the ability to keep track of whether the gist of what is being read makes any sense (Blachowicz & Ogle, 2008), figuring out what it is that they don’t understand and using appropriate strategies to clarify the meaning (Cameron,2009).

Monitoring and questioning are practically similar since both monitoring and questioning involve speaking to oneself about whether the meaning that is being revealed as one reads is in line with the predictions made and whether the meaning makes any sense (Duffy, 2009). Consequently, if the meaning does not prove to make sense then the reader needs to make a new prediction based on the information being discovered as well as their prior knowledge and experiences (Davis, 2007).

Monitoring, questioning and repredicting may be difficult to teach for a variety of reasons (Duffy, 2009). Firstly, he describes these processes as happening in a flash and as being invisible. This implies that it is almost impossible to tell when a skilled reader utilises these processes at various points in the reading activity. Secondly, he describes the strategies as being personal in that a struggling reader may not be able to copy what a teacher does as the process depends on one’s own prior knowledge and experiences. Thirdly, the use of these strategies is tentative; they are always changing as predictions are made and replaced by new ones. Finally, the uses of these strategies require much effort; effort that readers must be willing to put into the reading process. Students cannot be passive readers and at the same time maintain the expectation that they will be effective in applying these strategies to understand a text read.

Visualising

This is a strategy in which readers use the descriptions encountered in the text to create mental pictures of events, characters, settings or other aspects of a text being read (Davis, 2007; 2011; Duffy, 2009). To create mental images, readers draw on the use of their prior knowledge, their predictions as well as the use of all five senses. In doing so, they make the text become alive and interesting (Cameron, 2009). Duffy, (2009) views a reader's ability to visualize texts as one way to motivate students to engage in reading as a fun and lifelong activity. The visual images that readers develop before, during and after they read provide support and guidance to help them understand the text as they read. Even before reading, learners use their prior knowledge and clues from the text like the title and pictures to create visual images about what they are going to read. As they read, learners utilise both the new information plus what they already know to refine images as the new information gained may have clarified ideas and events thus leading to an improved understanding of the text (Davis, 2011).

Inferring

Inferring which is sometimes referred to as "reading between the lines" involves the ability of the reader to use what they already know based on their own prior knowledge and experiences and the clues provided in the text to help them figure out the meaning of the message that the author is trying to convey (Davis, 2007; 2011; Duffy 2009; Cameron, 2009). Both Duffy (2009) and Davis (2011) posit that many other comprehension strategies like the use of prior knowledge, prediction and visualisation are closely linked to making inferences. Davis (2011) warns however, that many readers in the early and middle primary years will not infer automatically and consequently need scaffolded instruction to help them understand and use this comprehension strategy. Skilled readers however, learn to make inferences throughout the reading process. They use the text features and prior knowledge to make inferences before reading. They make inferences during reading to monitor and

develop their understanding. They also make inferences after reading based on the author's purpose, the reading outcomes and the events that may follow (Davis, 2011).

Summarising

Summarising is a comprehension strategy in which skilled readers provide a shortened version of the text read. The ability to create summaries depends on the readers' ability to identify key words, phrases, ideas and events and pick out the important details or main ideas from the other supporting details. Students must then combine these ideas into coherent sentences or paragraphs using their own words to provide the gist of the text read (Davis, 2007; Duffy, 2009). Summarisation is a difficult strategy for readers to grasp as students have difficulty deciding what information should be included and deleted to form the summary (Cameron, 2009; Duffy, 2009). It is also difficult because summarisation requires the reader to draw from a variety of other strategies.

Both Cameron (2009) and Davis (2011) agree however, that it is an important strategy to teach learners especially as they move into the higher primary grades and into higher levels of education. As texts get longer and more complex learners need to be able to summarise effectively and focus on the most important ideas in the text.

Conclusion

In order for struggling readers to understand and effectively use reading strategies, they need to be provided with direct instruction Guthrie and Davis,(2003). This involves very explicit, step by step instruction by the teacher who models the use of the strategy and then provides scaffolded instruction to help students use the strategies independently (Graves & Liang, 2008; Guthrie & Davis, 2003). The comprehension strategies however, are most meaningful to struggling adolescent readers when they are given the opportunity to learn and practice them in meaningful contexts (Boardman et al., 2008).

Cognitive Development of Adolescents

Adolescence signifies a number of biological, cognitive and socio- emotional changes (Santrock, 2008). Adolescents seem to demonstrate a difference in their quality of thought. Many develop the ability to consider ideas from various angles and are thus able to reason, think strategically and process information more efficiently (Blakemore & Choudhury, 2006; Steinberg, 2005). Several theories including Piaget's theory of cognitive development attempt to explain how individuals think and come to understand the world. In Piaget's theory of cognitive development, he describes individuals starting from around the age of puberty as moving from the concrete operational stage in which the thought process is based primarily on what actually exists to the formal operational stage where these individuals can engage in abstract thought based on hypothetical situations, they can think logically and use metacognitive skills (Woolfolk & Perry, 2012; Santrock, 2011). Piaget's theory of cognitive development has been criticised as many adults fail to reach this stage and some children have been known to demonstrate such abstract thought (Galotti, 2011).

A more recent explanation of cognitive development in adolescence has been based on studies of brain development (Kuhn, 2006; Paus, 2005; Casey, Giedd & Thomas, 2000). It has been found that the adolescent period is characterised by dramatic changes in the remodelling and restructuring of the brain (Steinberg, 2011; Nagel, 2010). One of the most significant changes that characterise adolescence as a result of these brain developments is the notable improvement in their executive functioning which is considered to be an integral component in human cognition. Therefore, the adolescent period can be viewed as a period of significant cognitive growth where young people have the improved ability to control their thoughts and actions and make them consistent with their personal goals (Crone, 2009). The ability to process information effectively and efficiently is enhanced because of the

improvement in speed, capacity and inhibition influenced by changes in the brain (Kuhn, 2006).

Changes in the cognitive development of adolescents make this period ideal for the increased ability to develop and use strategies that will help them gain and apply knowledge capable of assisting them with higher order thinking. One such strategy that adolescents may now be able to use is metacognition. This ability makes it possible for them to think about their thoughts and plan and apply the appropriate course of action to critically analyse information (Skaggs, 2004). The improvement in their executive function makes adolescents capable of allocating, monitoring and managing the mental processes involved in learning, which proves vital for engaging in any kind of conceptual learning that requires a change in their understanding (Kuhn, 2006).

It would therefore seem reasonable to conclude that the cognitive development of adolescents make the adolescence period an ideal time for them to learn and use appropriate strategies that will assist them in reading comprehension. It has been suggested however, that while the adolescent brain undergoes many changes that would facilitate such learning, that if they are not provided with the appropriate learning experiences to develop such abilities, that the capacity to learn and apply appropriate reading strategies and higher level thinking may eventually be lost through a process called synaptic pruning which takes place in the brain. As Kuhn (2006) states, the experiences and activities that one engages in will determine which synaptic connections in the brain will develop and which ones will eventually disappear.

Summary

While there is much attention given to the development of reading among students in the early grades, a growing problem exists amongst adolescents who struggle with reading comprehension. The simple view of reading suggests that two components including

decoding and language comprehension must be adequately developed for reading comprehension to be possible. While these two components are different but equally important for the development of reading comprehension, research shows that language comprehension which includes linguistic knowledge and background knowledge is more strongly related to the reading comprehension of older students. To facilitate the development of linguistic knowledge in adolescents, attention must be given to instruction in vocabulary, word-study and fluency.

Reading comprehension however, is a complex activity and therefore it requires students to effectively use their metacognitive skills and become actively engaged in constructing meaning from texts read. To become active readers, students must become strategic readers. To facilitate the development of strategic readers, direct and explicit reading strategy instruction must be provided to help students understand texts. The adolescence period seems to be an ideal time to teach adolescents reading strategies and how to use those strategies effectively. This is due to the many changes that take place in the adolescent brain, thus contributing to an improvement in their cognitive development.

Motivation

Motivation is the process by which goal-directed activities are initiated and sustained (Schunk, Pintrich & Meece, 2008). In the context of the classroom, Brophy (2010) describes student motivation as the extent to which students will invest time, energy and attention towards various tasks, goals or activities. Motivation can therefore be viewed as a determining factor in a student's desire to pursue and successfully accomplish a particular task. Consequently, student motivation is an integral component of the teaching and learning environment. It influences all aspects of schooling and can be a determining factor in both student and school success. Student motivation can affect current learning as well as the skills and strategies learnt previously (Schunk, Pintrich & Meece, 2008).

The significance of improving and sustaining high levels of student motivation for reading and comprehension is a critical issue since a student's proficiency in reading has been found to be a determining factor for success in almost every subject area across the curriculum (Logan, Medford & Hughes, 2010). Indeed, Logan et al., (2010) argue that while much research has concurred with the important role that motivation plays in reading, they believe that motivation plays an even bigger role for struggling readers with lower cognitive abilities. This is especially so since these students are faced with the same assessments with other students at the same level of difficulty. The task of reading may therefore be more challenging and students would need to be highly motivated to persist in the face of difficulty.

Motivation however, is a multifaceted construct with a number of theories attempting to explain how individuals become motivated and maintain that motivation. Wigfield, Guthrie, Tonks and Perencevich (2004) view intrinsic motivation and self-efficacy as the two constructs that strongly relate to the frequency of student reading as well as their comprehension. Similarly, Guthrie, McRae, Coddington, Lutz Klauda, Wigfield, and Barbosa, (2009) found that two important aspects of motivation shown to improve reading comprehension amongst elementary students included the students' level of self-efficacy for reading and their intrinsic motivation to read. McGeown, Norgate & Warhurst (2012) further found that these two aspects of motivation correlated positively to the improved reading skills of both good and poor readers while extrinsic motivation did not.

Self- Efficacy

Competency and efficacy beliefs refer to learners' judgements about their ability to successfully accomplish a particular task such as reading a book. This judgement is influenced by their past experiences with other similar tasks, through vicarious experiences when they observe the success or failure of others, the feedback or persuasion that they

receive from trust worthy sources with regards to their ability to accomplish the task and the emotional response to the task which is characterised by whether they feel relaxed and at ease or whether they feel tense and anxious (Brophy, 2010; Wigfield et al., 2004). The beliefs that young people possess about their ability to perform various tasks form the foundation for all future accomplishments since young people will have very little incentive to pursue a task or keep up with that task in the face of difficulty if they have no confidence that their actions will produce positive results (Pajares, 2005). Adolescents will consequently engage in activities that they feel competent in accomplishing and avoid those activities in which they do not. The level of self-efficacy that learners have towards reading and comprehension may determine the effort and persistence in which they tackle a reading task as well as the emotional response to the task. This would suggest that the more efficacious students would encounter less stress and anxiety when faced with a reading task as compared to a student who has a low self-efficacy for reading (Zimmerman, 2000).

Pajares (2005) identified a number of implications for teachers and parents. He advises that interventions designed should emphasise the development of skills rather than that of self enhancement which includes building self-esteem through praise or self-persuasion. He explains that when the emphasis is on developing skills, then students can genuinely begin to experience some level of success at a given task. He also proposes that learners need to be exposed to effective modelling practices. Since learners develop self-efficacy through vicarious experiences such as success, then students need to observe others being successful at a given task. Teachers need to model the right behaviours and strategies to overcome challenges and attain success and students also need to observe how their peers overcome hurdles and accomplish a given task. He therefore, advises teachers to tailor instruction to the capabilities of the students. If students become overwhelmed by a task to the point of frustration, then these learning experiences may further impede the development of students' positive self-efficacy. Students must be given tasks in accordance with their

zone of proximal development in which a reading task will provide just the right challenge to motivate them to complete the task and experience some level of confidence and success.

He encourages teachers to be conscious of the words spoken to the learner or the presence of any hidden messages that may be sent based on their actions during instruction. Words spoken or messages sent to the learner can either impede or promote the development of positive self-efficacy. In light of that, teachers should only praise what is worthy of praise. They should provide effective feedback to students that will encourage them to make the appropriate adjustments and utilise the strategies that would propel them towards accomplishing the desired learning goal. Pajares (2005) also states that teachers must create a learning environment that promotes a culture of optimism and self-confidence. Learners must believe that with effort and the use of appropriate and effective strategies that learning goals can be achieved. They must understand that they possess the ability to achieve success and thus, their outlook on life and their actions may be one determining factor in determining the extent to which success can be achieved.

Intrinsic Motivation

Intrinsically motivated students complete a task out of a personal love and interest for the task itself. Their motivation can be described therefore, as coming from within and not from any external rewards as in the case with extrinsic motivation (Ryan & Deci, 2000). Intrinsically motivated students will therefore, engage in reading because they enjoy reading and because they want to improve their own reading skills. Wigfield et al. (2004) also posit that intrinsic motivation fosters the growth of reading skills which consequently lead to long term engagement in reading. They explain further that the different aspects of motivation work alongside each other and influence one another. Therefore, they claim that a student who has a high level of self-efficacy in reading would most likely be intrinsically motivated to read.

Ryan and Deci (2000) use the Cognitive Evaluation Theory (Deci and Ryan, 1985) to highlight the social and environmental factors that foster and sustain one's intrinsic motivation. One such factor is that of interpersonal events and structures such as rewards and feedback that promote a feeling of competence. Therefore, optimum challenges, effective feedback free from negative comments, are directly associated with a feeling of competence. It must be noted that a feeling of competence provides insufficient impetus to enhance intrinsic motivation. A feeling of competence will only be an effective catalyst for intrinsic motivation if it is accompanied by a sense of autonomy.

A feeling of autonomy is the second factor necessary to promote learners' intrinsic motivation. Learners must perceive their behaviour to be self-determined in order for intrinsic motivation to be enhanced (Ryan & Deci, 2000). For autonomy to be experienced students must be given some level of choice such as the task to be completed or the topic to be studied (Brooks & Young, 2011). The use of threats, deadlines, exams, imposed goals and pressured evaluations will only hinder the development of student autonomy while choice, acknowledgement of feelings appropriate for self-direction may enhance the feeling of autonomy (Ryan & Deci, 2000).

The third factor from the Self Determination Theory hypothesis is that intrinsic motivation will flourish in environments where security and relatedness is present (Deci, Vallerand, Pelletier & Ryan, 1991). Learners' intrinsic motivation will therefore be supported when they feel a sense of belonging and security in a caring and warm learning environment with adult and peer support. The principles of the Cognitive Evaluation Theory of competence, autonomy and relatedness under the self-determination theory however, will only apply to people who are intrinsically motivated to perform and complete a task. The task therefore, must have the appeal of novelty, challenge or have an aesthetic value to the learner (Ryan & Deci, 2000).

Motivation and Reading Instruction

It is essential for educators to make a conscious effort in improving the motivation of struggling readers especially adolescent struggling readers who have had multiple experiences of failure (Guthrie & Davis, 2003; Ivey & Guthrie, 2008; Guthrie, 2008; Boardman et al., 2008). Statistics reveal that a large population of these students experience low self-efficacy and high levels of anxiety with literacy tasks (McTigue & Liew, 2011). Logan et al. (2010) argue that developing motivation is even more vital for struggling readers since these students' level of motivation may play a greater role in their performance and growth in reading comprehension.

It has been found that the intrinsic motivation of learners and their attitude towards reading decline as they move up to the higher grades (Moore et al., 1999; Wigfield & Guthrie, 1997). Guthrie and Davis (2003) for example, using a student questionnaire with middle school learners found that intrinsic motivation for reading decreases as students move from elementary to middle school and extrinsic motivation in the form of grades and competition increases. In particular, they found that low achievers lose their intrinsic motivation for reading even quicker than the competent reader. Guthrie and Davis (2003) argue that there are many differences between elementary and middle school that contribute to the disengagement and low levels of motivation in reading for middle school students. Some of these differences include a mismatch between reading instruction and content instruction, text difficulty, the decrease in choices that students are given, isolation of students from teachers, formal, non- personal response expectations and the limited link between reading and the real world.

Guthrie et al., (2006) also found that the motivation of students in the late elementary school years significantly predicted the students' growth in reading and comprehension but reading

comprehension skills did not predict growth in reading motivation. This suggests that even cognitively capable students may just be going through the routine of school and of reading without being motivated to fully engage, and persist with challenging reading tasks. Greenleaf and Hinchman (2009) argue therefore, that a deliberate effort in helping adolescents change their identities from being non-readers to that of being able readers is an important component of adolescent literacy development. They posit therefore, that adolescents deserve instruction that aims for a high level of literacy that can adequately equip them for the ever changing and challenging world.

Boardman et al. (2008) highlight the need, to include motivation as an instructional component noting the increased awareness of the difficulty of keeping struggling adolescent readers motivated and the positive contribution that having motivated learners bring to reading. They explain however, that unlike word study, fluency, vocabulary and comprehension that require direct and explicit instruction by the teacher, that motivation cannot be taught directly but rather, particular attention must be given to motivating students when planning the reading activities. It would seem logical that having a group of motivated students may ultimately create the right avenue to get these struggling adolescent readers to engage meaningfully with reading comprehension.

The encouraging news is that the teaching and learning experiences of struggling readers can be manipulated and improved to foster a greater level of motivation among students. Wigfield et al., (2004) postulate that the experiences that students have in the classroom can either influence or hinder their motivation for reading. Ginsberg (2005) also argues that motivated students will perform better than unmotivated students both in learning and performance and therefore knowing about students' level of motivation can facilitate more effective teaching and learning.

Motivation however, is not an isolated factor in improving student performance in reading comprehension. In fact Guthrie et al., (2009) suggests that improving and nurturing multiple aspects of learning lead to an improved performance in reading and comprehension. They identify factors such as integrating reading with other content areas, emphasising learning goals, providing hands on activities, teaching reading strategies and encouraging self-directed learning and collaboration among students. Taboada, Tonks, Wigfield and Guthrie (2009) found that the development of both cognitive skills and reading motivation made a significant contribution to reading comprehension performance and growth. This suggests that a sole focus on developing students' reading motivation may not necessarily yield a general improvement in reading comprehension. Rather, in an effort to improve the general reading comprehension performance of struggling readers, a focus should be on improving both the students' reading motivation and their cognitive reading comprehension skills.

Concept Oriented Reading Instruction (CORI)

One programme that has been found to improve the reading comprehension and motivation level of struggling readers is the concept Oriented Reading Instruction (CORI) programme. This reading programme hinges off from much of what research has recommended in helping struggling adolescent readers. The description of the programme is based on the text edited by Guthrie, Wigfield and Perencevich (2004) who are the main developers of the CORI programme.

Guthrie (2004) provides an overview of the classroom context for engaged reading and a basic understanding of the principles of the CORI programme. Guthrie (2004) explains that the goal of the CORI programme is to help learners become engaged readers. To be engaged, learners must demonstrate two basic qualities. First, the learner must be cognitively competent in comprehension skills and comprehension strategies to enable them

to learn from texts. Therefore to be engaged, learners must be capable of utilising their background or prior knowledge, they must be able to form questions, search for information, summarise, organise newly learnt information and monitor their understanding as they read.

Secondly an engaged learner must be motivated. This means that the learners will be eager and willing to work even when they face challenges. According to Guthrie (2004) learners will demonstrate their motivation to learn when they demonstrate a great desire to learn and add to their wealth of knowledge and when they are socially interactive. This means that learners will be working together, discussing topics and analysing different points of views. Guthrie (2004) explains that as the name suggests the focus of the programme is on developing conceptual knowledge while at the same time teaching reading and comprehension. In doing so both cognitive competence and motivation can be achieved while teaching students a concept in one discipline and by setting learning goals. In addition to that, strategies which may seem difficult to students will now be taught with an authentic purpose in mind thus enhancing the learners' motivation to utilise the strategies and comprehend the text.

Guthrie (2004) lists four dimensions to the CORI programme which includes firstly, the explicit instruction of reading strategies such as activating prior knowledge, questioning, searching for information, summarising and organising information graphically. The second dimension involves science inquiry where scientific skills such as observation, designing an investigation or collecting data will be supported. The third dimension is providing motivational support by tapping into students environmental interests, developing student autonomy through choice such as asking questions which will then serve as the basis for directing their reading. To encourage motivation, interesting texts will be used and collaborative group work will be utilised. The fourth dimension is the integration of science and reading in which learners will be encouraged to make connections between real life experiences and the information discovered in the text.

Guthrie (2004) also notes that special considerations are given to struggling readers including providing them with help in improving their oral fluency by providing word recognition support, simplifying instruction for teaching reading strategies by providing more explicit modelling, providing extra support to help these students bridge the gap between reading the text and responding to it and by providing multiple and varied opportunities for students to learn the reading strategies.

Context

The improvement of reading comprehension and motivation is especially relevant to the island of Saint Lucia, a tiny developing state that has only recently started providing a secondary education for every primary school student. The structure of the education system has unintentionally perpetuated the “Mathew effect” a term popularised by Keith Stanovich (Wren, 2001) in that students who come from homes where they are provided with rich background experiences and academic support tend to become the high achievers and ‘good readers’ from the early grades and continue to excel, while students who come in with limited experiences, exposure to books and educational support tend to become the low achievers and struggling readers who continue to struggle and lag behind. This is further compounded by the situation which currently exists where students are sorted out and assigned to secondary schools based on their scores gained from the Common Entrance Exam with many of the low performing students being assigned to particular secondary schools while the high achievers are assigned to what many consider to be the more “prestigious” secondary schools.

In the synopsis of 2012 Common Entrance Exam, the national exam written by all grade six students in the primary school, the national mean was 59.04% with 52.88% of the students attaining scores at or above the mean. This means that out of a total of 2831 students who

wrote the exam, 1334 of them did not reach the national mean. The students' scores ranged from as high as 95% to as low as 15.67%. The report revealed that a mean score of 50% was obtained in all components of mathematics, general paper and all the components of English language with the exception of reading comprehension. This suggests that in 2012 primary school students in the island of Saint Lucia exhibited the lowest performance in reading comprehension failing to reach a mean score of 50%. This means that many of these students will now come in to the secondary schools performing below their grade level in reading comprehension.

When all of these students are assigned to secondary schools with tail end scores as low as 15.67%, these students continue to struggle with reading comprehension. This is because most of the students with the lowest overall scores are also those with the low comprehension scores. Consequently, they continue to struggle in many of the other content areas and continue to fall behind in their overall academic performance at the secondary school. Most of them do not believe in themselves because of their repeated experiences with failure and exhibit little motivation to read. Some of these struggling readers eventually drop out of school because they cannot keep up or cope with the demands of the secondary school curriculum.

It therefore, becomes necessary to provide much needed assistance to those struggling adolescent readers to help motivate them to engage in reading and to improve their reading comprehension performance. An improvement in their reading comprehension performance may ultimately mean an improvement in their overall academic performance as they become equipped with the appropriate skills and strategies to help them read and understand texts that they are exposed to in all subject areas.

Summary

Adolescent students deserve the optimum chance of success at school, at developing a career and in life in general. Therefore efficiency in reading comprehension becomes essential. Based on the simple view of reading, an individual must be efficient in both decoding and language comprehension to be successful at reading comprehension. While research has generally concluded that it is more productive to focus on developing the language comprehension of older students, it is also important to ensure that struggling adolescent readers are provided with the skills necessary to help them at the word level. Attention must therefore be paid to developing their word study and fluency skills.

Adolescents are at a critical point in their cognitive development because of the many changes taking place in the brain. This provides an opportune time to provide direct instruction of reading comprehension strategies and vocabulary development to assist with their language development. Focusing solely on developing the cognitive aspect of reading comprehension however, is insufficient; there must also be a focus on motivating adolescents to fully engage in reading comprehension. They must believe that they have the potential to be successful in a reading task and they must develop a love for reading which will propel them to read without any particular external incentive or push.

The CORI programme has been developed to help target both the development of reading comprehension through direct strategy instruction as well as the development of students' reading motivation through a number of aspects such as its integration of reading with science learning goals and the particular attention given to incorporating student choice within the reading programme.

The aim of this study is to examine the effectiveness of the CORI programme for improving the reading comprehension and motivation level for a group of form one struggling

adolescent readers at a secondary school in the island of Saint Lucia. The research questions are:

1. How effective will a reading intervention influenced by the Concept Oriented Reading Instruction (CORI) programme be in improving the reading comprehension performance of struggling adolescent readers?
2. How effective will a reading intervention influenced by the CORI programme be in improving the motivation level of struggling adolescent readers?

Chapter 3: Methodology

Overview

The purpose of this research was geared towards implementing a reading intervention to assist struggling adolescent readers to improve their reading comprehension skills as well as their motivation towards reading. The intervention developed was influenced by the work of Guthrie and colleagues in motivation and reading and the development of the Concept Oriented Reading Instruction (CORI) programme.

The intervention involved the teaching of reading comprehension using a science theme to integrate with the students' science class. The purpose of this was to have a built in purpose for reading throughout the intervention. Word level skills in the form of word study, vocabulary and fluency were taught. Direct and explicit instruction was also provided in reading comprehension strategies.

The research took the design of mixed methods using a combination of quantitative and qualitative data. The intervention was implemented for a total of four weeks which included 15 lessons lasting 40 minutes each. In addition to these four weeks, students' reading ability and reading motivation were tested three days prior to and three days following the intervention.

The Setting

The research was carried out in Saint Lucia, a small island in the Caribbean with a population of approximately 166,000 inhabitants (central statistics office, 2011). It is a

developing, independent state and it is a member of the Commonwealth Nations. Two languages are spoken in Saint Lucia, French Creole, which is the local language and English, which is the official language. Instruction at all levels of the education system is conducted primarily in the English language.

A school year in Saint Lucia begins from the first Monday in September and ends within the second week in July of the following year. Each school year consists of three terms with each term being approximately 13 weeks long. Compulsory schooling in Saint Lucia begins at age 5 and ends at age 16. The actual age that students begin compulsory schooling depends on the educational district and the rate of enrolment at the school.

Schools located within urban areas, with a high rate of enrolment will only accept students who are already five by the start of the school year to attend school for that given school year. Schools within other educational districts with available space will accept students given that they will turn five any time before or within the given school year. All students start school from the beginning of the school year. Compulsory schooling starts within the kindergarten class. Most children under five years of age fall under early childhood education and would be enrolled in either a day-care facility or a pre-school. Students from kindergarten to Grade 2 are considered to be part of the infant grades while students from Grade 3 to 6 form part of the primary grades. Students between the ages of 12 to 17 will be at the secondary school level. Secondary school begins from form one and ends in form five.

Prior to 2006, students in Grade six were required to write and successfully complete a national exam called the Common Entrance Examination in order to qualify and earn a place at one of the limited secondary schools. Based on the age of students, some of those who failed would have a second chance to write the national exam while those who were unsuccessful on their second chance would either receive a standard six school leaving

certificate or get to attend a junior secondary school, finishing school at the end of form three.

Since the introduction of universal secondary education in 2006, every student is afforded the opportunity to attend a secondary school. While students in Grade six are still required to write the Common Entrance Exam, the results of these exams only determine which secondary school students will attend. The students with the top scores get to attend what is considered to be the most prestigious secondary schools while those with the lower grades gain places at one of their lower school choices.

From 2013 the Ministry of Education has attempted to implement a form of partial zoning to create a more equal distribution of academic performance among secondary schools. Unlike before, when parents were given seven secondary school choices from any educational district, the Ministry of Education has now limited those choices to four with the first three choices being any secondary school but the fourth choice having to be selected from the students' educational district. Consequently, if students are unable to succeed for their top three choices they must remain within their educational district.

After students have completed secondary school at the end of Form five they are required to write the Caribbean Secondary Education Certificate exam (CSEC); one of the many exams prepared by the Caribbean Examination Council (CXC). Students are expected to write this exam in each of their selected subjects studied. This is a regional exam written by all secondary school students in the Caribbean. Students then use these results to gain a place at the Sir Arthur Lewis Community College in Saint Lucia where they previously wrote their Advanced Level Exams in association with Cambridge. In 2013 students attending the Sir Arthur Lewis Community College will now write the Caribbean Advanced Proficiency Exams (CAPE). Students can use their Advanced Level qualifications or their CSEC results to attain Associate degrees or Bachelor degrees in association with the University of the

West Indies. Students can also use their grades to gain places at private Colleges in Saint Lucia where they are able to gain qualifications up to a Master's degree in certain fields of study.

Site Selection

This research was conducted with a group of form one students at a secondary school in Saint Lucia. This secondary school is one of three co-educational secondary schools in that educational district. It generally takes students performing at an average to below average range. In 2012 the school enrolled students with scores ranging from 28.67% to 66.67% (Ministry of Education, 2012). Moreover, in 2013 the educational district had the least number of students performing at or above the national mean in the Grade six Common Entrance Exam with only one public primary school within that educational district having average student performance meet the national mean (Ministry of Education, 2013).

Most of the poor performing students are filtered back into the secondary schools within that district while many of the top performers go out to secondary schools in other educational districts. Consequently, the secondary school within which this research was conducted and which will be referred to as Pearl Bright Secondary for anonymity purposes, take a number of students with reading difficulties. As a result, specialist teachers in Mathematics and English are assigned to help with the remediation of the incoming form one students in numeracy and literacy studies.

Pearl Bright Secondary was chosen as the researcher had previously been an English Language teacher at this school and was aware of the problems which existed among students in reading comprehension and their motivation to engage in reading. A form one class was selected as it was expected that the intervention would be more effective in the earlier forms. Students would have the opportunity to use the reading comprehension

strategies learnt as they moved up to the higher forms limiting the possibility of them falling further behind in their studies.

Participants

Participants were chosen through purposive sampling. The researcher had selected specific characteristics of a general population and identified the participants as having those characteristics (Johnson & Christensen, 2008). The researcher purposively selected these participants as they formed part of the remedial reading class for form one students within Pearl Bright Secondary. The selected students were those pulled out of their regular English class to receive remedial literacy instruction from a specialist teacher. The participants were seven out of the eleven students in this remedial class who returned the signed consent forms from their parents and themselves. These seven students consisted of two girls and five boys ranging from ages 12- 14. The mean age of all seven participants was 13 years and 6 months with a standard deviation of 9.48 months. They were all students from one of the four form one classes. They came from different primary schools within the district and spoke both English and French Creole. French Creole was the dominant language spoken at home for two of the participants.

Data Collection Instruments

The data collection instruments were selected to ensure validity and to establish both quantitative and qualitative forms of data. The data collection instruments included the Neale Analysis of Reading ability (McKay & Barnard, 1999), reading motivation questionnaires and field notes recorded based on the researcher's general observations of participants.

Neale analysis of Reading Ability

The Neale Analysis of reading ability (McKay & Barnard, 1999) was used to assess the reading competency of students at both pre-test and post-test level. This instrument assessed the accuracy level as it related to word recognition. It also assessed the comprehension level of students and the rate or fluency at which students read.

It was administered by the researcher to every student, individually before and after the implementation of the intervention. The test was conducted in a quiet classroom in which the researcher first made the students feel comfortable and assured them that there was nothing to be frightened about. The researcher then asked students some simple questions such as their name, age and the language spoken at home to gather some basic information about each student. The researcher then read the instructions from the manual provided. Each student was given a reader in which all reading material was present. Each pupil was first given a practice reading passage to familiarise them with the procedure however, no actual recording was done by researcher.

For each passage read the researcher used a stop watch to record the time taken by each student to read the given passage. This was done to assess the rate at which students read or to assess their fluency level. While each student read the researcher recorded their errors on a prescribed Individual Record form consisting of each passage read by students. The various errors recorded included mispronunciations, substitutions, refusals, additions, omissions and reversals that each student made. The researcher also recorded any significant observation of students reading pattern that was not accounted for in the errors. This information would then be analysed to determine the reading level of students.

According to McKay and Barnard (1999), to determine the students reading level the standardised test scores must first be found. This is done by calculating the totals for each

passage, recording this information on the appropriate Individual Student Record and then calculating the raw scores. Scores for the passages that students read with no more than the number of accuracy errors permitted, contributed to the total raw scores for each of the three tasks being measured which included accuracy, comprehension and rate. Only the raw scores obtained by students in accuracy, comprehension and rate or fluency were used for data analysis.

To ensure reliability and validity of the results from the Neale Analysis of Reading ability several measures were taken. According to McKay and Barnard (1999) due to the relaxed manner of this type of testing, precise and reliable standards of measurement along with standardised studies were conducted which was necessary to establish confidence in the test. The sample for which this test was used is valid as the island of Saint. Lucia follows a similar school system to that of the United Kingdom with the same starting age for school at the beginning of the school year. This therefore, forms a basis for the parallel between the sample used in this study and the Australian sample used in the standardised studies. However, in this study only raw scores will be reported.

Reading Motivation Questionnaire

The reading motivation questionnaire was used to assess the motivation level of students as it related to reading. The statements were extracted and modified from the work of Guthrie, McRae, Coddington, Klauda, Wigfield and Barbosa (2009). The two constructs examined under student motivation included the students' self-efficacy towards reading and their intrinsic motivation to read. Self-efficacy dealt with how students viewed their own ability to be successful readers while intrinsic motivation examined how much students enjoyed engaging in reading for their own personal satisfaction. Intrinsic motivation was viewed as reading for enjoyment and curiosity with a preference for challenging reading activities (Wigfield & Guthrie, 1997). There were a total of ten statements related to students' self-efficacy in reading while a total of seven questions examined students' intrinsic motivation

towards reading. The reading motivation questionnaire comprised a total of seventeen questions which are provided in Appendix A.

Measures of validity and reliability were already taken by Guthrie et al. (2009) and the items measuring self-efficacy and intrinsic motivation were found to be theoretically cogent. Factor analyses were then conducted on these items to remove any items that were not comparable with the measures. The items measuring self-efficacy had a Cronbach alpha of .71 while the items measuring intrinsic motivation had a Cronbach alpha of .83.

The questionnaire was administered to the whole group in a quiet room with students sitting at a reasonable distance apart to avoid being influenced by others. Students were assured that this was not a test and there was no right or wrong answer; only what they thought. The researcher read the instructions with the seven students. In addition, the researcher read through all the statements and explained how to respond to the statements while students followed.

Students were then given permission to read quietly and circle what they thought was the most appropriate response. Pupils were told that they were free to seek clarification from the researcher for anything that was not clear to them. The responses from these questionnaires were then analysed to determine students' reading motivation level.

The questionnaire used a rating scale of 1-4 which was coded in the following way:

1never, 2sometimes, 3most of the time 4..... always.

Positive statements were scored according to the rating scale above but negative statements like questions 2, 3, 9 and 10 under reading self-efficacy and question 3 under intrinsic motivation were reversed coded. Higher scores in each sub-scale reflected positive self-efficacy with a maximum score of 40 or positive intrinsic motivation with a maximum score of 28.

Observational Field Notes

The observational field notes were taken by the researcher after each lesson or activity implemented in the intervention. The intervention was conducted by the researcher so the field notes were taken based on the researcher's general observation of students' as they read. The observations recorded were not specific to any particular student but included general observations based on students' thoughts, ideas, responses and general attitudes and dispositions to the reading activity. After each lesson, the students left and returned to their classes, the researcher recorded the observations in detail. The first part of the field notes was an outline of what the lesson entailed including the date and the day of the week followed by the observations made by the researcher. Any brief note written during the lesson itself to ensure that a significant detail was remembered was transferred to the field notes.

Description of Intervention

The two main objectives of the intervention were to improve students' reading comprehension level and their motivation to engage in reading. To help students improve on their reading and comprehension there was a focus on explicitly teaching students some reading strategies including how to activate their background knowledge and make connections with the text, making predictions, monitoring their understanding, asking questions, making inferences and summarising. Students were also assisted with word level skills such as word-study and vocabulary especially in dealing with texts which included key content words that would affect their understanding. Students were taught the DISSECT strategy (Cantrell et al., 2010) to help them decode unknown words. This strategy entailed:

Discovering the context

Isolating the prefix

Saying the stem

Separating the suffix

Examining the stem and applying phonics

Checking with someone

Trying the dictionary

There was also a lesser focus on fluency as students were encouraged to work with peers to reread texts that had already been covered. During the intervention there was a focus on modelling the use of the strategies, helping students to think aloud as they read and reciprocal teaching was used when the researcher wanted to incorporate the use of several strategies during reading.

To improve student motivation the researcher integrated the teaching of reading and comprehension with the theme of water in science. This theme was selected from a list of topics provided by the class' science teacher. This list represented topics that students were expected to complete for the term. For the theme of water, students were expected to learn about the many uses of water as well as the effects of water pollution on aquatic life. This topic was selected as it was a topic that was not too abstract and one that every student could relate to. A variety of texts dealing with water at the students' independent and instructional level was then sourced. These texts included both expository and narrative genres. Certain features such as text difficulty, topics, the availability of pictures and subheadings and level of interest was considered. The books were sourced to provide students with variety and a wider range of books at their instructional and independent reading level.

Another aspect of the intervention was to motivate students by giving them some level of choice during the reading activity. These choices sometimes included the choice of text to be read, the choice about how they represented their learning, choice of peers to work with and an input in the questions that directed some of their reading. See appendix C for a sample of a structure of a day's lesson.

Ethical Considerations

Ethical standards attempt to provide guidelines that help influence decisions taken by the researcher during the research process (Larson, 2009). First, permission was granted by the Massey University Human Ethics Committee to conduct this research. See appendix B. Other ways that the researcher ensured that ethical issues were considered included obtaining informed written consent from all participants including the principal, specialist teacher, students and their parents. Even when consent was granted, students were reminded that they could withdraw if they no longer wanted to participate. Permission was also sought from the Ministry of Education of Saint Lucia to conduct research within the school. The researcher also sought to keep the confidentiality and the anonymity of students (Burns 2000; Drew et al., 2008) by using alphabetical codes on questionnaires and securing reading assessment scores and any other data collected.

To ensure the validity of data collected, the researcher used various data collection instruments and ensured that a rigorous attempt was made to collect accurate and trustworthy data since internal validity according to Drew, Hardman and Hosp (2008) deals with the accuracy and truthfulness of the findings. The researcher also used various data collecting instruments to collect both quantitative and qualitative data to establish consistency in the data collected and the results that will be acquired after the data has been analysed.

Chapter 4: Data Analysis

The aim of this study was to determine the effectiveness of a reading intervention influenced by the CORI programme. The objective of the intervention was to help improve the reading comprehension and reading motivation level of struggling adolescent readers. The hypothesis for this study was that the students' reading comprehension level would improve because of the use of direct strategy instruction, as well as an emphasis on word study, vocabulary development and fluency. It was also hypothesised that the students' reading motivation measured by examining their self-efficacy and intrinsic motivation conceptualised as their enjoyment and curiosity with a preference for challenging reading activities (Wigfield & Guthrie, 1997) would improve.

Quantitative data obtained from the Neale Analysis of reading ability assessment and the motivation questionnaire as well as qualitative data obtained from field notes taken by the researcher are presented and analysed. Tables and graphs are used to illustrate the results obtained from the Neale Analysis of reading ability assessment and the motivation questionnaire before and after the intervention.

There were only seven participants in this intervention and only the total raw scores obtained by each of the seven participants from the Neale Analysis of reading ability assessment and the reading motivation questionnaire will be used for the data analysis. The means and standard deviations for the results will be presented alongside individual raw scores. Individual raw scores are given as the sample was too small to make sense of combined scores through a mean. The qualitative data obtained from the observational field notes will be presented after the results of each measure from the quantitative instruments in order to answer the two research questions.

Accuracy, Reading comprehension, and Fluency

Table 1 shows that there was an improvement in the reading level for four out of the seven students based on the passages read in the Neale Analysis of reading ability after the intervention was implemented. Three students read at the same level as before the intervention while one student was able to read two levels higher. Level 5 was the highest level attained by any of the students after the intervention as compared to the highest level of three before the intervention.

Table 1: Reading level of passages read from the Neale Analysis reading ability assessment attained by students A-G before Intervention (BI) and after the intervention (AI).

STUDENTS	Reading Level	
	BI	AI
A	2	3
B	2	2
C	3	5
D	3	4
E	3	3
F	3	4
G	3	3

Accuracy

To examine how effective the intervention programme was for reading, each of the measures of the Neale Analysis of reading ability will be discussed, alongside the qualitative

evidence from the observations of the intervention. Table 2 provides the individual students' scores showing that all students improved their accuracy level in reading after they had been exposed to the intervention. This is reflected in an increase in the mean score by approximately 10 after students had been exposed to the intervention. The standard deviation, however, decreased by 1 after the intervention which indicates that the students' scores in accuracy were more homogeneous after the intervention.

Table 2: Raw scores, mean and standard deviation for the measure of accuracy before the intervention (BI) and after the intervention (AI) for students A-G

	<u>Students</u>								
	A	B	C	D	E	F	G	Mean	Stdev
BI	23	17	41	36	29	37	32	30.7	8.4
AI	38	26	50	43	39	45	40	40.1	7.4

The in class observations indicated that pupils had learnt to use other options apart from simply trying to sound out the words using phonics. Sounding out words was a popular strategy that they shared during a brainstorming activity on ways to figure out an unknown word. Using the DISSECT strategy; pupils used word analysis to help them decode multi-syllabic words. The general feeling from the students however, was that the strategy had too many steps. Many times during shared and guided reading, students who were able to decode the words would simply provide the word to the other students. During independent reading students explained that they would simply use whatever part of the strategy that they felt would be the fastest in helping them discover the word.

Comprehension

The comprehension level of all students increased after they were exposed to the intervention (see Table 3). The most significant increase in comprehension was made by students whose reading level, based on the passages read in the Neale Analysis of reading ability assessment also increased. This shows that not only were they able to decode the more difficult passages read but they were also able to understand what they read. The standard deviation for scores obtained in comprehension were slightly higher after the intervention which means that the scores students obtained were slightly more varied from the mean score as compared to the scores obtained before the intervention.

Table 3: Raw scores, mean and standard deviation for the measure of comprehension before intervention (BI) and after intervention (AI) for students A-G

	<u>Students</u>								
	A	B	C	D	E	F	G	Mean	Stdev
BI	9	9	15	9	16	10	17	12.1	3.7
AI	17	11	25	18	17	17	19	17.7	4.1

The in class observations indicated that by the end of the intervention, students were consciously making an effort to apply the reading strategies learnt to help them make sense of the texts being read. Unlike the beginning of the intervention where students identified the text as being the only place where information could be derived to assist them in making sense of what they read, students were now able to see that information also came from themselves or from '*their heads*' as they put it. This limited view of reading comprehension was evident during the pre-testing phase using the Neale Analysis of reading ability where some pupils would listen to the words in the question and respond to the question by reading

the sentences where these words appeared even though these sentences did not answer the question. For example in one of the passages the question “*Why did Kim stop?*” was asked. A student’s response was “*Kim stopped on her way to school.*” They had not realised that some questions required them to make connections with the information from the text and information from their heads to come up with the answers. Students were more concerned about getting the words on the page right rather than on understanding the message being conveyed through these words.

Later, however, a student was able to explain his understanding of reading in relation to a new item being sold at the supermarket. The student explained that “*although the supermarket will have the name of the new item displayed in the window and the item will have its name and other information printed on it. Shoppers will use that given information along with the information in their heads to figure out the new product being sold.*”

Students demonstrated their understanding and use of the various reading strategies taught throughout the intervention. An example of such learning was evident in a story read entitled “Shark Attack” which was a student lead reciprocal reading in which students had different roles, one of which was that of the predictor. Students demonstrated how new information changed their original prediction to an entirely new idea. Most students had predicted that the narrative would have been about a great shark attacking some swimmers in the ocean only to discover as they read that the text was about a boy who had brought a set of shark’s teeth for show and tell in his class and then accidentally sat on the teeth.

Students shared their thoughts through ‘think alouds’ as they engaged in shared or independent reading. During these times there was evidence of students making connections between what they were reading and information that they possessed based on their background knowledge and experiences. One connection that a student was able to make was between ground water and a “soose” which was a word used in their local oral

language. He came up with this word to help clarify the concept of ground water which had been interfering with his comprehension of the text. He described the “soose” as *an area close to a stream or a river where you dig and you are then able to get water*. It was only by making this connection with his own experiences that he and others were able to understand the concept of ground water.

There was also evidence of students using the strategy of questioning to monitor their understanding. One such example of students’ questioning even before the text was read was why a book would be entitled “Desert Rain” when it seemed that these two words were opposite in meaning. In students’ minds a desert was a dry place with no rain so to them, that title was a bit confusing. In that same book students had difficulty understanding *‘shrubs bursting into flowers’*. This was because the word ‘shrub’ was not part of their everyday vocabulary. After they had understood the meaning of the word, they were then able to visualise that idea according to them as *“balloons popping open and then flowers coming out”*.

Students learnt to ask questions to clarify ideas and understand the text. One student stopped suddenly while reading the text “An Interview with a glass of water” and asked with a very puzzled look on the face, *“I thought that we were reading about water so how could water be stuck?”* The idea of water responding to the interviewer saying that it had been stuck in a glacier had interfered with the students’ understanding since they had no background knowledge of a glacier and their idea of water was as a flowing substance.

Observing some pupils during independent and paired reading also revealed that when reading on their own they were asking questions even though some of the questions were very, literal, straight forward questions to help them understand the text. For example a student would use the prompt of “I wonder” to ask questions such as *“I wonder why the pelicans come to the lake now?”* When the text directly stated that the pelicans came to eat fish now that the lake had water. It was obvious that more work had to be done to get

students to ask questions that would require higher order thinking from themselves and their peers.

Fluency

The fluency level did not increase for all students after the intervention (see Table 4). The fluency level increased significantly for student “E” and it also increased for student “B” both of whom stayed at the same reading level based on the passages read in the Neale Analysis of reading ability assessment. This indicates that although the students’ reading level did not increase they were able to read the passages quicker and with greater ease as seen by an improvement in their accuracy as well. Students however, who moved up to higher reading levels experienced a significant decline in their fluency level except for student “F” who improved slightly on fluency even while he improved on his reading level.

Table 4: Mean and standard deviation for the measure of rate/fluency before and after intervention for students A-G

	<u>Students</u>							Mean	Stdev
	A	B	C	D	E	F	G		
B I	85	24	79	72	36	46	37	54.1	24.1
A I	50	35	57	50	56	50	37	47.9	8.6

The significant decrease in fluency was due to a slower reading rate for the passages read in the new levels attained. The passages at these new levels increased in difficulty in terms of the words and sentence structure and so students took a bit longer to decode the words and complete the passages. There was also a significant drop in the standard deviation of scores after the intervention, indicating that the post-test scores were more homogeneous

and there was less variance with the mean as compared to the pre-test results in which there was a great difference between the highest and lowest scores.

Based on in class observations it appeared that students generally liked rereading texts to themselves, to their peers and even to the researcher which helped them with their fluency. Students were also more careful about figuring out unknown words instead of just skipping the words that they didn't know and never returning to these words. Skipping the word was another strategy that they used before the intervention when they could not decode a word. Students realised during the intervention that if a reader skips over too many words then that could interfere with text comprehension. Based on the DISSECT strategy they could read on to determine the context of the word but they had to return to the word to test out whether their hypothesis of the unknown word was accurate

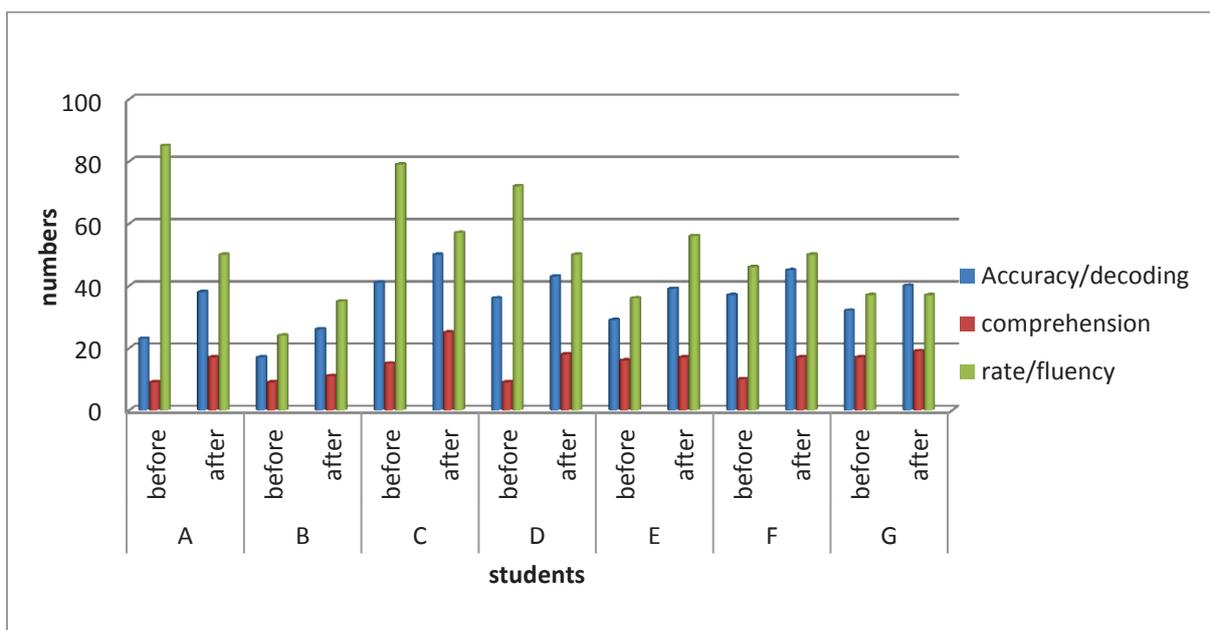


Figure 1: Reading outcome measures before and after intervention for individual students.

From figure 1 it can be seen that generally all students performed better in the Neale analysis of reading ability after they were exposed to the intervention. The most significant declines in scores after the intervention were in students' fluency rate. This was due to an

improvement in some students' reading level which exposed them to more challenging passages that required improved decoding and word analysis skills, vocabulary knowledge and the use of appropriate strategies to help them comprehend these texts. While some of the students were not able to read the passages quickly, they did demonstrate an increase in comprehension and accuracy scores which meant that they were able to apply their vocabulary knowledge, word analysis and comprehension strategies more effectively after the intervention to understand what they had read.

Reading Motivation

Self-Efficacy

To examine how effective the intervention programme was for improving reading motivation, each of the constructs from the reading motivation questionnaire will be discussed, alongside the qualitative evidence from the observations of the intervention. Figure 2 reveals that the self-efficacy of every student increased after the four week intervention. This indicates that students generally had a better view of themselves as being capable readers after the intervention was applied. After the intervention all the students believed that they would be successful in reading during the upcoming school year.

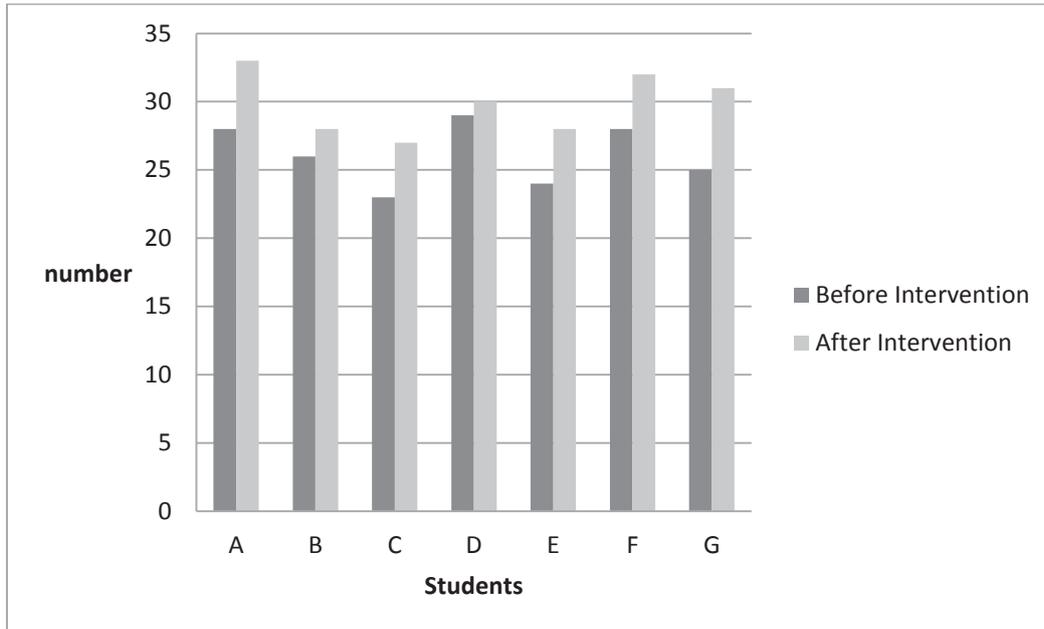


Figure 2: Self-efficacy outcome measures before and after intervention for individual students

While the mean score for the responses which indicated the reading self-efficacy for students after the intervention was higher; the standard deviation for the sum of students' responses before and after the intervention remained the same (see Table 5). This indicates that there was no change in variance from the mean before and after the intervention. Both sets of scores differed from their mean by the same amount which means that the scores before and after the intervention were homogeneous in nature.

Table 5: Mean and standard Deviation (Stdev) of the sum of students A-G’s responses for self-efficacy before intervention (BI) and after intervention (AI).

	<u>Students</u>							Mean	Stdev.
	A	B	C	D	E	F	G		
BI	28	26	23	29	24	28	25	26.1	2.3
AI	33	28	27	30	28	32	31	29.9	2.3

Based on the in-class observation, the self-efficacy of students improved as they experienced an increased confidence in their ability to engage in reading comprehension. This increased confidence may have been attributed to the strategies that they were now equipped with to help them with comprehension and figuring out unknown words. During the intervention, students also experienced some level of success in reading and comprehending books which were now at their level and so they felt empowered to read. This increased self-efficacy was evident in their willingness to participate in reciprocal reading during which they were willing to take on the roles of various strategies.

Unlike before when many of the students were unwilling to read aloud individually, many more students were volunteering to read aloud later on during the intervention. This was because unlike before when students would giggle and say to their peers who would somehow stumble during reading “*that word you don’t know!*” pupils had now become more supportive towards each other. Later, during the intervention when someone could not figure out a word or could not understand an idea they were more willing to help clarify the word or the idea to support their peers. They also realised that reading comprehension was more than just figuring out the words on the page. It was more about understanding the message.

Intrinsic Motivation

Figure 3 reveals that the intrinsic motivation of most students increased after the intervention. The most significant increase was for student 'C' who moved from being one of the lowest intrinsically motivated students before the intervention to being the most intrinsically motivated student at the end of the intervention. Some of the more intrinsically motivated students also became some of the least motivated students after the intervention. This may have been linked to a decrease in scores for questions related to enjoying the challenge in reading a book and enjoying books that made them think.

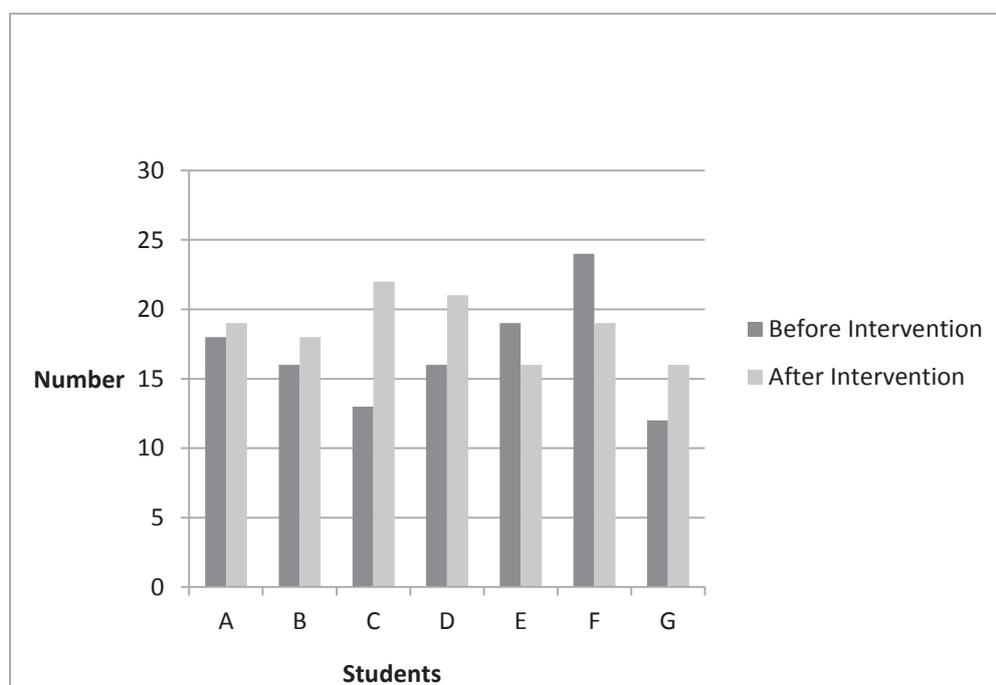


Figure 3: Intrinsic motivation outcome measures before and after intervention for individual students

There was a slight increase in the mean score of students' responses to being intrinsically motivated after the intervention (Table 6). The standard deviation of those responses however, was higher before the intervention with a standard deviation of 4.0. This means that the students' responses were more spread out and therefore varied more before the

intervention as compared to after the intervention. The standard deviation of scores after the intervention decreased by 1.1, indicating that the students' responses were closer to the mean and was therefore more homogeneous in nature.

Table 6: Mean and standard deviation (Stdev) of the sum of students A-G's responses for intrinsic motivation before intervention (BI) and after intervention (AI)

	<u>Students</u>							Mean	Stdev
	A	B	C	D	E	F	G		
BI	18	16	13	16	19	24	12	16.9	4.0
AI	19	18	22	21	16	19	16	18.7	2.9

Based on the in-class observations, the students were always enthusiastic about coming to class and participating in the reading lessons hence, an improvement in the intrinsic motivation for many of the students. They were willing to share their ideas during discussions and always wanted to take the books home to read. They were always hoping to discover and share something new during their free readings. They enjoyed reading and enjoyed being read to. In spite of their increased enjoyment for reading, it appeared that there was a decline for some students in their appreciation for the challenge in reading books and their preference for reading books that made them think. This consequently resulted in a decline of intrinsic motivation for some students.

One observation was that many students did not like to represent their learning from texts especially when it involved writing. They were very enthusiastic about the reading and discussion aspects but they sometimes groaned and slumped their shoulders when asked to write even though they were told that they should not worry too much about their spelling; the interest was in their ideas.

One particular example is when students had to create posters depicting something important that they had learnt about sea turtles. Some chose to depict why it was important to protect sea turtles while others wanted people to learn about the life cycle of a sea turtle. Students took almost the entire reading period drawing without writing one sentence or word to capture their ideas. Another observation was that when students were working in groups to create for example a flow chart to depict life in the desert when there was no rain compared to when the rain came or when they had to create a Venn diagram to examine the similarities and differences between two types of wells used in Africa to provide water to the people; selecting the type of well that they thought was the best, no one wanted to volunteer to be the writer. It always seemed to be the girls who ended up writing while the boys shared their ideas.

One unexpected finding from the results was that some highly intrinsically motivated students before the intervention became some of the lowest intrinsically motivated students after the intervention while one of the lowest intrinsically motivated students became one of the most highly motivated students at the end of the intervention. The now highly motivated student made some of the biggest improvements in terms of his reading level.

A possible explanation based on the researcher's observations was that during the intervention students realised that it took some mental work to understand a text. They realised that a good reader was not a passive reader. A good reader had to think and use strategies to help them understand not only the words but also the ideas that the author conveys through these words. By the end of the intervention, students knew that when they picked up a book that it required them to take on the role of an active reader; a thinker. As was evident with the students who used the strategy of questioning to monitor their understanding and clarify ideas to understand a text when they read that water had been stuck in a glacier or when students questioned the title of the text "Desert Rain".

For many students however, applying certain reading strategies like summarising or making inferences was hard work and added to the challenge of reading a text. Some students experienced much difficulty in seeing beyond what was written on the page and understanding the messages that the writers wanted to convey. They had difficulty drawing on appropriate background knowledge to use alongside the information provided in the text to make inferences.

The now highly intrinsically motivated students who attained some of the highest reading levels however, not only enjoyed reading books and were curious about books but it seemed that they were also motivated by the challenge in the text. Now that they were equipped with the strategies to help them unlock the meaning of texts, they wanted to read more. They persevered even when it took time to figure out an unknown word that was interfering with their understanding or an idea that needed clarification.

This was evident during the last day of the intervention when students were given an opportunity to choose from a number of books, any text of their choice whether related to the theme of water or not to read independently and then present their text to the class in whatever way that they liked. One of the weakest students chose a story “No home for a gnome”. This student sought help for the word gnome and its meaning. The student continued to read but was having difficulty figuring out some of the words in the text. Although it was independent reading, he did not want to give up on his text so asked for help whenever it was needed. When it was time for students to present their text, he was enthusiastic and wanted to present his text first. At the end of his presentation, the entire class was laughing, not at him but with him in the exciting and dramatic way that he had presented the text. He had understood the text and was able to draw the inference that the same gnome that the family thought that they had gotten rid of was returned to them as a gift. It was a big accomplishment for this particular student. He felt good about himself and was motivated to persist with his piece even though he had experienced some difficulty with decoding. He realised that understanding the text was important too.

Conclusion

The results from this study revealed that both the reading comprehension and reading motivation level of students improved. Although there was a decline in reading fluency for some, all students were able to improve their accuracy and comprehension in reading. In addition, some of the students were also able to improve their reading levels, reading texts at the end of the intervention that they were unable to read before they were exposed to the intervention.

After the intervention, the self-efficacy of all students towards reading improved. Although the intrinsic motivation of some students decreased after the intervention, there was an overall improvement in intrinsic motivation based on the mean score for all students.

5: Discussion

The purpose of this study was to determine the extent to which a reading intervention influenced by the Concept Oriented Reading Instruction programme was successful in improving the reading comprehension and motivational level of struggling adolescent readers. The study followed a mixed method design and implemented pre and post-test measures. The intervention utilised an integrated form of instruction in which reading comprehension strategies, vocabulary and word-study were taught. Reading comprehension was integrated with a science theme and books at the instructional and independent level of students were used. Students were given some choice in the questions that guided their reading and the manner in which they represented their learning. The results from this study supported the hypothesis in that there would be a general improvement in the reading comprehension and the motivation level of the struggling adolescent readers after the intervention.

Reading Comprehension

The reading comprehension of students was measured using the Neale Analysis of Reading Ability. Three measures were assessed including the accuracy, reading comprehension and fluency of the readers. The results for reading comprehension in this research were similar to that obtained by Guthrie et al, (2009) in which the CORI programme was compared with traditional reading instruction with high and low achievers in grade five. The results indicated that there was an improvement in the CORI group. There was an improvement amongst the low achievers in the CORI group in reading comprehension, word recognition and the development of content knowledge. The results indicated however, that there was no increase in fluency levels for either the low or high achieving students even when the texts were read multiple times. Similarly, in this research, there was an improvement in reading

comprehension and accuracy which can be interpreted as including word recognition but a decrease by some students in fluency.

Students exposed to this intervention were provided with direct and explicit instruction in reading strategies. In addition to direct strategy instruction, they were also provided with vocabulary and word study skills development, all of which contributed to an improvement in their reading comprehension performance. Explicit strategy instruction in reading has been found to produce positive gains in reading comprehension and to promote positive autonomous behaviour among students (Cantrell et al., 2010; Aghaie and Jun Zhang, 2011; Ahmadi, Ismail & Abdullah, 2013; Hedin, Mason & Gaffney, 2011; Sporer, Brunstein & Kieschke 2009). In one study, CORI students who were provided with strategy instruction were found to score higher in self-reported strategy use than students receiving traditional instruction (Guthrie et al., 2000). Similarly, in this present research, students were provided with instruction in reading strategies that were needed to assist them in becoming active readers. They were now able to monitor their understanding as they read. The words in the text became more than mere words but the students were now able to actively engage with these words to create meaning, to question and to understand the message that the author wanted to convey.

A study by Mckeown, Beck and Blake (2009) however, seems to have produced different results indicating that there was no difference seen in text comprehension when strategy instruction was implemented. In addition to that, they found that content focused students performed better than strategy focused students in their ability to recall stories and successfully attain the learning goals based on expository reading. Strategy students were occasionally out performed even by the basal control students. While these results differ from those of this present research it would be important to note that in the study by Mckeown, Beck and Blake (2009) that the differences between the approaches were limited to measures based on recalling information. In this present study however, students were

provided with opportunities to implement the reading strategies at various levels including the use of strategies like making inferences that required them to use higher order thinking.

Vocabulary instruction through this intervention, especially in content specific words may have also contributed to students, overall reading comprehension performance. Since the intervention included the integration of reading with science, the reading comprehension activities were guided by science learning goals. It became necessary therefore, to provide assistance with vocabulary knowledge of unfamiliar words and content words. Vocabulary development has been found to be an integral component in the reading comprehension of older learners, especially when it is integrated with instruction in metacognitive and self-regulating strategies (Gary, 2010). Work by Cisco and Padron (2012) found that developing the vocabulary of middle school English language learners was essential in improving their reading comprehension performance. Horn and Feng (2012) found however, that there was no significant difference in reading comprehension performance amongst seventh graders who received direct vocabulary instruction and those who did not. Upon further analysis however, they concluded that the students, especially those who had low vocabulary knowledge at the beginning, had a better overall reading performance. It appeared that those students performed considerably better in answering the comprehension questions indicating that students with limited vocabulary benefit more from direct vocabulary instruction and consequently, this improved vocabulary makes a more positive contribution to reading comprehension. This provides further support that the provision of vocabulary instruction within this intervention was essential in improving the reading comprehension performance of struggling readers who may also had low vocabulary knowledge.

While the accuracy and reading comprehension of the students increased, the reading fluency for some students decreased. This decrease in fluency by some students was accompanied by an increase not only in the reading comprehension and accuracy level of these students but also by an increase in their reading level at the end of the intervention.

This decrease in reading fluency could be explained by the students' increased awareness of reading strategies and word study strategies through word analysis. Students were taught the DISSECT strategy to decode unknown words and clarify the meaning of these words. Knowledge and use of this strategy may have contributed to their improved performance in accuracy. This would mean that students were not only concerned about the speed at which they could get through the text, but they were also utilising strategies to help them figure out unknown words and strategies to help them understand the text. Applying these strategies takes time for these struggling readers for whom the process of applying such strategies has not yet become automatic. Consequently, while students used word analysis to figure out unknown words and reading strategies to understand the text, their fluency decreased, but their reading comprehension and accuracy improved. These findings are contrary to those which find that oral reading fluency is related to one's ability to read and comprehend or that fluency is a good predictor of reading comprehension (Patton et al., 2010; Spear-Swerling, 2006; Stage & Jacobsen, 2001; Therrien, 2004). Patton et al, (2010) even found, that when strategy instruction was added to interventions aimed at assisting young students with fluency, that the addition of the reading strategy hindered the reading comprehension of those students. This was attributed to the fact that the students were not cognitively prepared to utilise certain reading strategies while at the same time trying to decode words. Adolescents however, are more cognitively ready to apply such strategies and may be more attuned to comprehending what they read rather than solely focusing on the word level.

It is worth noting that much of the research on fluency focuses on students in the early grades and so the predictive value of fluency on reading comprehension may not necessarily apply to adolescent learners (Patton, Crosby, Houchins, & Jolivette, 2010; Spear-Swerling, 2006; Stage & Jacobsen, 2001; Therrien, 2004). Dudley (2005) addresses adolescent fluency specifically and warns that the failure of these students to attain oral reading fluency will impact negatively on their reading comprehension and they will lag behind their average reading peers in academic performance and achievement. She posits further though, that a

sole focus on teaching adolescents to become fluent readers is insufficient. Marcell (2011) also expresses some concern over the mixed message that fluency measures carry, as it appears that more emphasis is placed on speed rather than on prosody and comprehension and little account is given to the fix-up strategies that students may have to implement in order to facilitate comprehension. This may have explained the decline in fluency experienced by some students in this research where the fluency measure may not have accounted for the fix up strategies that the students needed to apply to help them read the text accurately and meaningfully.

Motivation

The students' motivation to read was measured using a motivation questionnaire which was extracted from Guthrie et al, (2009) and modified to answer the research questions guiding this study. The two motivation constructs measured were reading self-efficacy and intrinsic motivation towards reading. Intrinsic motivation was defined in terms of the students' enjoyment and curiosity towards reading as well as their preference for challenge in reading. Similar to the results in a study by Wigfield et al., (2004) in which students were exposed to the CORI programme, both the intrinsic motivation and self-efficacy of students improved.

Self-Efficacy

The self-efficacy of all students exposed to the intervention in this study improved. Reading self-efficacy has been found to be a positive predictor of reading comprehension (Solheim, 2011) This improvement in students' self-efficacy was attributed to a growth in their self-confidence as a result of being exposed to books which were now at their independent and instructional reading level (Allington, 2006; Guthrie & Lutz Klauda, 2012; Moore et al., 1999). Being exposed to books at their level allowed them to experience some level of success; believing that with the use of appropriate reading strategies and the right attitude they could become successful readers (Allington, 2002; Dennis, 2009; Guthrie & Lutz Klauda, 2012).

Pupils were also given the opportunity to have repeated exposure to the same text thus building their reading skills. They became familiar with new words and concepts encountered during their reading. In addition, students were sometimes given the opportunity to choose their text and to work cooperatively with their peers, receiving the support and guidance needed to understand the reading material. This also contributed to an increased confidence and self-concept towards reading. While results from this study indicated that an increase in students' self-efficacy contributed to their reading motivation, Mucherah and Herendeen (2013) found that self-efficacy did not contribute to the reading motivation of adolescent students from Kenya but instead reading challenge and enjoyment contributed to their reading motivation. The difference between these participants was that the Kenyan students were preparing to write a national exam and had high levels of intrinsic motivation for academic achievement unlike the students in this study who had already experienced some level of failure in their national exam written previously. Consequently, their self-efficacy was crucial to developing their reading motivation.

Intrinsic Motivation

There was an overall improvement in the mean score for the intrinsic motivation of students. While this may provide some evidence to support the success of the intervention in developing students' intrinsic motivation, it must be noted that the intrinsic motivation of some students decreased after the intervention. One unexpected finding was that some students who had the highest levels of intrinsic motivation became some of the students who had the lowest levels of intrinsic motivation at the end of the intervention while some students who had the lowest levels of intrinsic motivation had the highest levels of intrinsic motivation at the end of the intervention. Those students who attained the highest levels of intrinsic motivation by the end of the intervention also made the largest gains in terms of the reading level acquired. This fluctuation in the intrinsic motivation of students was attributed to a change in students' responses related to questions dealing with the challenge involved in reading.

Those students whose intrinsic motivation was higher before the intervention as compared to after the intervention may now have had a revised perception of what was meant by the challenge in reading a book and an appreciation for books that made them think. Their perception of challenge may have now changed from simply seeing challenge only from the perspective of the word level of texts to also seeing the challenge as involving the ability to create meaning from the text. This means that before the intervention students may have seen the challenge of reading a book as a measure of how difficult it was to figure out the words instead of how difficult it was to also understand and create meaning from the text. Shanahan, Fisher and Frey (2012) however, do not blame students for seeing the challenge of a book as emanating from the difficulty of the words as they explain that the ideas of authors are conveyed through words and their meanings. They identify sentence structure, coherence, organisation and background knowledge as other aspects that contribute to the difficulty of texts and influence a students' reading comprehension. Fang (2008) further argues that a focus on expository text as opposed to narratives used in the primary grades contribute to the challenges that students may experience in reading comprehension.

Students' reading was also guided by science learning goals and as a result students were required to represent their learning in a variety of ways including writing. Students generally did not demonstrate a positive attitude towards writing which may have further contributed to their changing perception of the challenge in reading. Students may have now associated reading with writing which consequently made them perceive reading as more difficult for them. Fitzgerald and Shanahan (2000) argue that reading and writing are partially correlated and should be integrated to develop literacy skills. They warn however, that all the skills required for writing cannot be learnt from reading alone; and that separate instruction must be given to adequately develop each of these language components. While students were sometimes expected to write, no instruction was given to them in writing. This may have contributed to their negative attitude towards writing.

It appeared from the findings, that there was a positive link between intrinsic motivation and reading comprehension since students who showed an increase in intrinsic motivation also showed an increase in their reading comprehension and overall reading level. Those students who had high levels of intrinsic motivation did not only enjoy reading and were curious about discovering new ideas from text; they were also motivated by the challenge in reading. Logan et al., (2011) in a study found that in the low ability group, that students' intrinsic motivation made more of a significant difference to their reading comprehension performance. They suggest therefore that intrinsic motivation can contribute to growth in reading comprehension especially for low achievers, as students with high intrinsic motivation will be more likely to persevere even when they are faced with challenging reading material. On the other hand, research also shows that in addition to students' reading skill, their self-concept accounts for most of the variance in their preference for challenge. Therefore students who have a more positive reading self-concept or self-efficacy will most likely go for more challenge in reading (Medford & McGeown, 2012). This would suggest that since the self-efficacy of all students in this research increased then all students should have gravitated towards accepting the challenge in reading. Medford and McGeown, (2012) found though, that students' personalities played a role in determining their intrinsic motivation towards reading. Therefore another explanation for the fluctuations in the intrinsic motivation of students may have been based on varying personalities and their interpretations of the texts and reading activities.

Conclusion

Although there may have been some differences in the self-efficacy and intrinsic motivation measures of the struggling adolescent readers in this study, it can be tentatively concluded that the direct attempt at improving their motivation towards reading made a positive contribution towards their reading comprehension performance. The consensus among

many is that the reading motivation of students can predict their reading comprehension during the later elementary years (Guthrie et al., 2007; Schiefele, Schaffner, Möller, J Wigfield, Nolen, & Baker, 2102). Not only has it been found that reading motivation predicts reading comprehension performance but it has also been found that there is a bidirectional relationship between reading motivation and reading comprehension and this relationship has been found to cut across cultures (Morgan and Fuchs 2007; Becker, McElvany and Kortenbruck, 2010; Wang and Guthrie. 2004). This means that reading comprehension and reading motivation influence each other. This suggests that an attempt by this intervention to create learning experiences that fostered the development of the adolescent students' reading motivation as well as experiences that attempted to develop their reading comprehension skills were beneficial in assisting these struggling readers to become more competent and successful learners.

Limitations

The results from this study shed some light on the instructional practices that may contribute to an improvement in the motivational and reading comprehension level of struggling adolescent readers. The results from this study should however be considered with some caution as there are some limitations in the methodological design of this study.

One of the limitations in this study is that the sample of students used was very small and so the results obtained may not be capable of being generalized to a larger population. Another limitation is that the time involved in implementing this intervention included a total of 4 weeks with 15 forty minute lessons. The 4 week period is less than half the time taken to implement the aspects of the CORI programme when compared to the 12 weeks taken by the teachers in the CORI programme. While only certain aspects of the CORI programme

were implemented in this present study, the results may have been different if the intervention was implemented for a longer period.

Another limitation is that there was no attempt to gather evidence of the long term effects of the intervention on the reading comprehension and motivational level of these struggling adolescent readers due to time constraints. Therefore it is not known whether the gains made in reading comprehension and the motivational level of students based on the post-test scores would be maintained by students after a period of about a month has elapsed. It is also not known whether the results from this study will be the same for average and high performing readers.

Gathering data from more in-depth observations of individual students in the form of case studies as opposed to general observations of students as a group may have provided more data about particular characteristics that made the intervention more successful for some learners as compared to others.

Teachers who participated in studies involving the CORI programme were provided with professional development workshops in which they viewed video tapes in which the context for the various aspects of the programme were presented. Expert CORI teachers also provided them with samples of their lessons, their planning and how the lessons were implemented (Guthrie, 2004). Although the researcher is a trained English teacher, no form of professional development was received in the CORI programme. Instruction in this present study was therefore provided based on the researcher's interpretation of the description of the CORI programme. This interpretation may have varied from the ideas of the CORI developers.

Implications for Research

Based on the findings and limitations of this study, one possible direction for further research would be to implement a similar intervention using the CORI programme for a longer period of time within various educational contexts to determine whether similar results would be obtained. Measures should also be taken to establish whether the effects of the intervention would be maintained even after students are no longer exposed to the intervention. Researchers could also seek to determine whether there is any link between oral reading fluency and the reading comprehension of older readers and the nature of that link.

It would also be useful to determine the effects of strategy instruction on various aspects of intrinsic motivation like enjoyment, curiosity and challenge for struggling adolescent readers. Research should also assess the effects of an intervention using aspects of CORI when reading is integrated with other content areas other than science. Measures should also be taken to investigate whether there would be any improvement in attaining the learning outcomes for the content area integrated with reading.

Implications for practice

The results from this study support the findings that a link exists between the reading motivation and reading comprehension of struggling adolescent readers (Guthrie et al., 2007; Schiefele, Schaffner, Möller, J Wigfield, Nolen, & Baker, 2012; Morgan and Fuchs 2007; Becker, McElvany and Kortenbruck, 2010; Wang and Guthrie. 2004). Therefore, one of the implications for instructional practice is that a concerted effort must be placed on creating learning experiences that will motivate adolescents to become engaged in reading. Attention must be given even during instructional planning to motivate these readers. The consideration of student motivation in planning should influence the nature of the text chosen and its ability to cater to the interests of the adolescent reader, the degree of choice

that the adolescents have in the reading activities and the ability of the adolescents to relate and link texts to their own life experiences (Guthrie et al., 2000).

The reading experiences that students are provided with need to contribute to helping them develop positive identities of being capable readers thus building their reading self-efficacy. Students should not be made to feel that reading comprehension is something that they do just for the grades. Activities chosen should help students develop their intrinsic motivation and love for reading. Therefore, sufficient instructional time and various, interesting books should be provided to help the struggling adolescent reader to become fully engaged in reading (Greenleaf & Hinchman, 2009).

In addition to developing the motivation of struggling readers, attention must also be given to developing their reading comprehension skills. Students should therefore be provided with direct and explicit instruction in understanding and using reading strategies (Graves & Liang, 2008). They should be encouraged to see reading as involving more than just the ability to say the words correctly but also to see reading as using their metacognitive skills to create meaning from texts. These reading strategies should not be limited to reading or English classes but should also be reinforced in all content area classes to help students understand the challenging material that they are exposed to as they move to the higher grades (Mancilla-Martinez, Keiffer, Biancarosa, Christodoulou & Snow, 2011).

Some attention must also be given to developing the vocabulary and word level skills of struggling adolescent readers based on their needs. Students should therefore receive instruction in understanding the meaning and use of unfamiliar and content specific words which sometimes interfere with their ability to create meaning from texts read. Instruction should also be provided in decoding multisyllabic words through the use of word-study practices like word analysis.

To develop both the motivation and reading comprehension skills of learners, books at various reading levels should be sourced to help struggling readers to become engaged in reading (Allington, 2006 Moore et al., 1999). Books at various reading levels should also be sourced for reading comprehension in the content areas. One prescribed text book for all students regardless of their reading ability will not provide an equal opportunity for students to learn from what they cannot read and comprehend (Allington, 2002; Dennis, 2009) . Students should therefore be taught within their zone of proximal development and provided with the opportunity to work with their peers in order to maximise their potential to read, comprehend and learn from texts read.

There is also a need to help students see the link between their reading and writing experiences. They should be taught how reading and writing skills support each other in developing their literacy skills. After all, adolescents who become part of the workforce in the 21st century will read and write more than any other time in the history of mankind (Moore et al., 1999). Writing could therefore be integrated as a pre-reading, during or post-reading activity during their reading experiences. Students should be shown that some of the strategies required to help them create meaning from text read would be some of the same strategies needed to consider when writing for various purposes with specific audiences in mind (Anderson & Briggs, 2011: Fitzgerald & Shanahan, 2000). Teachers should be conscious though, that while it is beneficial to integrate reading and writing activities that it is also important to develop a good balance between the reading and writing activities such that one activity does not negatively impact the other.

The implications from this study can therefore be summarised as such; that in an information and knowledge filled society, the literacy needs of adolescents still largely involve the development of word level skills, the understanding and use of appropriate strategies and motivational processes that should be developed through well planned, explicit and systematic instruction (Braten, Ferguson, Anmarkrud & Stromso, 2012).

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Appendices

Appendix A: Reading Motivation Questionnaire

READING MOTIVATION QUESTIONNAIRE

Directions: Read each statement below carefully. Circle the most appropriate number that best represents your response to each of the given statements. Remember there is no right or wrong answer.

1---- never 2----not usually 3—usually 4--- always

Reading Self-Efficacy

1. I am a good reader.
2. I feel that others are smarter than me in reading.
3. I need extra help in reading.
4. I can sound out long words.
5. I learn more from reading than most students in the class.
6. I can recognize words easily when I read.
7. I think I will do well in reading next year.
8. I am good at remembering words.
9. Difficult words in a story stops me from reading
10. It is hard for me to understand things that I read in class.

Intrinsic Motivation

1. I enjoy reading books in my free time
2. I like reading new books
3. Reading is a boring activity for me.
4. I enjoy the challenge of reading a book.
5. I enjoy reading interesting books even though they are hard.
6. I enjoy reading books for a long period of time.
7. I like it when books make me think.

Extracted and modified from Guthrie, McRae, Coddington, Klauda, Wigfield & Barbosa (2009)

Appendix B: Human Ethics Approval Letter



MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

7 May 2013

Desma Jeriffe
23 Keiller Place
Fitzherbert Avenue
PALMERSTON NORTH

Dear Desma

Re: HEC: Southern B Application – 13/21 *
Improving the motivation and reading and comprehension of struggling adolescent readers

Thank you for your letter dated 2 May 2013.

On behalf of the Massey University Human Ethics Committee: Southern B I am pleased to advise you that the ethics of your application are now approved. Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Nathan Matthews, Chair
Massey University Human Ethics Committee: Southern B

cc Dr Alison Arrow
Institute of Education
PN500

Dr Brian Finch
Institute of Education
PN500

A/Prof Sally Hansen, Interim Director
Institute of Education
PN500

Massey University Human Ethics Committee
Accredited by the Health Research Council
Research Ethics Office

Massey University, Private Bag 11222, Palmerston North 4442, New Zealand T +64 6 350 5573 +64 6 350 5575 F +64 6 350 5622
E humanethics@massey.ac.nz animalethics@massey.ac.nz gtc@massey.ac.nz www.massey.ac.nz

Appendix C: Sample Structure of a Lesson

Date: Tuesday, 25th May, 2013

Lesson Time: 9:50- 10: 30

Objectives: Students will

- use prior knowledge and experiences to share their ideas on issues related to water
- ask questions to clarify their understanding of words or ideas in the text.

Students will view a 60 second video on water from the national geographic explorer.

They will discuss with their peers some of the things that they were able to make connections with from the video or anything new which they learnt. Students will also talk about any additional information which they possess that was not highlighted in the video. A few students will share with the class some of the ideas discussed. Students' ideas will be recorded.

The concept of an interview will be discussed then pupils will write one question that they would like to ask water if given the opportunity to conduct an interview with it.

Researcher and students will engage in shared reading. Only a section of the text will be read during this lesson. Researcher will model the strategy of questioning as she reads through the text "Interview with a glass of water". Researcher will use the following prompts to ask questions and generate discussion amongst students. Students will be encouraged to use the prompts and ask their own questions during the shared reading activity.

"I wonder where, why, what, when"?

Does..... make any sense?

What is water really trying to say?

By the end of the lesson for that day, pupils will share something learnt and whether their question written from the beginning of the lesson had been answered.

If any of their questions have been answered, they will share that question and the answer based on their understanding of the text. Unanswered questions will not be revealed till the end of the text. Any unanswered question may provide a purpose for further reading.