

READING IN A SECOND LANGUAGE: CONSIDERING THE ‘SIMPLE VIEW OF READING’ AS A FOUNDATION TO SUPPORT ESL READERS IN LESOTHO, SOUTHERN AFRICA

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Globally, reading proficiency has been a major area of difficulty for English second-language (ESL) learners. This research inter alia utilised a quantitative, quasi-experimental, pre-test/post-test research design to address the paucity of evidence-based second-language reading research internationally, as well as in Sub-Saharan Africa, and in Lesotho in particular; and to determine if second-language learners (L2) in the experimental group can improve their L2 reading abilities after being exposed to reading intervention strategies, based on the “simple view of reading”. Drawing from both psycholinguistic and cognitive linguistic principles, the authors considered this as a working model to develop reading strategies to support ESL learners in Lesotho who experienced significant delays in L2 reading abilities and comprehension. In the present study, strategies based on the “simple view of reading”, , included, inter alia, effective language exposure, building a rich vocabulary, improving reading fluency and word recognition abilities, and creating socio-linguistic opportunities to develop vocabulary and enhance reading comprehension (for example, creating a “word wall”, interactive story-book reading and the application of the ReQuest reading method). Results from this quantitative study demonstrated that Grade 4 ESL learners in the experimental group (N=36) significantly outperformed those in the control group (N=36) with regard to sight word fluency, word recognition, syntactic awareness, vocabulary knowledge and reading comprehension. As we move forward in an attempt to understand the nuances of creating a responsive reading environment to support ESL learners’ reading development, assessing the effectiveness of strategies to improve their reading skills is essential.

Keywords: Grade 4 ESL learners, “simple-view-of-reading” model; word decoding, vocabulary, reading comprehension.

INTRODUCTION

Multiple and complex factors (both extrinsic and intrinsic) contribute to poor reading outcomes among second-language (L2) learners. Researchers within the educational context of South Africa (see Hugo, le Roux, Muller & Nel, 2005; Lenyai & De Wit, 2008) are particularly concerned about factors which place these learners in a high risk category for failure as a result of their poor reading and literacy (Nel, 2008). Amongst

these are poverty; the quality of language input at school and home, including parents' lack of literacy knowledge and their illiteracy; the lack of qualified teachers; and overcrowded classrooms (Lenyai & De Wit, 2008). Several other language and linguistic factors also affect the process of acquiring adequate L2 reading skills, namely an individual's reading proficiency in his or her first language (L1), and the degree of overlap between the oral and written characteristics of the home language and the acquired second language (e.g. English) (Chard, Stoolmiller, Harn, Wanzek, Vaughn, Linan-Thompson & Kame'enui, 2008). Other researchers have argued that cognitive linguistic skills may transfer from learners' first language to their second language, but they also propose that this 'transfer' depends on whether both languages are alphabetic, whether they are written from left to right or right to left in both languages, whether the languages share orthographic elements and scripts, and whether they share sounds and sound-symbol correspondences (Soares De Sousa, Greenop & Fry, 2010).

When one focuses on intrinsic and cognitive linguistic factors and how they relate to effective reading development, it is important to understand how the various components (for example, oral language, word reading, vocabulary and reading comprehension) come together and interact (Geva & Massey-Garrison, 2012: 387). Accordingly we draw on a model of reading development that has received much attention in the reading research literature, namely the *Simple View of Reading* (SVR) (Gough & Tunmer, 1986; Hoover & Gough, 1990). This model specifically emphasises the important role of the two main interacting 'pillars' associated with reading comprehension, namely language comprehension and those associated with word-level reading skills (i.e., word recognition and word decoding skills) (Farnia & Geva, 2013: 390). Embedded in the SVR model, language comprehension involves broader oral language processing skills, such as vocabulary, verbal working memory, and morphosyntactic skills (Babayağit, 2015: 528). Furthermore, it is stressed that learners should be able to translate written into spoken language, understand the meaning of written words, and be aware of the morphological and syntactic processing of linguistic units. In this way words become part of the working memory and will thus enable the development of effective reading comprehension (Babayağit, 2015: 528). The SVR model was further augmented by the inclusion of other important cognitive linguistic aspects such as phonological awareness, working memory, syntactical and semantic awareness, orthographic skills and meta-cognitive reading strategies (Farnia & Geva, 2013: 390). These associated cognitive linguistic processes make significant contributions to reading comprehension over and above the two main pillars of the SVR model, namely word level reading skills and language comprehension (Farnia & Geva, 2013: 390).

In general poor reading skills lead to lower overall academic achievement, both in L1 and L2 (Chall, 2000), and children who have difficulty with early literacy often continue to experience failure in later grades and later in life (Lipka & Siegel, 2010: 963). Consequently, many ESL learners are diagnosed as children with learning disabilities. Stanovich (1986: 87) describes this as the 'Matthew Effect', that is, the phenomenon of 'the rich get richer while the poor get poorer'. In other words, those who acquire early

literacy skills have the tools to grow exponentially in their knowledge and skills while those who fail to develop early skills fall increasingly further behind. With regard to the current paper, the above-mentioned underscores the importance of early identification of learners with reading challenges. In addition, researchers have highlighted the detrimental consequences of not providing effective support (Lipka & Siegel, 2010: 963). These include a high prevalence of reading and associated problems directly related to reading that place learners at an even higher risk of academic failure, having to repeat a grade, the development of social problems, poor peer relations, emotional difficulties, and depression (Lipka & Siegel, 2010: 963). The consequences outlined above clearly demonstrate why it is imperative to identify L2 learners with reading impairments as early as possible.

Despite a growing interest in the value of literacy intervention amongst monolingual children at risk of reading failure during the past decade (Parris & Hoffman, 2004), research on ESL reading is not as extensive as that for L1s (Grant, Gottardo & Geva, 2011), both internationally and especially within the Southern African educational context. This demonstrates the pressing need for empirical research to investigate the theoretical counts of L2 reading development, and for in-depth longitudinal studies to expand on the current means of identifying ESL children with reading barriers, including examining which aspects of early reading problems and associated impairments (for example, the expressive/receptive, phonological, syntactical, or lexical factors) place these children at risk to develop reading problems. Consequently many ESL learners are unable to cope academically, resulting in them either leaving school or failing to pass Grade 12 (Le Cordeur, 2010: 36).

Drawing from both psycholinguistic and behaviourist theories on reading development, the SVR model provided us with an appropriate theoretical tool with which to search for and implement a combination of reading intervention strategies to support the reading development of Grade 4 ESL readers in Lesotho. These instructional strategies include, inter alia: (a) building and using vocabulary to develop oral language skills and reinforce language concepts, vocabulary knowledge, and the decoding of words via multi-sensory coding exercises, including using a 'word wall'; (b) improving reading fluency (sight words and text reading) via reading fluency exercises, repeated reading, and fast word-recognition games; (c) using the Cloze procedure to increase ESL learners' syntactical awareness skills; and (d) improving ESL learners' reading comprehension via the application of the ReQuest reading method, which entails reciprocal questioning and guiding learners to apply reading comprehension strategies such as predicting, summarising and making inferences.

METHODOLOGY AND RESEARCH DESIGN

This quantitative study pursued a quasi-experimental, pre-test/post-test research design, which entailed a controlled intervention in order to compare an ESL experimental group with an ESL non-exposed comparison group. Similar to randomised designs, quasi-experimental designs aim to demonstrate causality between an intervention and an

outcome (Harris, McGregor, Perencevich, Furuno, Zhu, Peterson & Finkelstein, 2006: 19-20). In the present study, the researchers administered pre-test measures to both the experimental and comparison groups (to assess the initial comparability of the groups before the intervention) and post-tests after the completion of the experimental intervention (to determine the efficacy of the intervention). In the next section the authors will elaborate on the sampling, measuring instruments and the intervention programme developed for this study.

Participants and Sampling

Reviewing the language policy of Lesotho, it recognises the diversity of the Lesotho nation and the existence of other languages besides the two official languages of Sesotho and English (MOET, 2005). Furthermore, it clearly states that learners' mother tongue will be used as a medium of instruction up to Grade 3 (resources permitting), after which English is used as the medium of instruction (MOET, 2005). The main challenge in many Lesotho schools is that this transition from the mother tongue to English as medium of instruction occurs at the expense of these learners' mother tongue (Sesotho) (this is also known as *subtractive bilingualism*) (see Masilo, 2008: 11). Moreover, it happens at a time when pupils have not yet fully mastered or developed communication competency and literacy skills in their mother tongue; thus they are not yet sufficiently prepared to be educated or study through the medium of English (Molapo, as cited in Masilo, 2008: 2). This was also evident in the current sample, with Grade 4 ESL learners experiencing numerous challenges with regard to reading and spelling development, both in their mother tongue and in English.

In the present study, the researchers employed a purposive sampling design to investigate the aims of this study. This design allowed us to select learners who could provide the necessary information regarding reading and spelling delays amongst ESL learners in Lesotho. ESL learners from two schools in rural villages in the Mafeteng District in Lesotho were sampled to take part in this study. These schools were situated in the same demographic area, providing greater control over variables such as cultural experiences, language abilities, educational environment and socio-economic status of families and schools. With regard to socio-economic status, these learners were from challenging socio-economic backgrounds and the two sample schools were also not well resourced.

Grade 4 educators assisted in identifying the participants from the two primary schools. All learners that were sampled were ESL learners whose mother tongue was Sesotho. Their ages ranged between 10 and 12 years, with the average age for learners in the experimental group being 10.78 years ($SD = 1.58$). For ESL learners in the comparison group it was 10.88 years ($SD = 1.42$). The final sample of 72 learners included 37 girls and 35 boys. With regard to academic performance, focusing on reading competency, the following criteria were considered: a significant delay on the standardised reading measurements (i.e. the UCT tests for sight word fluency and word recognition). In addition diagnostic information on their reading abilities was gathered from the

respective classroom educators. Learners who demonstrated substantial reading challenges with regard to sight word fluency, word recognition, vocabulary and reading comprehension were considered for inclusion in the final sample. Prior to the pre-testing all learners' parents/guardians had to sign informed consent letters, giving permission for their children to take part in this study. Only learners who could provide proof that their parents/guardians have signed the informed consent letters were assessed and included in the final sample.

Measuring instruments

The second author administered a test battery consisting of both standardised and non-standardised (diagnostic) reading tests. All measures were conducted in English, and the L2 readers were assessed individually both prior to and following the intervention period of nine months. The following standardised and diagnostic tests were administered as pre- and post-tests¹:

- The University of Cape Town (UCT) Speed Reading Test: This includes a list of sight words and the number of correct responses within one minute was assessed. This is a standardised speed-reading test that has been standardised for South African children. The norms range from 7.1 years to 14.5 years. The UCT test is commonly used in South Africa for educational and psychological testing and has been normed for L1 learners. The test consists of high-frequency words used very often in English. The test consists of 200 test items/words (Van Wyk 1980);
- The UCT Word Recognition Test: This standardised reading test consists of 110 test items/words (arranged from easy to difficult) and is discontinued after the reader has made 5 successive mistakes. The test has been standardised on South African L 1 learners, with norms available for children aged 7.1 to 14.5 years (Van Wyk, 1980);
- Progressive Achievement Tests in vocabulary knowledge (PAT-R): The PAT Reading Fourth Edition has five normed and graded vocabulary tests from the third year of school to the tenth year. We opted to use Test Booklet 1 for ESL learners in the current study, which is normed for year levels 3, 4, and 5 and contains 35 test items. A Cronbach alpha coefficient of 0.87 was calculated (Australian Council for Educational Research, 2010: 10, 56);
- Progressive Achievement Tests in reading comprehension (PAT-R): The PAT Reading Fourth Edition contains eleven normed and graded reading-

¹ The researchers would like to note the paucity of current standardised measures within the South African and Lesotho education contexts to assess reading abilities of L2 learners effectively. At present the measures are very dated and not normed for L2 learners. Having said this, the core aim of this study was to utilise measures that we deemed as acceptable and not culturally or linguistically biased. This was done in consultation with the educators at the sample schools, with the core aim being to determine the efficacy of the intervention strategies based on the SVR model, and not to determine whether these children achieved age-appropriate norms on tests standardised on L1 samples.

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comprehension tests for the first year of school to Grade 10. In the current study we administered the test in Booklet 3, which is recommended for year levels 2, 3, and 4. The maximum raw score is 28. A Cronbach alpha coefficient of 0.88 was calculated (Australian Council for Educational Research, 2010:10, 56); and

- Diagnostic Cloze-procedure test – developed by the first author (test-retest reliability coefficients 0.89). During the administration of the cloze-procedure test, learners have to supply omitted words from a reading passage to complete the sentences. This test requires both critical thinking and syntactical awareness skills. The maximum score that could be obtained was 15. The alternate-forms reliability coefficient of the Diagnostic Cloze-procedure measure was 0.84.

The 72 children were assigned to either the experimental or the comparison group after the pre-tests had been administered (experimental group, $n = 36$; comparison group, $n = 36$). The Statistical Package for Social Sciences (IBM Corporation, 2013) was used to analyse the quantitative data. *T*-tests revealed no statistically significant differences between the experimental and comparison groups before the experimental intervention: chronological age ($t = -0.12$; $df = 70$; $p = 0.96$), sight words ($t = 0.59$; $df = 70$; $p = 0.59$), word identification ($t = 0.31$; $df = 70$; $p = 0.75$), syntactical awareness ($t = 0.17$; $df = 70$; $p = 0.86$), vocabulary knowledge ($t = -0.27$; $df = 70$; $p = 0.78$), and reading comprehension scores ($t = 0.56$; $df = 70$; $p = 0.58$).

Intervention

The SVR model emphasises that skilled reading involves understanding as well as decoding text (Gough & Tunmer, 1986; Hoover & Gough, 1990). Thus reading comprehension is the product of two-interrelated but very distinct processes (or components), namely word recognition or decoding and the development of language comprehension (that is, language awareness, vocabulary and knowledge of grammar, whilst it also entails the ability to understand and interpret written texts as well as spoken language) (Farnia & Geva, 2011). Emanating from the above in the present investigation, the researchers considered the following intervention strategies based on the SVR model, namely strategies to improve knowledge of sounds, reading fluency and the development of effective word recognition and decoding skills, whilst it also aimed to enhance vocabulary and syntactical awareness and improve reading comprehension via the application of specific reading methods such as such as the ReQuest reading method.

The intervention for the experimental group, targeted small groups of 6 - 8 learners (five groups in total) in instructional sessions of 45 minutes, over a period of nine months. Small-group interventions, via “pull-out” of learners (in groups) were conducted during normal school hours, by the qualified support teacher, who completed her B.Ed. honours degree in Psychology of Education (specialising in support teaching). In practise this implied that she supported each of the five groups three times per week. During the small-group intervention, the support teacher focused on improving the ESL learners’ reading fluency, their word identification, syntactical awareness skills, and decoding of words. She also tried to expand their knowledge of vocabulary, and systematically guided

these learners to apply reading comprehension strategies. A typical 45-minute small-group session would consist of the following instructional components: sight word and fluency practice for 10 minutes via flash cards and word-matching exercises; new learning (i.e. the extension of the learners' vocabulary) via multi-sensory coding strategies and interactive "word-wall" exercises for 15 minutes, and reading text for 10 minutes. ESL learners in the comparison group continued with the class readers that were used at the specific sample school. This included formal literacy instruction by the class teacher three times per week for the same amount of time. Thus both groups followed the same reading curriculum by using the same class readers, the only difference being the two instructional methods that were followed. The learners in the experimental group received direct instruction based on mastering a sequence of essential reading skills and utilising a variety of instructional materials and methods (i.e. the components/activities of the intervention programme, mentioned above) that was developed by the researchers based on the class readers (i.e. a worked-out reading programme focusing on the components mentioned above). ESL learners in the comparison group were not exposed to the components of the reading intervention programme. Their instruction comprised word study (mainly using dictionaries) and reading stories in groups with neither explicit instruction nor scaffolding to improve their reading fluency, vocabulary and reading comprehension strategies.

The teacher attempted to enhance the reading fluency of the learners in the experimental group by combining word and text fluency practices in intervention strategies. Sight words from the Dolch list were typed on flashcards and practised daily. In accordance with performance, the level of difficulty was increased over sessions by decreasing the exposure time and increasing the complexity of the words. The remaining time during the session was spent on reading connected text: storybooks of interest that were just above the learner's level of reading and/or playing fast word-recognition games such as bingo. Vocabulary knowledge, including word reading (i.e. the identification of words), was enhanced through "word-wall" activities, which used multiple pathways and multi-sensory activities to enhance word reading and vocabulary knowledge. During these activities, the teachers guided the ESL learners to use their L1 to support their vocabulary development and reading comprehension in L2. This meant that L1 was used in a natural way as a tool to develop their L2 reading skills. This strategy included using multi-sensory activities, such as linking the target word with a picture/object and providing its L1 equivalent (if it was a similar word) and vocabulary instruction, which included explaining the meaning of words and forming sentences in both the learners' L1 and L2. For further reinforcement, learners developed their own portable "word-walls" to use in class and at home. Syntactical awareness of L2 readers was developed via the application of the cloze procedure, using different reading passages and words in follow-up sessions, with an increase in the level of difficulty. The cloze procedure guided ESL learners to use contextual clues to decipher omitted text/words and, the results discussed later in this article demonstrate that this technique seemed to improve their reading comprehension and syntactical awareness skills. Regular passage or storybook reading was introduced twice per week following the reciprocal questioning reading procedure (i.e., ReQuest).

RESULTS

This study used a quasi-experimental, pre-test/post-test research design. The authors investigated the efficacy of a reading intervention programme which included multiple techniques to develop sight word fluency, word recognition, vocabulary knowledge, syntactical awareness, and reading comprehension. In addition to our primary investigation that concerned the efficacy of an ESL reading programme, we also wanted to investigate the possible relationships between L2 sight word fluency, word recognition, vocabulary, syntax, and reading comprehension.

The data were analysed using the Statistical Package for the Social Sciences (SPSS 22.0, IBM Corporation, 2013). Group data were expressed as means and standard deviations (see Table 1). It is apparent from these results that ESL learners in the experimental and comparison groups were very similar prior to the intervention. In addition, inferential statistics revealed no significant differences between the two groups prior to the nine-month intervention period. From Table 1 it is evident that the average reading scores of both the experimental and comparison groups were very weak and that ESL readers experienced delays in sight word fluency, word recognition, vocabulary knowledge, syntactical awareness, and reading comprehension. In the post-test scores in Table 1, the mean scores for ESL learners in the experimental group show a noteworthy improvement across the variables mentioned above. For example, L2 readers in the experimental group's sight word fluency (i.e. the rate per minute of correct responses on the UCT Sight Word Test) improved from 16 to 35. The average score for UCT Word recognition improved from 15 correct responses to a mean score of 36. On the cloze-procedure measure, syntactical awareness improved from 2 to a mean score of 8; and PAT-R results for vocabulary knowledge demonstrated an increase from an average score of 5 to an average score of 14 for ESL learners in the experimental group. PAT-R test scores for reading comprehension increased visibly from the pre-intervention to post-intervention condition. Specifically, the average scores increased from 4 to 12 following the intervention. Comparing the number of correct responses of ESL learners in the experimental group to those in the comparison group, it is apparent that the comparison group demonstrated a marginal improvement in vocabulary knowledge, but their performance in reading fluency, word recognition, syntactical awareness, and reading comprehension were very weak compared to the ESL learners in the experimental group.

Table 1: Paired (two-sided) t-test comparisons of reading outcome measures for ESLs in the experimental and comparison groups (N = 72)

Groups	UCT test: Sight words (fluency)		UCT test: Word reading		Diagnostic Syntactic awareness test		PAT-R test: Vocabulary		PAT-R test: Reading comprehension	
	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)
Experimental (n = 36)	16 (4.1)	36* (4.4)	15 (1.4)	35* (1.5)	2 (1.2)	8* (1.5)	5 (1.4)	14* (1.9)	4 (1.8)	12* (2.2)
Control (n = 36)	15 (6.5)	18 (4.8)	14 (1.3)	16 (1.5)	2 (1.4)	3 (1.5)	5 (1.3)	6 (1.5)	4 (1.3)	6 (2.6)

Note. *p = 0.05; M = Mean score; SD = Standard deviation

T-tests were conducted to determine whether the results for these reading-outcome variables were statistically significant (i.e. with regard to the post-test scores of the experimental and comparison groups). The results for sight word fluency ($t = 10.40$; $df = 70$; $p < 0.000$; $d = 0.61$); word recognition ($t = 9.36$; $df = 70$; $p < 0.000$; $d = 0.55$); syntactical awareness ($t = 11.61$; $df = 70$; $p < 0.000$; $d = 0.65$); vocabulary knowledge ($t = 13.35$; $df = 70$; $p < 0.000$; $d = 0.71$); and reading comprehension ($t = 12.14$; $df = 70$; $p < 0.000$; $d = 0.67$) of learners in the experimental group improved significantly. To determine the practical significance of these results, effect sizes were calculated (Gay & Airasian, 2003). With regard to the *t*-tests, Cohen's *d* (Cohen, 1988) was calculated to determine the effect size for the experimental and comparison groups. From the results above, it is evident that the effect sizes for the different reading skills ranged from 0.51 – 0.71. This indicates moderate to high practical significance for the current study.

To explore the possible relationships between sight word fluency, word recognition, vocabulary knowledge, syntactical awareness, and reading comprehension, a series of two-tailed Pearson Product Moment correlation analyses were conducted to investigate whether there were any significant relations between reading comprehension and these reading outcome variables. We found significant and strong correlations between reading comprehension and vocabulary size ($r = 0.81$, $p = 0.0001$), and reading comprehension and word recognition ($r = 0.76$, $p = 0.0001$), whilst we found moderate correlations for sight word fluency ($r = 0.54$, $p = 0.0007$) and syntactical awareness ($r = 0.63$, $p = 0.0001$). These results firstly show the significance of L2 vocabulary knowledge in L2 reading comprehension, and also confirm the important contribution of other reading-related skills such as fluency, word recognition, and syntactical awareness in acquiring reading comprehension in ESL learners. From the results above, it is evident that ESL readers' comprehension and reading-related skills can be improved significantly following intervention strategies that are evidenced based, explicitly taught, or include guided practices involving both lower- and higher-order reading skills to improve sight word automaticity, vocabulary knowledge, and syntactical awareness. In addition, guiding ESL readers through various scaffolding techniques to apply reading comprehension strategies can improve their comprehension and reading-related skills. The results also demonstrated significant relationships between specific cognitive-linguistic and reading and related factors for ESL readers. In practice, this implies that underlying cognitive-linguistic and reading-related factors have specific implications for ESL learners' reading comprehension development, and therefore ESL teachers should include the practice of these cognitive-linguistic skills as part of their daily reading curriculum.

GENERAL DISCUSSION

This empirical investigation had two broad aims. Firstly, it aimed to determine whether Grade 4 ESL learners from Lesotho can significantly improve their reading fluency, syntactical awareness, word recognition, vocabulary knowledge, and reading comprehension following a nine-month reading intervention period which involved specific instruction and scaffolding to develop their English reading skills. Secondly, the

researchers were interested in determining whether there were any significant relationships between certain reading-related skills in Grade 4 ESL learners. These skills are reading fluency, word recognition, vocabulary knowledge, syntactical awareness, and reading comprehension.

Results addressing the first aim demonstrated the benefits of a reading intervention programme which considers multiple strategies to improve L2 readers' reading skills. The intervention programme, based on the SVR model, included the use of multi-sensory coding techniques to enhance L2 language proficiency and vocabulary knowledge and decoding of words; fluency exercises to foster automatic/fluent recall of sight words; and repeated reading activities to enhance text fluency. In addition, ESL readers were guided via effective scaffolding to apply reading comprehension strategies. With regard to the second aim, we found significant relationships between L2 reading comprehension and the following reading-related factors included in the current investigation: sight word fluency, word recognition, syntax, and vocabulary knowledge. In the general discussion that follows, we will reflect on previous L2 reading research and integrate this with findings from the current study by highlighting the following key components of the SVR model which we included in this investigation, namely: word-reading ability (i.e. sight word fluency and word recognition) and language comprehension ability (i.e. vocabulary and syntactical awareness), including the application of meta-cognitive strategies to enhance reading comprehension

Sight word fluency and word reading ability

There seems to be general consensus amongst L1 and L2 reading researchers that reading fluency is determined to a substantial extent by the ability to recognize words rapidly and efficiently (Landi, 2010; Koda, 2005). In line with this argument, one of the predicaments facing struggling L2 readers is their inability to recognize words correctly at an automatic response level (Grabe & Stoller, 2002; Koda, 2005). It is hypothesised that their slow or inefficient word recognition processes constrain the flow of information to the text-interpretation and comprehension processes, and thus limit the amount of text information that can be taken in and processed in a limited-capacity comprehension system – creating a bottleneck (Koda, 2005; NRP, 2000). Focusing on the current investigation, the researchers included activities that addressed both higher- and lower-order reading skills, namely multi-sensory coding activities to enhance word decoding and recognition, as well as fluency exercises to support ESL learners to read fluently (at an automatic response level). Results from the current investigation have yielded moderate correlations between reading fluency, word recognition, and reading comprehension, thus supporting previous research on the possible inter-relatedness of sight word automaticity, reading fluency, and reading comprehension (Landi, 2010: 701, 702; NRP, 2000). In addition, the results confirm the importance of word-reading ability as one of the key pillars of the SVR model.

Vocabulary

Researchers have stressed the importance of oral language skills as a foundation for the development of literacy and especially reading (Geva & Massey-Garrison, 2012: 388). While there is converging evidence of the positive effect of direct vocabulary instruction on primary phase first-language English-speaking children, research indicates that the effects of direct vocabulary instruction with English second-language learners have not yet been well established (Crevecoeur, Coyne & McCoach, 2014: 53). Moreover, it has been argued that, in the case of ESL children who often develop their English language and reading skills concurrently, having well-developed language skills is crucial, especially when the focus of reading shifts from decoding skills to developing effective reading comprehension (Geva & Massey-Garrison, 2012: 388). Researchers and educationalists involved in both L1 and L2 reading agree that vocabulary knowledge is an excellent predictor of reading success and that vocabulary and reading comprehension are highly correlated. Verhoeven (2007: 123) states that vocabulary as a measure of background knowledge can be seen as one of the most important components in reading. A rich vocabulary saturates the central processes of global interpretation, inference tracking, and comprehension monitoring during reading. Vocabulary can be categorised into *meaning vocabulary* and *utility vocabulary*, the former being the words a person understands, the latter those he or she actually uses (Nel, 2008: 126).

Researchers concur that children's levels of reading comprehension are affected by the types of opportunity available to them for building an extensive lexicon. These opportunities in turn depend on the learner's exposure to a language-rich environment. This means that children with extensive vocabularies are likely to read successfully (Farnia & Geva, 2011: 2). It also has clear implications for both L1 and L2 readers from impoverished linguistic environments – including children who have insufficient language experiences as well as children who learn English as a second language (Bernhardt, 2005; Koda, 2005; Nation, 2009; Stahl, 2003), placing them in a higher risk category in terms of having reading problems.

Furthermore, fast and efficient word recognition, word encoding, and lexical access are necessary for a higher level of semantic processing and the construction of meaning, all of which are closely related to effective vocabulary production (Nation, 2009). For many L2 readers, the presence of a high density of unknown words in a text may seriously hinder comprehension (Nation, 2009). Concurrent with previous research (Nation, 2009; Stahl, 2003), the current study yielded significant correlations between vocabulary and reading comprehension. The results of the Pearson correlation analysis showed a significant and very strong correlation between reading comprehension and vocabulary knowledge ($r = 0.81$). This confirms previous research findings by Qian (1999: 282), who also finds very high correlations ($r = .82$) between the vocabulary scores and scores on the TOEFL reading comprehension test; and Laufer (1992: 95; 1996: 55), whose extensive research on different types of vocabulary size tests and reading comprehension tests show high correlations between vocabulary size and reading comprehension. Moreover, results from the present investigation corroborate recent findings from a study

conducted by Crevecoeur and colleagues (2014: 54) that demonstrate the positive outcomes of vocabulary instruction on reading comprehension for both L1 and L2 learners. In their study L2 learners' general vocabulary knowledge increased at even a faster rate than that of the L1 learners in their study. Post-test results further showed that there was no statistically significant difference at the end of the study, demonstrating that both L1 and L2 learners equally benefited as a result of the vocabulary intervention (see Crevecoeur *et al.*, 2014: 54).

Given the impact of vocabulary size on reading comprehension, practically speaking, vocabulary size should receive much more attention in L2 classrooms. It is therefore imperative that teachers create quality opportunities to improve L2 readers' vocabulary development. This includes encouraging L2 children through interactive conversation and using pedagogically sound vocabulary activities to expand the size of ESL learners' vocabularies to support their reading comprehension.

Syntactical awareness

Syntactical ability is closely related to word reading, vocabulary knowledge, and reading comprehension (Geva & Massey-Garrison, 2012: 388). It has been argued that syntactical abilities support word-recognition skills by allowing a reader to use the syntactic constraints of a sentence to decode unfamiliar words, and reading comprehension by facilitating sentence- and text-level integration and monitoring skills (Cain, 2007: 679-680; Geva & Massey-Garrison, 2012: 388). Thus, it is quite apparent why L2 learners with limited vocabulary knowledge may have difficulty in combining sentences and articulating the rules of syntax in English. Given that significant correlations for syntax have been established in the acquisition of reading comprehension by monolingual learners, and the limited research available on the possible inter-relatedness of syntactical awareness and reading comprehension amongst ESL readers, the researchers in the current investigation were particularly interested in investigating the role that syntactical awareness might play in the development of reading comprehension of Grade 4 ESL learners. Results from the current study point to a moderate, but significant relationship ($r = 0.63$) between Grade 4 ESL learners' syntactical skills and reading comprehension. From the above, it is likely that, with more exposure to English syntax and grammatical rules, ESL learners may develop better syntactical awareness skills which can make a further contribution to improving reading comprehension in ESL learners.

Reading comprehension

Reading comprehension has been shown to be influenced by cognitive-linguistic and other reading-related factors, such as verbal working memory, phonological awareness, word decoding, and reading fluency, syntax, vocabulary, prior knowledge, and cognitive and meta-cognitive reading strategies (Geva & Farnia, 2012; Farnia & Geva, 2013). Although limited, research comparing L2 readers to L1 readers concurs that L2 reading comprehension is a major challenge for L2 learners. Furthermore, researchers assert that the SVR model of reading development (discussed earlier) is also applicable to L2 reading development (see Geva & Massey-Garrison, 2012: 387; Farnia & Geva, 2013),

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highlighting the interplay of both oral language skills for example syntax, vocabulary and listening comprehension and word reading abilities in L2 reading development. Although word recognition and oral language skills are distinct component skills with independent contributions to reading comprehension, they are also reciprocally related.

Drawing from Bernhardt's (2005) theoretical model, L2 researchers stress the importance of L1 literacy skills in fostering and buttressing L2 reading comprehension. With regard to L2 reading comprehension, Guo and Roehrig (2011) in particular emphasise the role of L2 language-specific factors (e.g. vocabulary) and L2 grammatical factors (e.g. syntactical awareness), as well as general and transferable reading knowledge factors (e.g. metacognitive awareness of reading strategies), and how these different components interact during the L2 reading process. The above has specific relevance for the present study, since the reading-intervention strategies aimed to improve L2 learners' reading comprehension in general by specifically targeting their challenges with regard to their vocabulary and syntactical abilities, whilst they were purposively guided (via scaffolding) to apply meta-cognitive strategies (see the intervention programme). Researchers (see Rupley, Blair & Nicols, 2009: 126) further argue that reading comprehension is a skill with a knowledge base that is similar to all of the elements that support it; hence it should be taught explicitly. According to them, explicit teaching of reading comprehension can be described as imparting new information to readers through meaningful teacher-child interactions and the teacher's guidance of the learners' learning. This means that ESL teachers should be familiar with all the necessary reading comprehension strategies and should employ both bottom-up and top-down processes. Focusing on classroom support to develop L2 reading comprehension, researchers concur that explicit instructional approaches and scaffolding of reading skills, including the use of multimedia, are beneficial in improving vocabulary and reading comprehension, irrespective of whether it is being developed for L1 or L2 reading comprehension (NRP, 2000).

This viewpoint provided the rationale for including a combination of strategies and techniques to improve the reading comprehension of Grade 4 ESL learners in the current investigation. Indeed this yielded positive results. Despite having had significant delays in reading-related skills and reading comprehension prior to the intervention, Grade 4 ESL learners in the current study improved significantly with regard to all reading-related variables. The learners' exposure to the explicit instruction of reading-related skills and scaffolding to apply higher-order comprehension strategies (such as questioning, predicting, making inferences, and summarizing) resulted in a noticeable improvement in their reading comprehension. During the reading intervention sessions ESL learners were introduced to the title, pictures, and new vocabulary in a reading passage or story before they formally engaged in the reading activity. Through the application of the ReQuest, they were also guided to use reading comprehension strategies such as predicting, questioning, making inferences, and summarising or retelling stories in English. Finally, results from this investigation have demonstrated significant correlations with the following reading-related skills: fluency, word recognition, vocabulary, and syntax. This lends further support to the notion that a reading-intervention programme which aims to improve the reading comprehension of ESL learners should integrate both cognitive-

linguistic and specific reading-related skills, including guiding ESL learners to apply comprehension monitoring strategies. Furthermore, it demonstrated the important role of teachers as reading facilitators in creating positive reading experiences in enabling reading environments to promote the skills necessary to improve reading whilst also generating a “love” for reading.

CONCLUSION

The specific reading skills that learners need to acquire to become proficient readers, regardless of their primary language are well established. According to the SVR model, both word recognition and oral language processing skills (i.e. vocabulary, verbal working memory, and morphosyntactic skills) affect the development of sufficient reading comprehension for both L1 and L2 learners (Babayigit, 2015: 528). Researchers argue that difficulties in either of these two component skills can contribute to difficulties with reading comprehension. Moreover, research findings have shown that weaknesses within the oral language domain could contribute to difficulties with reading comprehension even when children have adequate word recognition skills (Nation, 2009). For example, the study of Catts and colleagues (Catts, Tomblin, Compton & Bridges, 2012) involving older primary school learners, have identified problems with oral language skills as one of the main factors contributing to reading comprehension difficulties (Catts *et al.*, 2012). In addition, the available research findings on both L1 and L2 children’s academic achievement and literacy development, although limited, show the interrelatedness of language proficiency and subsequent reading skills which are important prerequisites for learning in content areas for both L1 and L2 children (Verhoeven, 2007; Gottardo, Chiappe, Yan, Siegel & Gu, 2006; McCardle, Scarborough & Catts, 2001). Against the backdrop of so many ESL children being wrongly diagnosed as having learning disabilities, much more research is needed on L2 language and reading development. Future research should focus specifically on the development of appropriate assessment measures, effective instructional approaches, effective interventions, the appropriate training of teachers and their empowerment to address the reading- and literacy-related challenges of ESL learners.

The current study demonstrated the benefits of creating an L2 literacy environment that fosters the development of both top-down and bottom-up reading skills. Moreover, this study agrees with that of Wang and Gutrie (2004) who challenge the complete dismissal of L1 in the L2 classroom. The present study has highlighted the possible benefits of using L1 to acquire L2 reading skills for the facilitation of the pedagogical process. In terms of the dual aim of the current investigation, firstly, Grade 4 ESL learners significantly improved in all reading-outcome variables included in this investigation. Secondly, the researchers also examined the possible relationships between L2 reading-related skills and L2 reading comprehension. Similar to previous research (see Gottardo *et al.*, 2006; McCardle *et al.*, 2001), the results from the current investigation demonstrate that L2 reading fluency, word recognition, vocabulary knowledge, and syntactical awareness correlate significantly with L2 reading comprehension, confirming the possible inter-relatedness of ESL cognitive-linguistic and reading-related skills.

PEDAGOGICAL IMPLICATIONS

We have identified several implications that apply to ESL pedagogical contexts in Lesotho and other Southern African countries. First, one of the major stumbling blocks that ESL learners face in learning English is their lack of vocabulary. This makes it difficult for them to express themselves in English or to predict the meanings of words in context (Asraf & Ahmad, 2003). Secondly, ESL learners' challenges are further exacerbated by many ESL teachers' limited subject and pedagogical knowledge of English and because they have had very little exposure to a wide range of lexis, syntax, and genres in English in the school and community (Nel, 2008: 152-153). This is particularly true for the rural areas in Southern Africa, where educators are not fluent in English and where there are very few libraries and resource centres. As a consequence, teachers' poor English abilities are passed on to many of their learners, with far-reaching effects (Hugo & Nieman, 2010: 61-68). Third, acknowledging that the role of L1 reading skills on L2 reading development is dynamic and multifaceted calls for the implementation of multiple strategies and reflective measures to explore and support L2 readers' reading development. Researchers stress the importance of empirically validated research findings to guide ESL literacy development; therefore the real progress of ESL readers depends on the ability to apply what is learned from classroom interventions. In agreement with this idea, the current findings have strengthened our theoretical and pedagogical knowledge with regard to ESL learners' reading development, and have demonstrated the value of using L1 in a supportive way to develop L2 vocabulary and to consider multiple strategies to develop L2 reading (for example the interactive vocabulary sessions where the "word wall" and learners' L1 target words, were used to improve their L2 vocabulary words). In addition, it supports previous research which challenges the complete elimination of L1 in the L2 classroom. Therefore teachers should allow for a gradual phasing out of L1 and should be much more tolerant of weaker L2 readers by allowing them to use their L1 skills to develop into more proficient L2 readers. In conclusion, research findings have shown that struggling readers from challenging socio-economic backgrounds are less likely to catch up as they progress through the school system, irrespective of their language background (see Kieffer, 2012; Babayiğit, 2015: 544). Thus it is imperative to identify struggling L2 readers and provide effective support as early as possible (within a responsive educational environment). Given the central role of oral language processing skills both in reading comprehension as well as its role across the curriculum, researchers have called for concerted efforts to meet the challenges of delivering programmes to support the oral language development of children. At the same time such programmes could help to bridge the developmental gaps between L1 and L2 learners, especially those from lower socio-economic environments, who are often deprived of quality linguistic input at home as well (Babayiğit, 2015: 544).

With regard to limitations in the present study, the authors would like to note the following: The fact that the study was carried out at one sample school has an influence on the generalisability of this findings. A further limitation that should be noted is the lack of measuring instruments developed and standardised specifically for L2 learner populations (evident in the present study as well). Having said this, however, the findings

from this study demonstrated the significant gains made by learners in the experimental group with regard to all measuring instruments that were administered (i.e. tests administered to determine their reading abilities prior to and after the intervention study). Furthermore, to some extent it did support the underlying claims of the SVR model, namely it showed that the teaching of word recognition and word decoding skills, together with skills that improve language comprehension (such as vocabulary, syntax and the ability to comprehend spoken and written language) played an important role in improving the comprehension skills of ESL learners in the present study. Therefore it is imperative that current research and empirical studies on the effective support of L2 readers should be prioritised, focusing on the most contemporary reading approaches, and build on existing and emerging information, including studies of responses to intervention approaches. In this way, all learners, including ESL learners, will be given equal educational opportunities and advance as readers.

REFERENCES

- ASRAF, RM & IS AHMAD. 2003. Promoting English language development and the reading habit among students in rural schools through the Guided Extensive Reading program. *Reading in a Foreign Language*, 15(2): 83 – 102.
- AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH. 2010. *Progressive Achievement Tests in Reading: Comprehension, Vocabulary and Spelling*. Victoria: Australia.
- BABAYIĞIT, S. 2015. The relations between word reading, oral language, and reading comprehension in children who speak English as a first (L1) and second language (L2): a multigroup structural analysis. *Reading and Writing: An Interdisciplinary Journal*, 28: 527–544. DOI 10.1007/s11145-014-9536-x.
- BERNHARDT, EB. 2005. Real and imagined roles for technology in acquiring second-language literacy. In McKenna, M., Labbo, L., Kieffer, R. & Reinking, D. (eds.), *Handbook of Literacy and Technology, Vol II*. (pp. 355-362). Mahwah, NJ: Lawrence Erlbaum, 355-362.
- CAIN, K. 2007. Syntactic awareness and reading ability: Is there any evidence for a special relationship? *Applied Psycholinguistics*, 28: 679-694.
- CATTS, HW., D COMPTON, JB TOMBLIN, & MS BRIDGES. 2012. Prevalence and nature of late-emerging poor readers. *Journal of Educational Psychology*, 104: 166-181.
- CHALL, J.S. 2000. *The academic achievement challenge: What really works in the classroom?* New York: Guilford Press.
- CHARD, D., M STOOLMILLER, B HARN, J WANZEK, S VAUGHN, S LINAN-THOMPSON, & E KAME'ENUI. 2008. Predicting Reading Success in a Multilevel Schoolwide Reading Model: A Retrospective Analysis. *Journal of Learning Disabilities*, 41(2): 174-188.
- COHEN, J. 1988. *Statistical power analysis for the behavioral sciences*. 2nd edn. Hillsdale, NJ: Lawrence Erlbaum.

- CREVECOEUR, YC., MD COYNE, & DB MCCOACH. 2014. English Language Learners and English-Only Learners' response to direct vocabulary instruction. *Reading & Writing Quarterly*, 30: 51–78.
- FARNIA, F., & E GEVA. 2011. Cognitive correlates of vocabulary growth in English language learners. *Applied Psycholinguistics*, 32: 711–738.
- FARNIA, F. & E GEVA. 2013. Growth and predictors of change in English language learners' reading comprehension. *Journal of Research in Reading*, 36 (4): 389–421.
- GAY L.R. & PW AIRASIAN. 2003. *Educational research: Competencies for analysis and application*. 7th ed. Upper Saddle River, NJ: Pearson Education.
- GEVA, E., & F FARNIA. 2012. Developmental changes in the nature of language proficiency and reading fluency paint a more complex view of reading comprehension in ELL and EL1. *Reading and Writing: An Interdisciplinary Journal*, 25: 1819–1845.
- GEVA, E. AND A MASSEY-GARRISON. 2012. A comparison of the language skills of ELLs and Monolinguals who are poor decoders, poor comprehenders, or normal readers. *Journal of Learning Disabilities*, 46(5): 387–401.
- GOTTARDO, A., P CHIAPPE, B YAN, L SIEGEL, & Y GU. 2006. Relationships between first and second language phonological processing skills and reading Chinese-English speakers living in English-speaking contexts. *Educational Psychology*, 26(3): 367-393.
- GOUGH, P., & W TUNMER. 1986. Decoding, reading, and reading disability. *Remedial and Special Education*, 71: 6–10.
- GRABE, W. & FL STOLLER. 2002. *Teaching and Researching Reading*. Harlow: Pearson Education Ltd.
- GRANT, A., A GOTTARDO, & E GEVA. 2011. Reading in English as a First or Second Language: The Case of Grade 3 Spanish, Portuguese, and English Speakers. *Learning Disabilities Research & Practice*, 26(2): 67–83.
- GUO, Y., & AD ROEHRIG. 2011. General versus second language specific knowledge in the English reading comprehension of Chinese-speaking learners. *Reading in a Foreign Language*, 23: 42-64.
- HARRIS, A.D., JC MCGREGOR, EN PERENCEVICH, JP FURUNO, J ZHU, DE PETERSON, & J FINKELSTEIN, J. 2006. The Use and Interpretation of Quasi-Experimental Studies in Medical Informatics, *Journal of the American Medical Informatics Association*, 13(1): 16-23.
- HOOVER, WA & PB GOUGH. 1990. The Simple View of Reading. *Reading and Writing: An Interdisciplinary Journal*, 2: 127–160.
- HUGO, AJ, SG LE ROUX, H MULLER, & NM NEL. 2005. Phonological awareness and the minimising of reading problems: a South African perspective. *Journal for Language Teaching*, 39(2): 210-225.
- HUGO, AJ & M NIEMAN. 2010. Using English as a second language as the language of instruction: Concerns and needs of primary school teachers in South Africa. *Journal for Language Teaching*, 44(1): 59-69.
- IBM CORPORATION. 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, New York.

- KIEFFER, M. 2012. Before and after third grade: Longitudinal evidence for the shifting role of socioeconomic status in reading growth. *Reading and Writing: An Interdisciplinary Journal*, 25: 1725–1746. doi:10.1007/s11145-011-9339-2
- KODA, K. 2005. *Insights into Second Language Reading: A Cross-linguistic Approach*. Cambridge: Cambridge University Press.
- LANDI, N. 2010. An examination of the relationship between reading comprehension, higher-level and lower-level reading sub-skills in adults. *Reading and Writing: An interdisciplinary Journal*, 23(6): 701–717. doi:10.1007/s11145-009-9180-z.
- LAUFER, B. 1992. Reading in a Foreign Language: How Does L2 Lexical Knowledge Interact with the Reader's General Academic Ability? *Journal of Research in Reading*, 15: 95-103.
- LAUFER, B. 1996. The Lexical Threshold of Second Language Reading Comprehension: What It Is and How It Relates to L1 Reading Ability. In Sajavaara, K. & FAIRWEATHER, C. (eds.), *Approaches to Second Language Acquisition*. Jyvaskyla: University of Jyvaskyla, 55-62.
- LE CORDEUR, M. 2010. The struggling reader: Identifying and addressing reading problems successfully at an early stage. *Per Linguam*, 26(2): 77-89.
- LENYAI, E. & M DE WITT. 2008. Language practices in school-based Grade R classrooms. *Journal for Language Teaching*, 42(2): 78-88.
- LIPKA, O & LS SIEGEL. 2010. The improvement of reading skills of LI and ESL children using a Response to Intervention (Rtl) Model. *Psicothema*, 22(4): 963-969.
- MASILO, M.G. 2008. Teachers' curriculum development experiences of the transition from mother tongue to English as a medium of instruction: a case study of three primary schools in Lesotho. Master's dissertation in Education: University of KwaZulu Natal.
- MCCARDLE, P, HS SCARBOROUGH, & HW CATTIS. 2001. Predicting, explaining and preventing children's reading difficulties. *Learning Disabilities Research & Practice*, 16(4): 230-239.
- MOET. 2005. Education sector strategic plan 2005-2015. Paragon Business Products.
- NATIONAL READING PANEL. 2000. *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Rockville, MD: National Institute of Child Health and Human Development.
- NATION, ISP. 2009. *Learning vocabulary in another language*. Cambridge University Press.
- NEL, N. 2008. Second language difficulties in a South African context. In Landsberg, E., Kruger, D. & Nel, N. (eds.), *Addressing barriers to learning: A South African perspective*. Pretoria: Van Schaik, 149-168.
- PARIS, SG, & JV HOFFMAN. 2004. Reading assessments in kindergarten through third grade: Findings from the center for the improvement of early reading achievement. *Elementary School Journal*, 105(2): 199-217.
- RUPLEY, WH, TR BLAIR, & WD NICHOLS. 2009. Effective Reading Instruction for Struggling Readers: The Role of Direct/Explicit Teaching. *Reading and Writing Quarterly*, 25: 125–138.

- QIAN, D.D. 1999. Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. *Canadian Modern Language Review*, 56: 282–308.
- SOARES DE SOUSA, D., K GREENOP, & J FRY. 2010. The effects of phonological awareness of Zulu-speaking children learning to spell in English: A study of cross-language transfer. *British Journal of Educational Psychology*, 80(4): 517–533.
- STAHL, SA. 2003. How words are learned incrementally over multiple exposures. *American Educator*, Spring 2003.
- STANOVICH, KE. 1986. Cognitive processes and the reading problems of learning disabled children: Evaluating the assumption of specificity. In Torgesen, T. & Wong, B. (eds.), *Psychological and educational perspectives on learning disabilities*. New York: Academic Press, 87 - 131.
- VAN WYK, A. J. 1980. *Die voorspelling van leerprobleme*. Unpublished PhD thesis. Bloemfontein: University of the Free State.
- VERHOEVEN, L. 2007. Early bilingualism, language transfer, and phonological awareness. *Applied Psycholinguistics*, 28: 123-144.
- WANG, JH, & JT GUTHRIE. 2004. Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly*, 39: 162–186.

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