

Making a case for the teaching of reading across the curriculum in higher education

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Over the past two decades there has been much written in the literature about the importance of reading and the importance of teaching students reading strategies to improve their reading comprehension. Reading is one of the most important academic tasks encountered by students. In higher education, students are exposed to a number of texts and textbooks that require independent reading. At this level they are expected to comprehend what they read so that they can analyse, critique, evaluate and synthesize information from various sources. Many students entering higher education are not adequately prepared to meet these challenges. This article highlights the literacy situation in South Africa with a particular focus on reading both in school and in higher education. In addition, the article highlights the importance of teaching students reading strategies across the curriculum in order to improve their reading comprehension, thereby enhancing their chances of academic success. The implications of this research for policy makers and academics in higher education institutions are outlined and some suggestions are made.

Keywords: academic literacy; higher education; reading across the curriculum; reading comprehension; reading literacy; reading strategies; teaching reading

Introduction

Over the past two decades there has been much written in the literature about the importance of reading and the importance of teaching students different reading strategies to improve their reading comprehension (Falk-Ross, 2002; Nel, Dreyer & Kopper, 2004; Caskey, 2008; Alvermann, Phelps & Gillis, 2010; Ngwenya, 2010). Reading is one of the most important academic tasks encountered by students. In fact, reading is the essence of all formal education as “literacy in academic settings exists within the context of a massive amount of print information” (Grabe, 1991:389) and students access this information primarily through reading. At tertiary level students are often confronted with a large number of texts and textbooks that they have to read independently. Reading at this level requires much more than just the ability to be able to identify written words in a text (that is, decoding information). While many students may have the ability to decode texts easily they are not able to understand what they have decoded, i.e. they lack comprehension skills. Comprehension is critical as it fosters analysis, critique, evaluation and synthesis of information from various sources. Hence, a lack of comprehension adversely affects academic performance.

Research in applied linguistics and reading research show a strong correlation between reading proficiency and academic success at all ages with many experts (Alexander, 1997; Nunes, 1999; Townend & Turner, 2000) agreeing that poor reading skills lead to poor academic performance which in turn adversely affects student’s overall development. For

example, a study conducted by Pretorius (2000) at the University of South Africa found that many first year Psychology and Sociology students were reading at 'frustration level', i.e. the reader reads with less than 90% decoding accuracy and 60% or less comprehension (Lesiak & Bradley-Johnson, 1983) and found a strong correlation between reading and academic performance. Similar findings were obtained by researchers at other South African Universities, for example, by Nel, Dreyer & Kopper (2004) at the University of Potchefstroom and by Ngwenya (2010) at the North-West University. These researchers are in agreement that students who have problems reading texts will experience difficulty obtaining information from texts and consequently encounter difficulties in learning. Reading research has also shown that reading strategies can be taught to students, and when taught, they can enhance student performance in tests of comprehension and recall (Le Cordeur, 2010a; Le Cordeur, 2010b; Vacca, Vacca & Mraz, 2011). The strategies taught and the methods used to teach these strategies vary in the different research studies. In light of the importance of reading and the many differently prepared South African students who enter tertiary education, the need for reading interventions to improve throughput rates cannot be overemphasized. This article begins by outlining the literacy situation among school-goers in South Africa as well as in higher education institutions and briefly touches on the link between reading and academic performance. In conclusion, it considers some of the implications for policy makers and academics in higher education and makes a few suggestions as a way forward.

Literacy and reading among school-goers in South Africa

The democratization of South Africa in 1994 brought about radical changes in education, the most significant of which was the integration of the previously separated education systems both at national and provincial levels. With a more equitable distribution of resources it was anticipated that all students in South Africa would have access to and receive the same learning opportunities. Since 1994 various attempts have been made by the South African government to improve the literacy levels in the country through various literacy and reading campaigns, by upgrading schools that were previously under-resourced and by providing teacher training. Yet, there are still reports on the low literacy rates among school-goers in South Africa. For example, the Department of Basic Education (DBE) reported that the 2011 Annual National Assessment (ANA) results had declined since testing in 2008. In 2008, 36% of Grade 3s scored under 35% in literacy while in 2011 the figure increased to 45%. A comparison between the 2008 Grade 3 results and the 2011 Grade 6 results also suggests a worsening performance. For instance, while 36% of 2008 Grade 3s scored under 35% in literacy, in 2011 57% of the Grade 6s scored under 35% (DBE, 2011).

In 2004, the South African Department of Education (DoE) recognized reading literacy as one of the most important priorities in education. Therefore, in the Revised National Curriculum Statement (RNCS) more attention was given to reading. However, as stated by Howie, Venter, Van Staden, Zimmerman, Long, Du Toit, Sherman & Archer (2006:6), in the foundation and intermediate schooling phases, the reading outcome is "placed together with other expected language outcomes associated with overall language competency" (DoE, 2003). Hence, although government policies about reading do exist these policies "may not be explicit enough to provide the level of support that teachers require to guide their classroom reading instruction practices" (Howie et al., 2006:9). In 2008, a National Reading Strategy (NRS) was put into place by the DoE the aim of which was to promote a nation of life-long readers and life-long learners. The NRS recognizes that many teachers do not know how to teach reading

and therefore listed teacher training, development and support as a key pillar of the NRS (DoE, 2008).

Over the years the DoE had its learners participate in several international learner achievement studies and also carried out a number of national learner achievement assessments. The results of these indicate that the learners' literacy levels are very low and are a cause for great concern. For example, in 2006, South Africa participated in the Progress for International Reading Study (PIRLS) to assess the reading literacy of Grade 4 learners. Grade 5 learners were also tested to study the progression in reading ability from Grade 4 to Grade 5. South African Grade 4 learners achieved an average score of 253 while the Grade 5 learners achieved an average score of 302. Although the scores indicated some progression from Grade 4 to Grade 5, they were significantly below the international fixed score of 500 (Howie et al., 2006). Howie et al. (2006) concluded that almost half of the 30,000 Grade 4 and Grade 5 learners tested in English and Afrikaans and more than 80% of the learners tested in the indigenous languages did not have basic reading skills and strategies. A national assessment included the systemic evaluations programme which was conducted in 2001, 2004 and 2007 focusing on Grades 3 and 6. Although the Grade 3 results indicated an improvement of 6% in reading between 2001 and 2007, they were still very low in 2007, with an average score in reading of 36% (DoE, report 2009). In February 2011, the Annual National Assessment (ANA) was written by all learners in public schools in Grades 2 to 7. The DBE (2011:6) reveals that "The percentage of learners reaching at least a 'partially achieved' level of performance varies from 30% to 47%, depending on the grade and subject considered. The percentage of learners reaching the 'achieved' level of performance varies from 12% to 31%".

Numerous studies have also been carried out by independent researchers (e.g. Horne, 2002; Matjila & Pretorius, 2004; Pretorius & Ribbens, 2005; Le Cordeur, 2010a). These researchers concur that learners are not reading at the level expected of them in a specific grade. For example, Horne (2002) found that many Grade 12 learners who cannot read or write possess the literacy levels of Grade 4 pupils. While the importance of language proficiency is acknowledged, Baatjies (2003) argues that it is incorrectly assumed that students acquire basic literacy by the end of Grades 3 and 4 and problems experienced by students in later grades are regarded as a "language" problem and not as a "reading" problem. However, Matjila & Pretorius (2004) found otherwise. In their study they gave Grade 8 learners two reading tests: one in Setswana which was the students' primary language and the other in English which was the language of teaching and learning (LoLT). One of their findings was that the students read more slowly in Setswana than in English, suggesting that students are not able to practice their reading skills because of inadequate exposure to books. In addition, Matjila & Pretorius (2004) argue that knowledge of one's home language is not sufficient for reading skills. They also found that the reading levels of the students in both languages were far lower than their maturational levels. In fact, students were reading at about a Grade 3 to 4 level. A similar view is expressed by Ngwenya (2010:84), namely, that general language proficiency is not a reliable predictor of a learner's academic success. The problem of the students' poor reading skills in primary schools is usually carried over into secondary schools and inadvertently higher education institutions as many students who enter higher education struggle to cope academically. Pretorius (2002:189) explains that students with reading problems get caught in a "negative cycle of failed reading outcomes and academic underperformance".

The above discussion highlights the low literacy levels and the reading problem among learners in South Africa. Inadequate teacher training and monitoring (Howie et al., 2006; NRS

2008), the numerous failed literacy and reading campaigns and initiatives, and the misconception that the low literacy levels are a direct result of the poor language proficiency of students without any recognition of the importance of reading, give rise to much concern given that reading is fundamental to the learning process. It would seem that the reading problem in South Africa tends to be masked by the language problems (Pretorius, 2002:174) as many teachers attribute the difficulties that students experience in reading comprehension to limited language proficiency, the underlying assumption being that language proficiency and reading ability are 'the same thing'. However, this is not always the case, as oral language and written language call on different skills. Research by Hacquebord (1994) has shown that improving language proficiency does not readily improve reading comprehension. Rather, it is attention to reading that improves reading skill, during which language proficiency also improves (Elley, 1991; Mbise, 1993).

Literacy and reading in South African Higher Education Institutions

As alluded to in the discussion above, a common problem that most South African Higher Education Institutions are currently experiencing is that many students enter higher education unable to read and write at the level expected of them (Nel, Dreyer & Kopper, 2004; Bharuthram, 2007; Ngwenya, 2010). The situation is not unique to South Africa but is also experienced in other parts of the world. For example, Falk-Ross (2002:278) says that a "... small but significant number of U.S. first-year college students commence their studies with less than adequate reading comprehension strategies and enter developmental reading classes or attend assistant labs". In a study conducted by the American Institute for Research (AIR), it was reported that 50% of students at 4-year colleges had inadequate skills to function at a 'proficient' level of literacy (AIR, 2006). Over the past few years, especially following the release of the annual South African Grade 12 examination results, there has been a spread of articles that report on the poor literacy levels of students about to enter tertiary education. For example, Govender & Naidu (2006) reported that academics from South African universities are aware that many Grade 12 learners entering universities are barely able to read and write. Govender & Naidu (2006:1) also make reference to Eloff, Vice-Chancellor of North-West University, who said "... the bad news for universities is that we see a worsening in the literacy levels and reading and writing skills of all students". More recently, the quality of the National Senior Certificate (NSC) results was questioned again since the requirements for a pass are so low, namely, students need 40% in three subjects, including their home language and 30% in another three subjects to pass. Consequently, a student with an average of 35% could obtain a NCS (Parker, 2012). This has resulted in high university drop-out rates due to student under-preparedness. It was reported in 2005 by the DoE that of the 120,000 students who were enrolled in higher education in 2000, 30% dropped out in their first year of study. A further 20% dropped out during their 2nd and 3rd years. Of the remaining students only 22% completed within the specified 3 years duration of their degree (DoE, 2005). More recent data (Department of Higher Education and Training, 2012) show that for 2010 the graduation rate was 15%, which was well below the expected national norm of 25% for three-year degrees in contact universities. In particular, the document states that in such universities "well under a third of students complete their courses in regulation time and one in three graduates within four years" (*ibid.*:38).

Several studies across South African universities (Perkins, 1991; Starkey, McKenna, Fraser & Worku, 1999; Balfour, 2002; Bharuthram, 2007; Ngwenya 2010) have confirmed that

the general language and reading levels of the majority of first-year students remain inadequate and a considerable number of students would be at risk of failing if no interventions were provided. For example, Balfour (2002) in an analysis of students' performance in English proficiency concluded that while students are conversational communicators in English they possess partial language or genre awareness and that students' reading skills needed urgent attention. In 2009, the National Benchmark Test (NBT) conducted by Higher Education South Africa (HESA) showed that of the 13,000 students who wrote the academic literacy test, only 47% were proficient in English and almost the same proportion — 46% — fell into the 'intermediate' category while 7% had only 'basic' academic literacy. In several of the above studies it was found that students performed much better in the multiple choice questions than the constructed questions, indicating that while students are able to answer literal questions, they do not have the competence in English that requires them to construct sentences in a cohesive and coherent manner. In a study conducted by Ngwenya (2010) to correlate first-year law students' profile with the language demands of their content subject it was found that the participants' average score in a reading comprehension test was 48%. Students performed poorly in the exophoric section which required them to think conceptually, infer meaning and be critical obtaining a score of 37% while the average mark on decoding endophoric information (i.e. responding to questions for which answers were retrievable from the text) was 58%. Generally, the students lack of proficiency in English which is the medium of instruction, and their limited reading ability, results in many of them struggling to cope academically, leading to high attrition and low throughput rates. The above results can be explained in terms of the distinction made by Cummins (2000) between Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP). CALP involves the use of a more context-reduced language associated with written language as well as more formal aspects of the classroom. According to Cummins (2000) academic literacies are context reduced. For successful meaning making, writers and readers are required to share a significant amount of background knowledge. Therefore, CALP, which is context reduced, is needed for the production and interpretation of academic texts. On the other hand, BICS is more context-embedded in the sense that meaning making can often be found within the interactional context (Cummins, 2000). This implies that even if a student has acquired a high level of proficiency in a language, the student is unlikely to succeed if the proficiency is mainly BICS proficiency. Students need CALP to succeed academically. It would seem that while many students who enter university have BICS, these students lack CALP, which as discussed above, is essential for success in higher education.

In a longitudinal study conducted at technikons mainly in the province of Gauteng, Horne (2002:43) found that there was a steady decline in the functional literacy levels of Grade 12 English Additional Language students who registered at these technikons. In 1995, Horne (2002) also administered a standardised English literacy skills assessment test (ELSA) to 766 Grade 12 school-leavers. These students had applied successfully to be trained as teachers in a province in the northern part of South Africa. Horne (2002) found that 95% had a functional skills level in English of below Grade 8 level; 3% at Grade 8 level; 1% at Grade 9 level and 1% at Grade 10 level. These students qualified as teachers at the end of 1998 and the vast majority are teaching English and/or using English to teach content subjects. Hence, the lack of teacher English proficiency is passed on to students, thus perpetuating the cycle. Since the study by Horne in 1995 other studies (e.g. Howie et al., 2006; Balfour, 2007) have also reported on inadequate teacher qualifications and a lack of training on the teaching of reading

and literacy development. For example, in the PIRLS report (Howie et al., 2006) the authors concluded that the qualifications teachers have do not necessarily prepare them to teach reading literacy and that many teachers were not able to effectively implement the strategies they learnt during their professional training. In 2008, the DoE in drawing up of the National Reading Strategy (NRS), recognized teacher competency as a specific challenge in the implementation of the NRS and therefore introduced training, development and support programmes for teachers (DoE, 2008).

Reading and academic performance

It is well known that in the process of acquiring knowledge, apart from the notes given during lectures, the student is expected to supplement these by consulting additional texts. These texts not only reinforce the teachings in the classroom but also broaden the student's knowledge base. Students must be able to understand the texts they read to achieve academic success. Consequently, students who experience difficulties in reading will be handicapped in acquiring knowledge and in succeeding academically (Pretorius, 1996; Nunes, 1999; Rose, 2004; Ngwenya, 2010). A study by Bohlman & Pretorius (2002:15) showed a "robust relationship between reading ability and academic performance". The authors found that the students in their study who failed Mathematics achieved 50% or less in reading comprehension, meaning that they understood half (or less) of the text, and were thus reading at frustration level. Interestingly, their marks for mathematics improved as their reading ability improved.

It must be noted that the level of reading required in higher education is much more demanding and sophisticated than in school. In a typical course load, students need to read a range of different books (genres) which requires sophisticated analytical and interpretative skills in reading and writing. Comprehending these texts is essential for academic success. The complex nature of most academic texts does not make the students' tasks any easier, coupled with the fact that many students come into higher education with their own literacy experiences, which may either advance or hamper the acquisition of their discipline specific literacies. Thesen (1998:39) discusses the complexity of texts in terms of an analysis of texts from three levels: the first level (text) involves description — the *what* of linguistic analysis; level two, is the *how* of meaning making, that is, interpretation; and level three engages in *why*, that is, explanations and implications thereof. In acknowledging the difficult nature of texts, many researchers (Thesen, 1998; Richardson, 2004; Rose, 2004) state that an important part of the reading process is the students' ability to recognize text genres and various distinct text types. Grabe (1988:64) indicates that "the linguistic elements of the text combines interactively to help create the 'textuality' (that is, what makes a text a text as opposed to a collection of individual sentences that must be processed by the reader)". Hence, just as university students are introduced to the different writing genres required in their disciplines, they need to be introduced to academic reading.

The relationship between reading and academic performance cannot be over-emphasized. Balfour (2002:67) argues that students' weak reading levels have serious implications for the following reasons:

- A poor ability to read and digest course material impacts negatively on students' performance and on their self-esteem.
- An inability to read affects students' ability to follow written instructions, be these in the form of essay questions or examinations.
- An inability to read texts impacts negatively on the students' ability to model their own

writing on them — both conceptually, linguistically and structurally.

- For this reason an inability to read — and to model one's own writing production on what one reads — severely affects students' chances of sustaining their own language development once they complete the course.

As discussed above, although the ability to read complex material is one of the major predictors of success in higher education (Lewin, 2005), many students are not able to adequately comprehend the texts they read. To this end, a review of reading research (Daneman, 1991; Droop & Verhoeven, 2003; Rose, 2004) indicates that students, especially low performers, benefit from the explicit teaching of reading.

Implications and suggestions for Higher Education Institutions

In the light of the above studies, it is recognized that drastic measures need to be taken at school level to improve the overall literacy and reading levels of all South African learners and hence inevitably of students entering higher education institutions. However, the current disconcerting situation faced by higher education institutions warrants an immediate interim intervention. This point is supported in a study by the Council for Higher Education (CHE) which concluded that “improvement in schooling *per se* should not be relied upon as a primary means for achieving substantial improvement in graduate outputs and equity of outcomes in higher education” (OECD, 2008). In addition, it should be noted that reading at school level is very different from reading at university. Texts at university level, as in the case of a journal, are disciplinary and often new to the student and are much more complex in nature requiring the use of sophisticated reading strategies. It is often incorrectly assumed by lecturers in higher education that students who have been successful readers at school level will not encounter any difficulties reading at university. However, many students find university reading a challenging task. While some students because of their prior reading experiences are able to adapt and adjust their reading with relative ease, others may lag behind.

On the basis of the above discussion, it is argued that higher education institutions need to make a commitment to help raise students' awareness of the importance of reading and also assist them in gaining the appropriate reading practices required at university level. In order to achieve success it is important that this be a collective (university wide) effort. Therefore, it is imperative that the teaching of reading be included across the curriculum. It cannot be emphasised enough that to be successful in this endeavour all academics need to accept and commit to the process. It is well known that it is not possible for university support programmes to cope with the large number of students requiring assistance with reading. In addition, the short duration of many of the academic development courses does not allow for sufficient practice and transfer of the literacy practices that are taught to the content subjects. Furthermore, while academic development programmes may teach critical reading, these reading strategies are most effective if they are reinforced through practice in the mainstream curriculum. It is acknowledged that some lecturers may argue that it is their job to teach content and they are not language specialists therefore the teaching of reading should be done elsewhere. Generally, lecturers who think in this manner also tend to believe that learning content and reading can be separated and that learning content does not require one to be a good reader or even a regular reader. This thinking encourages a reliance on lecture notes, rote learning and verbatim recall of information that is often not accurately presented. Furthermore, students who memorize information would not be in a position to challenge or re-interpret texts in the light of other texts (Hall, 2005).

It is suggested that a good staff development programme be put in place that encourages conversations around the current trends in reading and reading pedagogy. This is important to prevent the belief that reading is a decontextualized process that contains a set of skills/strategies that can be generically applied across content areas (Hall, 2005). Reading and writing are social practices and play different roles in different social contexts, performing different social actions (Brandt, 1990; Gee, 2000; McKenna, 2003; Herbert, Conana, Volkwyn & Marshall, 2011). The reading conversations could revolve around lecturers thinking about how and why reading strategies can be applied to the texts they use and how these purposes may change across content areas. As an example, the reading of a law text will differ from the reading of a history text. The way discipline lecturers think about and teach reading could possibly have an impact on how they address reading with their students. Furthermore, the more knowledge subject lecturers have on reading the less daunting a task it becomes to incorporate reading instruction into their classes. In addition, these conversations must be supported with practical examples using discipline texts on how to integrate the teaching of reading into content subjects. This article also suggests the need to research what is currently being done on the teaching of reading in academic support units and by subject lecturers to ensure that it is not just touched on in a superficial manner. Finally, while this article focuses on reading it is important to note that reading is taught most effectively with writing, as integrated processes. Reading and writing are two complementary processes both of which are essential for academic success.

In conclusion, a wide range of data has been presented here in discussing the poor reading levels of school-goers and of students in higher education institutions. These results are presented to highlight the gravity of the reading problems experienced in the South African educational system, in an attempt by the author to make a strong case for the teaching of reading across the curriculum in higher education. It is hoped that this research will serve as a catalyst for institutions to seriously promote discussions around the importance of reading and the actual implementation of the teaching of reading across the curriculum, while taking into account some of the suggestions offered.

References

- Alexander N 1997. Language policy and planning in the new South Africa. *African Sociological Review*, 1:82-98.
- Alvermann DE, Phelps SF & Gillis VR 2010. *Content reading and literacy: succeeding in today's diverse classrooms* (6th ed). Boston: Allyn and Bacon.
- American Institute for Research 2006. *New study of the literacy of college students finds some are graduating with only basic skills*. Available at <http://www.air.org/news/documents/Release200601pew.htm>. Accessed 18 January 2012.
- Baatjies I 2003. Reading in South Africa: an overview of policy, programmes and campaigns 1994. *Innovations*, 26:1-14.
- Balfour R 2002. *English language development project (Report No 7). An analysis of Natal University students' performance in the English language proficiency*. Durban: University of Natal.
- Balfour R 2007. Mother-tongue education or bilingual education for South Africa: theories, pedagogies and sustainability. *Journal of Language Teaching*, 41:1-14.
- Bharuthram S 2007. Teaching reading strategies in higher education. Unpublished PhD thesis. Durban: University of KwaZulu-Natal.
- Bohlman CA & Pretorius EJ 2002. Reading skills and mathematics. *South African Journal of Higher Education*, 16:196-206.
- Brandt D 1990. *Literacy as involvement: the acts of writers, readers, and texts*. Carbondale, IL:

Southern Illinois University Press.

- Caskey MM 2008. Comprehension strategies that make a difference for struggling readers. In S Lenski & J Lewis (eds). *Reading success for struggling adolescent learners*. New York: The Guilford Press.
- Cummins J 2000. *Language, power and pedagogy*. Clevedon: Multilingual Matters.
- Daneman M 1991. Individual differences in reading skills. In R Barr et al. (eds). *Handbook of Reading Research, Vol. 2*. London: Longman.
- Department of Basic Education 2011. *Report on the Annual National Assessments of 2011*. Pretoria, Republic of South Africa. Available at <http://www.education.gov.za>. Accessed 10 January 2012.
- Department of Education (DoE) 2003. *Revised National Curriculum Statement Grades R-9 (Schools). Teacher's guide for the development of learning programmes. Languages*. Pretoria: Department of Education.
- Department of Education (DoE) 2005. *Student enrolment planning in Public Higher Education, March 2005*. Pretoria: Department of Education.
- Department of Education (DoE) 2008. *National Reading Strategy, February 2008*. Pretoria: Department of Education.
- Department of Education (DoE) 2009. *Trends in Education Macro Indicators, Report 2009*. Pretoria: Department of Education.
- Department of Higher Education and Training (DHET) 2012. *Green Paper for Post-School Education and Training. Government Gazette, 13 January 2012*. Pretoria: DHET.
- Droop M & Verhoeven L 2003. Language proficiency and reading ability in first and second language learners. *Reading Research Quarterly*, 39:70-103.
- Elley WB 1991. Acquiring literacy in a second language: the effect of book-based programmes. *Language Learning*, 41:375-411.
- Falk-Ross F 2002. Toward the new literacy: changes in college students' reading comprehension strategies following reading/writing projects. *Journal of Adolescent and Adult Literacy*, 45:278-289.
- Gee J 2000. The New Literacy Studies, from 'socially situated' to the work of the social. In D Barton, M Hamilton & R Ivancic (eds). *Situated Literacies*. London: Routledge.
- Govender P & Naidu B 2006. Indian experts to help SA's worst schools. *Sunday Times*, 1 January.
- Grabe W 1988. Reassessing the term 'interactive'. In PL Carrell, J Devine & DE Eskey (eds). *Interactive approaches to second language reading*. Cambridge: Cambridge University Press.
- Grabe W 1991. Current developments in second language reading research. *TESOL Quarterly*, 25:375-406.
- Hacquebord H 1994. Academic literacy reading in the content areas: text comprehension in secondary education in the Netherlands. *Journal of Research in Reading*, 17: 83-98.
- Hall LA 2005. Teachers and content area reading: Attitudes, beliefs and change. *Teaching and Teacher Education*, 21:403-414.
- Herbert MS, Conana CH, Volkwyn TS & Marshall D 2011. Multiple modes of Epistemological Access in Physics. In V Bozalek, J Garraway & S McKenna. *Case studies of epistemological access in foundation/extended curriculum programme studies in South Africa*. Cape Town: South Africa.
- Horne TJ 2002. Education and language transferees. *Education Africa Forum*, 5:40-45.
- Howie S, Venter E, Van Staden S, Zimmerman L, Long C, Du Toit C, Scherman V & Archer E 2006. *Progress in International Reading Literacy Study 2006*. University of Pretoria: Centre for Evaluation and Assessment.
- Lesiak J & Bradley-Johnson S 1983. *Reading Assessment for Placement and Programming*. Springfield: Charles C. Thomas.
- Le Cordeur M 2010a. From 0 to 100% - How Raithby Primary turned their literacy performance around. *Journal of Education*, 49:35-64.
- Le Cordeur M 2010b. The struggling reader: identifying and addressing reading problems successfully at an early stage. *Per Linguam*, 26:77-89.
- Lewin T 2005. Many going to college aren't ready, report finds. *New York Times*. Available at

- <http://query.nytimes.com/>. Accessed 19 September 2011.
- Matjila DS & Pretorius EJ 2004. Bilingual and Biliterate? An exploratory study of Grade 8 reading skills in Setswana and English. *Per Linguam*, 20:1-21.
- Mbise A 1993. Teaching English language reading in Tanzanian secondary schools. In CM Rubagumya (ed). *Teaching and researching language in African classrooms*. Clevedon: Multilingual Matters, 96-109.
- McKenna S 2003. A critical investigation into discourses that construct academic literacy at the Durban University of Technology. Unpublished PhD thesis. South Africa: Rhodes University.
- Nel C, Dreyer C & Kopper M 2004. An analysis of the reading profiles of first-year students at Portchefstroom University: a cross-sectional study and a case study. *South African Journal of Education*, 24:95-103.
- Ngwenya T 2010. Correlating first-year law students' profile with the language demands of their content subjects. *Per Linguam*, 26:74-99.
- Nunes T (ed.) 1999. *Learning to read: an integrated view from research and practice*. London: Kluwer Academic Publishers.
- Organisation for Economic Co-operation and Development (OECD) Report 2008. *Review of National Policies for Education, South Africa*.
- Parker F 2012. *Myth busting the matric pass rate*. Available at <http://mg.co.za/printformat/single/2012-01-07-myth-busting-the-matric-pass-rate>. Accessed 09 January 2012.
- Perkins DM 1991. Improvement of reading and vocabulary skills at the University of Transkei. *South African Journal of Education*, 11:231-235.
- Pretorius EJ 1996. Reading in the learning context: the role of cognitive variables. *South African Journal of Linguistics*, 32:35-57.
- Pretorius EJ 2000. "What they can't read will hurt them": reading and academic achievement. *Innovation*, 21:33-41.
- Pretorius EJ 2002. Reading ability and academic performance in South Africa: Are we fiddling while Rome is burning? *Language Matters*, 33:169-196.
- Pretorius EJ & Ribbens R 2005. Reading in a disadvantaged high school: issues of accomplishment, assessment and accountability. *South African Journal of Education*, 25:139-147.
- Richardson PW 2004. Reading and writing from textbooks in higher education: a case study from Economics. *Studies in Higher Education*, 29:505-521.
- Rose D 2004. Sequencing and pacing of the hidden curriculum: how indigenous children are left out of the chain. In J Miller, A Marais & B Davies (eds). *Knowledges, pedagogy and society*. London: Routledge Falmer.
- Starkey T, McKenna S, Fraser S & Worku Z 1999. *Interim report on the English Language project at Technikon Natal*. Durban: Natal Technikon.
- Thesen LK 1998. Creating coherence. Design and critique of academic literacy materials. In S Angelil-Carter (ed). *Access to success: literacy in academic contexts*. Cape Town: Cape Town University Press.
- Townend J & Turner M (eds) 2000. *Dyslexia in practice: a guide for teachers*. New York: Kluwer Academic/Plenum Publishers.
- Vacca RT, Vacca JAL & Mraz ME 2011. *Content area reading: literacy and learning across the curriculum*. Columbus, OH: Allyn and Bacon.