A 3-tier model for supporting reading literacy among first year students

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Abstract

Undergraduates are expected to read, comprehend and learn independently from university texts across relatively unfamiliar academic domains, acquiring new vocabulary, key concepts, as well as principles of reasoning. Reading is not simply an additional tool that students need at university; it constitutes the very process whereby learning occurs. Regardless of student needs, most universities provide bolt-on generic skills course(s) offered by academic support units, language departments/schools or study skills centres. Academic reading is a complex skill that requires subject knowledge and above all, an understanding of the nature of knowledge in the specific discipline. The purpose of this paper is to present a 3-tier model for specifically reading literacy at university. The aim of the model is preventative and seeks to facilitate success for all students as well as fulfilling requirements of quality student outcomes and timely completion and throughput rates.

Introduction

Increased participation in the higher education sector in South Africa brings with it challenges regarding access to, and success in, the higher education sector. Questions of access to, and success in, higher education become really important when it is realised that many students now seeking participation in the sector do not necessarily come from backgrounds that have adequately prepared them for this participation (Scott, Yeld, & Hendry, 2007; Yeld, 2008). According to Tinto (2008), success for these students will not be achieved by practice as usual, by add-ons that do little to change the experience of these students at university. What is required is a more serious and substantial restructuring of student experience especially for the many students who enter university academically underprepared.

Du Boulay (1999, p.1) states that: ‘One of the biggest problems in higher education, but one which is often not fully recognised by either students or lecturers until some way into academic courses, is the problem of reading, perhaps because reading in itself is not assessed. However, the results or output from reading are assessed.’ Reading is not simply an additional tool that students need at university; it constitutes the very process whereby learning occurs (Rose & Hart, 2008). According to a report compiled by the Intersegmental Committee of the Academic Senates (2002, p.4), 83% of faculty stated that the lack of analytical reading skills contributes to students’ lack of success in a course.

Research within the Higher Education sector in South Africa confirms the poor reading levels of students. Webb (1999) reported that many of the students at the University of Pretoria who
were tested had reading levels of Grade 7-8 students. Similarly, Pretorius (2000) found that many first-year Psychology and Sociology students at the University of South Africa were reading at frustration level (i.e., well below their assumed reading level, with an average comprehension level of 53%). A study conducted by Nel, Dreyer and Klopper (2004) at the North-West University (Potchefstroom Campus) indicated that first-year students participating in their study experienced problems across all aspects of the reading components assessed, namely vocabulary, fluency, reading comprehension and reading strategy use. Similarly, research conducted by Zulu (2006) at the North-West University (Mafikeng Campus) indicated that first-year students lacked critical and analytical reading skills. Case study research, conducted by Pretorius (2005, p.798), indicated that students approach reading tasks in a 'mechanical and passive way, starting at the beginning and wading their way through conceptually dense text to arrive exhausted, demotivated and largely uninformed at the other end.' In addition, students had difficulty making predictions and elaborating ideas across paragraph boundaries and integrating information across the text.

In the crucial area of academic reading there is often only fragmented and limited provision of support at tertiary level (Wingate, 2007). Regardless of student needs, most universities provide bolt-on generic skills courses offered by academic support units, language departments/schools or study skills centres (Wingate, 2007). Research indicates that generic skills courses are not effective and students tend to avoid them because they regard them as irrelevant to their disciplines (Maxwell, 1997). Academic reading is a complex skill that requires an understanding of the nature of knowledge in the specific discipline (Alexander, 2005). Reading-to-learn at university requires a systematic and comprehensive approach to supporting students. Institutions should not leave reading development to chance (Pretorius, 2002). Structures need to be put in place to ensure the consistent and gradual development of academic reading skills for all students.

The purpose of this paper is to present a 3-tier model for academic reading skills support at university. The aim of the model is preventative and seeks to facilitate success for all students as well as addressing government requirements of quality student outcomes and timely completion and throughput rates (Scott et al., 2007). Each tier of the model focuses on core curriculum content, reading literacy curricula, teaching staff, resources, instructional methods/strategies, support, assessment and collaboration.

The primary skill that students need for university study is independently learning from academic reading (Rose & Hart, 2008). To study independently, university students must be able to strategically read complex academic texts with a high level of understanding, and be able to critically analyse such texts in order to present coherent analyses, arguments or discussion in their own written work (Rose, Lui-Chivizhe, McKnight, & Smith, 2003). Simpson and Nist (2000) reported that 85% of college learning requires careful reading. Extensive reading is also needed, as students often must understand 200-250 pages per week to meet sophisticated reading tasks in writing assignments, research papers and preparing for tests at university (Burrell, Tao, Simpson, & Mendez-Berrueta, 1997). University reading can be a daunting task (Taraban, Rynearson, & Kerr, 2000). Not only must students read successfully and extensively, but also they must monitor their success, change strategies to meet varying learning and task demands, and attribute success to their strategic approaches to reading rather than to chance or external factors (Caverly, 2001; Simpson & Nist, 2002).

Academic reading, reading for in-depth comprehension and learning, is a special type of reading, demanding a different type of processing (in terms of focusing of attention, information encoding and retrieval) than reading for enjoyment or reading for general
information. Academic reading is very often associated with ‘the requirement to perform identifiable cognitive and/or procedural tasks ... [to meet] the criteria on tasks such as taking a test, writing a paper, giving a speech, and conducting an experiment’ (Anderson & Armbruster, 1984, p.657). Effective academic reading involves several kinds of metacognitive knowledge: knowledge of the criterion task (such as a multiple-choice test, essay exam, speech, or research paper) and what needs to be studied (task awareness); knowledge of how best to process the text for learning, including what to focus attention on, how to subsequently encode the information attended to, and how to retrieve the information required by the criterion task (strategy awareness); and self-knowledge about whether and to what extent one has learned the material (performance awareness) (Anderson & Armbruster, 1984).

Academic texts present difficulties for inexperienced/underprepared students in two ways. First, the subject matter, including terms used in the academic field, is likely to be new and very unfamiliar, so even if students can read a text fluently, they cannot necessarily begin to understand, let alone interpret or critique, the ideas expressed in it (Shih, 1992; Pretorius, 2005). Second, since the patterns of language in academic writing differ from the patterns of language in everyday speaking or writing, reading academic texts can be such a struggle that understanding becomes extremely difficult, if not impossible (Rose et al., 2003).

In order to comprehend a text, narrative or expository, students must be able to recognize at least 90-95% of the words and know what they mean. They must also be able to read the text with some degree of fluency using appropriate speed, phrasing, prosody and intonation, so that they can channel enough cognitive resources for building a ‘situation model,’ or mental representation, that the sentences in the text as a whole projects (Kintsch, 2004). Within expository text material, two major factors are present which potentially affect students’ understanding: ordination and relationships. Firstly, most expository material is organised hierarchically (i.e., topics, main ideas, and details) into super-ordinate, co-ordinate, and sub-ordinate ideas (Meyer, 1975). Secondly, Meyer (1975) identified five general patterns of text structure present in expository material, namely collection or categorization, comparison/contrast, cause/effect, description, and problem/solution. Research indicates that students have difficulty discerning important from unimportant information; selecting, organising and interpreting across multiple texts; recognising text structures and inferring main ideas when they are implicit; accessing a repertoire of effective reading strategies; managing executive control over underlying cognitive, metacognitive and affective processes that are the foundation of these strategies; believing in their ability to control their success; and being motivated to read actively (Alexander & Murphy, 1999; Cabral, 2008).

Students at university need to comprehend text by actively constructing meaning, integrating information from the text with relevant information from their background knowledge (Caverly, 2001). Conceptual knowledge (content schemata), text-structure knowledge, and knowledge about text-processing strategies are the foundation for successful construction of meaning (Shih, 1992). In addition, reading is as much a strategic process as a comprehending process and metacognitive knowledge of the reading process is as important to develop as declarative knowledge, conditional knowledge, procedural knowledge, and conative knowledge (Caverly, 2001).

In order to be successful at university, students need to develop understandings of how they should approach the above mentioned challenging reading demands, how they should proceed while reading, and how they can tell whether they are proceeding effectively or not. According to Fox, Alexander nd Dinsmore (2007, p.2), many undergraduates have fragile
understandings of reading; their success in reading rests upon shaky foundations, due to a passive approach to reading, an over-reliance on background knowledge or personal experience, or a lack of metacognitive flexibility.

A 3 Tier Model for Supporting Reading Literacy

A 3-tier model was developed for supporting the reading literacy needs of first-year Bacalaureus Educationis (BEd) students (pre-service teachers) within the Faculty of Education Sciences at the North-West University (Potchefstroom Campus) in South Africa. A total of 2006 undergraduate BEd students are registered within the Faculty. The aim of the reading literacy support initiative is to assist all undergraduate BEd students and not only the 320 first year students. An analysis of the 2010 reading profile of the above mentioned students revealed that they read at 169 wpm with 41% comprehension in their mother tongue (Afrikaans) and at 178 wpm with 51% comprehension. The majority of the prescribed reading material in the BEd curriculum is English.

The model is designed to provide scientific research-based instruction and targeted interventions that lead to successful reading at university. The focus of the model should be seen as developmental and preventative and not as remedial. The rationale for a developmental focus is based on Alexander’s (2005) lifespan orientation toward reading. This perspective looks at reading as ‘a long-term developmental process,’ at the end of which ‘the proficient adult reader can read a variety of materials with ease and interest, can read for varying purposes, and can read with comprehension even when the material is neither easy to understand nor intrinsically interesting’ (RAND Reading Study Group 2002, p.xiii).

The model’s basic philosophy is based on the recognition that all students entering university need assistance in developing the necessary and appropriate reading skills for both the higher education academic context in general and, more importantly, the domain-specific context (Alexander, 2005). The model consists of three tiers, or levels, of instruction: Tier 1, Tier 2, and Tier 3 (cf. Figure 1). The model has been adapted for university purposes, by the authors, from Utah’s 3-tier model of reading instruction for schools (Utah State Office of Education, 2007). Current higher education practices continue to separate the reading literacy that is taught and the disciplinary knowledge that students are accessing. The Utah model focuses on addressing reading needs, the proposed model in this paper aims to transform current reading literacy teaching practices with a view to developing better synergy between the reading literacy that is taught and the disciplinary knowledge that students are accessing. This is achieved by close collaboration between reading literacy specialists, core curriculum (BEd) content area specialists, and a Supplemental Instruction (SI) component which focuses on peer facilitation by senior students.

Reading and learning screening assessments are administered to ALL first-year students during the induction period before classes officially start in order to identify those students most likely to experience reading and learning difficulties (cf. Figure 1). The information of tests of several reading and learning components is then used to create profiles of students’ reading and learning ability (Strucker, 1997).

Profiles result in a comprehensive view of students’ strengths and weaknesses across many aspects of the reading process and can be used to design instruction that addresses all aspects of the reading process during instruction. This ensures a balanced approach to reading instruction (Snow et al., 1998; NICHD, 2000). According to Kruidenier (2002), assessing several components of reading in order to generate profiles of students’ reading ability gives
educators much more instructionally relevant information than any test of a single component can. In addition, the reading assessment profiles of first-year students may be so diverse that any one measure of reading achievement may not be sufficient to identify strengths, weaknesses and needs of instruction (Strucker, 1997).

*Figure 1: A 3-Tier Reading Literacy Model for Supporting First Year Students*

**Tier 1:** Core classroom reading literacy instruction for all first-year students

The following tests and questionnaires are used to screen the students: The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument designed to assess students’ motivational orientations and their use of different learning strategies for a university course (Pintrich, Smith, & McKeachie, 1989), the Revised 2F Study Process Questionnaire is used to determine students’ approaches to learning (Biggs, Kember, &
Leung, 2001), the Learning Style Survey (Cohen, Oxford, & Chi, 2001) is used to determine students’ learning style preferences, the Steck-Vaughn Read-On programme (Harcourt Achieve, 2007) is used to determine the rate at which students’ read (i.e., words per minute) and their reading comprehension ability, and Coxhead’s (2000) Academic Word List – Sublist 1 is used to determine students’ vocabulary knowledge. At-risk students are identified and in addition to Tier 1 instruction, Tier 2 instruction becomes compulsory for these students.

Tier 1 refers to core classroom reading literacy instruction for all first-year students. The reading literacy module is linked to the students’ core curriculum (e.g., B.Ed) and there is close cooperation between both of these components and the university academic support centre that is responsible for the implementation of the SI component (i.e., identifying senior students who act as peer facilitators in at risk modules within the core curriculum). The staff responsible for implementing Tier 1 instruction include: the core curriculum lecturers responsible for teaching the identified linked modules within the core curriculum (e.g., B.Ed curriculum – Professional Studies EDCC 111, etc.), the reading specialist who will be responsible for teaching the linked reading literacy module and the academic literacy specialist in the Academic Support Centre who is responsible for coordinating the SI component and training the student facilitators. The reading literacy module focuses on scientifically based reading research (SBRR) to teach critical reading components relevant to adolescent and adult students as identified by the NICHD (2000), Caverly (2001), RAND Reading Study Group (2002), Kruidenier (2002), and Rose et al. (2003). Components taught include: strategic reading, fluency, reading comprehension, vocabulary, text and language structures within expository texts, and reading strategies. Instruction in the reading literacy module is direct and explicit. For example, the reading specialist specifically defines the strategy to be learned, he/she models the strategy, provides guided practice as students work independently or in small groups, and students are also provided with multiple opportunities to apply the strategies on their own. The reading specialist scaffolds support which enables students to successfully practice complex strategies and as they become more competent, scaffolding is gradually withdrawn. The content used in the reading literacy module is the prescribed material used by the core curriculum module lecturers in their courses. When students attend the reading literacy module they, therefore, use the same material as in their core curriculum modules. Weekly meetings between the identified staff and the SI student facilitators will ensure collaboration and engagement. For example, projects and assignments required in the core curriculum modules are used as ‘practice tasks’ within the reading literacy module. In order to complete the assignments students should be able to synthesise and integrate information from multiple sources with different structures, they should use a variety of reading strategies as well as monitor for comprehension. These reading skills are then explicitly addressed in the reading literacy module. Assessment within the reading literacy module is also combined with the core curriculum module; the reading specialist assessing the academic reading skills and the content specialist assessing the domain-specific content. Weekly planning meetings also allow colleagues the opportunity of discussing student progress and identifying students who might require Tier 2 or Tier 3 interventions and also what additional support or practice should be provided in and by the Academic Support Centre. Assessment data is used to monitor and inform instruction. Students not making adequate progress are identified and referred to the academic support centre (literacy specialist) where they receive differentiated and scaffolded instruction delivered in flexible grouping (i.e., whole group, small group, partner and individual study). Students are monitored on a bi-weekly basis by means of progress and outcome assessments in order to identify at risk students early in the semester. The Dean, directors, lecturers within the core
Tier 2: Supplemental targeted instruction

Tier 2 provides supplemental targeted instruction in addition to Tier 1, and addresses the specific needs of students who do not make adequate reading progress in Tier 1. Students move to Tier 2 based on a collaborative team decision made by the core curriculum lecturer, the reading literacy lecturer and the literacy specialist within the academic support centre and input made by the SI student facilitators. The results of various assessment data are used in order to make an informed decision (e.g., progress and outcome assessments). In addition, diagnostic assessment is done via the Visagraph III system (Taylor, 2000) in order to identify possible reading efficiency problems.

Tier 2 interventions should be targeted, scientifically based, and aligned with core curriculum instruction. Approximately 10-15 percent of students may require Tier 2 instruction. The duration of this instruction varies based on student assessment and progress monitoring data, and it is generally provided by the literacy specialist in the academic support centre. Flexible and small homogeneous group instruction is provided. A minimum of one additional period is required for teaching at Tier 2.

Tier 2 refers to targeted SBRR supplemental instruction. This instruction is aimed at supporting students who fail to meet Tier 1 benchmarks in one or more critical areas of reading: word-level decoding, fluency, vocabulary, comprehension, flexible strategy use, etc. Students who have difficulties with domain-specific knowledge will receive assistance from a core curriculum mentor. Tier 2 instruction is systematic, explicit, and aligned with Tier 1 instruction. Instructional interventions are differentiated based on the needs of individual students as determined by assessment data.

Tier 3: Intensive instructional intervention

Tier 3 intervention replaces Tier 2 instruction and is in addition to Tier 1. Tier 3 is designed to provide intensive, targeted intervention to the most at-risk readers, those who have not responded adequately to Tier 2 instruction. This small percentage of students usually have severe reading difficulties and require instruction that is more explicit, more intensive, and specifically designed to meet individual needs in the areas of essential word analysis, word recognition, fluency, background knowledge, vocabulary, comprehension, and, in extreme cases, phonemic awareness. Students are also required to work with the Reading Plus (Taylor, 2000) and Read On (Harcourt Achieve, 2007) software within the reading laboratory in the Academic Support Centre. This intervention is extended over a longer period of time, and diagnostic and weekly progress monitoring assessments are utilized extensively with this group of students to identify problems, check progress, and provide appropriate, targeted interventions using SBRR materials. Instruction is provided by a reading or academic literacy specialist or by a paraprofessional. Flexible, small group (2-3 students) or individual instruction is provided within Tier 3. A minimum of one additional period is required for instruction at this level. Support in terms of domain-specific knowledge is provided by a core curriculum mentor.
Conclusion

The 3 Tier model for reading literacy support discussed in this paper emphasises the importance of reading within the higher education context as well as acknowledging that all students need support with this skill due to its developmental nature. The 3-Tier model focuses on helping students who have to do the majority of their core curriculum academic reading in their second and sometimes third language succeed within the higher education context. Each tier provides a different level of support based on the students’ reading literacy needs (i.e., not only a focus on reading comprehension, but all scientifically-based reading research components) and is monitored through the use of students’ outcomes or data. In addition, the model addresses the much criticized lack of collaboration between reading literacy specialists and domain-specific content area lecturers. An additional aspect included in the model is the SI conducted by senior students. The model therefore encourages sustained collaboration and not ad hoc collaborative efforts. Reading literacy teaching is framed as central to how academic domains structure their knowledge bases.

Nowhere does such change matter more than during the critical first year when student success is so much in doubt. It is for that reason that there is much to be gained from a rethinking of the character of reading literacy courses/modules and the development of coherent first-year programmes whose purpose it is to ensure that all students receive the support they need to learn and persist beyond that year. As stated by Tinto (2008), ‘Access without effective support is not opportunity.’

References


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