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AN EVALUATION OF THE READ ON! PROGRAMME FOR HEALTH SCIENCES STUDENTS AT THE UNIVERSITY OF THE WITWATERSRAND, SOUTH AFRICA

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A Dissertation submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of MSc. (MED)(Health Sciences Education)

Johannesburg, 2016.

Supervisor: Associate Professor P. Mc Inerney

DECLARATION

I, Gail Carter, declare that this dissertation is my own, unaided work. It is being submitted for the Degree of MSc. (MED)(HSE) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

_____

(Signature of candidate)

1st day of November, 2016 in Johannesburg.

DEDICATION

This research is dedicated to

All Faculty of Health Sciences students

ABSTRACT

English reading and writing proficiency are at the heart of academic study. The Read On! is a reading intervention for to first and repeating year students at the University of the Witwatersrand, South Africa in 2013 and 2014. The aim of the study was to evaluate the Read On! programme and to determine students' perceptions and experiences of Read On! Evaluation research methodology with four phases was used and quantitative statistical analyses of the mean (average), standard deviation, Pearson's product-moment correlation coefficient and two-way ANOVA were performed on data from a first year Voluntary Group (VG). The Compulsory Group (CG) data and students' reported experiences and perceptions of the Read On! programme were analysed using the same statistical tests. The results showed a strong, positive relationship between Read On! and National Benchmark Testing (NBT) with specific reference to Academic Literacy , and a moderate positive relationship to NBT Quantitative Literacy, NBT Mathematics and the NBT Average. A mixed strong but mainly moderate positive relationship was found between Read On! and Composite Index, Academic Index and NSC at Grade 11 and 12 data. In the Likert-scale questionnaire, 70% to 85% of students reported positive benefits from Read On! In the open-ended responses participants gave overall positive responses reporting that they believed that practice sessions in Read On! had contributed to their improved English reading, comprehension, vocabulary and writing skills. In conclusion, reading interventions are important tools that can assist South African EAL students transitioning into English medium tertiary education. It is recommended that an effective reading intervention with discipline specific academic language to support the curriculum be included as part of the academic programme.

Keywords: Reading, academic proficiency, tertiary, National Benchmark Testing (NBT), student perceptions, English Additional Language (EAL).

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LIST OF ABBREVIATIONS

AI	Academic Index
AIn%	Academic Index percentage
BCE	Before Common Era
BCMP	Bachelor of Clinical Medical Practice
BDS	Bachelor of Dental Science
BHSc	Bachelor of Health Sciences
BNurs	Bachelor of Nursing
BOHSc	Bachelor of Oral Health Science
B Pharm	Bachelor of Pharmacy
BSc OT	Bachelor of Science of Occupational Therapy
BSc Phys	Bachelor of Science of Physiotherapy
CDC	Connectivism Development Cycle
CETAP	Centre for Educational Testing for Access and Placement
CG	Compulsory Group
CI	Composite Index
CIn%	Composite Index percentage
DOE	Department of Education
EAL	English as an Additional Language
EDL	Evaluación del Desarrollo de la Lectura
HESA	Higher Education South Africa
ICT	Information Computer Technology
LAN	Local Area Network
MBBCh	Bachelor of Medicine and Bachelor of Surgery
MKO	More Knowledgeable Other
NBT	National Benchmark Testing

NBT%A	National Benchmark Testing Average
NBTal%	National Benchmark Testing Academic Literacy percentage
NBTma%	National Benchmark Testing Mathematics
NBTql%	National Benchmark Testing Qualitative Literacy
NBTP	National Benchmark Testing Project
NSC	National Senior Certificate
VG	Voluntary Group
YOS	Year of Study
ZPD	Zone of Proximal Development

CHAPTER ONE

1. INTRODUCTION

1.1 BACKGROUND TO THE STUDY

"*Medical schools assume that students have the background knowledge and skill to understand all texts at an appropriately deep level*."

(Roberts and Klamen, 2010, p.328)

Reading is an essential practice and skill that underpins high-quality studentship. A solid foundation in reading for comprehension, vocabulary and English grammar can help build a student's knowledge base at tertiary level. Reading widely can further the practice of reflection and enhance students' comprehension and vocabulary. At universities, traditionally, reading has been of books and articles – paper-based, bound and often heavy. Today, in the world of Information Computer Technology (ICT), more and more students are reading on computers, tablets and e-books and the electronic medium is starting to overtake the print medium (Siemens, 2006; Jaffer, Ng'ambi, and Czerniewicz, 2007; Rowe and Struthers, 2009). Nevertheless, irrespective of form, in academia, reflective reading and comprehension remain a fundamental proficiency required to facilitate learning and develop a student's unique voice. Although reading is certainly an essential requirement at school, university and beyond, research has shown that students read less today than they did before (Taylor, Fleisch and Schindler, 2008; Roberts and Klamen, 2010; Pretorius 2012).

International and national literature support the view that effective and efficient reading is fundamental for successful studying for a degree (Fielding and Pearson 1994; Mavundla and Motimele, 2002; Pretorius, 2002; Murdoch-Eaton, Manning, Kwizera, Burch, Pell and Whittle, 2012; Lukhele, 2013). If reading skills are not present, they must be developed

(Bharuthram and McKenna 2006; Bharuthram, 2012; Murdoch-Eaton et al, 2012) to support students to be successful in their studies. Different approaches to addressing English language learning have shown the holistic approach to be amongst the most successful. Stanovich's (1986) "Matthew Effects" refers to the consequences of poor reading skills on the academic achievements of students (Carter, 2010). In South Africa, where there is often a lack of a strong reading background, this situation becomes even more complex. Today, entry level university students in South Africa are predominantly second, if not third language English speakers (de Wet, 2002) from diverse backgrounds (Keeton, 2014). Furthermore there is a move towards comprehensive and effectual learning tools in tertiary education that are ICT based (Gonzalez, 2004; Siemens, 2006; Kilfoil, 2008) and reading is no exception. Bharuthram's article stresses that "Reading is one of the most important academic tasks encountered by students" (2012, p.205) and goes on to argue that the reading gap is not acknowledged, and too little time is given to critical deep reading in university. In agreement with Bharuthram, both Van Dyk and Weideman (2004) and Scott (2009) have researched the under-preparedness of students in reading, which they believe directly contributes to first year university attrition rates. There are several routes to assist students to read.

One approach at retraining students to read is to mend "bad habits" habits in reading and teach students new techniques to inspire an enjoyment of reading (Ryan, 2010, p.106). However, obstacles arise when trying to develop an enjoyment of reading. These may include the students' home language (English as a second, third or fourth language), background, previous experiences of reading, teachers and schooling and prior success or failure in reading (Bharuthram, 2012).

Students repeatedly do not perceive reading as an "authentic" experience, have difficulty with being able to self select (being able to choose reliable and valid academic texts that they can understand) and may become discouraged when the material is beyond their level of

understanding (Ryan, 2010, p.107). In further support of this, students have all too infrequently had opportunity to play an active role in their own learning during school years (Diab, Flack, Mabuza and Reid, 2012). Thus, students are not always ready to advance, even if in the zone of proximal development (ZPD) (Vygotsky, 1978, p.32).

Vygotsky (1978) defined the ZPD as the area of the student's own current capacity of independent problem solving (which is achievable together with another person or more capable peer) and where problem solving cannot yet be achieved alone. Vygotsky (1978) calls this other person, teacher or peer the 'more knowledgeable other' (MKO). Peer support suggests an educational environment where students are active, rather than submissive, and can advance their knowledge with the assistance of student peers (Ross, 2007). Moreover, Vygotsky (1978) champions a top-down approach where interactive meaning construction, rather than details such as grammar and spelling, are the focus.

In South Africa, just over half of the students entering universities are first language English speakers while the rest comprise an ever-growing group of English Additional Language (EAL) speakers (Mavundla and Motimele, 2002; Bharuthram and McKenna 2012; Lukhele, 2013). The impact of reading attitude and vocabulary ability upon academic performance has been well-researched in South Africa (Kilfoil, 2008; Lukhele, 2013) and has confirmed that students bring their reading or non-reading attitudes, often developed in school or at home, with them into the higher education setting. There is overwhelming support for a holistic focus of interventions for helping students at university from other sources as well (Yorke and Thomas, 2003; Hoffman and Lowitzki, 2005; Ulloa and Herrera, 2006; Ross, 2007; Mbambo, 2008; Diab et. al. 2012).

Important debates in the last decade considered the most inclusive and effective uses of ICT (Gonzalez, 2004; Siemens, 2006; Kilfoil, 2008) and acknowledge that university students in

tertiary education today are using ICT to help them study better. Of a plethora of computer based reading programmes, Read On! is but one example. Read On! uses a scaffolded approach to develop students' reading proficiency that offers formative assessment and moreover can analyse, address and help students improve reading to address individual deficiencies across the spectrum. The Read On! is a self-paced learning programme with an accessible database management system that stores students' records and development in the programme. Read On! places students in built-in formative assessments, diagnoses students' reading deficiencies and progresses students through ongoing prescribed individualized assessments so students can practice reading.

In conclusion, the literature suggests that reading for a degree at university is fundamental to success. Moreover, reading needs to be extensive and effective and located in a whole learning approach. In South Africa, with a majority of English second or third language first year students entering university, support is crucial in assisting students who require reading skills. Read On! utilises an information technology programme to teach reading, writing, vocabulary and comprehension, amongst others.

1.2 PROBLEM STATEMENT

Ideally, students entering tertiary education ought to arrive equipped with all the necessary skills to 'read for a degree'. In fact, university students are often assumed to possess a broad and wide reading capacity, a solid vocabulary and adequate comprehension skills to be able to engage with high level study material at university. However, this is seldom the case. In South Africa, with eleven official languages and students from diverse backgrounds for whom English is frequently a second, third (and sometimes even, fourth language), students face many obstacles in reading in English. Linked with historically neglected reading opportunities and resources both at home and at school, many students entering university

arrive with disadvantages in the very areas they crucially require them - namely reading, vocabulary and comprehension. For university students, it is essential that earlier inconsistencies in reading, vocabulary and comprehension ability be adequately addressed, for students to be successful in university. Quintessentially, Read On! may be the change factor that can assist students in addressing some of these limitations in South Africa. The University of the Witwatersrand admits students from diverse backgrounds into its health science programmes. This diversity means that students begin the first year of study with varying levels of reading skills. The Read On! programme attempts to identify the reading level of individual students at the point of commencement of study. This research seeks to answer the broad question: What difference does Read On! make to academic outcomes for health science students in one Faculty of Health Sciences in South Africa?

1.3 AIM OF STUDY

The aim of the study was twofold: to evaluate the Read On! programme by correlating its assessment scores against selected admission scores of students who voluntarily completed the programme for reading, writing, vocabulary and comprehension skills and to do the same for a group of students for the whom the programme was compulsory including determining their perceptions and experiences of Read On!

1.4 RESEARCH OBJECTIVES

The objectives of this study were to:

1.4.1 Obtain the following data from the faculty: Grade 12 English and Mathematics marks, home language, NBT results (including Academic Literacy) and Composite Index and Academic Index with NSC Grade 11 and 12 data for students admitted to the first year of study in the Faculty of Health Sciences in 2013 and 2014;

1.4.2 Obtain Read On! screening and assessment scores for these students;

1.4.3 Identify those students who continued to practice in Read On! on a compulsory basis (Compulsory Group - CG), and those who worked in Read On! on a voluntary basis (Voluntary Group - VG);

1.4.4 Evaluate student performance of the VG and CG by analysing their Read On! screening and assessment results and end-of-year academic results at the end of 2013 and 2014;

1.4.5 Describe the VG and CG in terms of gender, degree and Read On! level attained;

1.4.6 Determine students' experiences and perceptions in the Read On! programme by means of a questionnaire administered at the end of 2013 and 2014.

1.5 DEFINITIONS

1.5.1 National Benchmarking Testing (NBT) is the assessment for a first year applicant into Higher Education Institutions and comprises NBT Academic Literacy, NBT Mathematics and NBT Qualitative Literacy to make up the NBT Average (CETAP, 2015).

1.5.2 The Academic Index consists of the average of the top five marks for Grade 11 or Grade 12 subjects and the average of the three NBT results multiplied by 0.8%. The top five subjects are English, Mathematics, Biology or Physics, Life Sciences and the best remaining two subjects.

1.5.3 The Composite Index (CI) is obtained from 80% of the applicant's top five academic subject results plus a biographical questionnaire score and NBT biographical questionnaire.

1.5.4 The National Senior Certificate (NSC) is the main school-leaving certificate and is also called the matriculation (matric) certificate.

Academic results are one indicator of academic performance that show the consequence of education. This study used NBT scores, Composite Index, Academic Index, NSC Grade 11 and 12 results (Appendix VI and VII) and Read On! 2013 and 2014 and end-of-year results as indicators of academic performance.

1.6 TARGET POPULATION

The target population comprised first year and repeating year tertiary level students in different disciplines in the Faculty of Health Sciences (known as the faculty hereafter) at the University of the Witwatersrand in Johannesburg, South Africa in 2013 and 2014. These students were from diverse schooling, social and economic backgrounds.

The target population of 1,616 students included the first year students and repeating student intake for 2013 and 2014. There were 607 first year students admitted in 2013 and 679 first year students admitted in 2014. There were 166 repeating students in 2013 and 164 repeating students in 2014 (data obtained from the Faculty Office of the Faculty of Health Sciences).

1.7 SAMPLE

Drawing from the target population, two groups of students were identified. One sample group consisted of those students who were required to attend the Read On! on a compulsory basis (CG) and the second sample consisted of those who attended voluntarily (VG).

Inclusion criteria were as follows:

Students registered in a first year of study and/or students who were repeating a year of study, in any degree in the Health Sciences in 2013 and 2014. Students who attended the introduction, screening and assessment presentation of Read On! and who completed the screening and assessment in the Read On! programme. Students who continued to use the Read On! programme during the course of the respective year on a voluntary basis (VG) and

those who continued to use the Read On! programme during the course of the respective year on a compulsory basis (CG).

Exclusion criteria were students who:

Did not attend the Read On! introduction in 2013 and 2014 at all, were absent from the screening and assessment in Read On!, who did not attend Read On! practice during 2013 and 2014 due to circumstances beyond their and the researcher's control, such as illness, absence, leaving the university or an unwillingness to attend.

1.8 DATA COLLECTION

Admissions data and final results for first year students in 2013 and 2014 were obtained from the faculty office. Student information was treated confidentially and an unlinked number was assigned to each set of student data. Similarly, Read On! data were assigned to the corresponding anonymous numbers and no personal information was used in the data set. All repeating student data were prepared in the same manner for 2013 and 2014.

1.9 DATA ANALYSIS

The following data were analysed: the faculty admissions criteria data, Read On! screening and assessment scores and level at which the student was placed in Read On! for 2013 and 2014, respectively. Descriptive and correlation statistics were applied to the data sets.

1.10 DATA MANAGEMENT

Copies of data received from the faculty office and the Office of Student Support were kept in a locked cupboard for the duration of the research. The data on the computer and the Read On! database in the Office of Student Support was only accessible to the researcher, who held the password. The following data were obtained: student Academic Literacy, NBT and CI

admission data and English and Mathematics results from 2013 and 2014 in Excel/STATS, data from student screening and assessment in Read On! for 2013 and 2014 in Excel/STATS, data of student attendance for 2013 and 2014 from Read On! in Excel/STATS and 2013 and 2014 final student outcomes in Excel/STATS.

1.11 ETHICAL CONSIDERATIONS

Permission was applied for and granted by the Human Research Ethics Committee (Medical clearance certificate number M140175) (Appendix I) to access student data to conduct this research. Written permission to use the data from the faculty was obtained from the Assistant Dean of Student Support (Appendix II and Appendix III).

The participant information sheet (Appendix IV) outlined the aims of the research and the expected time it would take to complete the questionnaire (Appendix V). The researcher extended an invitation to students to respond to the questionnaire. Moreover, students were assured that their participation was entirely voluntary, would not relate in any way to academic outcomes or progression and that the researcher had no responsibility for curriculum design, examination outcomes or academic progression. In addition, data sets for individual students were allocated a random number. Students were not asked to give a name or student number when answering the questionnaire, thereby assuring confidentiality and anonymity. Further, students were informed that they were under no obligation to complete the questionnaire. Students were counselled that completion of the questionnaire was considered as consent to participate in the research.

1.12 OUTLINE OF CHAPTERS

In this chapter the background of the study has been presented; the research data has been discussed and the target population and samples have been identified.

Chapter 2 describes the research background, South African context, Read On!, screening and assessment, outcomes and reporting.

Chapter 3 reviews the literature in terms of historical context and reading models, reading and academic success, reading and information technology and the Read On! programme.

Chapter 4 describes the research methodology, design, data collection methods, data analysis and the ethical considerations applied to this study.

Chapter 5 includes the findings and analysis of the research.

Chapter 6 provides a summary of the research, limitations of the study, the conclusions and recommendations.

CHAPTER TWO

2. RESEARCH CONTEXT

2.1 INTRODUCTION

"Knowledge is not intended to fill minds. It is intended to open them."

(Siemens, 2006, p.13).

Many students entering university find academic deep reading complex and not as easy as first imagined. Siemens (2006) says of reading that the reader 'adopts' what they perceive as informative, helpful ideas while they read and in that way make the information their own. His argument is that reading underpins knowledge.

Introducing a reading programme into the faculty at the beginning of 2012 was the inspiration of the then Dean of the faculty. He realised that numerous students transitioning from school to university in South Africa frequently needed extra help with reading skills and strategies. Read On! is a computer based programme that was developed and published in the United States of America (USA) in 2006 (Harcourt Achieve, 2007). The programme claims to offer a reading format that can reportedly improve students' reading, comprehension and writing proficiency.

2.2 READ ON! ORIGINS

The Read On! programme was developed from the Learning 100 programme, by an educational corporation in the USA. The software was purchased by the Wits Disability Unit at the University of the Witwatersrand in mid 2006 as a promising intervention that may help students improve their English reading skills. Other South African universities, such as the University of Pretoria, the University of KwaZulu-Natal's Pietermaritzburg campus and the

University of Johannesburg are known to have implemented Read On! or some aspects of the programme (Personal Communication: Duncan Yates, 2013).

Ideally, students entering tertiary education ought to arrive equipped with the necessary skills to 'read for a degree'. In fact, university students are often assumed to already possess considerable reading capacity, and adequate vocabulary and comprehension skills to be able to engage with high level study material at university. Nonetheless, this is not always the case. The English language is often the compounding factor when considering reading capacity.

2.3 THE SOUTH AFRICAN CONTEXT

In the South African milieu, the consequences of past political, societal, and financial inequalities have produced an imbalance for many students entering tertiary education and these factors must be accepted. In many areas of the country, students are not schooled in English, nor exposed to the language until later in their schooling. They do not have the resources in English and opportunities for daily use, let alone reading and reflecting. Without a level of English proficiency students may experience difficulties in the language at tertiary level. Consistent with universities globally several universities in South Africa still use academic English as the medium of instruction and it is therefore necessary to try to address these problems as soon as possible, for the sake of the students.

South Africa has eleven official languages and university students are admitted from vastly diverse backgrounds from across the country. In many instances, more and more students have one or two home languages which are not English. Therefore English will be an additional language (EAL) for the student. Home language and English language levels at school are additional contributory factors that will determine how the student will be able to read.

In some regions of South Africa, teaching in schools is in the language predominant in that area and not the English language. This can further exacerbate the language dilemma for the student. One consequence is that it may only be at the tertiary level that students truly begin to encounter the many obstacles in 'reading' that not having read English previously brings to the fore. This is for the reason that without a solid grounding in the English language, the language of academia at university, academic English, can and does overwhelm students and leads to frustration and even failure.

The National Benchmarking Testing Project (NBTP) was introduced in universities across South Africa by the Department of Higher Education in 2009 to assist universities in gauging students' academic preparedness for tertiary education (Fleish, Schöer and Cliff, 2016). There are three components in the NBT: NBT Academic Literacy, NBT Mathematics and NBT Quantitative Literacy giving an NBT Average.

The NBT Academic Literacy, measures the student's capacity in academic literacy and aims to "assess candidates' ability to: read carefully and make meaning from texts that are typical of the kinds that they will encounter in their studies; understand vocabulary, including vocabulary related to academic study, in their contexts; identify and track points and claims being made in texts; understand and evaluate the evidence that is used to support claims made by writers of texts; extrapolate and draw inferences and conclusions from what is stated or given in the text; identify main from supporting ideas in the overall and specific organisation of a text; identify and understand the different types and purposes of communication in texts and to be aware of and identify text differences that relate to writers' different purposes; audiences, and kinds of communication" (CETAP, 2015, p.12).

The NBT Mathematics looks at application of the numerical systems including exponents, surds, series and sequences and also covers aspects of algebra, graphs, equations,

trigonometry and analytical geometry as well as measures of data and representations and use of logic and validity of assertions (CETAP, 2015).

NBT Quantitative Literacy is concerned with quantitative reasoning, graphs, tables, charts and some text and covers aspects such as integration, multi-step calculation, and symbols and graphs with a focus on identifying, measuring and applying properties as measures and to interpret and measure using graphs, symbols and text (CETAP, 2015).

The NBT Average is the calculated average of the three components NBT Mathematics, NBT Academic Literacy, NBT Quantitative Literacy and is used to calculate entry level conditions for first year students (CETAP, 2015).

The focus in this study will be on the NBT Academic Literacy which measures making sense from academic text or, in other words, reading and understanding.

In the NBT assessments students may be placed into the Proficient, Intermediate or Basic levels determined for degree study. Students placed into the Basic and Intermediate levels will most probably require additional support in the form of extra classes, training workshops, supplementary courses, and notably, 'language intensive work' (CETAP, 2015).

Skills in English reading, vocabulary, comprehension and writing are fundamental for university study. Linked with historical social, economic and political neglect, access to English reading and writing skills, opportunities and resources, are still not available in a considerable number of schools. More often than not, students coming into tertiary studies find the transition to English language from a poor education background fraught with difficulty in terms of language. For university students, it is vital that shortfalls in English reading, vocabulary, comprehension and writing ability be adequately addressed as early as possible in their university career. Addressing this lack as soon as possible may improve the

students' chances of making a success of their tertiary studies. Quintessentially, practice in a scaffolded programme such as Read On! may be one answer to the English language limitations that South African university students experience.

2.4 READ ON! ROLL OUT

The programme was implemented in 2012 with the Office of Student Support being tasked with screening all 2nd year students in the faculty. In 2013, the then Dean determined to screen and assess all 1st year students, in addition, as a result of a request by the Head of Therapeutic Sciences. There was a perception that 2nd year was too late to screen and assess students in Read On! and the then Dean wanted to be able to offer reading and writing support to students where needed, as early as possible.

2.5 READ ON! HISTORY AND STRUCTURE

Read On! is a computer-based reading, comprehension and writing programme developed by an educational corporation in the United States of America (USA) from the Learning 100 programme (Harcourt Achieve, 2007). Learning 100 was a "multimedia, multimodal, multilevel communication skills program " which was "self-pacing to allow… each student to enter the program at a point most suitable to his [or her] instructional needs… and six graded levels of instruction are provided." (Scheier and Senter, 1969, p.7). Learning 100 was developed as an Adult Basic Education project in Bedford-Stuyvesant, New York. In Read On! the number of levels have been expanded to ten levels of instruction.

The ten structured learning levels "... focus instruction and practice in these essential skills: Vocabulary, Evaluation, Language Skills, Appreciation, Literal Comprehension, Reading Fluency and Rate, Interpretation, Organization, (and) Thinking Skills for Reading and Listening" according to Harcourt Achieve, Steck-Vaughn (2006, p.7). The levels consist of a total of 225 cycles of instruction. These cycles have built–in reading and learning activities

that offer opportunities for introducing, supporting and allowing for practice of new (and already existing) vocabulary, language proficiency, reading comprehension skills, and opinion writing skills. Formative assessment is ongoing in the programme with comprehension tested at the end of each of the 210 reading selections. In addition, at the end of each of the 420 instructional lessons a test is given which determines if the student is ready to move to the next level in the programme. According to Harcourt Achieve (2007) Read On! offers 1 000+ hours of teaching and exercises in reading, listening, vocabulary, grammar and writing methods with which to practice English literacy (Harcourt Achieve, 2007, p.3).

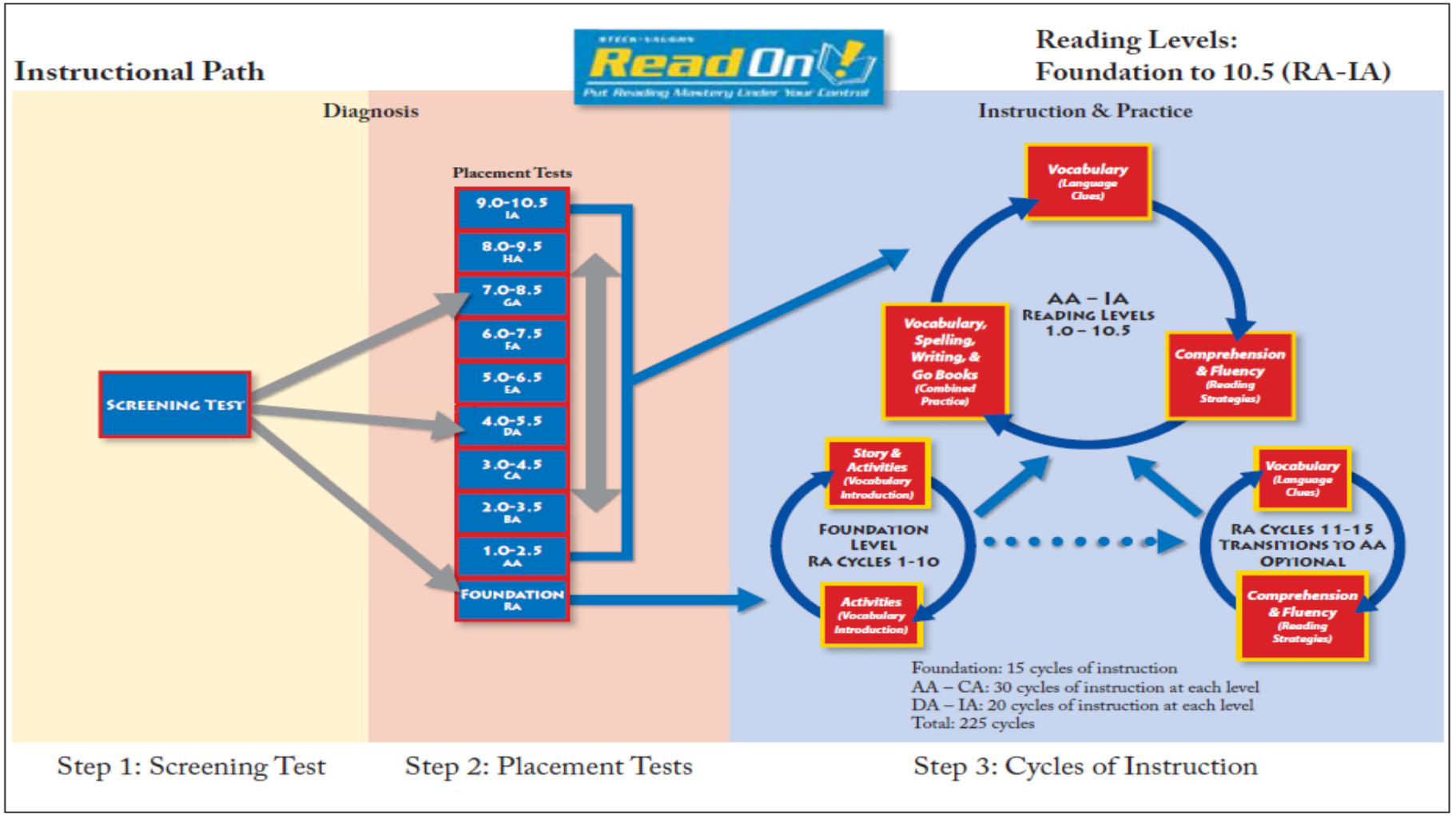


Figure 2.1 Read On! Instructional Path (Harcourt Achieve: Steck-Vaughn, October 2007).

The Read On! programme comprises ten levels, namely, the lowest RA, then going up in order AA, BA, CA, DA, EA, FA, GA, HA and IA, with IA being the topmost level. Each level has between 15 and 30 cycles of instruction. The RA level is a foundation level and consists of 15 cycles of instruction, while the AA, BA and CA levels consist of 30 cycles of instruction each. The DA, EA, FA, GA, HA and IA uppermost levels, consist of 20 cycles of instruction each. Each cycle comprises three parts: Reading Strategies (comprehension and vocabulary), Language Clues (grammar) and Combined Practice (a writing component). Prior to being placed in Read On! the students' reading abilities are assessed individually to ascertain their current reading proficiency.

2.6 READ ON! AND CLOZE TESTING

Read On! utilises different methods of assessing a student's reading ability. In the initial screening and assessment cloze type testing is used. Cloze testing, developed originally by Taylor (1953), presents a piece of text with certain words removed (cloze text). The student must read the text and drawing from a list of given words, decide on the correct word and fill in the blanks. Read On! gives four possible options in a drop down menu box from which to select. Cloze testing calls for understanding of context and vocabulary when choosing the best-fit word and is often used in second language learning. A 2015 research study by Mashhadi and Bagheri shows that cloze type question practice does have a positive effect on learning grammar at an individual level. For the test, the Read On! facilitator sets the minimum outcomes. The programme achievement level was set at a minimum of 80% with a reading speed of 100 words per minute (w.p.m.) on recommendation from the Disability Unit and the suppliers. These would seem to be low but the facilitator wanted to be as inclusive as possible. Prior to the screening and assessment test students were given a mini interactive lecture setting out the Read On! programme attributes.

2.7 READ ON! PRESENTATION

An approximate twenty minute interactive lecture, with an accompanying PowerPoint slide presentation, introduced students to the various features of the Read On! programme in an encouraging way. The facilitator highlighted Read On!'s capacity to help with improving reading strategies, growing vocabulary, mastering grammar and building comprehension and writing ability. Students were given a dedicated user name and password when they attended the screening and assessment test in the Read On! programme and were urged to work independently. During the assessment, students were given the result from the formative testing immediately on completing the section, which enabled them to see how they were performing in the Read On! programme as they progressed through the assessment.

2.8 READ ON! SCREENING AND ASSESSMENT

Students were made aware that Read On! started out with easy, straightforward questions around reading which grew progressively more complex as the assessment progressed. Moreover, students were counselled to stay alert and pay attention when responding to the cloze type questions and other forms of evaluation used in the assessment for their maximum benefit. The screening component consists of 20 cloze type questions. Once that is completed and directly thereafter, Read On! guides the student through a series of placement assessments at various levels in the Read On! programme. These contain a range of cloze type questions in English reading, grammar and comprehension skills to establish the level the student is reading at that moment in time. Students were advised prior to the testing that the pass rate was set at 80% or more with a 100 w.p.m. reading speed and that these settings would apply throughout the programme.

After the screening assessment, Read On! places most students into the default GA placement assessment level testing but this was not always the case. Students who did not attain the

required 80% in screening were placed at an appropriate lower level where the programme determined they would be able to continue with the assessment. In some cases students were placed at extremely low levels in the placement assessment, such as BA, CA, DA and EA. In 2013, 13 students were placed in these levels and in 2014, 44 students were placed in these low levels. Given that Read On! has been developed as an intervention for school students, it is concerning when first year tertiary students are placed at levels lower than half way down the programme.

2.9 READ ON! RESULTS

In the first situation those students who completed the Read On! screening and assessment at or above the prescribed level received a message from the programme which says *'No lessons prescribed. See the Facilitator.*' In this case, the student was not prescribed any practice lessons in the Read On! programme because they had met or exceeded the set outcomes in the Read On! programme. The Read On! programme identified these students as reading at or above the required level and therefore they were not required to do any practice. A second situation also arose whereby the student had been identified in the Read On! programme as requiring assistance with certain aspects of reading. After individual screening and assessment these students were placed in the Read On! programme, at a level determined by the programme, where they may have benefitted from extra practice in reading.

2.10 READ ON! REPORTING

Reports of the outcomes of the screening and assessment for all first year groups were compiled and sent to lecturers, relevant course co-ordinators, heads of school and departments across the faculty during 2013. All students who were repeating a year were also screened and assessed and in 2013 the Deanery of the faculty gave a directive that all repeating students should complete the screening and assessment test and if placed, must

attend compulsory practice sessions in the Read On! programme to improve their reading, vocabulary and comprehension.

To this end, for repeating students placed in the Read On! programme from the screening and assessment test, it was made compulsory to attend planned practice sessions of two hours duration once a week during term times. Practice was only available on the campus because Read On! had been purchased with a LAN network license only. Though the programme developers recommended five hours practice per week, course co-ordinators and staff felt that five hours in a week was too great an ask but agreed to a two hour practice session per student, per week, during term times. The weekly practice sessions were implemented from April, 2013. Admittedly, at that time an evaluation of the Read On! programme had yet to be done.

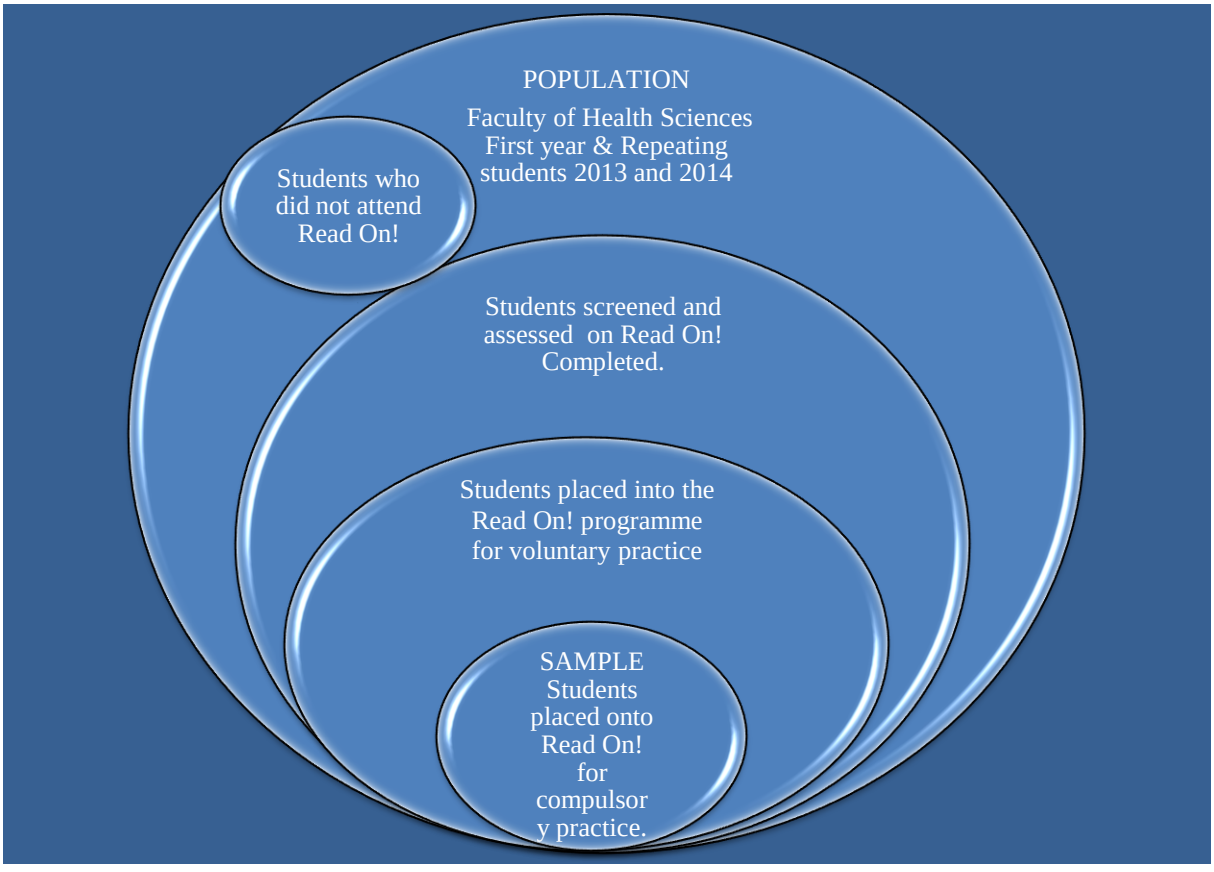


Figure 2.2 Anticipated Pathway of the Research Data Analysis

2.11 CONCLUSION

"Reading and writing are associated with very sensitive aspects of university life such as drop-out rates, low academic performance, research enhancement, production of knowledge and development of professional knowledge" (Kingdon, 1995, p.129).

Roberts and Klamen (2010) argue that suppositions made about how an individual student understands a particular reading can lead to vulnerability for the student if s/he is underprepared for the nature, density and volume of the reading involved. In an attempt to avert this, a reading programme that pre-assesses a student could go a long way towards helping the university and the student to put into place measures to avert that injustice. Students received immediate feedback on outcomes while they were doing the Read On! assessment and subsequently the Facilitator prepared a report for the lecturer and course coordinators. Initial feedback from both seemed to be positive. On investigation of the literature, very limited research appears to have been done in the Read On! programme at university level and questions remained about the effectiveness of the programme in assisting students with English reading, vocabulary, comprehension and writing skills.

In a South African context, the historical disparate social, economic and political conditions that exist for most students entering tertiary education today must be acknowledged. Students will most certainly require extra support to be successful in their degree of choice. Screening and assessment, together with practice in the Read On! programme, may possibly contribute to the success of students at university. To this end, this research sought to evaluate the Read On! programme in order to establish the soundness and consistency of the programme to help address the crucial areas of English reading, vocabulary, comprehension and writing ability.

CHAPTER THREE

3 LITERATURE REVIEW

3.1 INTRODUCTION

This chapter examines recent literature on reading and methods of learning reading to underpin an evaluation of the Read On! programme. It will thus consider the historical perspective and current literature on reading and reflect upon linkages between academic reading and academic success in the South African context. Attitudes to and models in reading will also be taken into account.

Specific aspects in the literature associated with learning reading and the development of reading skills from early to more recent theoretical viewpoints from Flavell (1976), Vygotsky (1978), Stanovich (1986) and Siemens (2006) will be discussed. Two associated studies on reading and learning from the limited published literature on the Read On! programme per se, are also taken into account.

3.2 HISTORICAL CONTEXT OF READING AND WRITING

The origins of the development of reading and writing are uncertain but there is no doubt that writing arose first. Early forms of writing in pictograms can be traced back to clay tablets from around 3500 Before the Common Era (BCE). These writings may have come into being for recordkeeping purposes (Bertman, 2003). Writing, nevertheless, requires accurate later reading for comprehension of the recorded language and in subsequent academic writing, reading was necessary as a reference for knowledge developed. For example, by the eighth century BCE the Sumerian King Ashurbanipal had collected all the most advanced medical knowledge of his era in a great library of eight hundred cuneiform clay tablets for students of the day to read and consult. Paper for writing upon

was developed much later after materials such as bones, sea and land shells, wood and silk had been used to write on in China and elsewhere (Bertman, 2003).

By 105CE paper had been invented in China (Thompson, 1978) and books and manuscripts compiled there were inscribed by hand (mainly by monks) and stored in monastery libraries. In these collections, literary, scientific and philosophical Greek and Roman works could be found alongside sacred texts right up until the introduction of universities (Thompson, 1978). For instance, Nalanda University, famous for its philosophy, mathematics, language and even public health courses, had over 10,000 students with more than 2000 staff, until it was destroyed after six centuries of existence in 1193 (Gul and Khan, 2008). China held the paper making monopoly for almost seven hundred years (Thompson, 1978) until thereafter paper making and the related economic and cultural value of paper spread through the Arab countries to Europe. Down through the ages reading and writing have been of central importance to universities.

Reading itself, according to Manguel (1996) evolved in universities in Europe at different times between the 5th and the 15th century in the Middle Ages. By the late 1800's, Vinao (Pinzon, 2009, p.122) reports that eight varieties of book were being read aloud at that time with the purpose of reading to "bring excellence in reciting". Vinao maintains that pronunciation, delivery and enunciation were the focus of early reading (Pinzon, 2009). In other words, reading was concerned with production of the word for the listener rather than with the context, reasoning, analysis and argument as the focus. Writing remained the centre of learning and repository of knowledge. Yet, by the early 1900's, Vinao asserts that silent reading or reading to oneself, had become the more accepted custom, perhaps to accommodate the larger university classes of up to sixty students at that time. Pinzon (2009) further contends that it was only then that reading took principle position over writing. Today in most universities academic reading remains in a pivotal position of

informing and informs students' writing too, at all levels, to underpin the academic endeavour.

3.3 CURRENT LITERATURE AND ACADEMIC SUCCESS

Recent literature supports the view that reading proficiency is fundamental for successful studying for a degree in tertiary level education (Pretorius, 2002; Mavundla and Motimele, 2002; Lukhele, 2013). Many researchers further propose that if the skill of reading is not there, it must be taught in universities (Van Dyk and Weideman, 2004; Bharuthram and McKenna 2006; Andor, 2006; Carter, 2010; Bharuthram, 2012) to enable students to achieve the academic literacy that they require to attain their degrees. Different methods to addressing learning can be used in a holistic approach. Educational theories such as Vygotsky's theory (1978) of the Zone of Proximal Development (ZPD), metacognitive study strategies (Flavell, 1976), the Matthew Effects (Stanovich, 1986) and the more recent Connectivism Development Cycle (CDC) (Siemens, 2006) offer a range of learning tools which can be made use of to address the academic literacy shortfall in reading skills. In South Africa, where students lack a strong reading background, these remedies are even more essential. In addition, researchers found that "[H]ealth sciences students of rural origin studying at universities in the South African context face specific challenges related to the nature of the contrast between rural and urban life, in addition to the more generic adaptations that confront all students on entering tertiary education" (Diab et al., 2012, p.1). Today, entry level university students in South Africa are predominantly multi-language speakers and English will often be an EAL for students, with many being from rural areas (de Wet and Wolhuter, 2009). Furthermore there is a shift towards inclusive and effective ICT based learning tools in tertiary education (Gonzalez, 2004; Siemens, 2006; Kilfoil, 2008; Levy, 2009) and reading is no exception. The originators of Read On! assert that their scaffolded (metacognitive) approach to

developing students reading proficiency offers formative assessment and practising in the programme that can address and help students improve those reading deficiencies.

3.4 READING AND ACADEMIC READING

"[Yet,] reading is one of the most important academic tasks encountered by students".

(Bharuthram, 2006, p.3).

Bharuthram (2006) argues that the reading gap is firstly, not acknowledged, and secondly, too little time is given to critical deep reading of subjects in universities. Many researchers (Van Dyk and Weideman, 2004; Butler and Van Dyk, 2004; Andor, 2006; Bharuthram and McKenna 2006; Carter, 2010; Bharuthram, 2012) agree that general reading for vocabulary, grammar and general knowledge can contribute considerably to the preparedness of students in tertiary institutions. Van Dyk and Weideman (2004) and Scott (2009) researched the under-preparedness of students in reading at university and believe that the lack of reading contributes directly to first year university attrition rates.

In addition, MacGregor (2009) in reporting on the National Benchmark Tests Project (NBTP) trials commissioned by Higher Education South Africa (HESA), quoted the draft report as saying "Difficulties with the medium of instruction are undoubtedly a contributing factor to poor performance, and impact on success and throughput rates" (MacGregor, 2009, p.1). Moreover, student performance strongly suggests that universities need to provide "extensive support in language development - not only for a small minority of registered students, but for almost half of them" (MacGregor, 2009, p.1).

In the above report MacGregor (2009) states that as many as 46% of first year students who complete the NBT assessment fall into the "intermediate group" in the NBT results.

If one adds this to the 7% of students who are insufficient in Academic Literacy preparedness for university, this makes up more than half (53%) of university students. These are the students who require support in the form of "additional tutorials, workshops, augmented courses, language intensive work" (CETAP, 2015, p.1) and for the lower levels maybe "Students need to be placed onto an extended programme" (CETAP, 2015, p.1).

Before suggesting several ways to assist students to read academically researchers propose several different reasons for this lack of preparedness.

Researchers are of the view that the reading dilemma at universities may come about from either inadequate reading or inappropriate prior teaching of reading or a combination of both of these situations. Students who do not read enough or effectively when younger or at school may find it difficult to write about what is being read in academia (Bharuthram, 2006; Kilfoil, 2010; Behroozizad and Bakhtiyarzadeh 2012; Bharuthram, 2012). Other researchers like Kingdon (1995), Van Dyk and Weideman (2004), Wingate (2006) and Scott (2009) have found that under-preparedness in reading by undergraduate students entering tertiary education is the central challenge to success rates and they consider schooling to be the central issue. Scott's (2009) research in the United States of America confirms that underachievement in reading is due to inadequate reading comprehension strategies and shows that all too often students are not being taught meaning construction at school level. On the other hand, Deci and Ryan (2008) contend that it is early reading encounters, home language and conditions, together with schooling and schoolteachers which influence the successes and failures in attempts at reading. They maintain that multi-language English speakers tend to focus on the bottom-up approach for a considerable time (Deci and Ryan, 2008).

Students who have difficulty in reading also often experience academic writing as a difficult task for the two are inextricably linked. Without skilful proficient academic support, reading and writing can become unattainable skills for some EAL students and may even lead to academic failure. This is the basis for arguing for a shift towards nurturing individual reading and writing skills at tertiary education level for those students who would benefit from it.

Deficits in an individual's reading and writing capacity at tertiary levels of study can and does hold back a number of students. Epistemological assumptions aside, researchers agree that robust reading and writing proficiency can smooth the progress of academic students towards developing their 'voice' at tertiary academic level. In other words, without solid ability in defined, comprehensive and in-depth discipline specific academic reading, students will not be able to reason, analyse or argue, in written discourse at university. Therefore, research into reading and writing at tertiary level must be ongoing. The shortfall in academic literacy in reading and writing is evident in South African universities and support for offering additional help is being repeatedly proposed (Andor, 2006; Bharuthram, 2006; Bhorat, 2006; Carter, 2010; Kilfoil, 2010; Bharuthram, 2012) as it seems to have the most influence upon students and their capacity and approach to studying.

The influence of attitude on reading, writing and vocabulary mastery upon academic performance has been well-researched in South Africa (Pretorius, 2002; Kilfoil, 2008; Lukhele, 2013) and confirms that students bring their reading or non-reading attitudes, often developed during schooling, with them into the higher education setting. There is overwhelming support for a holistic focus of interventions for helping students at university from other sources as well (Yorke and Thomas, 2003; Hoffman and Lowitzki,

2005; Ulloa and Herrera, 2006; Ross, 2007; Mbambo, 2008; Diab et al., 2012). Almost certainly, though, no one shoe will fit all.

3.5 READING IN SOUTH AFRICA

In South Africa, Pretorius (2012) holds that reading is a learned skill rather than inherited. As a result, she argues that everyone is required to *learn* (my italics) to read and write. Furthermore, Pretorius (2012) makes the case that reading, writing and comprehension must be explicitly taught in schools. For example, in South Africa, at so-called upper-tiered (Prew, 2009) urban schools, 80% of learners are reading at Grade level while in the lower-tier schools, which account for 80% of mainly public schools (often in rural and poorer areas), over 90% of school learners are not reading anywhere near Grade level (Pretorius, 2012). In the Western Cape Department of Education report (Pretorius, 2012) confirms the situation and shows the severity of the situation (DOE, 2008, p.27) across schools in the nine provinces of South Africa. The statistics leave no doubt of the sizeable gaps in the knowledge of some learners who matriculate and continue on to university.

In South Africa, greater and greater numbers of students entering universities are EAL English speakers or 'multi-language' speakers (Mavundla and Motimele, 2002; Bharuthram and McKenna 2006; Lukhele, 2013). The impact of reading attitude and vocabulary ability upon academic performance has been well-researched in South Africa (Pretorius, 2005; Kilfoil, 2008: Lukhele, 2013) and confirms that male and female students bring their reading or non-reading attitudes, often developed in school or at home, with them into the higher education setting.

Some would suggest that students should continue reading skills at university. Kilfoil (2008), Bharuthram (2012) and Andor (2006) believe that reading should be taught as part of the syllabus at tertiary level and moreover Bharuthram (2012) argues that the

teaching of reading should be embedded in the curriculum. The consequential difficulties for students who go on to tertiary education means that the resultant gap between reading and writing 'prepared' students and reading and writing 'underprepared' students must have a wide-ranging and detrimental effect on the students themselves. Without reading and writing support, students entering tertiary level education, especially from previously disadvantaged areas, will simply not be able to manage their degree. And as can be seen, they do not in fact, cope. The question that needs to be asked is how reading and writing gaps can be addressed. The consequences of not doing so are becoming apparent.

3.6 READING AND WRITING AT UNIVERSITY

In order to be successful in the challenging environment of university, students require skill and motivation yet, they also need to be able to read and write capably and knowledgably. Research on reading and writing at tertiary level in South Africa shows that students who are underprepared or disinterested in reading and writing contribute significantly to first year university attrition rates (Addo, 2003; Andor, 2006; Carter, 2010; Kilfoil, 2010; Bharuthram, 2012). Underperformance, specifically in reading (but also in writing) without doubt can lead to exclusion of students from university when they do not have the strategies to be able to cope with the workload. This scenario is often (but not always) limited to the early years of study (Andor, 2014).

One successful approach at retraining students in reading, (Deci and Ryan, 2008; Ryan, 2010) is to break the externally acquired in early reading and writing experiences. This entails teaching new reading and writing techniques which will inspire an enjoyment of reading and writing. Obstacles to passing on the enjoyment of reading, however include aspects such as the student’s home language being different (in this case, a multi-language speaker may not acquire English until much later), background, previous

experiences of reading, teachers and schooling and prior success or failure in attempts at reading (Bharuthram, 2006; Ryan, 2010). In addition, Deci and Ryan (2008) contend that a de-motivating factor for multi-language English speakers is how the student has learned to read in their home language while Boughey (2009) believes that ways of reading and writing that underpin knowledge production are discipline specific and are therefore of more importance. These views all point to the fact that prior reading experience undoubtedly influences how students at tertiary level will read in English.

Moreover, students may not perceive reading as an "authentic" experience and often encounter difficulty with being able to self select readings (Ryan, 2010, p.107). Students may frequently become discouraged when the text is beyond their level of understanding (Ryan, 2010) and may even give up trying to read at all. In addition, students who at earlier learning levels have not had an opportunity to play an active role in their own education are not always ready to progress. This means that they are not in their individual zone of proximal development (ZPD) (Vygotsky, 1978, p.32) and therefore are unsure how to do so, even with assistance. There are different ideas about how to teach reading with such diversity and under such a miscellany of circumstances.

3.7 MODELS OF READING

Ryan (2010) discusses two models for the teaching of reading. The first model is where the focus in the teaching is on grammar-translation where grammar and rules of the language, in this case English, are extensively taught (Ryan, 2010). The other model concentrates on book-related reading where the information or text being read for overall comprehension is the focus and the grammar and rules of language are not. In this latter model, the reading material may be overly difficult for some of the students in terms of vocabulary. In the former model, the overly detailed grammar focus of the text might lack

the overview or big picture while in the latter case, learners may not be able to see the big picture because they experience difficulties with being able to self select the important detail from the text. In both instances this may be because the students have not yet acquired the background world knowledge required to do either (Ryan, 2010). As a result, students frequently become discouraged in reading if they are unable to either grasp the essence because the material is beyond their level of understanding or too grammatically detailed to allow them to formulate an overview (Ryan, 2010). Students who are trying to learn beyond their individual capacity would most likely not be successful when they encounter challenges with texts and writings beyond their current understanding. In addition, students will have little prospect of playing an active role in their own learning unless they are working within their zone of proximal development (ZPD) (Vygotsky, 1978).

3.8 VYGOTSKY – ZONE OF PROXIMAL DEVELOPMENT

Vygotsky's (1978) zone of proximal development (ZPD) is defined as "... *the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers*" (Original italicised) (1978, p.33). In other words, it is the learning space wherein a student can achieve success in independent learning and problem solving with the help of another. Working at the 'level of potential development', the student has the wherewithal to learn and comprehend the information at that level together with the help of another. Vygotsky (1978) calls those collaborators (adult guide or peer) the "more knowledgeable other" (MKO). As Vygotsky (1978) maintained "... the individual actively modifies the stimulus situation as a part of the process of responding to it" (Vygotsky, 1978, p.14). At entry level into tertiary studies, the additional language English students will unquestionably require incremental

and realistic progression in reading but may also require additional help from another to meet the challenges of the academic language. Vygotsky's (1978) ZPD and MKO principles consider an educational context where students are active, rather than passive, students. Moreover, he advocates an interactive meaning construction method which, when closely combined with grammar and vocabulary, can form an integrated teaching and learning approach (Vygotsky, 1986).

Much of the literature investigated supports the view that efficient reading, comprehension and writing are closely linked to academic success at university (Fielding and Pearson 1994; Stanovich, 1986; Cunningham and Stanovich, 2001; Mavundla and Motimele, 2002; Pretorius, 2002; Kilfoil, 2008; Hermida, 2009; Hallett, 2010; Bharuthram, 2012; Lukhele, 2013). Moreover, local research further suggests that appropriate reading and related skills have to be developed in the student if they are not already there (Carter, 2010; Bradbury and Miller, 2010; Andor, 2012; Bharuthram, 2012; Lukhele, 2013) for students to achieve success in their studies. It must be remembered that entry level university students in South Africa are predominantly EAL English speakers (de Wet, 2002).

3.9 THE MATTHEW EFFECTS AND READING

Differing approaches to address English language learning deficits show that the holistic approach to teaching and learning is among the most successful. The Matthew Effects, (Stanovich, 1986; Cunningham and Stanovich, 2001) details the consequences of poor reading skills on the academic achievements of the individual. In South Africa, there is reportedly not a strong reading background and moreover often students are using English as an additional language. Stanovich (1986) argues that students who are able to read well in their own language, will continue to improve the skill of reading the more they read in

an additional language. In contrast, poor readers, unable to read well, lose their reading proficiency as the ability to progress is weakened without engaging in reading practice. The shrinking of reading ability may lead to a decline in reading and comprehension ability and students can be further demoralised, frustrated and irritated at the lack of success.

One example from personal experience was of a student who had studied in an overseas programme in Spanish for five years and was assessed in Read On! while on a visit to South Africa in 2014. Upon returning to South Africa the following year to a final year of study, the student was retested on the exact same programme. It was found that the student's English language level had *dropped* by two levels in the post Read On! assessment, despite the student having had access to English reading materials while abroad and being encouraged to read in the language. Over time, a lack of reading may erode a student's reading ability to such an extent that it is difficult to recover. Several factors need to be considered.

3.10 READING FOR A DEGREE

The Sanskrit word from which the word "read" was reportedly first derived and used before the 12th century – *rādhnoti*, means to "achieve" or "prepare" (Schwartz, 1981). The Merriam-Webster Dictionary (2014) online, reports that the modern English word for 'read' stems, not from the Latin, but from "ræden", in Old English (Germanic), which means 'to make something difficult or written, clear' (Merriam-Webster Dictionary, 2014). These ideas suggest that the central figure in reading ought to be the reader.

3.11 METACOGNITIVE STRATEGIES

Metacognition as defined in 1976 by Flavell can be said to be a higher level cognition where the learner has awareness and control over own thought processes. In this way students are able to use metacognitive capacity (awareness of one's own thinking patterns) to manage and coordinate their learning processes, and especially so when reading. Karbalaei (2010) studied the effects of metacognitive reading strategies used by EAL students and found that scheduling, organising and assessing reading with purpose is common among such readers. Interestingly, the student readers in that sample did not use summaries, underscoring or making notes much, while they read. Studies completed in China, Morocco and the United States of America also point towards students using very diverse approaches to reading (Karbalaei, 2010). Multi-language readers seem to use both the top-down (vocabulary based) and the bottom-up approach to reading and some analytical strategies around re-reading (Karbalaei, 2010) which also suggests metacognition.

Research by Sikwari, Pillay and Grobler (2015) indicates a positive correlation between metacognitive strategies and academic success. Sikwari et al. (2015) concur that students must be aware of their own strengths and weaknesses to be able to take control of learning, adopt relevant strategies, measure improvements and correct where necessary. In their research among “Foundation Program” students at a university in Limpopo, South Africa, findings showed that students were not aware of cognitive and meta-cognitive strategies and therefore could not apply them. Students often read through texts superficially with a view to memorising knowledge. In addition, Nel and Nel (2009) support this view and argue that academic reading literacy must be discipline specific to facilitate understanding. Therefore, for maximum achievement students must be able to read and think about that reading in their chosen discipline.

3.12 THERE ARE NO SHORTCUTS

Extensive reading is required to help multi-language students become proficient, fluent, engaged and confident English readers (Stoller, 2015). Stoller (2015) highlights five main concerns around reading which include: thorough actual reading, giving students different options of what they read, motivating students in reading and demonstrating reading with enthusiasm together with the use of rereading to help fluency and emphasize the weight of meaningful reading and finally for the teacher to set high but achievable goals in reading. Stoller (2015) suggests that educator resistance to change former ways of teaching reading, diverse teaching reading models and understandings of what is meant to be a reader, the drain on resources (for purchasing books etc.) and time limitations are among some of the reasons for a lack of enthusiasm for extensive reading. Nevertheless, she concludes that "... students only learn to read by reading; there are no shortcuts" (Stoller, 2015, p.158).

One can argue that it is essentially the reader who determines how any particular written work 'reads' because they bring to the reading their exclusive individual experience, background and knowledge. Disparate readings of any single text must therefore emerge as individuals who are able to 'read' the same piece of writing, and yet, each will do so in their own unique and distinctive way. Accordingly, some readers will attribute a particular understanding of, or sense, to a text they read, while another may form an understanding of the exact same piece of writing in an entirely different way.

Reading for a degree is considered to be a fine endeavour. Bharuthram (2012) insists that "Reading is one of the most important academic tasks encountered by students" (Bharuthram, 2012, p.22) and argues for the imperative of teaching reading across the curriculum both at school and even more so, in university. Furthermore, Bharuthram

(2012) alludes to the challenges of reading complexity at tertiary level, the current lack of awareness of the deficit in universities and the reading gap. Moreover, she discusses the lack of time given to critical deep reading and the lack of development strategies which might bring lecturers closer to current trends in reading theory and practice (Bharuthram, 2012). Productive reading for understanding and interpretation she argues, goes side by side with productive and original writing. In the 21st Century, reading and writing meets the Information Computer Technology (ICT) age which can play a pivotal role in offering authentic advances in training students in reading and writing.

3.13 READING AND INFORMATION COMPUTER TECHNOLOGY

Important debates in the last decade considered the most inclusive and effective uses of Information Computer Technology (ICT) and reading (Gonzalez, 2004; Siemens, 2006; Kilfoil, 2008; Levy, 2009) and researchers widely acknowledge that students in tertiary education are using ICT more and more to help them study better. One such programme may be Read On!. Read On! uses a scaffolded approach to developing students' reading proficiency that offers formative assessment and moreover can analyse, address and help students improve individual reading deficiencies. It is individualized, and students take a screening and diagnostic assessment that places them into an appropriate individual level in the Read On! Programme. The Read On! background management system monitors student's records in the programme. Students are tested with appropriate built-in formative assessments which identify reading deficiencies. The Read On! programme's built in levels determines the planned progression through ongoing prescribed individualized, self-paced practice that can be of maximum benefit for students towards reading mastery. As discussed in Chapter 2, if a student is not quite able to cope with an aspect in an upper reading level, the Read On! programme will take the student to a lower level to practice that aspect, repeating this until the student masters the reading concept.

After that, the programme will return the student to his/her individual level, to continue the practice. This can be seen as an application of the ZPD (Vygotsky, 1978).

Levy (2009) maintains that effective computer software should include: an *exchange of information* between person and computer software, follow scientific principles and be in an authentic learning situation. He believes that these aspects are fundamental to engaging the 'student' in relevant learning (Levy, 2009). With regards comprehensive computer software reading programmes, five essential aspects are required according to Levy (2009), namely "comprehension, idea generation, analysis, reflection and composition" of the subject matter being read.

Read On! appears to measure up to these five aspects in most ways as Feldman (2007) found in his analysis of multiple reading programmes. He promotes the use of time, intensive instruction, curriculum based materials, partner, group, home and 'silent' reading practice and student self-advocacy as the keys for improved reading skills and argues strongly that even if there are "no quick fixes" it is possible to improve literacy with time, training and resources (Feldman, 2007).

Reading interventions at tertiary level are repeatedly seen as only corrective or curative measures, despite research that shows reading and writing as being of fundamental importance when studying for a degree. Some would contend that reading must change and develop to be more compatible with the global digital world environment.

With the prevalence of digital competencies, Hayles (2010) suggests that there needs to be efficacy and efficiency in digital reading and poses questions around how we can "…convert the increased digital reading into increased reading ability and how to make effective bridges between digital reading and the literacy traditionally associated with print" (Hayles, 2010, p.62). Hayles' article suggests reimagining what reading is and how

the 21st Century digital age and setting can inform a new style of reading that may offer a digital reading platform which includes interpretation of patterns, meanings and contexts in reading.

The 2006 Reading Next Report (Biancarosa and Snow, 2006) published in the United States describes how students use reading and central reading activities for a variety of purposes. These can include extra reading in content areas, reading at university, reading for employment and perhaps surprisingly, reading for nationality. Students across the globe are reading online and on other digital devices.

In a Malaysian study at the University of Kebangsaan, Behroozizad and Bakhtiyarzadeh (2012) identified several problem areas in their students reading, including lack of comprehension of texts, inadequate vocabulary command, not being grammatically proficient and wanting in the use of suitable reading strategies and skills. In their study of students' capacity to read original work as opposed to simplified passages derived from the originals, they found that some students had difficulty with information processing in the originals while others had vocabulary difficulties. In both instances comprehension was the ambivalent factor.

The South African Department of Education, National Reading Strategy, of February 2008, does not appear to exhaustively interrogate the digital reading setting. The National Curriculum Statements recommendation that "Foundation Phase" students must have ten hours per week reading and writing teaching does not appear to have been implemented. This can be seen in the numbers of students who enter university with a lack of expertise in reading and writing and other areas crucial for reading such as phonics, phonemic awareness, fluency, vocabulary and comprehension for tertiary level (National Reading Strategy, 2008). For Siemens (2006) the changing nature of knowledge, information and

concepts means that universities need to rethink connection based processes, context and characteristics in multiple realities, spaces and structures dependent upon the tasks, challenges or opportunities that present. In other words, how do today's students process information and learn for the digital age?

3.14 SIEMENS' CDC AND REFLEXIVITY

Learning tools in tertiary education of the future will almost certainly be ICT based (Addo, 2003; Gonzalez, 2004; Siemens, 2006; Kilfoil, 2008; Levy, 2009) and learning to read and write are not exceptions. While some researchers argue that online reading can help students acquire skill in reading others believe that if the students' reading capabilities in the printed form are not well established, they could have even greater difficulty in the world of ICT. But reading and writing are not ends in and of themselves: their function in learning is to enable the individual to broaden knowledge.

Siemens (2006) argues that knowledge must be acquired to broaden the view and understanding of students for a future tomorrow rather than to only fill their heads with facts, figures, lists and tables for a short-lived today. Despite the opening of minds not always being seen as the central role of lecturing in higher education, Elliot and Martin (2011) argue that this ought to be the case. In another personal example, a lecturer announced in a recent tertiary level meeting that his job is not to teach reading and writing: his job is to cover the content in the curriculum of the course. While there may be some truth in this, it is not the only truth. If students are unable to read and write at the appropriate tertiary level, then trying to teach those students content only is an illogical pursuit. This is because individual, proficient, self-directed reading and writing are core abilities that will determine the student's academic development. Without these skills it is

unreasonable to expect the student to carry out the independent learning so fundamental to academia.

Siemens' (2006) connectivist theory suggests that students access, learn and retain knowledge in the 21st Century in a holistic way. And importantly, this includes how they source and find information. Elliot and Martin (2011) when discussing connectivism theory suggest that forming networks and connections in a global world that uses open courseware allows students interactive participation in their own learning. They go on to argue that this is not enough and that connectivism may be applied more closely in education today. The Connectivism Development Cycle (CDC) developed by Siemens enables the student to work towards a state of knowledge that continually adapts and updates to the most modern sources of knowledge for engaging in reflexivity (Siemens, 2006). The Read On! programme may contribute in some small way to a more interactive and involved reading and writing learning environment.

3.15 LITERATURE ON THE READ ON! PROGRAMME

Sparse data is available on the efficacy and efficiency of the Read On! programme itself with only a few related publications found in the academic literature field. These include a publication on Learning 100, the brochure and publication from the suppliers, one smaller local unpublished document and two local papers which only use aspects of Read On! were all that this researcher could locate.

3.16 LEARNING 100

The earliest article by Scheier and Senter (1969) published in the USA researched the "Learning 100" programme which was a forerunner to Read On! They found that "significant differences in achievement in favouring the Learning 100 group were

attained" and for "students high interest and motivation were obtained ... with positive changes in attitude" (Scheier and Senter, 1969, p.14). This led to the subsequent development and launch of Read On! in 2006.

3.17 READ ON! FROM HARCOURT ACHIEVE

Harcourt Achieve, the Read On! developer and supplier, asserts that Read On! offers direct, explicit comprehension instruction utilising embedded instructional principles in the content. Using assorted texts and intentional tutoring where required, the programme is said to be text-based learning in collaboration with students. The approach involves self-directed learning with the motivation that students are engaged in the programme. There is also a writing component in a technologically friendly environment. Ongoing formative assessments involve the students in measuring their own advances in the programme. Read On! is maintained to be an inclusive comprehensive and coordinated reading and writing programme for development.

The Read On! programme was developed using the Evaluación del Desarrollo de la Lectura (EDL) reading process (Harcourt Achieve, 2007:4). The process involves four consecutive areas in reading: Seeing, Perceiving, Understanding and Reacting and Elaborative and/or Divergent Thinking (Harcourt Achieve, 2007). The process walks through the following pathway: Stimulus, Retinal Pattern, Identified-Recognised Word, Patterns or Sequences through to Meaning. This Reading Process Model formed the basis of the pedagogical model for Read On! which was released in 2005 (Harcourt Achieve, 2007:5). While the process appears structured and comprehensive, a concern is that the tested data reported on and used in substantiation is drawn mainly from research made with *Learning 100* which means that the data reported on may not pertain to the actual Read On! programme. A second concern would be that the testing of the programme was

mainly done in schools and few tests (if any) were undertaken in universities or colleges. One quotation of middle and high school that could equally apply in a university setting: "Literacy ... can come from principals and teachers who have a solid understanding of how to teach reading and writing to the full array of students present in schools" (Biancarosa and Snow, 2006, p.5).

3.18 READ ON! AT THE UNIVERSITY OF PRETORIA

In an unpublished document collegially shared by the University of Pretoria (UP) in South Africa, an October 2012 pilot project in the Department of Accounting of the Read On! programme surveyed the voluntary and compulsory groupings. In that study, although the programme was offered for free, additional incentives such as prizes and class test marks that counted, were also offered to students. The facilitators decided that committed hours of work would have to be invested by students and they were given four and a half months to complete the course. Comments from the UP students indicated that reading speed, comprehension, vocabulary and spelling appeared to have resulted in good outcomes. The report also found that lesser completion rates than anticipated emerged. Some of the conditions were attributed to first year students not being able to comprehend the importance of reading, that the time to benefit ratio was not enough and that the programme was not adapted to the university environment. In addition, students who were unable to manage their own time struggled with the course they were in for the degree and focussed their attention on the degree itself rather than reading. Others were limited practice due to travel time or time spent on campus and lack of enough free time to practice. Yet others felt their reading skills were adequate even though the assessment on Read On! inferred otherwise and lastly, lack of attendance may have been due to possible embarrassment with peers around having to attend the Read On! at all. Their findings were that the majority of students who completed the Read On! course benefitted

with “exceptional value”. For those students who completed, the objectives were for the most part, met and that in future, the Read On! should ‘carry more weight’ (University of Pretoria, 2012).

3.19 CONCLUSION

In conclusion, available literature indicates that reading for a degree at university is decisive in determining success. Moreover, such reading needs to be extensive and effective with clear comprehension and located firmly in a holistic approach to learning. The literature suggests that learning development processes such as working within the ZPD, taking cognisance of the Matthew Effects, utilizing metacognitive strategies and finally employing the future looking CDC can all be harnessed to assist students in being more successful in their university studies. In other words learning is a holistic academic endeavour at tertiary level even though it may not begin there for some students. In South Africa, due to the predominance of multi-language first year students entering university, reading and writing support is crucial in assisting students who require those skills to enable the playing field to be level.

Read On! utilises information technology to offer a programme that can assist students to learn reading, vocabulary and comprehension, amongst others, that they may not have had the opportunity to do in school. Nonetheless, central questions remain as to what extent such a reading programme can influence outcomes at tertiary study level, what experiences the students had practicing in the programme and how valid measures can be taken of these aspects. This research endeavours to take those measures.

CHAPTER FOUR

4 RESEARCH METHODOLOGY

4.1 INTRODUCTION

Ethridge (2004) maintains that research is undertaken to collect original and trustworthy data through using disciplined and coordinated methods. This chapter presents the organized and ordered phases undertaken in this research. It includes the methodology, aim and rationale, research design, how the population and sample were determined and a summary of the data collection and instruments used. Furthermore, it clarifies how the data were assembled and analysed. The validity and reliability of the research were also considered.

New developmental interventions introduced to alleviate poverty and raise socio-economic development are often unable to deliver on the claims that they make, according to research done by Khandker, Koowaal and Samad (2010) for *The World Bank*. Khandker et al. (2010) advocate a mixed approach that includes both quantitative and qualitative analyses in evaluation research methodology in order to obtain a more nuanced account of the outcomes of an intervention. Under some circumstances, the quantitative results may even be generalisable, while the qualitative findings present the broader picture of the perceptions and attitudes of students (Garbarino and Holland, 2009; Khandker et al., 2010; Polit and Beck, 2016).

The data collection and analysis methods and processes used in this research include statistical analysis and the responses to the Likert-scale and open-ended questionnaire. A holistic and deep assessment of outcomes for students in the Read On! programme in the Faculty of Health Sciences at the University of the Witwatersrand in 2013 and 2014 was being sought. This study used an evaluation method. Evaluation methodology is concerned

with collecting, analysing and interpreting data about a programme to determine the helpfulness, efficacy and other consequences that an intervention may have had for students (Silver, 2004; Stufflebeam and Shinkfield, 2007; Garbarino and Holland, 2009; Khandker et al., 2010; Polit and Beck, 2016).

4.2 RESEARCH OBJECTIVES

The objectives of this study were to firstly, evaluate the Read On! programme for students' reading, writing, vocabulary and comprehension skills. Secondly, to correlate the Read On! assessment scores of a group of students who completed the programme voluntarily against the National Benchmark Testing scores (NBT) entry level, Composite Index (CIn), Academic Index (AIn) and National Senior Certificate (NSC) Grade 11 and 12 scores. Thirdly, to correlate their scores with the variables named above and to draw out students' perceptions and experiences in Read On! for a group of students for whom the programme was compulsory.

The detailed research objectives were thus:

4.2.1 Obtain the following data from the faculty: Grade 12 English and Mathematics marks, home language, NBT results (including Academic Literacy) and Composite Index and Academic Index with NSC Grade 11 and 12 data for students admitted to the first year of study in the Faculty of Health Sciences in 2013 and 2014;

4.2.2 Obtain Read On! screening and assessment scores for these students;

4.2.3 Identify those students who continued to practice in Read On! on a compulsory basis (Compulsory Group - CG), and those who worked in Read On! on a voluntary basis (Voluntary Group - VG);

4.2.4 Evaluate student performance of the VG and CG by analysing their Read On! screening and assessment results and end-of-year academic results at the end of 2013 and 2014;

4.2.5 Describe the VG and CG in terms of gender, degree and Read On! level attained;

4.2.6 Determine students' experiences and perceptions in the Read On! programme by means of a questionnaire administered at the end of 2013 and 2014.

4.3 EVALUATION MODELS

Evaluation models provide an instrument with which to make a broad assessment of a programme where there are data that will also allow statistical analysis. In that analysis, a measure of the effectiveness of the intervention can be made. Evaluation helps to establish whether the impact of a programme for students is positive and beneficial, or not. Nevertheless statistics alone are often not sufficient to measure a programme fully. Of equal importance, and perhaps in some cases, of more importance, are student perceptions that are formed of a programme which has prescribed compulsory practice sessions during an academic year. Consequently, besides the statistical analysis that was made of the data, a questionnaire comprising Likert-scale questions (Hernández, Drasgow and González-Romá, 2004; Sullivan and Artino, 2013) and open-ended questions was used to elicit the experiences of those students who had practiced some considerable hours in the Read On! programme in their academic year of study. An academic year of study (YOS) at the University of the Witwatersrand consists of the set of courses that a student is expected to pass in a particular year to be able to proceed to the next year. There are several evaluation models.

Kirkpatrick's (2009) classic evaluation theory (used to evaluate business training models), offers a four step (level) model comprising Reaction, Learning, Behaviour, and Results which

allows for assessment from the perspective of the student. A broader view of evaluation which would include statistical data analysis was being sought for this research.

Silver (2004) contends that process evaluation is primarily concerned with the understanding, running and analysis of a programme by taking cognisance of the awareness of the various groups and agendas involved. For Silver "... the main goal of the evaluation report is to inform and/or influence decision makers..." (Silver, 2004, p.9). In addition, Silver (2004) maintains that the impact and context of the programme is important because they can be used to provide feedback and establish correlation of results of an intervention, hence measuring causation. Silver (2004) also suggests that formative evaluation (the why of the programme with the possibility of change in a certain direction) and summative evaluation (which summarises the entire programme but cannot be measured until the completion of the entire programme) may be linked to process and impact. Equally, naturally, it may not.

From the numerous evaluation models (Silver, 2004; Stufflebeam and Shinkfield, 2007; Kirkpatrick, 2009; Khandker et al., 2010; Polit and Beck, 2016) this research determined to use the model from Polit and Beck (2016) with four phases of evaluation. Key aspects of the evaluation methodology allowed the researcher to assess the relationship between multiple different inputs and outcomes for students and examine the influences (if any) of the Read On! programme.

Polit and Beck (2016) offer four phases in evaluation theory to measure the programme being implemented. These include: identifying the objectives of the intervention, measuring any success of the objectives, collecting the data and finally interpreting the data collected (Polit and Beck 2016). These four phases will be further discussed below. Bearing this in mind, the methods chosen in this evaluation methodology combined quantitative (statistical data

analysis) with qualitative data to evaluate the Read On! programme. Accordingly, evaluation research methodology was selected, informed and supported this research.

4.4 RESEARCH DESIGN

The research design is predominantly quantitative data with some qualitative data from responses to open-ended questions. This research followed the four phases of evaluation research as determined by Polit and Beck (2016). These include establishing the evaluation research objectives, measuring the success of the research, the data collection and storage phase and, lastly, the analyses of the data collected.

4.4.1 Phase I: Evaluation Research Objective

The purpose of this research was to assess the Read On! programme and the experiences of students in years 2013 and 2014. Students completed an individual screening and assessment in the Read On! programme with measurable outcomes. After the assessment, students were then placed into an appropriate level in the programme. For the repeating students' cohort it was compulsory to practice in Read On! with a view to helping students to improve their reading and writing skills. This research sought to determine that outcome.

4.4.2 Phase II: Measuring the Research Success

The second of the four phases comprised the means used to measure the success of the programme (Polit and Beck, 2016). Consequently, for this research, data were drawn from first year and the repeating student samples only for 2013 and 2014.

The questionnaire section of the data were drawn from 2013 and 2014 CG student responses who practiced in Read On! Data were drawn from a questionnaire administered in 2013 and 2014. The data from the 2013 and 2014 survey questions were analysed as one data set.

Data which contributed to the analysis in this section comprised gender distribution, home language, Read On! screening and assessment outcomes, duration of practice time (in minutes) in the Read On! programme and end of year academic results obtained by students' levels placed in the programme in 2013 and 2014 and follow-up responses.

4.4.3 Phase III: Data Collection and Storage

The following data were collected for the VG students: entry data scores especially for the NBT Academic Literacy (NBTal%) used for first year students in both years, the Composite Index (CIn%) and Academic Index (AIn%) and NSC scores for Grades 11 and 12 in 2013 and 2014 and the Read On! data for the VG and CG students for 2013 and 2014.

As discussed in detail on page 12, the NBTal% is an educational test designed to measure the students' academic reading, writing, vocabulary and comprehension skills. In short, in academic literacy students make meaning from academic text, understand vocabulary related to academic study and use evidence from academic texts to support claims, draw inferences and arrive at conclusions. The scores used in this research were obtained from NBT tests which university students sat in the years prior to admission in 2013 and 2014.

In terms of Read On!, data are produced from the screening and assessment that students attend during the first year of study. This data, in alphabetical name sets, were assigned to the relevant corresponding student's NBT data and thereafter each student's complete set of data were allocated a random unique number. The Read On! screening and assessment outcomes were given as a percentage. From these and the first year entry level scores, the mean and

standard deviation were calculated for the entire group by year and by degree. Academic end of year outcomes data of the first year student cohort admitted to university and all students repeating a year of study in 2013 and 2014 who undertook the Read On! screening and assessment were gathered.

Likert-scale data from questionnaires distributed at the end of 2013 and 2014 were gathered and analysed for the readmitted student group. Statistical analysis was made of the Likert-scale questionnaire only for those students who were practising students. Thematic analysis was undertaken of the open-ended questions in the questionnaire.

To ensure the confidentiality of the data at all times during data collection and analysis, all hard copy data were retained in a lockable cupboard in the researcher's office. Soft copies were maintained on the researcher's computer with a confidential password known only to the researcher. Anonymity and confidentiality was maintained for all students in the study by assigning random unlinked numbers to student data and no student names or student numbers were used.

4.4.4 Phase IV: Data Analysis

The data analysis was undertaken in four stages.

Firstly, data were analysed for all first year students in 2013 and 2014 using academic entry level data, Read On! screening and assessment outcomes and end-of-year results. Secondly, an analysis was made of Read On! assessment scores and academic data from those students who were repeating a year (any year of study) and who had been placed into the programme to practice further following screening and assessment.

Thirdly, the anonymous, voluntary questionnaire to determine the perceptions of the Read On! included a set of questions that required responses using a Likert-scale and open-ended

questions. The data were elicited from the questionnaire given to students who practiced in Read On! in the years 2013 and 2014. In the comparison of Likert-scale groups, Boone and Boone (2012) argue that "[t]he analyses of Likert-type and Likert-scale data require unique data analysis procedures ..." (p.3) and their method was used to analyse this data.

Polit and Beck (2016) remind the researcher that the responses to open-ended qualitative questions can often offer a deeper amount of insight and flexibility to the research at hand. Thematic analysis allows for " ... identifying, analysing, and reporting patterns (themes) within data" (Braun and Clarke, 2006, p.79). Descriptive and thematic analysis, drawing on the Braun and Clarke (2006) six-phase analysis guide and applying a theoretical approach (Tuckett, 2005) allowed for the identification of themes from the 2013 and 2014 questionnaire data. These phases included: Transcribing and acquainting oneself with the data, listing preliminary codes, identifying themes, refining the themes, defining and allocating names to the themes and finally selecting extracts and drawing parallels to the research and the literature by producing the report (Tuckett, 2005; Braun and Clarke, 2006).

4.5 TARGET POPULATION

The population for this research comprised all students registered in the faculty in 2013 and 2014 while the target population consisted of first year students and repeating students (in any year of study) registered in the faculty in 2013 and 2014. The first year student group in 2013 and 2014 was independently analysed in their respective disciplines. The faculty offers degrees in diverse disciplines, which include the following: B. Clinical Medical Practice (BCMP), B. Dental Science (BDS), B. Health Sciences (BHSc), B. Nursing (B Nurs), B. Pharmacy (B Pharm), BSc. Occupational Therapy (BSc OT), BSc. Physiotherapy (BSc Phys), Bachelor of Medicine and Bachelor of Surgery (MBBCh) and B. Oral Health Science (BOHSc). Samples were drawn from these disciplines that met the inclusion criteria.

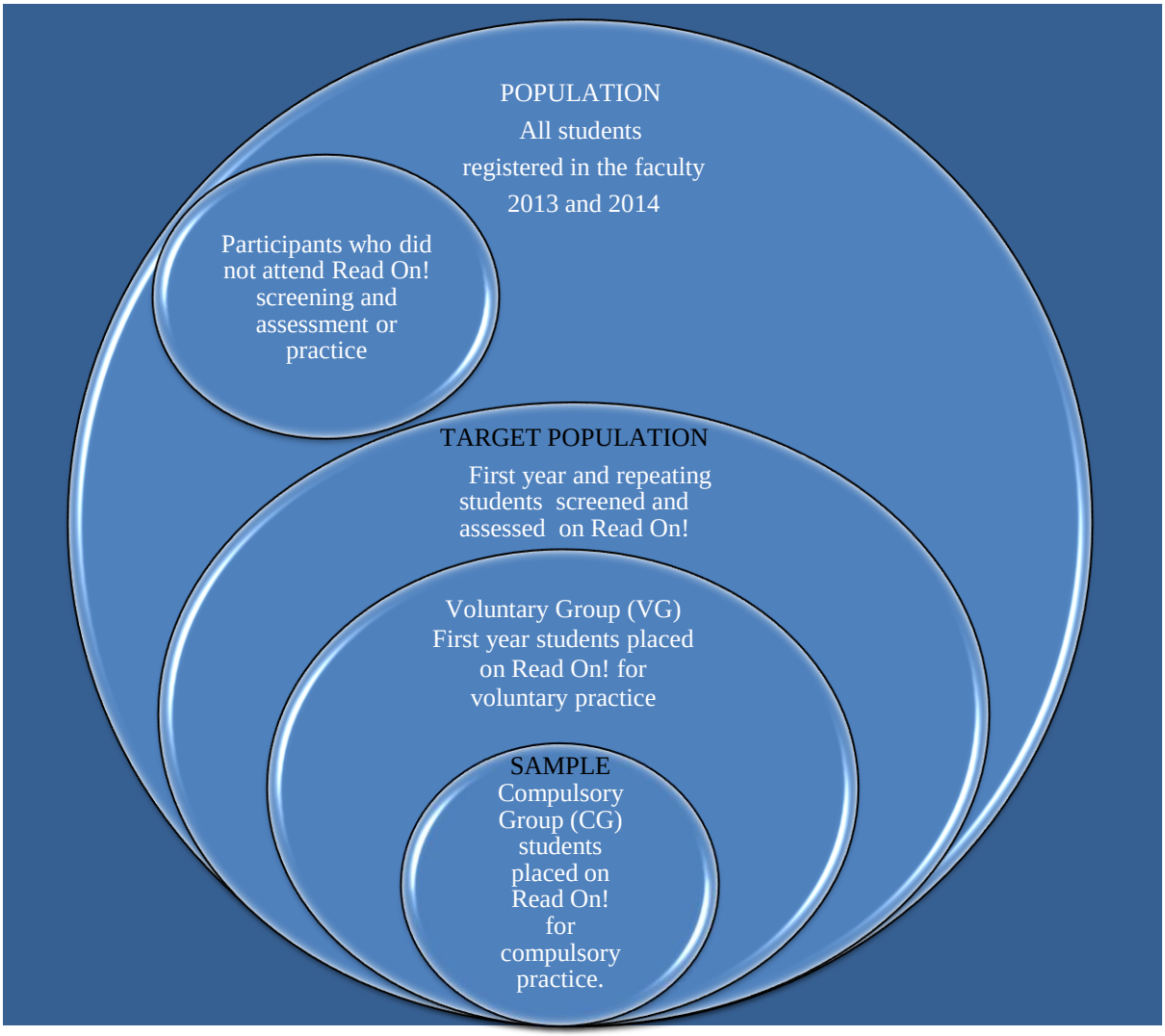


Figure 4.1 VG and CG Population and Sample 2013 and 2014

4.6 SAMPLE

In the VG, even if students were placed in Read On! i.e. the programme identified that they required further help with reading, further practise in the Read On! was optional.

The students in the CG were made up of a cohort of students repeating a YOS. In the CG students were allowed to choose the day of the week and time they would attend practice sessions but had to commit to attend a minimum of a two hour session each week. Practice sessions were arranged four afternoons a week and two mornings in 2013 but only four afternoons a week in 2014 as it was found that students could not generally attend in the

mornings. Students had a facilitator in attendance to offer assistance in all the practice sessions. Students sometimes found this a difficult task when the academic schedule was very full. The CG included students from all the different academic years of study from YOS 1 up to YOS 4, all of whom were repeating certain compulsory courses that had to be attained before they could proceed to the next YOS. It is important to note that despite this being a compulsory aspect in the repeating students year of study, their attendance or not at the sessions, had no direct consequence on any final academic outcome. Read On! attendance records of participation in both the screening and assessments and in the practice sessions of students were maintained in the Office of Student Support.

4.6.1 Sampling method

Convenience sampling was used in this study. Convenience sampling is a non-probability sampling technique whereby participants comprise the most easily accessible group of people for the study (Polit and Beck, 2016, p. 309). There were no prior inclusion criteria and all first year and repeating students were invited to participate.

4.7 DATA COLLECTION METHODS

Quantitative statistical analyses was made of Read On! screening and assessment results at the 10 different levels against academic entry level scores for the VG. This was done for the entire sample and then again separately, by discipline, for all students screened and assessed in Read On! It was not possible to analyse entry level data for the CG because these students were from different years of study, ranging from first year to fifth year in their degree programme and MS Excel spreadsheet was developed to analyse this data.

In the qualitative research aspect, Hannan (2007) and Leahy (2004) maintain that questionnaires using both closed and open-ended questions are helpful for acquiring a fuller

range of data. For this reason two types of question styles were utilised in order to reveal students' attitudes to and experiences of the Read On! programmes.

Firstly, closed ended questions with Likert-scale responses (Likert, 1932) were selected in order to draw out specific facts which can offer a quantitative measure and provide a factual measure of attitudinal scales based on composite scores.

Secondly, a selection of open-ended questions posed in the questionnaire gave respondents the opportunity to voice beliefs, opinions and judgements and to say what they thought of the intervention. Further, the questionnaire offered insight into and enriched the meaning of the Read On! experience for students, enabling a measure of what advantage may have been gained for them or not. Thematic analysis of open-ended questions can uncover a deeper perspective of students' experiences of the Read On! intervention. In so doing, an in-depth assessment of the Read On! programme's capacity and an accurate perspective of students who put in the time to practice could be gathered.

All CG students were invited to respond to the questionnaire. The participant information sheet (See Appendix IV) outlined the aims of the research, the expected time it would take to complete the questionnaire. Furthermore, the letter advised students that their participation was entirely voluntary, was in no way related to academic outcomes or progression and that the researcher had no responsibility for curriculum design, examination outcomes or academic progression. In addition, students were reassured that they could stop completing the questionnaire at any time. Students were also made aware that in completing the questionnaire they were deemed to have given their consent to the research.

4.8 DATA ANALYSIS

In the quantitative statistical analyses use was made of the mean, standard deviation, Pearson's product-moment correlation coefficient and two-way ANOVA. In the Likert-scale comparative analysis (Hernández et al.; 2004 Sullivan and Artino, 2013), the qualitative data from the questionnaire given to the CG was subject to in-depth data analysis and thematic analysis according to Braun and Clarke (2006).

4.9 DATA MANAGEMENT

Data were managed in the Office of Student Support and maintained in a locked filing cupboard and office for the duration of this research. The data in the Read On! database in the Office of Student Support were only accessible to the researcher who held the password. As discussed in Phase IV above, all data were held securely and no students' names, numbers, personal particulars or any other details were disclosed in the research, ensuring complete anonymity for the students. The researcher had access to, analysed and utilised the data for the purposes of this research. In addition, all data were allocated a random number not linked to any student in any way. Students were not asked to provide their names or students numbers assuring confidentiality and anonymity in the research.

4.10 RELIABILITY

Reliability speaks to the consistency of the measure of the data under consideration and the quality of the data constructs and variables (Polit and Beck, 2016). Sound reliability is necessary for statistical analysis when working with large amounts of data in order to test all aspects of the data. Objective analysis of the data is required to obtain an accurate reproducible examination of the data. The entire data set for first years both as a whole group

and by degree were analysed using statistical analysis in Excel. All calculations were checked and rechecked for the entire data set by the researcher.

4.11 VALIDITY

Validity refers to the accurateness of the results obtained in the research (Polit and Beck, 2016) and there are different types of validity. Internal validity measures if the effects are a true reflection of reality. In this instance, because the data were educed from the students actually practising in Read On! it can be said to be an accurate expression of their experiences of the programme. In contrast, external validity determines if results are generalisable. Due to the limited sample these results are not generalisable. In addition, construct validity establishes if the fit was measured accurately and lastly statistical conclusion validity measures the truth in relationship or differences from the statistical analysis (Whittemore and Melkus, 2008). Other extraneous variables of which the researcher may not have been aware, besides those already identified in the research, may also have impacted upon the validity of the study.

It is noted that no other new interventions were introduced into the Office of Student Support in 2013 and 2014.

4.12 ETHICAL CONSIDERATIONS

Permission to access the student data and to conduct this research was applied for and granted by the Human Research Ethics Committee (Medical clearance certificate number M140175) (Appendix I). Letters granting permission to use the data from the faculty were obtained from the Assistant Dean of Student Support (Appendix II and and Appendix III). Data collection could only commence when the 2014 academic year was complete and students had

completed practicing in the Read On! programme. Data were obtained from the faculty office and from the Read On! database.

4.13 CONCLUSION

Evaluation of any new programme introduced into academia can be of great value to both the institution and the students. This research sought to assess the efficacy of the Read On! programme and draw out student perceptions and attitudes to the programme. In this way, the academic community and management of the University may be better informed as to the validity and reliability of Read On!. This research analysed data from first year level and data from students repeating a year of study. Likert-scale analysis and thematic analysis was used to elicit a clearer understanding of students' perceptions and experiences of Read On!

CHAPTER FIVE

5. ANALYSIS AND FINDINGS OF THE STUDY

5.1 INTRODUCTION

"The function of education, therefore, is to teach one to think intensively and to think critically. ... Intelligence plus character--that is the goal of true education."

(King Jr., 1947, p.2]

This chapter presents the findings from the VG and CG samples in this study.

Following the objectives of the research, statistical analyses were made on the VG and CG data. Firstly, the data were statistically analysed using the VG, CG and Read On! results. Secondly, the CG data for those who had practiced on a compulsory basis using Read On! results were analysed for end of term academic outcomes and the number of practice hours during 2013 and 2014. Lastly, the Likert-scale data were analysed using the Sullivan and Artino (2013) and Boone and Boone (2012) approaches and the open-ended questions were analysed using a qualitative approach to determine students' perceptions and views of Read On! by means of responses to the questionnaire administered at the end of 2013 and 2014.

5.2 VOLUNTARY GROUP (VG) AND COMPULSORY GROUP (CG)

5.2.1 VG Population and Sample

The VG in 2013 comprised 607 first year students, while the 2014 VG consisted of 679 first year students in the faculty. All first year students were scheduled to attend screening and assessment in the Read On! programme in 2013 and 2014 and going forward as decided by the faculty. Table 5.1 describes the VG first year cohort of students who attended, were

absent/did not complete the Read On! screening and assessment in 2013 and 2014 and those students who attended the screening and assessment.

Table 5.1 VG First Years in Read On!

	2013 (n=607)	**2014 (n=679)**
Absent / Incomplete	134	361
Attended	473	318
Completed Read On!	386	196
Placed in Read On!	87	122

5.2.2 CG Population and Sample 2013 And 2014

The CG consisted of all students repeating a year of study (YOS). The CG includes students from YOS 1 to YOS 5 who were repeating their year of study while the VG comprises only YOS 1 students. A more detailed degree distribution is given below. The CG sample is made up of all students who were placed in Read On! to practice after the screening and assessment in 2013 and 2014. The figures are reflected in Table 5.2.

To offer a more complete description of the population and sample of the VG and CG groups, the gender and degree distribution are described below.

Table 5.2 CG Read On! Screening and Assessment

	2013 (n=166)	**2014 (n=163)**
Absent/ Incomplete/Deregistered	33	22
Completed Read On!	105	113
Placed in Read On! any YOS	28	28

5.3 CG AND VG BY GENDER, DEGREE AND PLACED IN READ ON!

5.3.1 VG by Gender

In 2013 there were a total of 415 female students and 192 male students. In 2014 there were a total of 473 female students and 206 male students. The gender distribution of students in the VG across the two years was similar as can be seen in Figure 5.1 below.

The gender distribution for first year students who were required to practise in Read On! after attending the screening and assessment in the Read On! programme showed a majority of females in both 2013 and 2014. Of interest, the percentage of females placed in Read On! was 12% higher in 2014 than in 2013. The data also showed that for 2013, 34% of students placed in Read On! were male, while in 2014, 22% were male.

It must be remembered that it was not compulsory for the VG students who were placed in Read On! to attend reading practice sessions on the programme. The degree distribution for the VG population for 2013 and 2014 is given below in 5.4.4.

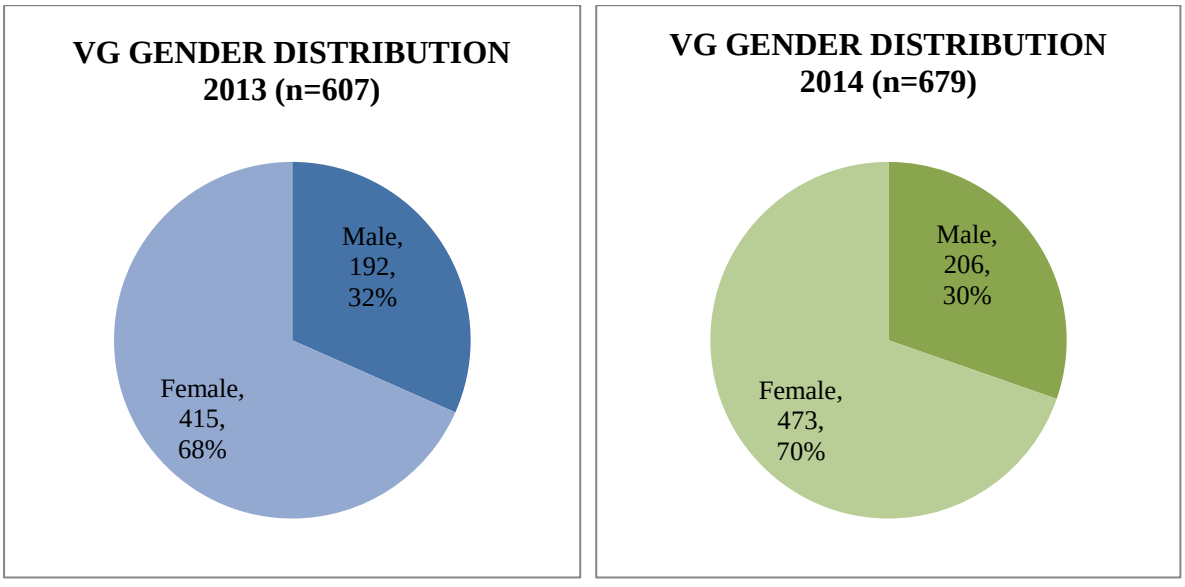


Figure 5.1 Gender Distribution First Year Students 2013 and 2014

5.3.2 VG and CG by Gender Distribution

In 2013, 31% of the total repeating students were male while for the CG first year group in 2014 the percentage had dropped by 10% to 21%. Likewise in terms of repeating female CG students, the data is dissimilar for the two groups and in 2013, 69% of CG first years were female, while in 2014 the percentage of female students increased by 10%. Therefore, across both years, the gender distribution of students in the VG and CG was quite similar.

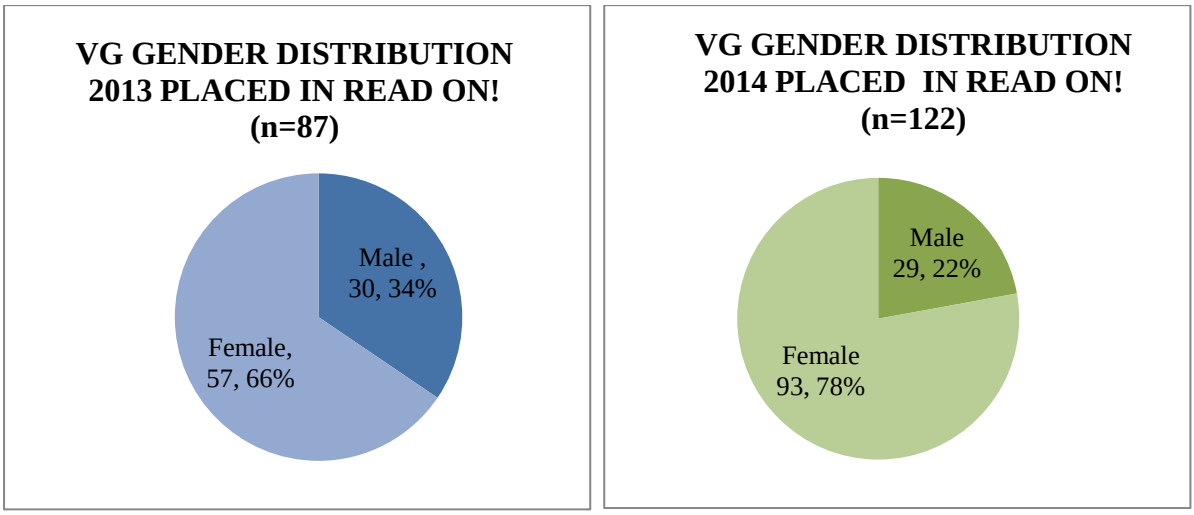


Figure 5.2 Gender Distribution for students placed in Read On! 2013 and 2014

5.3.3 CG by Gender Distribution

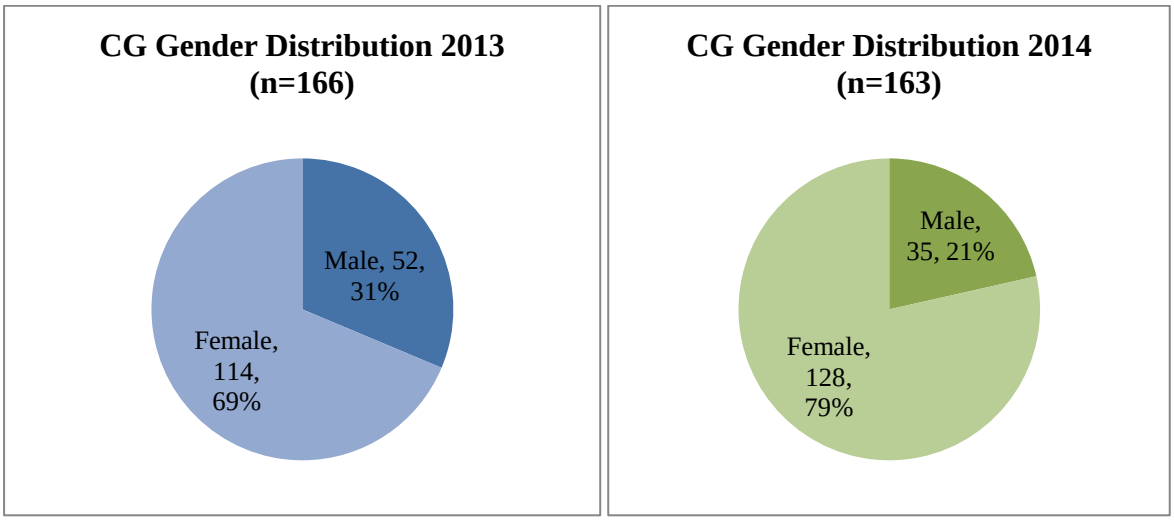


Figure 5.3 CG Gender Distribution 2013 and 2014

5.3.4 VG by Degree

Analysis was made of the degree distribution of the entire group of VG first year students in the Read On! across 2013 and 2014.

The BOHSc degree was not offered in 2013 as this degree was new and only started in 2014.

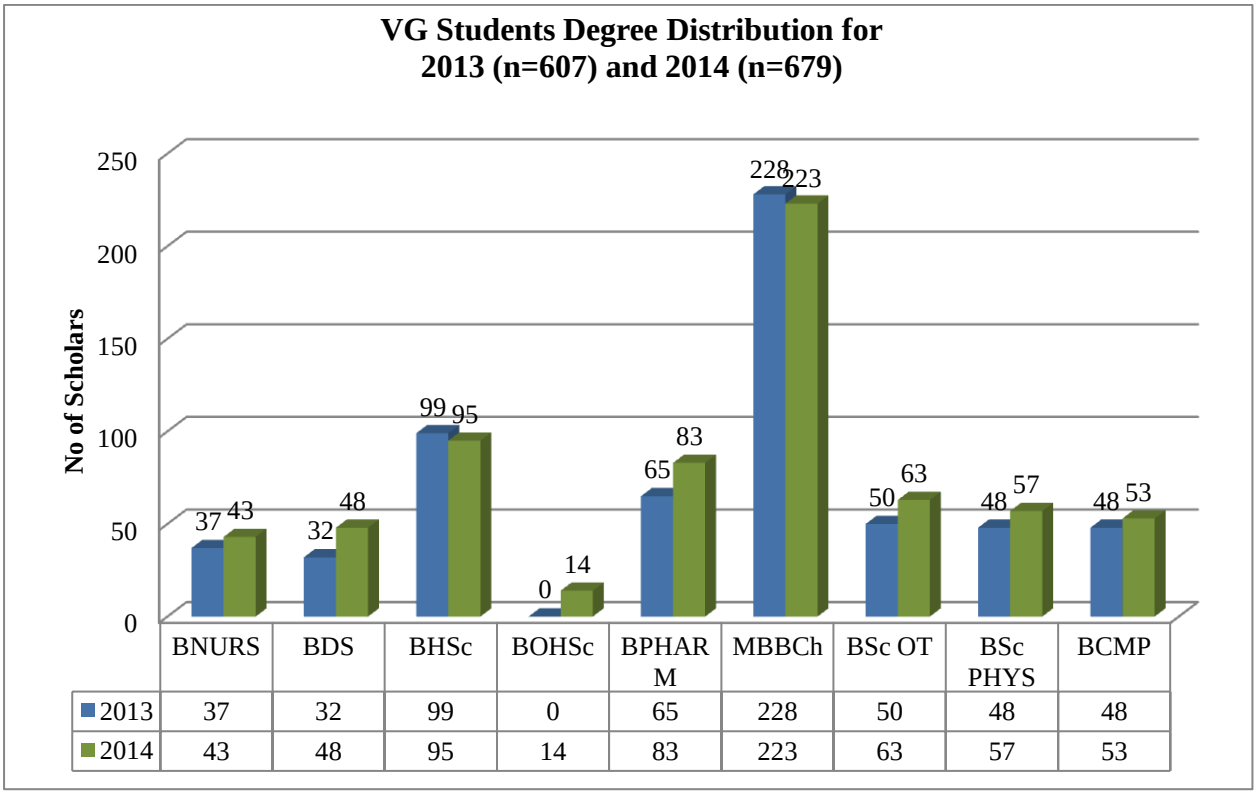


Figure 5.4 VG Students Registered by Degree in 2013 and 2014

5.3.5 VG Placed in Read On! by Degree

Analysis was made of the degree distribution of VG first year students in the Read On! In 2013 students from the BCMP (17), BNurs (19) and BPharm (18) were placed in Read On! Lower numbers of students were placed from the other degrees except for MBBCh (20).

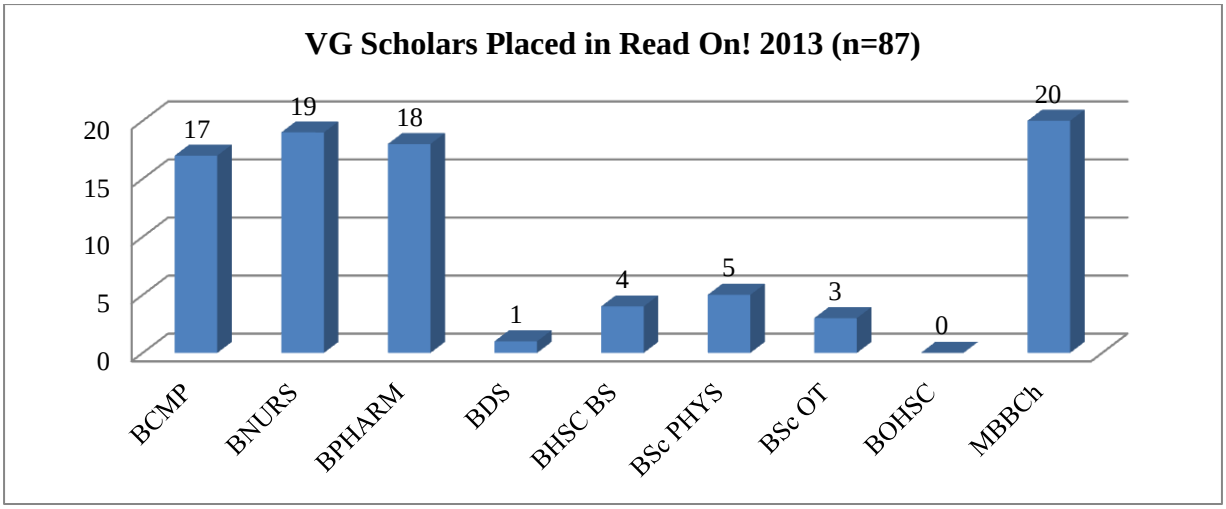


Figure 5.5 2013 VG Students distribution in Read On! by Degree

In 2014 the number of students placed increased for BNURS (24), BCMP (31) and for BPHARM (20) and lower numbers of students were placed in Read On! for other degrees. The MBBCh figures do not present a full picture as only a handful of students were able to attend the screening and assessment in 2014 due to technical difficulties.

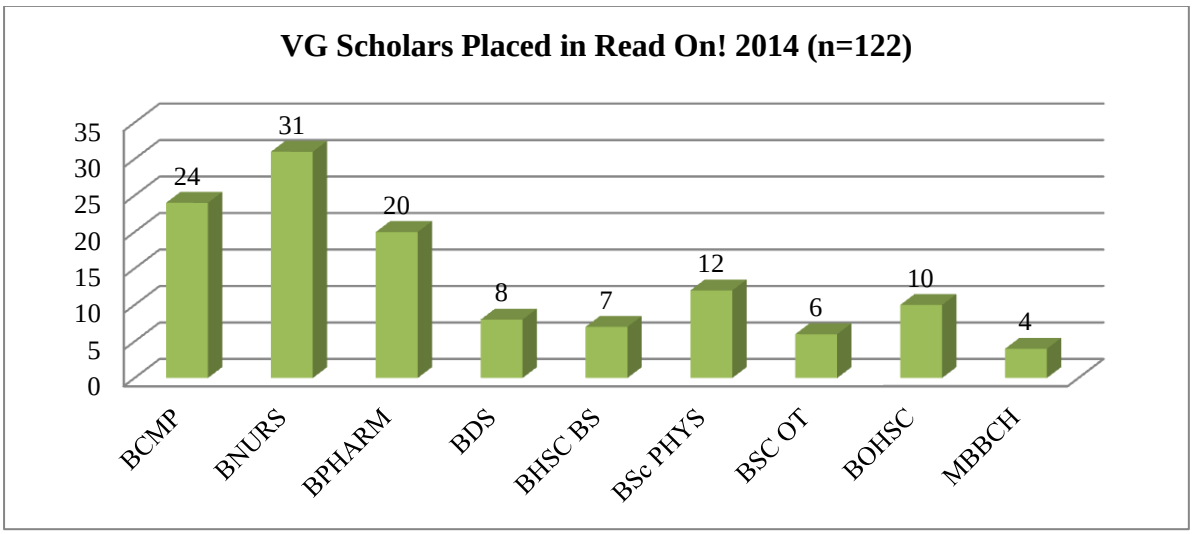


Figure 5.6 2014 VG Students distribution in Read On! by Degree

5.3.6 VG Placed in Read On! by Level

From the figure below, the 2013 and 2014 data reveal that the number of VG students placed in the Read On! in 2014 increased in the GA, EA, DA, CA levels. The numbers also

remained high in the IA and HA levels. As the first year VG group were not required to attend any Read On! practice sessions most students did not make use of the Read On! even though they were encouraged to do so. Read On! data show that during 2013, only 11 VG students and during 2014 only 16 VG students who had been placed on the programme spent more than five hours practising in the Read On! out of the 209 students who had been identified as requiring assistance with vocabulary, reading, writing and comprehension.

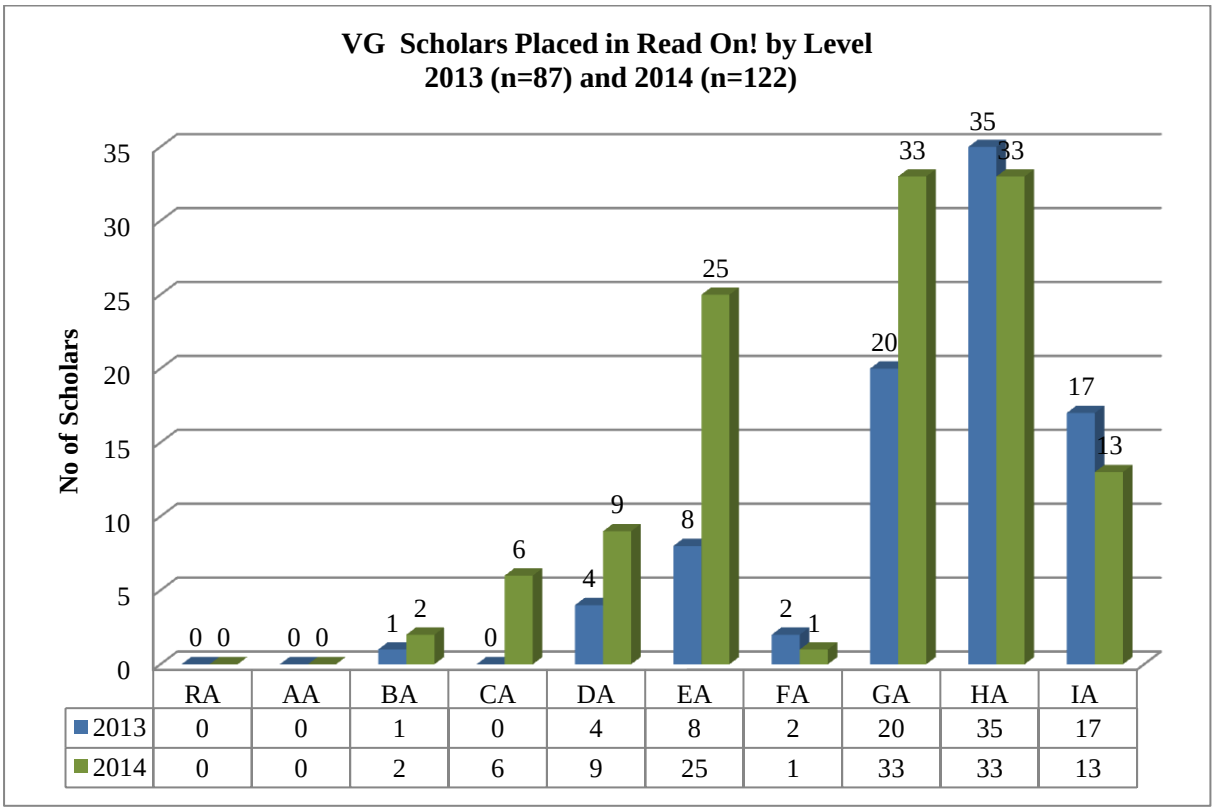


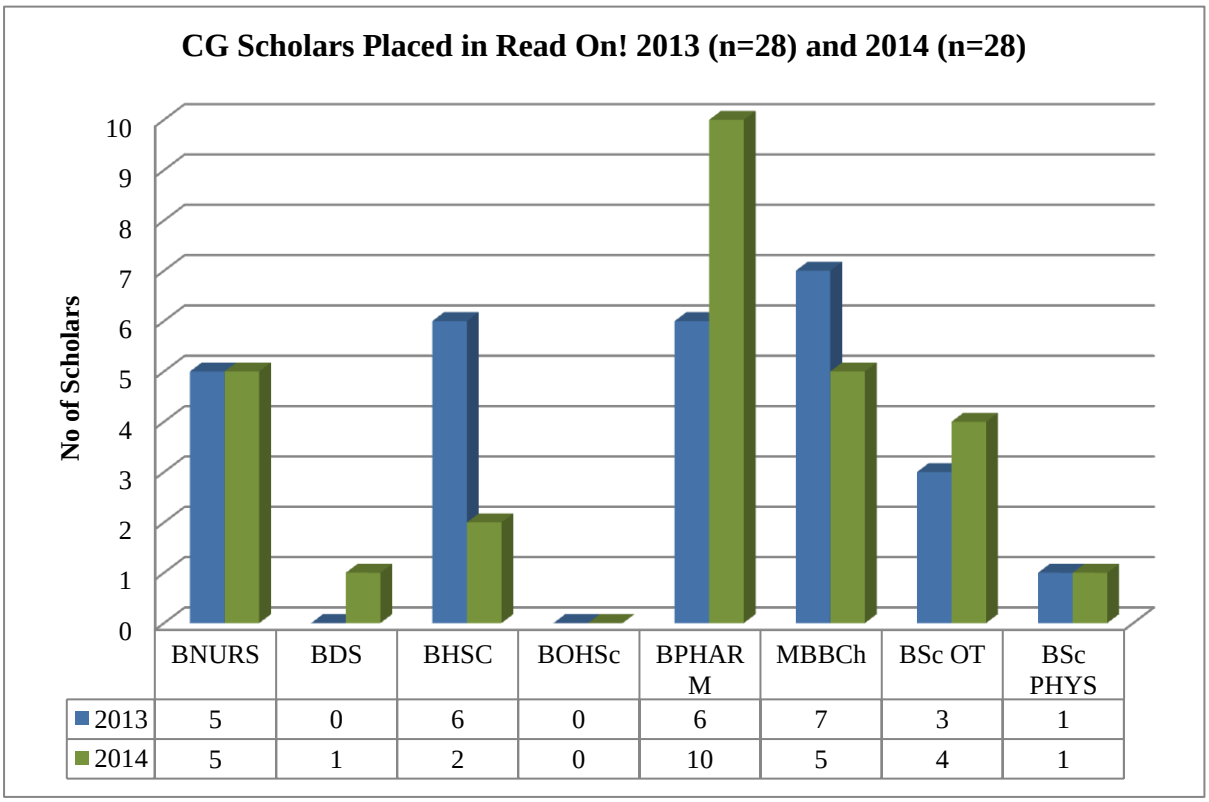
Figure 5.7 VG Population Placed in Read On! by level 2013 and 2014

5.4 CG BY DEGREE AND PLACED IN READ ON!

The CG was made up of all students repeating a YOS who had been placed in the Read On! programme and who were required to practice in the Read On! in 2013 and 2014.

5.4.1 CG Placed by Degree

The repeating CG students who were placed in Read On! for obligatory practice were from a range of degrees in the faculty and different YOS.



	BNURS	BDS	BHSC	BOHSc	BPHARM	MBBCh	BSc OT	BSc PHYS
2013	5	0	6	0	6	7	3	1
2014	5	1	2	0	10	5	4	1

Figure 5.8 CG Degree Distribution Placed in Read On! in 2013 and 2014

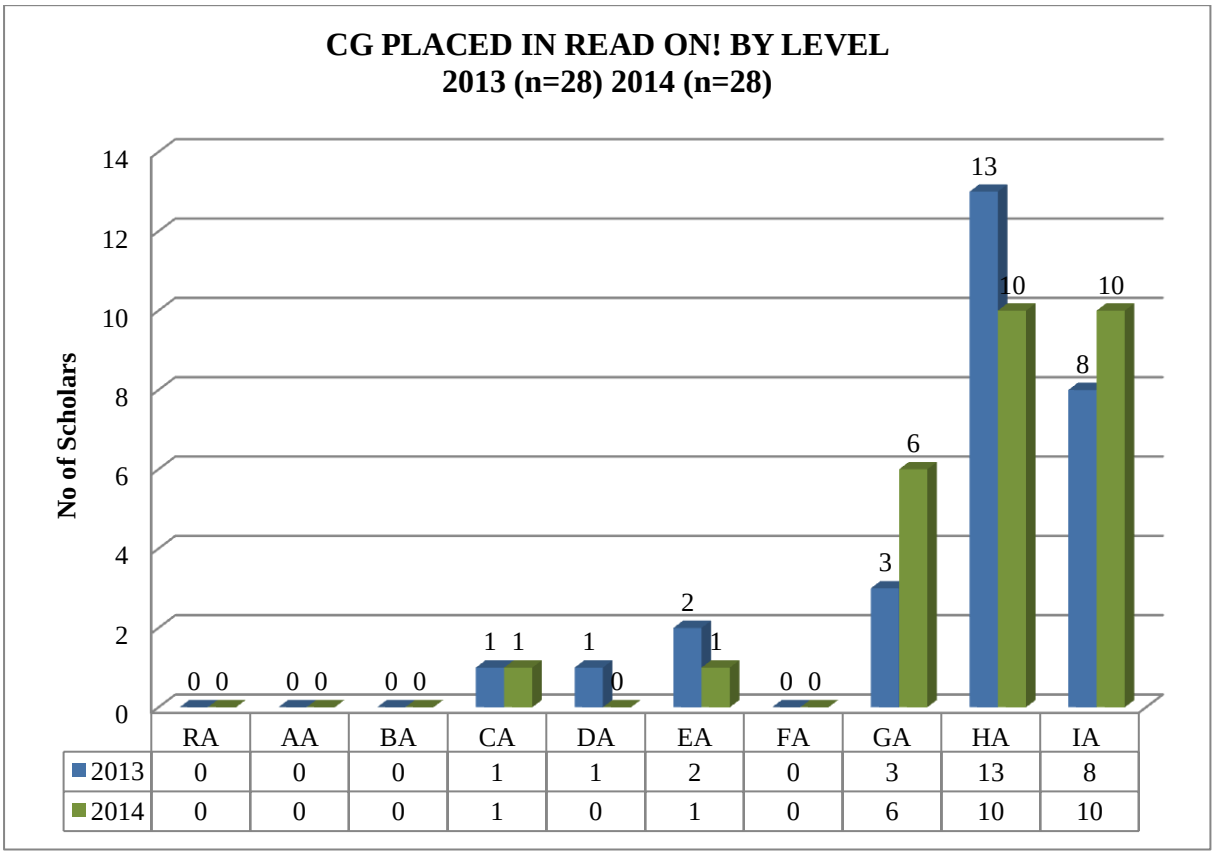
5.4.2 CG Placed in Read On! by Level

The number of students placed into the different Read On! levels after the screening and assessment of the CG group in 2013 and 2014 is shown in Fig 5.9 (See page 67).

It is apparent from the data that the majority (50 out of 56) of the students were placed in the upper three Read On! levels, namely GA, HA and IA. Notably some students were also placed into the EA level, which signifies reading three levels lower than the others. The data show that the highest number of students were placed into the HA level. This is the second highest level in the Read On! programme. IA is seen as the level that students in the USA are purportedly proficient at reading at when they complete school. This suggests that in the

current context students who are placed in Read On! are not reading or writing at adequate levels when they enter tertiary education.

For the CG, attendance at weekly practice sessions was ‘compulsory’ which was not always well received by CG students. In 2013, 24 out of the 28 students spent between 7 and 68 practice hours in Read On! In 2014 only 15 out of 28 students spent between 2 and 21 hours in Read On! The latter may be attributable to the IT challenges in 2014.



	RA	AA	BA	CA	DA	EA	FA	GA	HA	IA
2013	0	0	0	1	1	2	0	3	13	8
2014	0	0	0	1	0	1	0	6	10	10

Figure 5.9 CG Placed in Read On!

5.5 VG DATA FOR NBT, CI, AI AND NSC GRADE 11/12

The admission entry requirements for first year students (VG) admitted in 2013 and 2014 were obtained from the faculty. The Read On! data (VG and CG) were obtained from the Read On! database which is administered by the researcher. Due to the varying years of study of the CG students (YOS ranging from 1st year to 5th year) the admission entry level scores for the repeating students cohort were not used in this research as students would have already undertaken differing ranges of studies. Therefore, the CG entry level data were not used for this analysis.

5.5.1 Correlation between VG, NBT Data 2013, 2014 and Read On!

In terms of the analysis of the data for the VG group, the National Benchmark Test (NBT) results comprising NBT Mathematics (Nbtma%), NBT Academic Literacy (Nbtal%), NBT Qualitative Literacy (Nbtql%) and the NBT Average (Nbt%A) were used for the analysis against the Read On! results. The quantitative relationships between Read On! levels and Nbtma%, Nbtal%, Nbtql%, and Nbt%A with a focus on NBTal% were analysed using the Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity (Appendix VIII).

5.5.2 Correlation between VG, NBT Academic Literacy 2013, 2014 and Read On!

The results suggest a strong, positive relationship between the Read On! and the NBT Academic Literacy (Nbtal%) scores. In 2013, 28.9% (n=176) of VG students were placed into the NBT Basic or Intermediate Benchmark level for Academic Literacy while in 2014 26.2% (n=178) of entry level first year VG students were placed into NBT Basic or

Intermediate AL. The results for the two years will be considered consecutively starting with 2014.

For 2014, the relationships for the IA ($r = .76$, $n = 291$, $p < .01$), HA ($r = .60$, $n = 239$, $p < .01$), GA ($r = .56$, $n = 208$, $p < .01$), FA ($r = .56$, $n = 208$, $p < .01$), EA ($r = .74$, $n = 39$, $p < .01$), DA ($r = .55$, $n = 42$, $p < .01$) and BA ($r = .59$, $n = 4$, $p > .01$) show a strong, positive relationship level with NBTal% scores and are statistically significant. Interestingly, there was a weak, negative relationship for the CA ($r = -.27$, $n = 12$, $p > .01$) level which may possibly be due to the small sample size (n=12).

For 2013, the relationships for the IA ($r = .54$, $n = 384$, $p < .01$), HA ($r = .60$, $n = 425$, $p < .01$), FA ($r = .50$, $n = 29$, $p < .01$), EA ($r = .71$, $n = 13$, $p < .01$), show a strong, positive relationship with NBTal% scores and are consequently statistically significant. Interestingly, there was a weak, positive relationship for the GA ($r = .12$, $n = 462$, $p < .05$) and DA ($r = .21$, $n = 13$, $p > .01$) levels. There was a weak, negative relationship for level CA ($r = -.27$, $n = 12$, $p > .01$).

5.5.3 Correlation between VG, NBT, Mathematics and Read On!

Overall, a moderate to weak positive relationship was found in terms of analysis of the VG group and the Read On! levels with the NBT Mathematics (Nbtma%).

For 2014, there was a weak, positive relationship for IA ($r = .10$, $n = 284$, $p > .01$), HA ($r = .14$, $n = 233$, $p < .05$), GA ($r = .15$, $n = 205$, $p < .05$), FA ($r = .15$, $n = 205$, $p < .05$), EA ($r = .16$, $n = 38$, $p > .01$) levels and a weak, negative relationship for level DA ($r = -.10$, $n = 41$, $p < .01$). No strong positive relationships were found.

For 2013, there was a moderate, positive relationship for IA ($r = .37$, $n = 383$, $p < .01$) and HA ($r = .35$, $n = 423$, $p < .01$) levels. For GA ($r = .14$, $n = 460$, $p < .01$), FA ($r = .20$, $n = 29$, p

> .01) EA (r = .21, n = 13, p > .01) and DA levels (r = .22, n = 13, p > .01) there was a weak, positive relationship.

5.5.4. Correlation between VG, NBT Qualitative Literacy 2013, 2014 and Read On!

A moderate to strong positive relationship was found between the Read On! levels and the NBT Qualitative Literacy (Nbtql%).

For 2014 a moderate, positive relationship was found for IA (r = .44, n = 291, p < .01), GA (r = .32, n = 208, p < .01), FA (r = .32, n = 208, p < .01), EA (r = .40, n = 39, p < .05) and DA levels (r = .31, n = 42, p < .05).

For 2013 a strong, positive relationship was found for IA (r = .50, n = 384, p < .01) and DA levels (r = .48, n = 13, p > .01). A moderate positive relationship was found for levels HA (r = .45, n = 425, p < .01) and EA (r = .44, n = 13, p > .01).

5.5.5 Correlation between VG, NBT Average and Read On!

In the correlation of the NBT Average (Nbt%A) and Read On! strong, moderate and weak positive relationships were found overall. For 2014 a strong, positive relationship was found between the Read On! levels and the NBT Average (Nbt%A) for IA (r = .51, n = 291, p < .01). A moderate positive relationship was found for HA (r = .39, n = 239, p < .01), GA (r = .39, n = 208, p < .01), FA (r = .39, n = 208, p < .01) and EA levels (r = .49, n = 39, p < .01).

For 2013 a strong, positive relationship was found for Read On! levels and the NBT Average (Nbt%A) for IA (r = .52, n = 384, p < .01) HA (r = .51, n = 425, p < .01) and EA levels (r = .60, n = 13, p < .05). A moderate positive relationship was found only for level DA (r = .38, n = 13, p > .01) in 2013. As only one student was placed at the AA level in Read On! correlation coefficients could not be calculated for this level. No students scored on the RA level, which is the lowest level in the Read On! (Appendix VIII).

A strong negative relationship was only found at the CA level in 2014 (r=-.79, n = 12, p < .01) and a weak negative relationship in 2013 at the CA level (r = -.78, n = 4, p<.01) which could also have been due to a small sample size (Appendix VIII).

5.5.6 Correlation between VG, Composite Index, Academic Index, NSC Scores 2013, 2014 and Read On!

Analysis of the VG group data for the Composite Index (CIn%), Academic Index (Ain%) and the Grade 11 and Grade 12 NSC English (Nsc English%), NSC Physical Science (NscPS%), NSC Language Science (NscLS%) and NSC Mathematics (NscMaths%) scores follows.

The above were analysed against the Read On! scores using the Pearson product-moment correlation coefficient. The analyses were conducted making sure there was no violation of the concepts of normality, linearity, and homoscedasticity.

5.6 VG ACADEMIC AND COMPOSITE INDICES AND NSC GRADE 12

In 2014 there were no strong positive relationships between Read On! and the AIn%, CIn% and the NSC outcomes in Grade 12. A strong negative relationship in AIn% for Grade 12 was found at level CA (r=-.75, n=12, p < 0.01) only. All other levels except for the DA level (r = .24, n=41, p < .01) showed a moderate positive relationship. This may be due to the small sample size of n=41. In 2013, the AIn% statistics showed a strong positive relationship associated with Read On! for the IA (r = .55, n = 364, p < .01), HA (r = .51, n = 402, p < .01) and EA levels (r = .53, n = 12, p > .01) (Appendix IX). All other levels except for the GA level (r = .14, n=438, p < .01) showed a moderate positive relationship.

In 2013 the AIn% statistics showed a moderate positive relationship associated with Read On! in the IA (r = .48, n = 270, p < .01), HA (r = .35, n = 220, p < .01), GA (r = .43, n = 192, p < .01), FA (r = .43, n = 52, p < .01) and EA levels (r = .40, n = 38, p < .05).

In 2014 CIn% showed a moderate positive relationship with Read On! for IA (r = .30, n = 364, p < .01), EA (r = .47, n = 12, p > .01) and DA levels (r = .47, n = 13, p > .01).

In 2013, there was a moderate, positive relationship for Read On! and Ain% for FA (r = .37, n = 54, p < .01) and DA levels (r = .40, n = 44, p < .01) (Appendix IX).

Only the NSC Maths Lit showed a strong, positive relationship with Read On! for the IA level (r = .78, n = 4, p > .01) (Appendix IX).

5.7 VG ACADEMIC AND COMPOSITE INDICES AND NSC GRADE 11

The 2014 statistics showed a strong positive relationship for Read On! and AIn% at the IA level (r = .57, n = 207, p < .01). The 2013 statistics reveal strong positive relationships associated with high scores in Read On! for the IA (r = .57, n = 287, p < .01), HA (r = .55, n = 316, p < .01) and GA levels (r = .59, n = 345, p < .01). All other levels except for the DA (r = .27, n=13,p<.01) showed a moderate positive relationship. A strong negative relationship in AIn% for Grade 11 analysis was found at level CA (r = -.90, n = 4, p > .01) only for 2013 and the CA (r = -.63, n = 11, p < .05) level in 2014. This may be due to the small sample sizes of n=11 and n=4 respectively (Appendix X).

In 2014 the statistics showed a strong positive relationship for Read On! and CIn% at the IA (r = .58, n = 202, p < .01) and the FA (r=.54, n=45, p<.01) levels. In 2013 the CIn% statistics showed strong positive relationships between CIn% and Read On! for IA (r = .56, n = 280, p < .01), HA (r = .55, n = 306, p < .01) and GA (r = .56, n = 333, p < .01) levels. All other levels showed a moderate positive relationship. A strong negative relationship in CIn% for Grade 11 analysis was found at level CA only (r = -.91, n = 4, p > .01) in 2013 and CA (r = -.64, n = 11, p < .05) in 2014. Once more, this may be due to the small sample size of n=11

and n=4 respectively (Appendix X). None of the NSC scores in Grade 11 showed a strong, positive relationship with Read On! (Appendix X).

5.8 COMBINED VG AND CG CORRELATION OF READ ON!

The relationship between all students who attended the screening and assessment in Read On! for students in the combined VG (n=791) and CG (n=273) was investigated using a two-way ANOVA between groups and looking at multiple variables. A two-way between-groups analysis of variance was conducted to explore (a) differences in the Read On! screening and assessment for students belonging to either the CG or VG, (b) differences in the Read On! screening and assessment for students in 2013 and 2014, and (c) the differences in the effect of belonging to either the CG or VG based on scores obtained in the Read On! screening and assessment for students from 2013 and 2014. The following was found.

The interaction effect between the students belonging to either the CG or VG and their year of participation was statistically significant ($F (1, 1064) = 7.41$, $p = .01$), suggesting that there is a difference in the interaction effects of belonging to either the CG or VG on scores obtained in the Read On! screening and assessment. There were also statistically significant main effects for belonging to the CG or VG, ($F (1, 1064) = 6.43$, $p = .01$ and, $F (1, 1064) = 8.50$, $p = .01$) respectively.

In summary, this indicates that there is a significant difference in the Read On! screening and assessment for students belonging to either the CG or VG and in the Read On! screening and assessment for students in 2013 and 2014. However, as the effect sizes were small (both partial eta squared values were calculated as equal to 01), it would suggest that although these effects reached statistical significance, the actual differences in the mean values are very small.

5.9 VG READ ON! COMPLETED/PLACED/ACADEMIC OUTCOMES

From Table 5.3, in the VG Read On! screening and assessment, 386 students in 2013 and 196 students in 2014 had "No lessons prescribed" or "Completed" the Read On! to proficiency. For the 2013 academic end of year outcomes in the VG 340 (88.1%) students who completed the Read On! screening and assessment passed the YOS while 46 (11.9%) students out of 386 failed the YOS out of those who Completed Read On! For the 2014 academic end of year outcomes in the VG 157 (80.1%) students who Completed the Read On! screening and assessment passed the YOS while 39 (19.9%) students out of the 196 failed the YOS out of those who Completed Read On! From this it can be seen that there is a difference of 8% between the 2013 VG Read On! who passed the academic year and the VG students who Completed Read On! in 2014 and passed the academic year.

This research does not clearly show the reason for the difference and this could be an area for further investigation which is considered in the final chapter.

Table 5.3 VG Completed Read On! screening and assessment Academic Outcomes

	2013 (n=386)	**2014 (n=196)**
PASSED ACADEMIC YOS	340	157
FAILED ACADEMIC YOS	46	39

Of the 2013 VG, 87 students were placed in Read On! and of those 81.6% (n=71) of students passed the YOS and 18.4% (n=16) of students failed the academic YOS. Of the VG 2014, 122 students were placed in Read On! and of those 82.0% (n=100) of the students passed the YOS and 18.0% (n=22) of the students failed the academic YOS. This reveals that there were similar outcomes for the 2013 and 2014 VG students who were placed in Read On! and for whom it was determined required extra reading practice. Noticeably, almost one-fifth of students failed the academic YOS.

Table 5.4 VG Placed in Read On! screening and assessment and academic end of year outcomes

	2013 (n=87)	2014 (n=122)
PASSED ACADEMIC YOS	71	100
FAILED ACADEMIC YOS	16	22

Of the 2013 VG students (n=134) who did not attend the screening and assessment in Read On! 75.4% (n=101) of the students passed the YOS and 24.6% (n=33) of the students failed the academic YOS. Of the 2014 VG students (n= 361) who did not attend the screening and assessment in Read On!, 83.1% (n=300) of the students passed the academic YOS and 16.9%(n=61)of the students failed the academic YOS.

From this it can be seen that in 2013 almost one quarter of students who did not attend the screening and assessment in Read On! failed the academic YOS unlike in 2014 where the percentage was lower. Moreover, it should be taken into account that the 2014 figures were likely to be less consistent due to ICT challenges experienced during that year. These outcomes cannot be attributable to attending Read On! due to other variables which may have contributed.

Table 5.5 VG Students who did not attend Read On! screening and assessment and academic end of year outcomes

	2013 (n=134)	2014 (n=361)
PASSED ACADEMIC YOS	101	300
FAILED ACADEMIC YOS	33	61

Data were also considered from the perspective of the various degrees. Table 5.6 above reflects the numbers of students who passed and failed in the different degrees. In 2013, 11.9% of students completed Read On! and yet failed the end of the YOS. In 2014 18.4% of students completed Read On! and yet failed the end of the YOS. This reflects a difference of 5.5%. However, it must be remembered that the 2014 MBBCh data is not complete due to technical challenges and the data will therefore be skewed.

In 2013, 14.3% of the VG students (n=87) were identified by the Read On! programme as requiring different levels of assistance with reading, writing, vocabulary and comprehension skills and were placed in Read On! In 2014, 18.0% (n=122) were placed in Read On! for practice sessions. This indicates that for 2013 and 2014 together, 209 (35.9%) of the 582 students entering the first year of study at university and who attended the Read On! screening and assessment lacked adequate reading and writing skills. It should be noted that as 495 (38.5%) students over the two years did not attend the screening and assessment in Read On! at all in 2013 and 2014 these figures may well be higher.

Table 5.6 VG Completed Read On! and End of Year Academic Outcomes by Degree

	2013 (n = 386)		**2014 (n = 196)**	
	PASS (n=340)	**FAIL (n=46)**	**PASS (n=157)**	**FAIL (n=39)**
BHSc	15	3	7	4
BCMP	22	4	24	2
BOHSc (Not Offered in 2013)	0	0	4	0
B NURS	8	7	4	1
BSc PHYS	38	2	39	1
BSc OT	38	4	39	9
B PHARM	39	3	20	3
BDS	6	0	17	17
MBBCh	174	23	3	2

5.10 CG READ ON! AND COMPLETED/PLACED/ACADEMIC OUTCOMES

The two CG samples comprised 166 students in 2013 and 164 students in 2014. In 2013, 105 students completed the Read On! screening and assessment. In 2014, 113 students completed the Read On! screening and assessment and were not prescribed any practice sessions.

For the 2013 academic end of year outcomes in the CG 89 (84.8%) students passed the YOS and 16 (15.2%) students failed the YOS out of those who Completed Read On! For the 2014 academic end of year outcomes in the CG 100 (88.5%) students passed the YOS and 13 (11.5%) of students failed the YOS of those who Completed Read On! From this it can be seen that there is a difference of 4% between the 2013 CG Read On! and the 2014 CG Read On! for students who passed.

Table 5.7 CG students who Completed Read On! and Academic Outcomes

	2013 (n=105)	**2014 (n= 113)**
PASSED ACADEMIC YOS	87	99
QUALIFIED ACADEMIC YOS	2	1
FAILED ACADEMIC YOS	16	13

Students placed in Read On! to practice in the CG consisted of 28 students in 2013 and 28 students again in 2014. The CG data were analysed for academic performance against end of year outcomes. Of the 28 students who were screened and assessed in 2013, 24 passed the YOS, while in 2014, 27 students passed the YOS. The failure rate for the CG who attended the compulsory practice sessions in Read On! in 2013 was 4 students and in 2014 was 1 student. Clear reasons for this difference do not emerge from this research nevertheless the percentage pass rate is higher for the CG than it is for the VG in both 2013 and 2014 despite the fact that students were only able to practice in Read On! during the latter half of the year, i.e. after July 2014.

Table 5.8 CG students Placed in Read On! and Academic Outcomes

	2013 (n = 28)	2014 (n = 28)
PASSED YOS	23	25
QUALIFIED DEGREE	1	2
FAILED YOS	4	1

5.11 VG HOME LANGUAGE DISTRIBUTION

The home language distribution in 2013 and 2014 showed that English was a home language for more than half of first year students. The home language distribution data as provided by the faculty is shown in Table 5.9 on the following page.

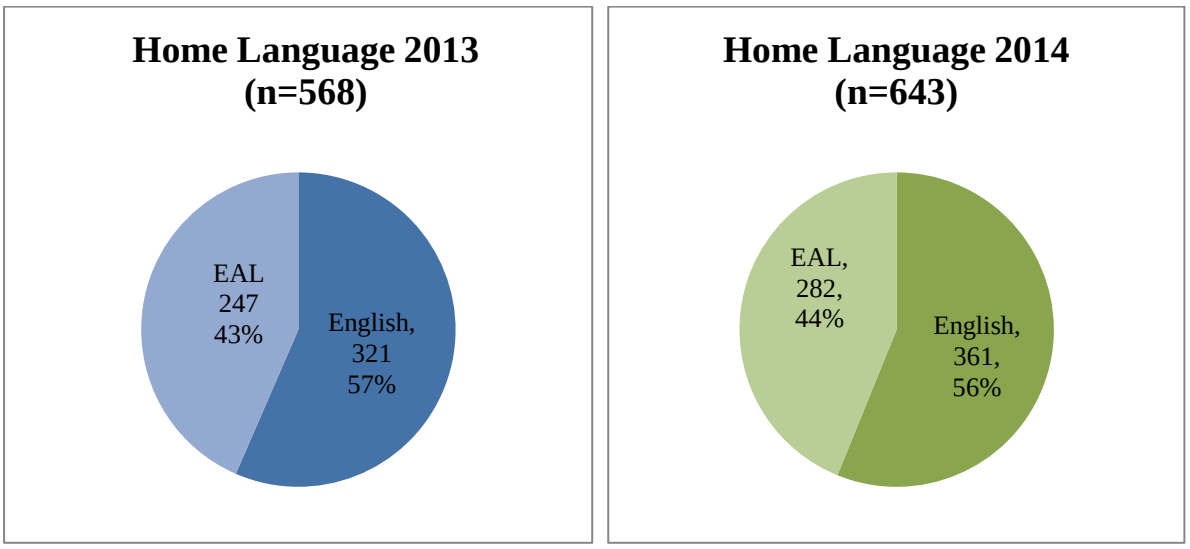


Figure 5.10 VG English Additional Language and English Home Language

The data below reflects the great diversity of home languages amongst first year students in the faculty. In 2013, 43% of students and in 2014, 44% of students had English as an additional language.

Table 5.9 Home Language Distribution for First YOS students

2013		**2014**	
Bilingual English/Afrikaans	2	Bilingual English/Afrikaans	1
English	319	English	360
Zulu	62	Zulu	77
Xhosa	25	Xhosa	31
Pedi	37	Pedi	29
Sesotho	30	Sesotho	28
Setswana	26	Setswana	24
Tsonga/Shangaan	15	Tsonga/Shangaan	24
Tshivenda	5	Tshivenda	16
North Sotho	3	North Sotho	9
South Sotho	2	South Sotho	2
Tswana	4	Tswana	6
Shona	5	Shona	4
Ndebele	3	Ndebele	5
Siswati	5	Siswati	2
Afrikaans	8	Afrikaans	12
French	4	Arabic	1
German	2	Bambe	1
Malayalam	1	Chinese (Other)	1
Portuguese	3	Dutch	1
Swahili	1	French	2
Swazi	2	Korean	1
Urdu (Pakistan)	2	Portuguese	1
Yoruba	1	Rwandese	1
Unknown	1	Serbian	1
Total	568	Swahili	1
		Swazi	1
		Urdu (Pakistan)	1
		Total	643

5.12. CG HOME LANGUAGE DISTRIBUTION 2013 AND 2014

In the CG sample, 41% (n=16) of students were Sepedi home language speakers, 15% (n=6) were IsiZulu home language speakers with 8% (n=3) coming from homes with English as a home language. For the rest, the numbers ranged between 1 and 2 students per language.

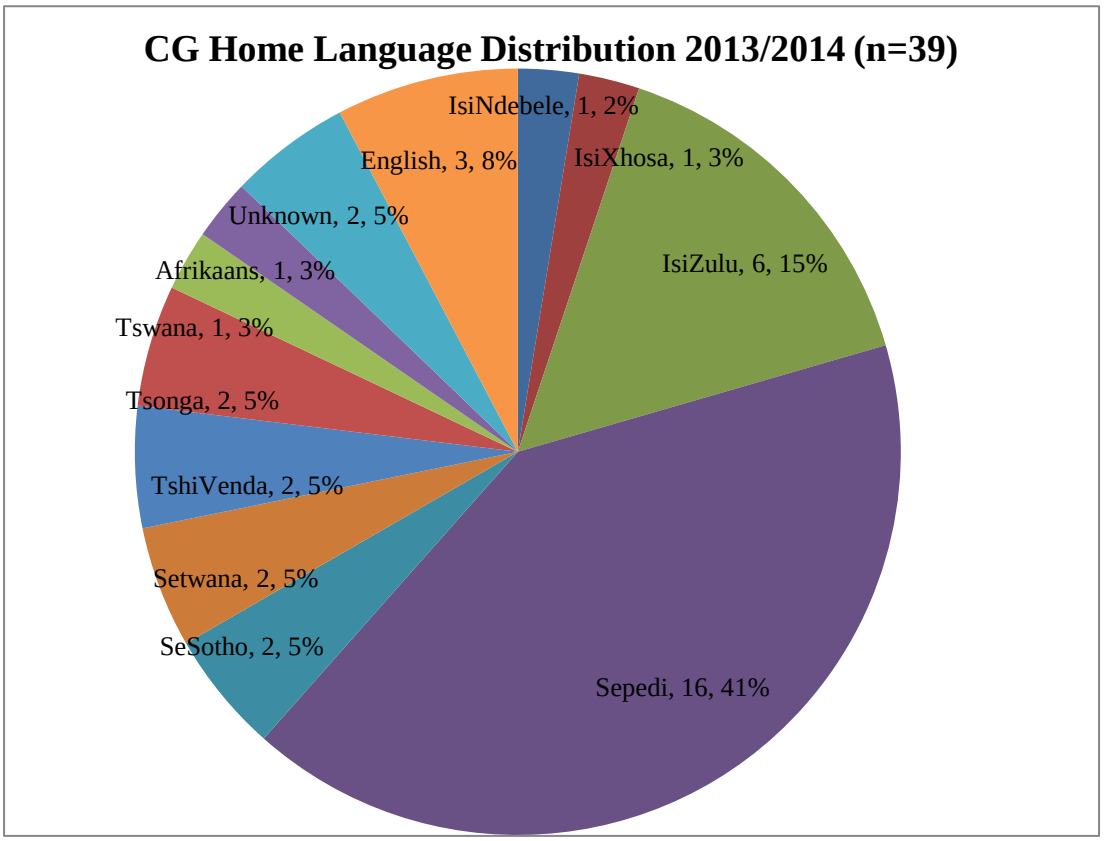


Figure 5.11 CG Home Language Distribution

5 13 CG STUDENTS' PERCEPTIONS OF READ ON!

5.13.1 CG Likert-Scale Data

An anonymous questionnaire, which included 14 Likert-scale questions and seven open-ended questions, was circulated to the CG students at the end of 2013 and 2014, respectively. The Likert-scale questions sought to elicit an explanatory window on the perceptions of students who were practicing in the Read On! programme during the years 2013 and 2014. The data from 2013 and 2014 were combined to obtain an overall representation of student

perceptions. The combined sample consisted of response feedback from 39 students (70%) of the 58 students in the CG over the two years.

The Likert-scale responses were analysed based on the median of the data. The data from these responses follows.

The Likert-scale data were arranged into five areas of interest, and the median was calculated for the data set. This is because Likert-scales offer ordinal data which is best analysed using the median or middle distribution of the data (Hernández, Drasgow and González-Romá, 2004; Sullivan and Artino, 2013) (See Appendix XI):

- Students self confidence in English (Q1,4,7,6);
- Linking, understanding and analysis in Read On! (Q5,2,3);
- Attendance and Commitment to Read On! (Q8,9);
- Presentation clarification and feedback value (Q10,11,12) and
- Assessment of the Read On! facilitator and assistance offered (Q13,15).

The 'Strongly Agree' and 'Agree' responses were combined, and similarly the 'Strongly disagree' and 'Disagree' responses were combined as suggested by Boone and Boone, (2012) and Sauro (2011). Sauro, (2011) argues that the "best approach" to Likert-scale analysis is dependent upon "the context and situation" wherein the respondents who agree or disagree are considered. For this reason similar questions were grouped into clusters. The median of the responses was calculated for the data and the outcomes can be found in Appendix XI. The results are shown below.

5.13.2 Students Self Confidence in English (Q 1, 4, 7, 6)

The majority (82%) of the sample responded that they believed that they had gained more confidence in reading, writing, understanding and working independently. Of the sample 11% remained neutral while less than 8% disagreed.

5.13.3 Linking, Understanding and Analysis of Read On! (Q5, 2 ,3)

A majority of the students (85%) felt that they were able to make linkages in English reading, were able to analyse and understand the readings better and were able to use the vocabulary they had learned due to practising in Read On!. While 6% of the sample remained neutral, only 9% disagreed.

5.13.4 Attendance and Commitment to Read On! (Q 8, 9)

Just under two-thirds of the students (61%) expressed a positive commitment to completing the Read On! programme and attending the Read On! practice sessions. More than a quarter (29%) remained neutral while 11% disagreed.

5.13.5 Read On! Presentation and Feedback Value (Q 10, 11, 12)

The majority of the students (70%) reported that the presentation was helpful, that the Read On! programme was clear and that they believed their reading and understanding capacities had been advanced. While 15% of the sample remained neutral, 12% of the respondents disagreed.

5.13.6 Read On! Facilitator/s and Assistance (Q 13, 15)

Almost three-quarters of the students (74%) agreed with the statement that the facilitator/s had helped to clarify complex questions and their enthusiasm had helped the student to appreciate the importance of reading. A small percentage of the sample remained neutral (14%) while 12% of the sample strongly disagreed with this stance.

5.13 SUMMARY

Responses to questions in the Likert-scale showed that the majority of the respondents reported feeling positive towards the Read On! programme. Under half of the students felt that they would like to complete the Read On! programme.

On the Strongly agree/Agree side, a median of 82% of the students reported that they were more self confident in English in reading, writing, understanding and the importance of working on one's own. In terms of linking, understanding and analysis, 85% of the sample replied positively, reporting that they could now use the vocabulary that they had learned in Read On! In terms of attendance and commitment, less than half of the students (48%) surveyed reported that they felt that they wanted to complete the Read On! In contrast, almost three quarters (73%) said that they were able to attend the practice sessions in Read On! on a regular basis. Students responded to the questions about the presentation, clarity and feedback from the Read On! positively and a median of 70% responded that they strongly agreed that the Read On! was helpful for them. In response to the final question, 73% of students felt that the facilitator was helpful in clarifying questions and 76% reported that the facilitator's enthusiasm helped them to appreciate the importance of reading, giving a median of 74%.

In summary, the responses are encouraging and signal that Read On! has produced a mainly positive experience for the majority of university level students who were placed in the Read On! and who had to attend the practice sessions on a compulsory basis.

5.14 CG ANALYSIS OF OPEN-ENDED QUESTIONS

Analysis of the open-ended questions made use of Braun and Clarke's (2006) six-phase guide to thematic analysis and entailed " ... identifying, analysing, and reporting patterns (themes) within data" (Braun and Clarke, 2006, p.79).

Firstly, the data were consolidated from the handwritten responses transcribed by the researcher who subsequently familiarized herself with the data by reading and rereading, several times and identifying fifteen sub categories. The researcher did not analyse the individual questions and responses as different students tended to give the same or very similar information in to the different questions. The researcher therefore analysed the responses to the questions as one data set. From the fifteen preliminary sub-categories, nine categories were identified and from these five central themes emerged (See Table 5.10 below).

Table 5.10 Themes Formed from Categories and Sub-categories

THEMES	CATEGORIES	SUB-CATEGORIES
Perceptions/Attitudes	Students' reading strategies	Enjoyment and Pleasure in Reading
	Development in reading	Personal Growth in Reading
		Implementation of Read On!
Academic Insights	Understanding in reading	Comprehension
	Reading and analysis	Linking and Connections
		Academic Analysis from Reading
Reading/Writing/Vocabulary	Reading and writing skills	Improved Reading Skills
	Acquired vocabulary	Improved Writing Skills
		New Vocabulary
Access/Facilitators	Access to Read On!	Availability to Students
	Structured sessions	Read On! Facilitators
Suggestions/Improvements	Language	Using Discipline/Faculty Specific Language
	Discussion about time	Increase Practice Time
	Students' comments	Decrease Practice Time
		Additional Feedback

The five themes identified are discussed below and show how the subcategories and categories contributed to development of the themes.

5.14.1 Perceptions / Attitudes

In this theme students reported the positive influence that Read On! had on their ideas about reading and writing. They also spoke of the change in their attitudes after practising in Read On!

Several responses reflected that students were able to find enjoyment and pleasure in their experiences in Read On! and more so for EAL students.

"It [Read On!] is a great programme, especially for people using English as their 2nd or 3rd language."

Students' perspectives offered support for the stance of Ryan, (2010) which holds that learning new reading habits can engender enjoyment of reading and writing. This indeed, may lead to better reading and writing ability and the students responses suggest that this can even happen at tertiary level, given the correct surroundings and conditions.

"It [Read On!] was very useful in improving my speech and adding a level of sophistication ... allowing me to articulate and organise my thoughts better."

The overall responses in this section were encouraging and positive. A number of students reported a beneficial, useful and 'great' experience of the Read On! programme. As one student affirmed

"... I think that everything the [Read On!] programme offers ... benefits the students tremendously."

In terms of personal development, students transitioning into tertiary education often struggle with their studies when they find themselves hampered by a lack of imperative reading and writing skills. In this regard students reported that Read On! had had a positive effect on the individual aspect of their reading and other aspects of their study life.

"[Read On! helped with] building my confidence."

For example, sometimes, if students encounter difficulty with being able to self select and manage their readings, Ryan (2010) argues they may give up completely in discouragement. One student reported that Read On! had enabled them to overcome this problem.

"My knowledge and understanding of English, being a second language was difficult and programmes such as Read On! help ... when studying alone."

Several students felt that the Read On! should be implemented from the first year of study which they believed would have helped.

"It helped starting [Read On!] at the beginning of the year"

In addition, some students believed that the Read On! screening and assessment and practice sessions should be implemented at first year level. For YOS 1 students this would have enabled them to practise in the Read On! Some students directly said this.

"If it [Read On!] was implemented for first years it would be a better foundation for them ... rather than wait for someone to repeat ..."

Due to the very full first year timetable there are currently not enough free slots to allow students time to practice in the Read On! Students therefore suggested that the Read On! should be included into the curriculum.

"... add it [Read On!] to our study plans or timetables."

Some sources suggest that under preparedness in reading and writing leads to attrition rates for first year students (Scott, 2009; Van Dyk and Weideman 2004) and Bharuthram's influential 2012 research argues for inclusion of reading in the curriculum. This, together with early implementation in the study year, may go a long way towards improving the lack of reading that a number of students bring with them into university. One student emphatically asserted that:

"Personally, I think I should have started with Read On! the minute I stepped into Wits ..."

Not only did students report progress in reading skills, placing of Read On! in the curriculum and support for starting practice early, they also often referred to academic reading skills gained.

5.14.2 Academic Insights

This theme focuses on the academic insights that students had from the Read On! programme. Several aspects such as comprehension, linking and connections and academic analysis from reading are discussed.

Because a number of students entering university are not proficient readers or writers and may not have the required comprehension skills set for tertiary education Ryan (2010) shows that students may experience problems with self selection and identifying the synopsis of texts while reading because they may not have attained the global information required to do so yet. One student asserted that:

"Read On! taught me how to comprehend and analyse things better."

Students who attended the Read On! on a regular practicing basis reported improvements in their general comprehension of the material being read. Moreover, a number of students

believed that Read On! had benefitted them in terms of their understanding of the academic work as can be seen in the comment below.

"Understanding the context of a passage/text given [on Read On!]"

Reading and writing underpins discipline specific knowledge production (Boughey 2009). Closely aligned to this is making the linkages and connections between the reading/s and the production of writing. Students reported that they had benefitted from:

"Linking information when reading ... [Read On!]"

For tertiary students this is a significant step towards academic success. Several students reported the value of linking and comprehension with regard to their experiences in Read On!:

"The understanding of ... linkage between words in reading and interpretation ... [in Read On!]"

Specifically, some students affirmed that Read On! had helped them with understanding and comprehension in specific ways:

"[Read On! helps]Making time to understand and come up with one's own point of view on comprehension."

As lack of reading skills can lead to inability to process information and write about it (Behroozizad and Bakhtiyarzadeh, 2012; Bharuthram, 2006, 2012; Kilfoil, 2010) this is a core skill required in tertiary education. In addition, awareness of the students' own thinking processes or Metacognition (Flavell, 1976) is reflected in the following reported by one student.

"It [Read On!] broadens ones way of thinking."

Students described how they could use Read On! to direct and organize their own learning processes when reading.

"It [Read On!] enhances my analysing skills."

Karbalaei's (2010) study on the result of metacognitive reading strategies used by EAL students found that students were able to use scheduling, organising and assessing with focused reading. Students reported similar findings in Read On! Students understood that the ability to read with analysis at academic tertiary level is key and commented that:

"It [Read On!] helped me to be able to read and interpret ..."

Additionally, students believed that Read On! may also enable them to understand, link and analyse reading, writing and improve their vocabulary. Some students specifically suggested that EAL students would benefit if Read On! were compulsory.

"The [Read On!] programme should be compulsory to (sic) all Health Sciences students who have done (sic) English as a second language."

5.14.3 Reading / Writing / Vocabulary

In this theme improvements to reading and writing were reported by students. Some students described the value of the gaining of vocabulary from Read On!

The Matthew Effects are the detrimental results of weak reading skills (Stanovich, 1986). Stanovich (1986) argues that students with inadequate reading skills are more likely to lose proficiency if they continue not to read regularly. Several students who practiced reading reported on the benefits they had experienced from different reading practice skills in Read On!

"It [Read On!] helped me to improve my reading strategies"

Reading skills are acquired with extensive practice and range in any language. Students related that their current reading skills had improved in that they were now able to read with more awareness.

"It [Read On!] helped me with being able to read carefully."

Other aspects of reading can also be enhanced when practice is put in. In addition to improved reading skills some students reported that their reading speed had been enhanced.

"It [Read On!] improved my reading speed ...

In addition to improvements in reading skills, students reported that their writing skills had similarly become better. Academic writing is often one of the most difficult aspects to master at tertiary level. Indeed, some students felt that both their reading and writing skills had improved.

"[Read On!]... helped our reading and writing skills."

Besides comprehension/understanding, the acquisition of vocabulary was among the most mentioned benefits, as can be seen from the examples given below.

"I have learned a lot of new words and meanings of words I see every day."

The concept of the ZPD (Vygotsky, 1978) maintains that active students are more likely to be able to take on board the capacity to combine the vocabulary and grammar aspects of Read On! Some students felt the Read On! helped them in both instances.

"[Read On!] helps me to understand [both] word structure and sentence construction"

Read On! appears to support a scaffolded (Vygotsky, 1978) teaching and learning approach which a number of students felt was helpful to them. Further, some students reported that their current vocabulary had expanded. Students with existing English capacity felt that there was a sufficiently broad and deep vocabulary to accommodate the variety of students who participated in the practice sessions.

"For someone already capable of reading, speaking and writing in English ... [Read On! is] ... a good tool to extend my vocabulary ..."

5.14.4 Access / Facilitators

Students drew attention to the limited access to the Read On! programme as it is only available on campus and in very few computer laboratories. They felt that access to Read On! should be accessible campus wide and even from homes and residences, on the internet. Students described positive experiences with the help of the facilitators who worked with Read On!

Connectivism theory (Siemens, 2006) contends that students retrieve, learn and retain knowledge holistically. This includes how and where students acquire and locate data. One student stated that Read On!:

"[Should be] available on all campuses."

In today's learning environment students are more likely to technologically network and connect (Elliot and Martin, 2011) and they may also use open courseware that allows students interactive participation in their own learning.

"[Read On! should be] made available on the Wits website for individuals who can work independently."

Siemens (2006) contends in the Connectivism Development Cycle (CDC) that students in this era have to work within a knowledge position that regularly adapts and updates to the most up-to-date modern sources of knowledge for engaging in reflexivity (Siemens, 2006). Students detailed how they wanted constant, ongoing access to Read On!

"I think it [Read On!] is better to be made available throughout [the curriculum and campus] because sometimes you find you have a lot of free time and you can use it for learning."

In an unpublished report from the University of Pretoria (UP) (2012) students reported positive outcomes in reading speed, comprehension, vocabulary and spelling. Less successful for students at UP, were comprehension of the importance of reading and the time/benefit ratio, as first year students seemed unable yet to manage their own time. In addition, UP students often had difficulties in the course work for the degree they were registered. Wits students also reported that some Read On! levels were beyond them and they believed that they needed extra help.

"There should be more helpful facilitators ... as some of the levels we do on the programme need explanation.

In the UP report students said that limited time was spent on campus, due to travelling to and from campus and students' heavy study schedules.

Finally, some students may have experienced unease with having to attend Read On! around peers but dedicated facilitators were reported to assist considerably to ease attendance and commitment to the Read On! programme. Students reported this as a positive aspect of Read On!

"... [S]tudents are more likely to produce great results with the aid of a [Read On!] Assistant/Assistants with absolutely great communication skills."

In the overall the feedback was positive and constructive. Students practising on the Read On! also reported around the issue of Facilitators/Assistants that:

"The [Read On!] Assistants are amazing ... encouraging and very friendly."

There was one negative but valid response regarding the role of the facilitators. One student maintained that:

"The [Read On!] supervisors (facilitators) should be taught to respect us and understand our situation."

For this reason peer-to-peer Facilitators/Assistants would require adequate training and skills to facilitate the sessions.

5.14.5 Suggestions and Improvements

Students were invited to add any observations or comments about the Read On! programme.

Some students felt that there was a lack of discipline specific terminology and vocabulary in the Read On! They felt that this is one of the areas where Read On! could be improved.

" ... language related exercises.. [in Read On!] like anatomical terms/words that can be useful in medical school studies."

Students felt that if Read On! was going to be used in the faculty it should utilize more medical terminology and be more focussed in the Health Sciences with regards to terms, expressions and language. Students also felt that Read On! should include medical language with which students are required to be familiar so that they are working in an authentic reading and writing environment. A few students added constructive suggestions that they

felt that reading, comprehension and writing could be combined so that students would benefit on all levels.

These submissions are interesting as the objective of Read On! is not to "teach" medical terminology but to teach students to read, write and understand when reading. Several students reported that they did not believe that the programme was challenging enough and they reported that

"[Read On!] needs more challenging language practice exercises ..."

Notably, not all students believed that the Read On! was not difficult. One student felt that even the slight changes in English spelling that they had encountered (Read On! was developed in American English) were difficult to work with in terms of spelling and commented

"The [Read On!] programme is American and it is hard to spell some words"

There were several perspectives for and against, on the amount of time that students spent on the programme. In terms of practice time, a number of students believed that the time spent in Read On! should be increased and maintained that

"[Students] should [be able to] practice more than 2 hours [in Read On!]"

The overall feeling was that for students to really benefit they should be working regularly and often. *"More than 2 hours to do Read On! per week."*

Some students felt that the two hour long sessions (students were encouraged to take a break in the middle and stretch and do something else for a fifteen minute stretch) were too long. They suggested that the practice time should be decreased.

"The [practice] sessions are long ..." and *" ... 2 hours is a bit long [for practicing] ... "*

This is a compelling suggestion and one which will be valuable to address going forward. Furthermore, some students suggested reducing the number of levels in Read On!. This would be difficult in practice because of the scaffolded nature of the programme, which may result in certain sections being omitted and which would impact on the practitioner at a later time in the programme. They proposed to

"Decrease the number of levels in the [Read On!] programme"

This same argument was made by more advanced students. Given that students up to five years of study had been placed onto the programme from the CG to practice, some of these students felt that the sessions were too long. As some of the practising students came in from hospitals, where they were placed, this did impact on them.

"If the [Read On!] programme is pursued in 3rd year of study ... two hour sessions should be broken down ..."

Another criticism was that the Read On! programme should give feedback on the written component. The writing component does have the facility to mark the work done. However, the researcher wanted to move away from mark related assessment to a space where the student was engaged in the process of writing and could develop as s/he moved through the Read On! programme. This was discussed in the early stages and a decision was taken not to allocate marks to the writing component. The workload would also have been unsustainable in the long term for the facilitators.

"[Read On gives] [n]o marking/feedback in writing exercises"

With a dedicated, full time facilitator, the writing component may be used to springboard the student into deeper writing exercises in which academic writing in classes is then discovered in parallel by the student.

5.15 CONCLUSION

In this chapter the results from the VG and CG gender, degree and home language distribution were revealed. Statistical analyses were made on the VG and CG data using the VG and CG and Read On! screening and assessment results. The VG and CG data and academic outcomes were analysed using Read On! practice times in 2013 and 2014. Subsequently, the Likert-scale and open-ended questions data were analysed using a qualitative approach to determine students' perceptions of Read-On! in 2013 and 2014. The VG relationships between Read On! levels and Nbtal%, Nbtma%, Nbtql%, and Nbt%A were analysed using the Pearson product-moment correlation coefficient and focussed on the Nbtal%. The results of the Read On! and the NBT Academic Literacy (Nbtal%) scores over the two years were considered and the following was found. For the VG in 2014, seven of the ten Read On! levels showed a strong, positive correlation between Read On! and the Nbtal%% while in 2013, four of the ten levels showed a strong positive relationship. The Nbtma%, Nbtql% showed a moderate to weak positive relationship overall. A strong to moderate positive correlation was found between Read On! levels and the NBT Average (Nbt%A): 2014 level IA ($r = .52$, $n = 384$, $p < .01$) and for 2013 level IA ($r = .51$, $n = 291$, $p < .01$), 2013 level HA ($r = .51$, $n = 425$, $p < .01$) and 2013 level EA ($r = .60$, $n = 13$, $p < .05$). Correlation coefficients could not be calculated for AA and RA levels as no students were placed into these levels. In the qualitative analyses of the Likert-scale and the open ended questions, the greater number of CG students who participated reported positive benefits from their involvement on Read On! A few students reported experiencing difficulty in Read On! In general, the small amount of reported negative feedback from students was constructive in the main, which seems to indicate that students were introspective in their responses.

In chapter six discussion will be made of the above results and some recommendations for the future will be considered.

CHAPTER SIX

6. DISCUSSION OF RESULTS, RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

In this chapter the results of the research will be examined and discussed and some recommendations made for the way forward. This research evaluation methodology used statistical analyses of the mean (average), standard deviation, Pearson's product-moment correlation coefficient and two-way ANOVA for the VG first years, Read On! and end of year outcomes. Furthermore, questionnaire data obtained from the student sample in the CG for 2013 and 2014 were analysed quantitatively using, firstly, the median in the Likert-scale analysis and secondly, emerging themes in the open-ended questions, to draw out student perceptions of the Read On! programme.

From the objectives of the research, the academic performance and Read On! data were obtained for the students admitted to the first year of study and repeating YOS in the faculty for 2013 and 2014. The CG and VG groups were identified and the CG and VG were evaluated by analysing the Read On! screening and assessment results and end-of-year academic results at the end of 2013 and 2014. In the results, the VG and CG are described in terms of gender, degree, Read On! level attained, CG and VG Read On! and end-of–year academic results and distribution of home languages for the CG and VG. Thereafter, CG students' reported experiences in Read On! programme are considered.

6.2 RESULTS

6.2.1. Gender Distribution

The gender distribution reflects previous findings of gender distribution at university : the ratio of females to males in both the VG and CG reflect more females placed in Read On!

than males. Research in 2008 by Mbambo in the South African higher education context showed that there was equal opportunity for success for both male and female students with females generally being more successful than males. Lukhele (2013) maintains that females may have a more positive standpoint to reading than males.

6.2.2 VG Placements by Degree

The number of VG first-year students who were screened, assessed and placed in Read On! in 2013 was 87 (14.3%) and in 2014 was 122 (17.9%). These students were identified by Read On! as requiring extra English reading, writing, vocabulary or comprehension assistance. This reflects as almost 1 student in 5 of the first years in 2013 and more than 1 student in 3 of first years in 2014 who were underprepared in academic literacy skills for tertiary study. While this does not reflect the high figures that MacGregor (2009) found, they are still fairly high. Without some intervention for these students the tertiary study experience is likely to be difficult and students are unlikely to be successful in their studies. Given this, it is reasonable to expect that students who have already completed their schooling and been accepted into university would be able to master the Read On! programme with relative ease. But there are other factors involved. The 2013 and 2014 data revealed that while numbers of students are placed in the Read On! upper levels of IA, HA, GA, there were a percentage of students who were placed in much lower Read On! .levels and even some very few were placed at levels as low as DA and CA. This will be of real concern for the university as these students will almost definitely face greater academic language challenges. Nevertheless, it must be remembered that EAL students and students entering university from disadvantaged schooling backgrounds will certainly require extra assistance in reading and writing skills in the transition.

In 2013 and 2014 most VG students were placed into the GA (53 students), HA (66 students) and IA (30 students) Read On! levels. For example, the placement level in the EA group rose from 8 students in 2013 to 25 students in 2014, the reasons for which are not apparent and would require further investigation. During 2013 and 2014 only 27 VG students practiced in the Read On! programme for more than 5 hours even though 209 students had been placed in Read On! As all national and international students who enter the university had completed matric, ideally the students should have no difficulty completing Read On! with 'No lessons prescribed'. Nevertheless, this would only have been possible if students are reading at matric level because the Read On! was developed for school level up to matric in the USA.

This signals that a number of students entering university are still underprepared in reading and writing, as confirmed in the literature. These students will definitely require extra assistance in reading and writing skills to be able to bridge the academic gap between school and university (Bharuthram and McKenna 2006; Andor, 2006; Carter, 2010; Bharuthram, 2012). In this research 209 students out of 1,286 students, 16.2% of university entrants in the years 2013 and 2014, who were screened and assessed were placed in the Read On! programme. As mentioned above, time spent in the Read On! by the VG showed that during 2013 and 2014 only a total 27 out of 209 first year students (13%) who had been placed practiced in the Read On! programme. The reasons are diverse: first-year students often find great difficulty in setting aside time at university for time-consuming, extra-curricular activities such as learning English vocabulary, reading, writing and comprehension. In addition, they may not recognise that they need the help and believe they know how to read adequately. Any intervention offered must be discipline relevant and specific in order to directly assist students in their current studies as they progress. In addition, the intervention must not be seen as a punitive measure but rather an activity that can enhance and improve

their current studies. A discipline-specific intervention path would possibly facilitate time-stressed students to take a more invested view in engaging in the intervention.

With regard to other universities who use the Read On! programme in South Africa, the UP Report for example, says "[F]or the most part the objective of the course being to increase the reading skills of first year ... students was met" (UP, 2012, p.18). This finding is consistent with the findings of the CG participants in this research, who were the only students who did considerable practice in the Read On! This would signal that the Read On! may have been a tool that helped those students improve their English reading, writing, vocabulary and comprehension skills at tertiary level study.

6.2.3 VG Read On! and Disciplines

Read On! levels and students from disciplines placed in Read On! were consistent in the VG group in both 2013 and 2014. In 2013, the highest number of students placed in Read On! in the VG group were from the following degrees: BCMP (20%, n=17), BNURS (22%, n=19), BPHARM (21%, n=18) and MBBCh (23%, n=20). In 2014 there was a similar distribution across these degrees with BCMP (20%, n=24), BNURS (25%, n=31) and BPHARM (16%, n=20). In 2014, the MBBCh class attendance was low (n= 9) due to IT difficulties and the figure of 3% (n=4) placed in Read On! in 2014 is skewed. The number of students placed from the BDS, BOHSc, BSc PHYSIO, BSc OT and BHSc were lower across both years. (See Figure 5.5 and Figure 5.6 on page 62). The greater numbers of first year students placed in Read On! are disquieting. This offers compelling evidence for offering early reading, writing, vocabulary and comprehension support to those students who enter tertiary education underprepared.

In 2013, 18% of the VG first year students who did the Read On! screening and assessment were placed in Read On! while in 2014, 38% of VG screened were placed in Read On! This

reflects a marked increase between 2013 and 2014, the reasons for which cannot be established from this research. Stanovich (1986) found that for poor readers, reading skills weaken over time if the student does not read to maintain or improve upon reading skills. And the cycle perpetuates (Stanovich, 1986). Notably, VG students in 2013 and 2014 were not required to practice reading in the Read On! programme even if they have been placed in it. Importantly, the lack of proficiency in reading at tertiary level, where reading is crucial to the academic endeavour, may lead to academic failure.

6.2.4 CG Placement in Read On! by Level

In the CG in 2013, 28 students (16.8%) and in 2014, 28 students (17.1%) were placed in Read On! for reading and writing practice. Repeating students in the CG were registered in a range of levels of study and degrees (from first to fifth year of study). Students repeat a year of study for a variety of reasons including poor academic literacy and lack of comprehension of the material. Identifying students who do require the extra assistance in reading and writing skills early in their studies is crucial, be they repeat YOS or not. Without extra support, these students are vulnerable in reading and writing skills and sooner or later in their degrees they may encounter an overly difficult task and may even give up entirely.

In the Read On! 24 (86%) of the 28 students placed in 2013 and 26 (93%) of the 28 students placed in 2014 were placed in the GA, HA and IA levels – which is somewhat encouraging given that these are the uppermost levels in Read On! Over the two years, the highest and second highest numbers of CG students were placed in HA (23) and in IA (18) respectively while 9 students were placed in the GA level. Some of the repeating CG students across different years of study may have carried the under preparedness in the essential skills of vocabulary, reading, writing and comprehension with them but there are certainly other exacerbating factors. In 2009, MacGregor found that under preparedness in academic English

language was a contributory factor in underperformance at university and was one of the obstacles that impacted directly on throughput rates. Although this research study did not cover the throughput rates, this may be an area for further research. Bharuthram (2012) and other researchers (Andor, 2006; Carter, 2010) recommend that if students are not reading or writing adequately when they enter tertiary education then they must be offered extra assistance in these areas to address the challenges they are facing in English. It may well have been that as students progressed through their degrees they were able to gather enough English academic language skills to progress to the next year of study, but then when the level of English and content required was again higher they were not able to proceed and had to repeat a year. An interesting area of further study would be an in-depth analysis of student progression to establish whether students were repeating more than one year of study through the development of their degree.

In South Africa, reading interventions such as Read On! for EAL first year level students may offer students a solid academic English foundation to help overcome these challenges and thereby contribute towards an improved throughput rate.

6.2.5 CG Read On! and End of Year Academic Results

Success rates were considered for the CG by interpreting student performance between Read On! screening and assessment results and end-of-year academic results in 2013 and 2014. The data revealed that 85.7% of the CG students in 2013 passed the YOS while in 2014, 96.4% students passed the YOS. Interestingly, these success rates are higher than the VG in 2013 (81.6%) and in 2014 (82.0%) for end of year pass rates. Obviously, it must be borne in mind that the CG students were repeating a YOS which certainly points towards them being weaker students. Notwithstanding, it must also be remembered that these students had already studied the year's work, albeit unsuccessfully, and were now re-reading the YOS. This

repetition may have aided the students in their studies and as described by Cunningham and Stanovich (2001),“ … exercise of this habit [reading] serves to further develop reading comprehension ability ...” (p.147). In reading a second time round the majority of those students were successful, however that success cannot be attributed to the Read On! intervention alone, as this study is not generalisable.

In the CG for 2013 and 2014, a total of 39 students out of 56 repeating students (70%) practiced between five and 68 hours in Read On! This was even though the Read On! was not always well received by repeating students who sometimes saw this measure as punitive and negative. The facilitators offered ongoing encouragement in the Read On! sessions because as Deci and Ryan (2008) and Ryan (2010) found, a positive reading environment assists students in acquiring new optimistic reading and writing experiences and techniques which can inspire and inculcate enjoyment of reading and writing. In other words, an additional intervention, such as Read On! may be more successful if it is facilitated and delivered in an encouraging and affirmative manner for the benefit of students. To this end, time must be allocated in the regular study schedule to attend such sessions.

6.2.6 VG and NBT, Read On! and End of Year Academic Results

Correlations between NBT entry level and Read On! and Read On! and end–of–year results for 2013 and 2014 for the VG were considered.

In 2013, 28.9% of VG students were placed into the Basic or Intermediate NBT AL while in 2014 26.2% of VG students were placed into Basic or Intermediate NBT AL. This indicates that more than one in four first year students will require extra ‘extensive’ support in English when entering tertiary study. This research showed a strong, positive correlation between NBT Academic Literacy ($p < .01$) and Read On! for the VG in 2013 and 2014. Read On! may have made more of a difference if students had practiced in the programme and not just

attended a screening and assessment. This exercise may have further benefitted those students who required extra vocabulary, reading, writing and comprehension skills.

Overall, the statistics showed a strong, positive relationship between Read On! assessment and NBT AL entry level scores for the VG but there was a variance at the GA level. The exception was that only a weak, positive relationship was found in the 2013 GA level, the reasons for which cannot be identified from this research.

In terms of the NBT Mathematics, Quantitative Literacy, Academic and Composite Indices and the Grade 11 and 12 outcomes a moderate, weak positive relationship was found, which was not unexpected as the research focus was on academic literacy.

6.2.7 Distribution of Home Language

The literature reports that students who do not read enough or effectively in English will have challenges in reading and writing in academia (Bharuthram, 2006; Kilfoil, 2010; Behroozizad and Bakhtiyarzadeh, 2012; Bharuthram, 2012) and will require extra support. The research moreover indicates that this may impact on student success (Van Dyk and Weideman 2004; Scott, 2009) and has found that under-preparedness in reading by undergraduate students entering tertiary education is the central challenge to success rates.

Several studies (Mavundla and Motimele, 2002; Bharuthram and McKenna 2006; de Wet and Wolhuter, 2009; Lukhele, 2013) have shown that EAL students often experience greater difficulty with English reading, writing, vocabulary and comprehension at tertiary level unless the students' English language foundation was comprehensive. The data indicates that in 2013, 43% (n=247) of students were EAL speakers and in 2014, 44% (n=282) of students were EAL speakers. These statistics reflect an increasing diversity of home language amongst first year students entering university and planning around support in English reading,

writing, vocabulary and comprehension skills for this cohort is essential if these students are to have equal opportunity to be successful in their studies.

6.2.8 CG Perceptions of Read On!

On the whole, the CG students' reported perceptions showed that those students who had practised in the Read On! programme had had a positive and affirmative experience. Notwithstanding, a small percentage of the students felt that Read On! had not benefitted them for different reasons. This is consistent with the findings from UP "Overall it has been concluded that, while Read On! is not without its faults, that the majority of the students who completed the course indeed did derive some exceptional value out of the course" (UP, 2012:18). Bharuthram, (2012), Ryan (2010) and Deci and Ryan (2008) endorse early reading which is included into the curriculum, holistic in nature, and an environment which motivates EAL students towards a proficient reading capacity.

A median of 82% of the CG students said that they felt more self-assured in reading, writing and understanding English and understood the importance of working alone after practicing in Read On! An average of 85% of the sample replied positively about gains in linking, understanding and analysis in English and recounted that they were now able to use vocabulary learned in Read On! In terms of facilitator's enthusiasm 76% of students agreed that Read On! facilitation and the facilitators' dedication helped them to appreciate the importance of reading. Almost three-quarters of the students (73%) said that they had been able to attend the practice sessions in Read On! on a regular basis. This may have been due to the fact that repeating students have to repeat a course or courses but not the entire year, and therefore had more free time to practice in Read On!. A median of 70% of respondents reported that they agreed that attending the Read On! programme helped them. The above

responses are heartening and indicate that Read On! has offered a mainly positive experience for the majority of first year students who responded to the questionnaire.

Notably, less than half of CG students (48%) felt that they would like to complete the Read On! programme while a small percentage (median between 6% and 12%) of students felt that the Read On! had not helped them. This may have been attributable to the repetitive, intensive and deep reading practices and exercises which are involved in learning reading. There are no quick or easy ways to assimilate reading with English vocabulary, grammar and language and for many EAL students the road is a rough one.

In the main, student responses included perceptions and attitudes, academic insights into reading, writing and vocabulary, access, Read On! facilitators and suggestions for improvements were constructive, positive and optimistic. Students reported that the Read On! programme helped them to increase and improve their reading, writing, vocabulary and comprehension skills. Additionally, a number of students detailed how their academic reading skills were enhanced as a result of their experience in Read On! Some recommendations were made on ways to improve Read On! and students' responses offered some valuable insights. While these results are not generalisable they do offer a 'window' of students' observations and estimations of the Read On! programme which is a helpful insight despite the constraints.

6.3 LIMITATIONS

Limitations to a study of this nature were expected due to its exploratory nature.

The first limitation to this study may have been the sample size because despite the sample being adequate it was not inclusive of all students who had at any time used the programme. It was limited to those who had practised in Read On! Therefore, the results can only offer a

window on the use of the Read On! in this specific setting and for this specific sample. In addition, as the study was evaluative, the study results are not generalisable.

Another limitation was that a non probability sample selection method was not used. The sample selection for the VG group was determined from those first year students in 2013 and 2014 who attended the Read On! screening and assessment. In addition, a reduced number of students were placed in Read On! to practise. Moreover, the sample of students for the Likert-scale analysis and the thematic analysis was drawn from this set of students who completed the questionnaire voluntarily, which meant a further reduction in sample size.

Yet another limitation was that the MBBCh figures in 2014 do not present a full picture as only nine students were able to attend the screening and assessment due to technical difficulties. Additionally, there may have been academic changes or other variables, unknown to the researcher and introduced in 2013 and 2014 which may have affected the study.

Finally, despite the above, it must to noted that Read On! screening and assessment and practice sessions were the only new interventions that were introduced in the Office of Student Support during 2013 and 2014, to the best of the researcher's knowledge. This however, does not rule out that other interventions may have been made in the teaching methods or additional help given in the various disciplines that may have contributed to the changes found in the study.

6.4 RECOMMENDATIONS

The research confirms from the strong, positive correlation with the NBT Academic Literacy and reported perceptions that students can benefit from extra assistance with reading, writing, vocabulary and comprehension. Given the vital importance of a strong base in reading, writing, vocabulary and comprehension capacity in first year in university, the development

of a Faculty of Health Sciences' appropriate academic English reading resource is very important. This could go a long way towards empowering students who find the transition from high school to first year university challenging. Furthermore, such a resource could also offer a more solid foundation and a more equal footing for students' tertiary careers going forward. Of notable significance is that the reading and writing intervention itself should not be presented as a punitive measure but rather as a smart tool with which a student can get ahead and improve and enhance reading, writing, vocabulary and comprehension skills for their professional career.

This research does not show clear causes for the throughput difference for VG students who completed Read On! and were not prescribed any further practice on the programme, as opposed to those who did not. As most VG students did not practice in the Read On! programme, data could not be obtained for this sample and further research into the true reasons for this may be of value.

In 2013 almost one in four students who did not attend the screening and assessment in the Read On! programme also failed the academic YOS. The 2014 outcomes were somewhat lower. This would be another avenue for future research that may be of importance - to identify factors other than the ICT difficulties which may have contributed to this variation.

Currently, practice in Read On! is not a requirement for first year students. The programme also does not bear any credits nor are there any consequences for not taking the opportunity to develop the necessary reading, writing vocabulary and comprehension skills required to be successful at university. Furthermore, the curriculum timetable is very full and there is no space for this kind of intervention. If Read On! is to be maintained going forward, all of the above would benefit students more if they were addressed.

This Read On! research (despite Read On! not being designed for tertiary level education) has undoubtedly confirmed that students can benefit from a reading programme intervention. Particularly, as the Read On! correlates to the NBT Academic Literacy scores, using the programme may be useful until a better reading programme emerges to promote reading.

6.5 CONCLUSION

South Africa is one of the most unequal societies in the world where the quality of qualifications needs to be considerably bettered (Keeton, 2014). In addition, historical bias with economic, political and social discrimination continues to affect many spheres of life in South Africa and can and does lead to unbalanced schooling opportunities and transition from schooling to university.

This research shows that health sciences students and the Faculty of Health Sciences could benefit from a programme designed to transition from school to university in terms of academic literacy. The voices of students can clearly be heard requesting this. The difficulty would be in developing such a resource which could be updated on an ongoing basis and maintained as the discipline develops in the health sciences. To this end an open education resource, contextually developed in the field of health sciences, specifically for the health sciences students, might be one answer.

Home language as one determiner for ease of the transition into higher education could be incorporated into the design to assist EAL students across the divide but should not be the core learning outcome in the process. Academic language in reading and writing should remain the central aim but the resource needs to be wider than that. In academic circles it is often not recognised that students who already have English as a home language may also find challenges in academia at tertiary level study. Granted, for those who are EAL students the transition must be exponentially harder. The resource should be developed for *any* student

entering tertiary level and who may need extra support in reading, writing, vocabulary and comprehension skills in English – as long as English remains the language of tuition.

Another determiner could be the entry level scores for the NBT AL, which have been shown to correlate with the Read On! programme confirming that reading, writing, vocabulary and comprehension skills in English are vital to university students. The faculty could utilise these data more fully for the early identification of students' Academic Literacy needs and how to benefit all students coming into university in a more realistic way. Building even more on this idea, programmes to assist students who are struggling in the NBT MA and NBT QL could be added to the resource in a relevant way, as these skills can contribute to the comprehension and logical analysis skills required in Academic English and to enable students to benefit holistically in adjusting to the academic environment.

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Appendix I

M140715

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M140715

NAME: (Principal Investigator) Ms Gail Carter et al

DEPARTMENT: Office of Student Support
Faculty of Health Sciences

PROJECT TITLE: An Evaluation of the Read On! Programme for Health Sciences

DATE CONSIDERED: 25/07/2014

DECISION: Approved unconditionally

CONDITIONS:

SUPERVISOR:

APPROVED BY: _____
Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 25/07/2014

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

_____ _____

Principal Investigator Signature M140715Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix II

Faculty of Health Sciences (Office of Student Support)

The Phillip Tobias Health Sciences Building, 29 Princess of Wales Street, Parktown 2193, South Africa
• Tel: +27 11 717-2000 • Fax: +27 11 643-4318 • Telegrams: 'Witsmed'

14 May 2014

Ms Gail Carter
ASSOCIATE LECTURER
Office of Student Support
Faculty of Health Sciences
University of the Witwatersrand
JOHANNESBURG

Staff No: 00200365

Dear Ms Carter

RE: **RESEARCH PROPOSAL ENTITED** – *"An evaluation of the Read On! programme for first year health science students"*

I have reviewed your research protocol and permission is hereby granted for you to proceed with the research.

PLEASE NOTE: that permission has been granted subject to the following conditions:

1. Students are to remain anonymous.
2. Consideration of the proposal and approval by the Ethics Committee.

Yours sincerely

Professor T Parbhoo
ASSISTANT DEAN (Student Support)
Faculty of Health Sciences
University of the Witwatersrand
JOHANNESBURG

Appendix III

Faculty of Health Sciences (Office of Student Support)

The Phillip Tobias Health Sciences Building, 29 Princess of Wales Street, Parktown 2193, South Africa
• Tel: +27 11 717-2000 • Fax: +27 11 643-4318 • Telegrams: 'Witsmed'

14 May 2014

Ms Gail Carter
ASSOCIATE LECTURER
Office of Student Support
Faculty of Health Sciences
University of the Witwatersrand
JOHANNESBURG

Staff No: 00200365

Dear Ms Carter

RE: **RESEARCH PROPOSAL ENTITLED** – *"An evaluation of the Read On! programme for health science students"*

I have reviewed your research protocol and permission is hereby granted for you to proceed with the research and to use the admissions scores of your sample population. These scores include Composite Index, Academic Rating, NBT, BQ and Grade 11 & 12 English marks.

PLEASE NOTE: that permission has been granted subject to the following conditions:

1. Students are to remain anonymous.
2. The admissions scores are to be used in such a way that they cannot be directly related to specific individuals in your sample population.
3. Consideration of the proposal and approval by the Ethics Committee.

Yours sincerely

Professor T Parbhoo
ASSISTANT DEAN (Student Support)
CHAIR: Advisory Committee on Admissions Policy
Faculty of Health Sciences
University of the Witwatersrand
JOHANNESBURG

Appendix IV

PARTICIPANT INFORMATION SHEET

Study Title: An evaluation of the Read On! programme for Health Science students

Ms Gail Carter (Associate Lecturer) Contact Number 0844 733 900
Supervisor: Associate Professor P Mc Inerney

Dear Students

My name is Gail Carter and I am an Associate Lecturer in the Office of Student Support based in the Faculty of Health Sciences. Thank you for attending this evaluation session of Read On!.

I have registered for a Masters degree in the Faculty of Health Sciences at the University of the Witwatersrand and wish to evaluate the Read On! programme. This research will help us to see whether Read On! is an effective intervention or not and to better understand the value of the programme to students and the University. I hope to complete this research by the end of 2015.

I am asking you to participate in this research by completing the attached anonymous questionnaire about the Read On! programme as fully as you possibly can, and handing it back to the facilitator. Participation in the research is completely voluntary. There will be no consequences whatsoever should you choose not to participate. If you choose not to participate, there will be no loss of benefits or penalty whatsoever to yourself. Furthermore, if you would prefer to discontinue participation in the study at any time there will be no consequences to yourself.

Complete anonymity is assured. Please do not write your name, student number or any personal information or details whatsoever on the questionnaire. In this way the questionnaire cannot be linked to you. With complete anonymity there are no risks attached to being involved in this research.

As the main researcher, I will be the only person to have access to the data that is provided and will keep it completely confidential. I will personally enter and analyse the data from the questionnaires. The results emerging from this questionnaire and the research will be made available to students, staff and the University after the completion of the research.

Thank you for your participation.

If you have any objections to or concerns with this research please feel free to email me at: Gila.Carter@wits.ac.za or the HSRE office directly or Ms Anisa Keshav Anisa.Keshav@wits.ac.za. And contact number(011) 717 1234.

Read On! - Questionnaire 2014

Please complete both pages of this questionnaire.

Prior computer knowledge: _____(in months/years) Date:_____

Home language/s: _____

Please answer the following questions on a scale of 1 to 5
(1 = strongly agree; 2 = agree; 3 = neutral; 4 = disagree; 5 = strongly disagree)

	Strongly agree				Strongly disagree
	1	2	3	4	5
1. I am now more confident about reading in English					
2. I can now understand/analyse what I am reading in English better.					
3. I can now use the English vocabulary that I learned on Read On!.					
4. I am now more confident about writing in English.					
5. I am now more able to make linkages in my English reading.					

	Strongly agree				Strongly disagree
	1	2	3	4	5
6. I recognize the importance of being able to work on my own.					
7. I am now more confident about reading and understanding.					
8. I want to complete the Read On! programme.					
9. I was able to attend Read On! on a regular basis					

	Strongly agree				Strongly disagree
	1	**2**	**3**	**4**	**5**
10. The presentation helped me understand the basic principles.					
11. Enough time is allocated to do the Read On! programme.					
12. The Read On! programme makes clear what I am required to do					
13. The Read On! feedback was helpful to my understanding.					
15. The facilitator's attitude to the Read On! was positive.					

16. Please list the things that Read On! does well and that you feel helped you on the programme:

_____

_____

_____

17. Please list the things that you think could be improved on the Read On! programme :

_____

_____

_____

<u>Please answer the following questions to assist in course design:</u>

18. Would it have helped you to have participated in Read On! earlier in the year? Please say why you think that is?

_____

_____

_____

19. What were the THREE most important things that you learned on Read On! in order of importance to you, with 1 being the most important?

1. _____

2. _____

3. _____

20. Please feel free to add any other observations or comments about Read On!:

_____

_____

_____

Appendix VI

2013 FIRST YEAR PARTICIPANTS (607) STATISTICAL ANALYSIS

Academic Index 11 nbt50nsc50	Correlation
SCR VS Ain 11	0.02
IA VS Ain 11	0.13
HA VS Ain 11	0.11
GA VS Ain 11	0.11
FA VS Ain 11	-0.05
EA VS Ain 11	-0.21
DA VS Ain 11	0.00
CA VS Ain 11	0.27
Academic Index 12 nbt50nsc50	Correlation
SCR VS Ain 12	0.14
IA VS Ain 12	0.22
HA VS Ain 12	0.20
GA VS Ain 12	0.08
FA VS Ain 12	-0.06
EA VS Ain 12	0.01
DA VS Ain 12	0.41
CA VS Ain 12	-0.43
Composite Index 11 prov decs	Correlation
SCR VS Cin 11	0.03
IA VS Cin 11	0.15
HA VS Cin 11	0.16
GA VS Cin 11	-0.04
FA VS Cin 11	-0.22
EA VS Cin 11	0.01
DA VS Cin 11	0.35
CA VS Cin 11	-0.91
Composite Index 12 prov decs	Correlation
SCR VS CIN 12	0.10
IA VS CIN 12	0.21
HA VS CIN 12	0.18
GA VS CIN 12	0.07
FA VS CIN 12	-0.07
EA VS CIN 12	0.01
DA VS CIN 12	0.47
CA VS CIN 12	-0.16

NBT AL Percentage	Correlation
SCR VS NBTAL%	0.38
IA VS NBTAL%	0.54
HA VS NBTAL%	0.60
GA VS NBTAL%	0.12
FA VS NBTAL%	0.50
EA VS NBTAL%	0.71
DA VS NBTAL%	0.21
CA VS NBTAL%	0.37
Grd 11 Nsc English	Correlation
SCR VS GRD 11 NSC Englis	0.20
IA VS GRD 11 NSC English	0.38
HA VS GRD 11 NSC English	0.34
GA VS GRD 11 NSC English	0.32
FA VS GRD 11 NSC English	0.22
EA VS GRD 11 NSC English	0.06
DA VS GRD 11 NSC English	0.42
CA VS GRD 11 NSC English	-0.24
Grd 12 Nsc English	Correlation
SCR VS GRD 12 NSC Englis	0.21
IA VS GRD 12 NSC English	0.47
HA VS GRD 12 NSC English	0.42
GA VS GRD 12 NSC English	0.07
FA VS GRD 12 NSC English	0.19
EA VS GRD 12 NSC English	0.24
DA VS GRD 12 NSC English	0.40
CA VS GRD 12 NSC English	0.29
NBT MA Percentage	Correlation
SCR VS MA Percentage	0.24
IA VS MA Percentage	0.37
HA VS MA Percentage	0.35
GA VS MA Percentage	0.14
FA VS MA Percentage	0.20
EA VS MA Percentage	0.21
DA VS MA Percentage	0.22
CA VS MA Percentage	-0.43
Grd 11 Nsc Maths	Correlation
SCR VS Grd 11 Maths	0.16
IA VS Grd 11 Maths	0.32
HA VS Grd 11 Maths	0.27
GA VS Grd 11 Maths	0.30
FA VS Grd 11 Maths	0.22
EA VS Grd 11 Maths	-0.04
DA VS Grd 11 Maths	-0.15
CA VS Grd 11 Maths	-0.87
Grd 12 Nsc Maths	Correlation
SCR VS Grd 12 Maths	0.21
IA VS Grd 12 Maths	0.35
HA VS Grd 12 Maths	0.26
GA VS Grd 12 Maths	0.09
FA VS Grd 12 Maths	0.02
EA VS Grd 12 Maths	-0.13
DA VS Grd 12 Maths	-0.06
CA VS Grd 12 Maths	-0.39

		MEAN	STDEV
G	MINS IN RO	66.0	186.6
I	SCREENING	96.7	4.5
J	IA LEVEL	93.3	6.3
K	HA LEVEL	90.6	8.2
L	GA LEVEL	95.9	60.8
M	FA LEVEL	80.0	10.3
N	EA LEVEL	66.5	18.6
O	DA LEVEL	81.8	9.7
P	CA LEVEL	91.0	10.5
Q	BA LEVEL	70.0	
R	AA LEVEL	100.0	
S	RA LEVEL		
X	Academic Index 11 nbt50nsc50	41.1	26.2
Y	Academic Index 12	53.6	16.0
Z	Composite Index 11 prov decs	46.9	31.5
AA	Composite Index 12 prov decs	60.4	22.1
AG	NBT MA Percentage	53.5	17.5
AH	NBT AL Percentage	68.7	11.1
AI	NBT QL Percentage Score	63.2	15.1
AJ	NBT Percentage Average	61.8	12.6
AQ	Grd 11 Nsc English	74.3	8.8
AR	Grd 11 Nsc Physical Science	70.5	13.0
AS	Grd 11 Nsc Life Science	76.3	10.2
AT	Grd 11 Nsc Maths/Lit	45.0	63.6
AU	Grd 11 Nsc Maths	75.1	13.7
AV	Grd 12 Nsc English	76.6	7.8
AW	Grd 12 Nsc Physical Science	74.8	12.0
AX	Grd 12 Nsc Life Science	79.2	8.8
AY	Grd 12 Nsc Maths Lit	84.0	6.9
AZ	Grd 12 Nsc Maths	77.1	12.3

Only for NURS/OT/BCMP/BHSc

Appendix VII

2014 FIRST YEAR PARTICIPANTS (679) STATISTICAL ANALYSIS

Academic Index 11 nbt50nsc50	Correlation	NBT Academic Lit Percentage	Correlation			MEAN	STDEV
SCR VS Ain 11	0.05	SCR VS NBTAL%	0.51	G	MINS IN RO	83.3	258.0
IA VS Ain 11	0.03	IA VS NBTAL%	0.76	I	SCREENING	94.7	6.2
HA VS Ain 11	0.10	HA VS NBTAL%	0.60	J	IA LEVEL	89.2	11.3
GA VS Ain 11	0.06	GA VS NBTAL%	0.55	K	HA LEVEL	87.5	9.7
FA VS Ain 11	-0.01	FA VS NBTAL%	0.67	L	GA LEVEL	91.3	6.3
EA VS Ain 11	-0.12	EA VS NBTAL%	0.80	M	FA LEVEL	80.1	10.5
DA VS Ain 11	0.09	DA VS NBTAL%	0.59	N	EA LEVEL	64.3	15.3
				O	DA LEVEL	82.8	12.2
Academic Index 12 nbt50nsc50	Correlation	Grd 11 Nsc English	Correlation	P	CA LEVEL	75.7	12.2
SCR VS Ain 12	0.12	SCR VS GRD 11 NSC English	0.31	Q	BA LEVEL	87.0	11.0
IA VS Ain 12	0.19	IA VS GRD 11 NSC English	0.31	R	AA LEVEL	80.0	
HA VS Ain 12	0.08	HA VS GRD 11 NSC English	0.36	S	RA LEVEL		
GA VS Ain 12	0.04	GA VS GRD 11 NSC English	0.27	X	Academic Index 11 nbt50nsc50	44.2	25.1
FA VS Ain 12	0.25	FA VS GRD 11 NSC English	0.32	Y	Academic Index 12	54.8	15.2
EA VS Ain 12	0.15	EA VS GRD 11 NSC English	0.13	Z	Composite Index 11 prov decs	50.9	30.2
DA VS Ain 12	0.41	DA VS GRD 11 NSC English	0.20	AA	Composite Index 12 prov decs	61.7	21.6
				AG	NBT MA Percentage	58.6	17.2
Composite Index 11 prov decs	Correlation	Grd 12 Nsc English	Correlation	AH	NBT AL Percentage	69.1	11.0
SCR VS Cin 11	0.04	SCR VS GRD 12 NSC English	0.35	AI	NBT QL Percentage Score	63.2	14.6
IA VS Cin 11	0.19	IA VS GRD 12 NSC English	0.43	AJ	NBT Percentage Average	63.6	12.1
HA VS Cin 11	0.08	HA VS GRD 12 NSC English	0.45	AQ	Grd 11 Nsc English	74.0	8.9
GA VS Cin 11	0.04	GA VS GRD 12 NSC English	0.42	AR	Grd 11 Nsc Physical Science	69.9	13.6
FA VS Cin 11	0.25	FA VS GRD 12 NSC English	0.21	AS	Grd 11 Nsc Life Science	74.8	12.3
EA VS Cin 11	0.15	EA VS GRD 12 NSC English	0.18	AT	Grd 11 NscMathsLitBNOTBCMPBHSC	69.5	24.7
DA VS Cin 11	0.41	DA VS GRD 12 NSC English	0.28	AU	Grd 11 Nsc Maths	74.6	14.6
				AV	Grd 12 Nsc English	77.4	7.8
Composite Index 12 prov decs	Correlation	NBT MA Percentage	Correlation	AW	Grd 12 Nsc Physical Science	73.5	12.1
SCR VS CIN 12	0.11	SCR VS MA Percentage	0.03	AX	Grd 12 Nsc Life Science	79.4	8.6
IA VS CIN 12	0.15	IA VS MA Percentage	0.09	AY	Grd 12 Nsc Maths Lit	86.4	5.2
HA VS CIN 12	0.06	HA VS MA Percentage	0.13	AZ	Grd 12 Nsc Maths	77.3	11.4
GA VS CIN 12	0.02	GA VS MA Percentage	0.10				
FA VS CIN 12	0.28	FA VS MA Percentage	0.35		Only for NURS/OT/BCMP/BHSc		
EA VS CIN 12	0.18	EA VS MA Percentage	0.26				
DA VS CIN 12	0.42	DA VS MA Percentage	0.00				

Grd 11 Nsc Maths	Correlation
SCR VS Grd 11 Maths	0.14
IA VS Grd 11 Maths	0.23
HA VS Grd 11 Maths	0.10
GA VS Grd 11 Maths	0.19
FA VS Grd 11 Maths	0.25
EA VS Grd 11 Maths	0.18
DA VS Grd 11 Maths	0.11

Grd 12 Nsc Maths	Correlation
SCR VS Grd 12 Maths	0.06
IA VS Grd 12 Maths	0.04
HA VS Grd 12 Maths	0.06
GA VS Grd 12 Maths	0.20
FA VS Grd 12 Maths	0.12
EA VS Grd 12 Maths	-0.10
DA VS Grd 12 Maths	0.03

Relationship between levels and NBT scores

		Nbtma%	Nbtal%	Nbtql%	Nbt%A
Relationship between IA level and NBT scores	2013	Moderate, positive relationship r = .37, n = 383, p < .01	Strong, positive relationship r = .54, n = 384, p < .01	Strong, positive relationship r = .50, n = 384, p < .01	Strong, positive relationship r = .52, n = 384, p < .01
	2014	Weak, positive relationship r = .10, n = 284, p > .01	Strong, positive relationship r = .76, n = 291, p < .01	Moderate, positive relationship r = .44, n = 291, p < .01	Strong, positive relationship r = .51, n = 291, p < .01
Relationship between HA level and NBT scores	2013	Moderate, positive relationship r = .35, n = 423, p < .01	Strong, positive relationship r = .60, n = 425, p < .01	Moderate, positive relationship r = .45, n = 425, p < .01	Strong, positive relationship r = .51, n = 425, p < .01
	2014	Weak, positive relationship r = .14, n = 233, p < .05	Strong, positive relationship r = .60, n = 239, p < .01	Weak, positive relationship r = .28, n = 239, p < .01	Moderate, positive relationship r = .39, n = 239, p < .01
Relationship between GA level and NBT scores	2013	Weak, positive relationship r = .14, n = 460, p < .01	Weak, positive relationship r = .12, n = 462, p < .05	Weak, positive relationship r = .09, n = 462, p > .01	Weak, positive relationship r = .14, n = 462, p < .01
	2014	Weak, positive relationship r = .15, n = 205, p < .05	Strong, positive relationship r = .56, n = 208, p < .01	Moderate, positive relationship r = .32, n = 208, p < .01	Moderate, positive relationship r = .39, n = 208, p < .01
Relationship between FA level and NBT scores	2013	Weak, positive relationship r = .20, n = 29, p > .01	Strong, positive relationship r = .50, n = 29, p < .01	Weak, positive relationship r = .09, n = 29, p > .01	Weak, positive relationship r = .28, n = 29, p > .01
	2014	Weak, positive relationship r = .15, n = 205, p < .05	Strong, positive relationship r = .56, n = 208, p < .01	Moderate, positive relationship r = .32, n = 208, p < .01	Moderate, positive relationship r = .39, n = 208, p < .01
Relationship between EA level and NBT scores	2013	Weak, positive relationship r = .21, n = 13, p > .01	Strong, positive relationship r = .71, n = 13, p < .01	Moderate, positive relationship r = .44, n = 13, p > .01	Strong, positive relationship r = .60, n = 13, p < .05
	2014	Weak, positive relationship r = .16, n = 38, p > .01	Strong, positive relationship r = .74, n = 39, p < .01	Moderate, positive relationship r = .40, n = 39, p < .05	Moderate, positive relationship r = .49, n = 39, p < .01
Relationship between DA level and NBT scores	2013	Weak, positive relationship r = .22, n = 13, p > .01	Weak, positive relationship r = .21, n = 13, p > .01	Strong, positive relationship r = .48, n = 13, p > .01	Moderate, positive relationship r = .38, n = 13, p > .01
	2014	Weak, negative relationship r = -.10, n = 41, p < .01	Strong, positive relationship r = .55, n = 42, p < .01	Moderate, positive relationship r = .31, n = 42, p < .05	Weak, positive relationship r = .27, n = 42, p > .01
Relationship between CA level and NBT scores	2013	Weak, negative relationship r = -.43, n = 4, p > .01	Moderate, positive relationship r = .37, n = 4, p > .01	Weak, negative relationship r = -.75, n = 4, p > .01	Weak, negative relationship r = -.78, n = 4, p > .01
	2014	Strong, negative relationship r = -.63, n = 12, p < .05	Weak, negative relationship r = -.27, n = 12, p > .01	Strong, negative relationship r = -.77, n = 12, p < .01	Strong, negative relationship r = -.79, n = 12, p < .01
Relationship between BA level and NBT scores	2013	N/A	N/A	N/A	N/A
	2014	Strong, negative relationship r = -.59, n = 4, p < .01	Strong, positive relationship r = .59, n = 4, p > .01	Weak, positive relationship r = .18, n = 4, p > .01	Weak, negative relationship r = -.10, n = 4, p > .01

KEY

	Weak	Positive	**High** levels scored on the IA level are associated with **high** NBT scores
	Moderate		
	Strong		
	Weak	Negative	**High** levels scored on the IA level are associated with **low** NBT scores
	Moderate		
	Strong		

Relationship between Read On! levels CIn, Ain and NSC Grade 11 Marks

		IA	HA	GA	FA	EA	DA	CA
Ain	2013	Strong, positive relationship r = .57, n = 287, p < .01	Strong, positive relationship r = .55, n = 316, p < .01	Strong, positive relationship r = .59, n = 345, p < .01	Moderate, positive relationship r = .43, n = 23, p < .05	Moderate, positive relationship r = .41, n = 12, p > .01	Weak, positive relationship r = .27, n = 13, p > .01	Strong, negative relationship r = -.90, n = 4, p > .01
	2014	Strong, positive relationship r = .57, n = 207, p < .01	Moderate, positive relationship r = .42, n = 163, p < .01	Moderate, positive relationship r = .41, n = 139, p < .01	Moderate, positive relationship r = .47, n = 45, p < .01	Moderate, positive relationship r = .41, n = 32, p < .05	Moderate, positive relationship r = .38, n = 34, p < .05	Strong, negative relationship r = -.63, n = 11, p < .05
Cin	2013	Strong, positive relationship r = .56, n = 280, p < .01	Strong, positive relationship r = .55, n = 306, p < .01	Strong, positive relationship r = .56, n = 333, p < .01	Moderate, positive relationship r = .47, n = 21, p < .05	Moderate, positive relationship r = .42, n = 12, p > .01	Moderate, positive relationship r = .35, n = 13, p > .01	Strong, negative relationship r = -.91, n = 4, p > .01
	2014	Strong, positive relationship r = .58, n = 202, p < .01	Moderate, positive relationship r = .42, n = 158, p < .01	Moderate, positive relationship r = .35, n = 134, p < .01	Strong, positive relationship r = .54, n = 45, p < .01	Moderate, positive relationship r = .41, n = 32, p < .05	Moderate, positive relationship r = .33, n = 34, p > .01	Strong, negative relationship r = -.64, n = 11, p < .05
NSC English	2013	Moderate, positive relationship r = .38, n = 329, p < .01	Moderate, positive relationship r = .34, n = 366, p < .01	Moderate, positive relationship r = .32, n = 397, p < .01	Weak, positive relationship r =.22 , n = 24, p > .01	Weak, positive relationship r = .06, n = 12, p > .01	Moderate, positive relationship r = .42, n = 13, p > .01	Weak, negative relationship r = -.24, n = 4, p > .01
	2014	Weak, positive relationship r = .25, n = 259, p < .01	Moderate, positive relationship r = .36, n = 211, p < .01	Weak, positive relationship r = .29, n = 183, p < .01	Weak, positive relationship r = .22, n = 50, p > .01	Weak, positive relationship r = .12, n = 39, p > .01	Weak, positive relationship r = .25, n = 43, p > .01	Weak, negative relationship r = -.03, n = 14, p > .01
Nsc PS	2013	Moderate, positive relationship r = .34, n = 313, p < .01	Moderate, positive relationship r = .35, n = 348, p < .01	Moderate, positive relationship r = .33, n = 378, p < .01	Moderate, positive relationship r = .30, n = 23, p > .01	Weak, positive relationship r = .02, n = 11, p > .01	Weak, negative relationship r = -.21, n = 13, p > .01	Strong, negative relationship r = -.93, n = 4, p > .01
	2014	Weak, positive relationship r = .21, n = 244, p < .01	Weak, positive relationship r = .10, n = 199, p > .01	Weak, positive relationship r = .19, n = 172, p < .05	Weak, positive relationship r = .08, n = 46, p > .01	Weak, positive relationship r = .23, n = 34, p > .01	Weak, positive relationship r = .27, n = 38, p > .01	Moderate, negative relationship r = -.43, n = 12, p > .01

Nsc LS	2013	Moderate, positive relationship r = .31, n = 311, p < .01	Weak, positive relationship r = .28, n = 348, p < .01	Moderate, positive relationship r = .37, n = 378, p > .01	Moderate, positive relationship r = .32, n = 24, p > .01	Weak, positive relationship r = .16, n =12, p > .01	Weak, negative relationship r = -.04, n = 13, p > .01	Strong, negative relationship r = -.83, n = 4, p > .01
	2014	Moderate, positive relationship r = .40, n = 243, p < .01	Weak, positive relationship r = .27, n = 196, p < .01	Weak, positive relationship r = .25, n = 169, p < .01	Moderate, positive relationship r = .31, n = 49, p < .05	Weak, positive relationship r = .23, n = 39, p > .01	Weak, positive relationship r = .29, n = 43, p > .01	Weak, negative relationship r = -.09, n = 14, p > .01
Nsc Maths	2013	Moderate, positive relationship r = .35, n = 328, p < .01	Moderate, positive relationship r = .30, n = 365, p < .01	Moderate, positive relationship r = .32, n = 396, p < .01	Weak, positive relationship r = .22, n = 24, p > .01	Weak, negative relationship r = -.04, n = 12, p > .01	Weak, negative relationship r = -.15, n = 13, p > .01	Strong, negative relationship r = -.87, n = 4, p > .01
	2014	Weak, positive relationship r = .19, n = 257, p < .01	Weak, positive relationship r = .12, n = 210, p > .01	Weak, positive relationship r = .18, n = 183, p < .05	Weak, positive relationship r = .22, n = 49, p > .01	Weak, positive relationship r = .13, n = 38, p > .01	Weak, positive relationship r = .12, n = 42, p > .01	Weak, negative relationship r = -.15, n = 14, p > .01

KEY

	Weak	Positive	**High** levels scored on the RO level are associated with **high** Marks
	Moderate		
	Strong		
	Weak	Negative	**High** levels scored on the RO level are associated with **low** Marks
	Moderate		
	Strong		

Relationship between Read On! levels and CIn, AIn and NSc Grade 12 Marks

		IA	HA	GA	FA	EA	DA	CA
AIn	2013	Strong, positive relationship r = .55, n = 364, p < .01	Strong, positive relationship r = .51, n = 402, p < .01	Weak, positive relationship r = .14, n = 438, p < .01	Moderate, positive relationship r = .30, n = 29, p > .01	Strong, positive relationship r = .53, n = 12, p > .01	Moderate, positive relationship r =.41, n = 13, p > .01	Moderate, negative relationship r =-.43, n = 4, p > .01
	2014	Moderate, positive relationship r = .48, n = 270, p < .01	Moderate, positive relationship r = .35, n = 220, p < .01	Moderate, positive relationship r = .43, n = 192, p < .01	Moderate, positive relationship r = .43, n = 52, p < .01	Moderate, positive relationship r = .40, n = 38, p < .05	Weak, positive relationship r = .24, n = 41, p > .01	Strong, negative relationship r = -.75, n = 12, p < .01
CIn	2013	Moderate, positive relationship r = .30, n = 364, p < .01	Weak, positive relationship r = .28, n = 403, p < .01	Weak, positive relationship r = .08, n = 439, p > .01	Weak, positive relationship r = .12, n = 29, p > .01	Moderate, positive relationship r = .47, n = 12, p > .01	Moderate, positive relationship r = .47, n = 13, p > .01	Weak, negative relationship r = -.16, n = 4, p > .01
	2014	Weak, positive relationship r = .21, n = 276, p < .01	Weak, positive relationship r = .13, n = 224, p > .01	Weak, positive relationship r = , .15 n = 195, p < .05	Moderate, positive relationship r = .37, n = 54, p < .01	Weak, positive relationship r = .17, n = 40, p > .01	Moderate, positive relationship r = .40, n = 44, p < .01	Weak, negative relationship r = -.21, n = 14, p > .01
Nsc English	2013	Moderate, positive relationship r = .47, n = 362, p < .01	Moderate, positive relationship r = .42, n = 401, p < .01	Weak, positive relationship r = .07, n = 437, p > .01	Weak, positive relationship r = , .19 n = 29, p > .01	Weak, positive relationship r = .24, n = 12, p > .01	Moderate, positive relationship r = .40, n = 13, p > .01	Moderate, positive relationship r = .30, n = 4, p > .01
	2014	Moderate, positive relationship r = .37, n = 276, p < .01	Moderate, positive relationship r = .42, n = 224, p < .01	Moderate, positive relationship r = .46, n = 195, p < .01	Weak, positive relationship r = .14, n = 54, p > .01	Weak, positive relationship r = .24, n = 40, p > .01	Moderate, positive relationship r = .30, n = 44, p < .05	Strong, negative relationship r = -.60, n = 14, p < .05
Nsc Physical Science	2013	Moderate, positive relationship r = .30, n = 345, p < .01	Weak, positive relationship r = .21, n = 382, p < .01	Weak, positive relationship r = .11, n = 417, p < .05	Weak, positive relationship r = .02, n = 28, p > .01	Weak, positive relationship r = .07, n = 11, p > .01	Weak, negative relationship r = -.12, n = 13, p > .01	Strong, negative relationship r = -.60, n = 4, p > .01
	2014	Weak, positive relationship r = .03, n = 263, p > .01	Weak, positive relationship r = .07, n = 213, p > .01	Weak, positive relationship r = .13, n = 184, p > .01	Weak, negative relationship r = -.03, n = 51, p > .01	Weak, negative relationship r = -.07, n = 36, p > .01v	Weak, negative relationship r = -.09, n = 40, p > .01	Moderate, negative relationship r = -.44, n = 12, p > .01

Nsc Life Science	2013	Moderate, positive relationship r = .40, n = 338, p < .01	Moderate, positive relationship r = .34, n = 376, p < .01	Moderate, positive relationship r = .38, n = 411, p < .01	Weak, positive relationship r = .23, n = 29, p > .01	Moderate, positive relationship r = .35, n = 12, p > .01	Weak, positive relationship r = .06, n = 13, p > .01	Weak, positive relationship r = .03, n = 4, p > .01
	2014	Moderate, positive relationship r = .30, n = 261, p < .01	Weak, positive relationship r = .16, n = 210, p < .05	Weak, positive relationship r = .27, n = 182, p < .01	Moderate, positive relationship r = .34, n = 53, p < .05	Weak, positive relationship r = .29, n = 40, p > .01	Moderate, positive relationship r = .43, n = 44, p < .01	Moderate, negative relationship r = -.31, n = 14, p > .01
Nsc Maths	2013	Moderate, positive relationship r = .34, n = 359, p < .01	Weak, positive relationship r = .26, n = 397, p < .01	Weak, positive relationship r = .09, n = 433, p > .01	Weak, positive relationship r = .02, n = 29, p > .01	Weak, negative relationship r = -.13, n = 12, p > .01	Weak, negative relationship r = -.06, n = 13, p > .01	Moderate, negative relationship r = -.39, n = 4, p > .01
	2014	Weak, positive relationship r = .03, n = 276, p > .01	Weak, positive relationship r = .05, n = 224, p > .01	Weak, positive relationship r = .22, n = 195, p < .01	Weak, positive relationship r = .08, n = 54, p > .01	Weak, negative relationship r = -.14, n = 40, p > .01	Weak, negative relationship r = -.02, n = 44, p > .01	Moderate, negative relationship r = -.48, n = 14, p > .01
Nsc Maths Lit	2013	Strong, positive relationship r = .78, n = 4, p > .01	Weak, negative relationship r = -.10, n = 5, p > .01	Weak, negative relationship r = -.01, n = 5, p > .01	N/A	N/A	N/A	N/A
	2014	Moderate, positive relationship r = .35, n = 7, p > .01	Moderate, positive relationship r = .35, n = 6, p > .01	Moderate, positive relationship r = .40, n = 4, p > .01	N/A	N/A	N/A	N/A

KEY

	Weak	Positive	**High** levels scored on the RO level are associated with **high** Marks
	Moderate		
	Strong		
	Weak	Negative	**High** levels scored on the RO level are associated with **low** Marks
	Moderate		
	Strong		

Appendix XI

Results Likert-scale Analysis CG 2013/2014	Qs	Strongly Agree/ Agree	Neutral	Strongly Disagree/ Disagree
Student Self Confidence in English from Read On!				
I am now more confident about reading in English	1	82%	9%	9%
I am now more confident about writing in English	4	82%	12%	6%
I am now more confident about reading and understanding	7	76%	12%	12%
I recognise the importance of being able to work on my own	6	88%	6%	6%
Median		82%	11%	8%
Linking, Understanding and Analysis in Read On!				
I am now more able to make linkages in my English reading	5	73%	21%	6%
I can now understand/analyse what I am reading in English better	2	85%	6%	9%
I can now use the English vocabulary that I learned on Read On!	3	85%	6%	9%
Median		85%	6%	9%
Attendance and Commitment to Read On!				
I want to complete the Read On! programme	8	48%	42%	9%
I was able to attend Read On! on a regular basis	9	73%	15%	12%
Median		61%	29%	11%
Read On! Presentation Clarification and Feedback Value				
The presentation helped me to understand the basic principles of the Read On! programme	10	67%	24%	9%
The Read On! programme makes clear what I am required to do	11	70%	15%	15%
The Read On! feedback was helpful and advanced my reading understanding capabilities	12	76%	12%	12%
Median		70%	15%	12%
Read On! Facilitator and Assistance				
The facilitator was helpful in clarifying complex questions	13	73%	15%	12%
My facilitator's enthusiasm for the Read On! programme helped me to appreciate the importance of reading	15	76%	12%	12%
Median		74%	14%	12%