

**Implementation of the Accelerated Reader Program in a
Designated Disadvantaged Second-Level School
A Case Study**

**by
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Declaration:

“I hereby declare that this is entirely my own work and that it has not been submitted for the award of any degree at any other university.”

Signed: _____

Date: _____

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Table of Contents

Declaration:	i
Acknowledgements	ii
Table of Contents	iii
Abstract	vi
CHAPTER I: INTRODUCTION	1
1.1 Introduction	1
1.2 Research Question and Variables	2
1.2.1 Research Questions:	2
1.2.2 Measurement Variables:	2
1.3 Background / Rationale	3
1.4 Objective of the Research	4
1.5 A Brief Introduction to the Accelerated Reader	4
1.6 Structure of the Thesis	6
CHAPTER 2:LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Reading Literacy	7
2.3 ICT - Pedagogical Implications	10
2.4 ICT – Teaching and Learning and Educational Disadvantage	11
2.5 ICT and Literacy Development	12
2.6 Intervention Instruction	13
2.7 Reading Literacy and Disadvantage	16
2.8 Previous Studies on the Accelerated Reader	18
2.9 The Role of the School Library in Raising Students’ Achievement ...	20
2.10 Conclusion	24
CHAPTER 3:METHODOLOGY	25
3.1 Introduction	25
3.2 Research Design and Method	25
3.3 Methodology	26
3.4 Methodological Approach	27
3.5 The Research Question	29
3.6 Case Study Setting	30
3.7 Research Participants	30
3.8 Research Timeline	31

3.9	Data Collection	31
3.9.1	Pre and Post Reading Tests	31
3.9.2	Observation.....	33
3.9.3	Questionnaires	35
3.9.4	Questionnaire Pilot Test and Completion.....	36
3.9.5	Administration of the Questionnaire.....	36
3.9.6	Interviews.....	37
3.9.7	Group Interviews with Students	39
3.10	Analysis of the Data	41
3.11	Ethical Considerations.....	41
3.11.1	Informed Consent	41
3.11.2	Access and Acceptance	42
3.11.3	Privacy and Confidentiality	42
3.12	Limitations.....	43
CHAPTER 4: RESEARCH FINDINGS.....		45
4.1	Introduction	45
4.2	Student Questionnaire	46
4.3	Group Interviews with Students	51
4.3.1	The Accelerated Reader Program	51
4.3.2	Reading Experiences and Abilities	51
4.3.3	School Library.....	52
4.4	Interviews with Teachers and School Librarian	52
4.4.1	Motivation.....	52
4.4.2	Library Impact.....	54
4.4.3	Literacy Skills.....	55
4.4.4	AR Reports and Communication with Parents.....	56
4.4.5	Negative Aspects.....	58
4.5	Observations	59
4.6	Reading Tests.....	64
CHAPTER 5: DISCUSSION OF FINDINGS.....		66
5.1	Introduction.....	66
5.2	ICT and Reading Development	67
5.3	Reading Attitudes and Patterns.....	67
5.4	Motivation and Rewards	69
5.5	Impact of School Library	69
5.6	Accelerated Reader Implementation.....	70
5.7	Negative Aspects of the AR Program	71
5.8	Comparison of Reading Test Results	72
5.9	Conclusion.....	74
CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS		75
6.1	Introduction.....	75

6.2	Literacy and ICT	76
6.3	Recommendations	78

BIBLIOGRAPHY	79
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APPENDICES	94
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Abstract

A Case Study of the Accelerated Reader Program in a designated disadvantaged second-level school

The purpose of this study was to determine whether a specific computer-based reading development programme i.e. the Accelerated Reader Program, when implemented through a professionally staffed school library, actually impacts on the reading comprehension and literacy development of underachieving adolescent students who are participating in the Junior Certificate School Programme in a designated disadvantaged school. The study also sought to determine the extent to which the participating students' reading levels as determined by the AR diagnostic test the Standardized Test for Assessment of Reading (STAR) reflects their reading levels as determined by the nferNelson Group Reading Test II (GRT II) Standardised Reading Test.

The Accelerated Reader Program was implemented in the case study school for one academic year with a participating student cohort of thirty five First Year students. Progress was measured by a comparison of pre and post test data and observations, semi-structured and group interviews and questionnaires.

Statistical analysis of the findings of the study suggested that implementation of the Accelerated Reader intervention program was effective in improving reading levels and reading comprehension of the participating students. However, the findings also highlighted a significant discrepancy between the student reading ages as determined by the two test types used and further investigation is recommended in this area.

The overall findings of this study support the view that the use of Information and Communications Technology (ICT) with underachieving students can be an effective method of enhancing their motivation and learning achievements.

Kathleen Moran
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CHAPTER I: INTRODUCTION

1.1 Introduction

The value of good literacy skills is obvious to those with strong abilities (Dugdale & Clark, 2008). However, this belief is not always shared by those with weaker skills who often do not see the relevance of literacy to their lives. This problem was highlighted in recent research carried out in the UK for the 2008 National Year of Reading. A study into the attitudes of C2DE households (lower income social grades, non professional households and those dependant on welfare) found that 76 per cent did not equate reading with success (TNS Consumer, 2008). This is particularly worrying because it is these audiences that could benefit most from improving their skills. The personal and social benefits that are realised by raising skills among those groups who have the lowest levels of literacy are disproportionate. For example, a small rise in literacy levels for men with the lowest skills results reduces the likelihood of being on state benefits from 19 per cent to 6 per cent (Dugdale & Clark, 2008).

Speaking and listening are the first literacy skills. Language development is influenced by family background. By the age of four, a child with better educated and professional parents may have been exposed to over 33 million words. A child from a disadvantaged background may have heard less than 10 million (Risley & Hart, 1995, 2006). These disadvantaged children will remain well behind their peers in later years at school.

Reading isn't just one of life's great pleasures, it is an essential skill for modern living and the ability to read well affects everything we do – our earning potential, our employment opportunities, our health and self-esteem, how we feel about society and how positive a citizen we want to be.

To be literate is to become liberated from the constraints of dependency. To be literate is to gain a voice and to participate meaningfully and assertively in decisions that affect one's life. To be literate is to gain self-confidence. To be literate is to become self-assertive. To be literate is to become politically conscious and critically aware, and to demystify social reality..... In a nutshell, literacy empowers.

Kassam (1994)

An individual's motivation to read and the effect this has on their achievement and aspirations has long been a source of academic research and discussion.

1.2 Research Question and Variables

As the first stage in the development of this research study, the following research questions and measurement variables were devised. These subsequently informed the methodological approach undertaken for the study.

1.2.1 Research Questions:

The research questions to be addressed throughout this study are:

- Can the Accelerated Reader Program (AR), when implemented through a professionally staffed school library, impact on the reading comprehension and literacy development of underachieving adolescent students who are participating in the Junior Certificate School Programme in a designated disadvantaged school?
- To what extent do participating students' reading levels (as determined by the AR diagnostic test the Standardized Test for Assessment of Reading (STAR)) reflect their reading levels as determined by the nferNelson Group Reading Test II (GRT II) Standardised Reading Test?

1.2.2 Measurement Variables:

- Impact of having a professionally staffed school library on the implementation of a specific ICT-based reading development program in a 2nd level school setting in the context of educational disadvantage.
- Individual students' experiences of reading throughout school years

- Impact of using ICT initiatives in supporting reading development of Junior Certificate School Programme students.

1.3 Background / Rationale

The researcher is currently employed with the Junior Certificate School Programme (JCSP) Support Service. The JCSP has operated since 1996 on a national level as an intervention at the Junior Cycle for students who, for a variety of reasons, have experienced difficulties in school and hence are considered to be at risk of leaving school early. The Programme is founded on the premise that all young people can be successful in school and strives to help teachers to provide opportunities for students' achievements and skills to be documented and acknowledged. Fundamental to the JCSP are the Literacy and Numeracy Strategies. The JCSP Support Service works with schools to employ classroom strategies to develop students' literacy and numeracy skills and to encourage their adoption of a whole school approach to literacy and numeracy. This is facilitated by providing schools with ongoing in-service on cross-curricular approaches to literacy and numeracy as well as resources annually to run a variety of short-term and long-term interventions that can impact on students' educational, cultural and social development. The Programme is dedicated to ensuring that all young people, regardless of their socio-economic context or educational difficulties, are provided with the opportunities in the Junior Cycle to develop fully their skills and potential. The Programme is currently run in 245 schools nationwide with further schools joining up to 2010 under the DEIS (Delivering Equality of Opportunity in Schools) Action Plan (2005).

The JCSP Demonstration Library Project was set up as a research project in 2002 as part of the Early Literacy Initiative. The main aim of the Project was to establish whether a high quality, professionally staffed school library which caters for the needs of students with literacy difficulties, actually impacts on their literacy skills, attitudes and overall learning experiences and allows them to address and overcome these difficulties. The first ten such high quality school libraries, staffed by full-time professional librarians, were set up throughout Ireland in 2002. An additional

Project library was established in 2003. Under its DEIS Action Plan (2005), the Department of Education and Science has committed to the expansion of the Project, bringing the total number of Project Libraries up to 50 by 2010. This Project expansion has already commenced with JCSP Project Libraries currently operational in 30 schools nationwide.

1.4 Objective of the Research

The objective of this research is to evaluate the impact of the introduction of a specific ICT-based reading development program, implemented in a school library setting, on the literacy levels of students participating in the Junior Certificate School Programme in a designated disadvantaged second-level school. A school in a designated disadvantaged setting poses different problems and challenges to other schools. “Teaching in schools serving socially disadvantaged communities requires a particular set of attitudes, competencies and skills” (SDPI, 2004)

1.5 A Brief Introduction to the Accelerated Reader

Accelerated Reader (AR) is a computer based reading and management program that is designed to provide reliable and valid feedback on comprehension of books and other materials that students have read. The goal of AR is to provide measurable reading practice time for each student participant. It purports to supplement any class-based reading curriculum by providing the teacher/librarian and each student in the group immediate feedback on how well reading material has been comprehended.

The program includes a list of more than 14,000 books, each of which has a reading level determined by a computer-administered readability program based on the Flesch-Kincaid readability index (Florida Center for Reading Research, 2004). Each book is also assigned a maximum “AR Point Value”, derived from its length and reading level.

Students participating in the program select and read a book and then take a multiple

choice comprehension quiz on the book on the computer. The computer test consists of multiple choice questions about important facts in the book. Most of the questions evaluate literal comprehension. Students earn points based on the number of words each book contains and its reading difficulty, along with the number of correct responses on each quiz. In order to earn points on a book, the student must answer at least sixty percent of the questions correctly on the test. The computer scores the test, calculates the number of points earned by each student, and records the data. Students may only test once for any given book.

Each student is assigned a points goal based on his or her reading level (as determined by an AR diagnostic test called the Standardized Test for Assessment of Reading (STAR)). The STAR generates a grade equivalent (GE) score that can be used to guide students to read books at an appropriate reading level. Unlike an ordinary Silent Sustained Reading (SSR) program, the AR program purports to also allow teachers and librarians to easily monitor the reading progress of their students based on their test-taking records and assigned reading levels. Teachers and librarians can access the software to generate a variety of reports to help identify individual student strengths and weaknesses, based on the students' scores on the quizzes, the number/reading level of books read during the term, and progress towards their respective points goal. Reports can be generated listing the AR points earned, number of tests taken, number passed, average grade level of books read, and average percentage achieved on the tests taken. (Sample AR reports are shown in Appendix I).

AR data measures three aspects of students' reading practice: quantity, quality and challenge. Quantity is defined as the number of books read and the number of points earned. Quality is indicated by how well the students score on AR tests. Level of challenge refers to the relationship between the difficulty of the books read and the student's tested reading ability.

While this commercial program claims the capability to raise student reading comprehension levels and to create lifelong learners, the program has its share of critics who question its impact on reading comprehension gains and on overall student progress on standardised tests. These critics question the effectiveness of a reading management program that emphasises the use of quizzes, points and rewards, and challenge the program's impact on long-term student motivation and reading level development.

1.6 Structure of the Thesis

Chapter 1 involves setting the context for the study. The purpose, aims and outline of the study are detailed.

Chapter 2 explores the relevant literature. The focus is on adolescent literacy, educational disadvantage, the role of the school library in literacy development and the impact of ICT across all of these areas.

Chapter 3 focuses on the research methodology. This chapter deals with the different kinds of research, the design of the research and the methodology used. Ethical considerations and the limitations of the research are also discussed.

Chapter 4 presents the research findings from the questionnaires, observations, reading tests and interviews.

Chapter 5 discusses and interprets these findings.

Chapter 6 contains the conclusions and recommendations of the research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

As part of the emergent design of this research a review of the relevant literature was conducted. The purpose of this review is to explore the existing body of research related to AR, to provide some contextual background on student underachievement, especially related to reading development and reading comprehension, educational disadvantage and the benefits of ICT integration in an educationally disadvantaged setting, the literacy development of underachieving second-level students and the role of the school library in raising students' achievement.

2.2 Reading Literacy

Learning to read is one of the greatest accomplishments in childhood because it is the foundation for learning and academic achievement. Therefore, it is not surprising that debates among educators about how best to help children learn to read and develop their reading ability have been heated, polarized, and unsettled for many years. The intensity of the debate, coupled with enormous political pressure and commercial interests, has made learning to read a contentious public issue across the developed world. Although we often think of literacy as a set of all-purpose skills and strategies to be learned, it is more complex, more local, more personal and more social than that. Becoming literate involves developing identities, relationships, dispositions and values as much as acquiring strategies for working with print (Brandt, 2001; Collins & Blot 2003; Gee 2000).

The ultimate objective of reading is comprehension or the reconstruction of meaning. The meaning, or at least the full meaning, may not emerge immediately. It grows gradually and in the process is redefined, revised and reformulated by the reader when he/she engages in reading the text and reflecting on it – “this entails much more than mere word recognition” (Tharp & Gillimore, 1988). Of course, the more one reads, the more fluid, comfortable and adept one becomes at reading.

Howard (1988) espoused that “nothing builds reading ability as much as time spent reading”. This view of increasing one’s reading ability by increasing one’s reading activity is quite logical. Harste (1985) concurred, “We must make time to work on comprehension.... The easiest way to do this is by providing daily invitations to do real reading and real writing for real purposes”

From the beginning of reading children will recall and retell details of what they have read, and predict possible outcomes. However, as they mature and deal with texts of increasing complexity they need to develop skills such as analysis, synthesis, inference, deduction, summarisation, evaluation and correlation, if they are to extract the full meaning in the text. These skills interconnect to assist the reader to reconstruct meaning in the text. They will not be developed effectively merely through exercises or assignments based on individual skills such as are found in many workbooks and school text books. It is through reading the text, reflecting on it, discussing it and writing about it that comprehension skills are best developed (Lerner, 2003).

The Organisation for Economic Cooperation and Development (OECD) (1999) defines reading literacy as ‘understanding, using and reflecting on written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society’ (p.20). Reading literacy is therefore measured by assessing the ability of people to successfully undertake tasks of varying degrees of complexity which they encounter in everyday life. The Commission on Adolescent Literacy of the International Reading Association asserts:

Adolescents entering the adult world in the 21st century will read and write more than at any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives.
(Moore, Bean, Birdyshaw & Rycik, 1999)

In 1998 a report by the Joint Oireachtas Committee on Education and Science found that, using OECD measures, about 25% of Irish adults are at the lowest level of literacy, an incidence which is 50% higher than the average of other advanced

countries and although literacy problems are more common among older people, Ireland stands out as a country with one of the greatest literacy problems among 16 - 25 year olds. There are also particular problems with transition from primary to secondary school in Ireland. In addition, among 15 year olds, over twice as many boys as girls have serious literacy problems (OECD, 2006)

It has been found that people with literacy problems

- are three times more likely to be out of work;
- are three times more likely to be among the lowest earners;
- are only half as likely to be active in community organisations, to write letters or read books;
- are only one-fifth as likely to participate in adult education

The Program for International Student Assessment (PISA) studies found that engagement in reading was the third largest individual pupil factor to impact on performance (after year and immigration status) and accounted for twice as much of the difference in performance as socio-economic status (SES). Youth from the lowest SES who were highly engaged readers performed as well on the assessment as highly engaged youth from the middle SES group and youth with medium levels of engagement in the high SES group (Kirsch, et al., 2002). This suggests that highly motivated youth may compensate for low family income and parents' limited educational attainment by reading more.

Not only is literacy complex and social but also the literate demands of the world keep changing with exponential acceleration. The apparent boundaries between spoken and written words and their conventions have been obliterated by instant messaging, audio books, text messaging, speech translation software, interactive hypertext and the facility with which text and image (moving or still) are fused. Literate demands are changing so rapidly that we cannot predict with certainty what today's preschoolers will face in adulthood. We do know however that they will need to be resilient learners to maintain their literate development in the face of the

increasingly rapid transformations of literacy in their communities (Carr & Claxton, 2002).

2.3 ICT - Pedagogical Implications

Information and Communications Technology (ICT) plays an increasingly important role in work and in social and personal life, and is now of central importance for successful and critical participation in the knowledge society and has obvious implications for education systems. Three primary rationales for its inclusion in education have been proposed. First, pedagogically, the use of ICT is said to increase the breadth and nature of learning; second, socially, it is increasingly viewed as an essential life skill and therefore should form a core curriculum subject; and third, economically, there is a need to prepare school-goers to meet the perceived needs of the work place (OECD, 2001, 2004).

In many countries, computers and other digital media are becoming increasingly important tools to support educators in designing, stimulating and controlling teaching and learning processes and effects. Today there are computers and digital media of various descriptions in nearly all second level schools in the developed world. In Ireland, Government reports and initiatives have sought to promote the integration of ICT into teaching and learning. “Developing an e-learning culture in all schools, where ICT is fully embedded in teaching and learning across the curriculum is a major priority for this Government. Between now and 2013 over €250 million will be provided for investment in infrastructure, professional development and technical support” (Hanafin, 2007). Tapscott (1998) argues that we are now in a digital era of learning. A transformation in learning is taking place from what he labels ‘broadcast’ learning to ‘interactive’ learning. Today’s student has grown up with technology – it is an integral part of their lives. No longer are today’s generation of learners satisfied in being the passive recipients of the traditional teaching process, rather, they want to discover it for themselves by becoming interactive with their learning. ‘New media tools offer great promise for a new model of learning – one based on discovery and participation’ (Tapscott, 1998).

Schools as institutions are changing rapidly as technology alters the paradigm of schooling. The introduction of new technology is changing how schools operate. The basic direction is away from the “old” pedagogy of teachers “telling” (or talking, or lecturing, or being the “Sage on the Stage”) to the “new” pedagogy of students’ teaching themselves with teacher’s guidance (a combination of “student-centered learning”, “problem-based learning”, and the teacher’s being the “Guide on the Side.”) “The teacher’s role in this new pedagogy therefore should not be a technological one, but rather an intellectual one” (Prensky, 2001, 2008) – to provide context, quality assurance and individualised help to students who are utilising technology to teach themselves. 21st century pedagogy is a move from Lecture/Controller to Guide/Partner relationships.

Today’s technology offers students all kinds of new, highly effective tools they can use to learn on their own – from the Internet with its vast amounts of information, to search and research tools to sort out what is true and relevant, to analysis tools to help make sense of it, to creation tools to present one’s findings in a variety of media, to social tools to network and collaborate with each other and with people around the world. And while the teacher can and should be a guide, most of these tools are best used by students, not teachers.

2.4 ICT – Teaching and Learning and Educational Disadvantage

The potential of ICT to facilitate social inclusion is much reported in the literature (BECTA, 2005; NCTE 2007d; NALA 2004). ICT can promote inclusion in terms of its possibilities of reducing isolation, providing new modes of communication across cultural groups, providing new forms of access to students with disabilities. However, the potential negative impact of ICT development cannot be ignored. ICT can create “a new form of exclusion as well as reinforcing existing patterns of exclusion from society” (Selwyn et al, 2002) – as the gap between those that have access to the new technologies and those who do not have access may be widened.

The OECD (2007) states that further onus is placed on schools in disadvantaged communities in their provision of ICT. “From the perspective of education policy makers it is important to consider whether schools in poorer communities provide the ICT resources that are otherwise lacking within the local community”. Digital literacy support is commonly identified as one of the main needs within educational disadvantage.

The ability to use new technology is rapidly becoming a skill as fundamental as the established literacies of reading, writing and numeracy. Those already marginalised in society are at risk of becoming even more disadvantaged in an Information Society” (OECD, 2007)

2.5 ICT and Literacy Development

With the revolution in communication, stimulated by the ubiquity of the internet, young people are engaging with reading and writing more than ever before. Social networking sites, emails and text messaging have shifted written communication from page to screen, while the rise in personal computer ownership means more young people spend their leisure time reading and writing.

However, international studies have suggested that while young people have increased the amount of time spent reading and writing, their attitudes to reading have become increasingly negative (Twist et al, 2007). There now exists a lack of connection between young people’s personal and social experience of literacy outside the classroom, and the way in which it is experienced in the classroom. National Literacy Trust research in the UK has found that while young people read regularly outside of school, many of them do not consider the reading they do to be ‘real reading’ (Clark et al, 2008). Most young people surveyed considered ‘real reading’ to be fiction books and poetry; the materials they felt were promoted in school. The lack of connection between reading of choice and reading at school encourages young people to see literacy in the classroom as irrelevant to their personal and social interests and therefore boring.

There is significant concern that the reality of how many young people experience literacy outside of the school environment i.e. almost entirely on computer screens, is not reflected within the school environment. At a National Literacy Trust consultation event on literacy in the digital age, some attendees expressed concern that the interpretation of the curriculum by teachers still reflects literacy as it was before the widespread use of ICT (National Literacy Trust, 2009). Prensky (2008) refers to students having to “power down” when they go to school. He states that this powering down does not just apply to the students’ electronic devices, but also to the students’ brains. “When kids come to school, they leave behind the intellectual light of their everyday lives and walk into the darkness of the old-fashioned classroom” (Prensky, 2008).

It is therefore vital that schools offer students literacy activities that are both engaging and enjoyable and that motivate young readers – particularly those who continue to struggle with reading. There is great potential for the use of ICT based new media in literacy teaching and the curriculum must be open to such innovations.

2.6 Intervention Instruction

Learning to read is a complex process. Most children learn to read and continue to grow in their mastery of this process. However, there continues to be a group of children for whom learning to read is a struggle. This group that continues to struggle presents a challenge to our schools. Thus the development of effective intervention programs and instructional strategies for the struggling reader, or the underachiever in reading, continues to be a topic of concern.

If students are not successful in literacy by the end of primary school, many become unwilling to engage in reading activities at all (Pittner & Coit, 1999). By the time they enter secondary school, students with low reading skills have a limited chance of attending college (Lyon, 1998). Unless a concerted effort towards reading and writing intervention is undertaken in the early years of secondary school, statistics

show that these students will be underemployed, undereducated, and underutilized in society.

Overall, poor adolescent readers demonstrate poor decoding skills, poor spelling, few or no strategies to attempt an unknown word, weak vocabulary and oral language, little outside reading, and a well developed set of avoidance behaviours (Honig, 1997).

The incidence of reading underachievement among adolescents has led educators and politicians to re-examine overall literacy instruction particularly for adolescents. Research has shown that adolescent students with poor reading skills are often multiple years below their class level and are in immediate need of effective intervention (Haslett, 2005).

Reading for learning in secondary school often requires complex skills to which the student with reading difficulties may not initially aspire. There is a consequent inability to extract any meaning from any of the texts used (Lunzer and Gardner, 1979, 1984). Frequently such students cannot cope with the curriculum meant for their age group. Consequent reactions to failure, whilst varied, are significant. A downward spiral of demotivation, alienation from education and lower attainments often ensues.

Reviews of the research literature regarding intervention programs (Grossen, 1997 and Slaven & Madden, 1989) indicate that the consequences of a slow start in literacy become enormous over time and continue to adulthood without proper intervention. Consequently, there is a great need for effective intervention for those students who reach secondary school without the necessary literacy skills.

Students at risk of reading failure first of all need to be motivated to read. Calkins (1997) describes five effective strategies to encourage a love of reading, including showing how reading fits into children's lives, identifying all children as readers, focusing on good reading experiences, showing when reading works, and

encouraging children to talk about books. Reluctant readers need high interest reading materials, opportunities to discuss readings in small groups, reading aloud, role play and computer-assisted instruction (Carbo, 1994). Research consistently supports an interactive approach and engaging activities for at-risk learners, since this helps them experience reading as enjoyable.

Qualitative evaluation research by McMillan (1995) also supports the idea that the key to successful literacy intervention in secondary school is first to engage students in reading and then to apply the needed skills.

The International Reading Association's Commission on Adolescent Literacy position statement on adolescent literacy (Moore et al., 1999) suggested the following *principles* guide literacy programmes:

- Principle 1. Adolescents deserve access to a wide variety of reading material that they can and want to read.
- Principle 2: Adolescents deserve instruction that builds both the skill and desire to read increasingly complex materials.
- Principle 3: Adolescents deserve assessment that shows them their strengths as well as their needs, and that guides their teachers to design instruction that will help them grow as readers.
- Principle 4: Adolescents deserve expert teachers who model and provide explicit instruction in reading comprehension and study strategies across the curriculum.
- Principle 5: Adolescents deserve reading specialists who assist individual students having difficulty learning how to read.

Principle 6: Adolescents deserve teachers who are trained to understand the complexities of individual adolescent readers, respect their differences, and respond to their characteristics.

Principle 7: Adolescents deserve homes, communities and a nation that will support their efforts to achieve advanced levels of literacy and provide the support necessary for them to succeed.

2.7 Reading Literacy and Disadvantage

There are several factors that affect a child's development of reading achievement. Research has shown that strong literacy skills begin early in life (Adams, 1995, Chall, 1983). Students who come from strong literacy environments have better developed vocabularies, awareness of print concepts, and more reading experiences than other students (Lyon, 1998). Studies show that middle class children enter first grade having experienced an average of 1,000 – 1,700 hours of storybook reading in the home, compared with 25 hours for children from very low-income homes (Literacy Partners of Manitoba, 1999). "To counteract the head start in literacy that middle class students have at the completion of primary schooling.... each working class classroom would need to be stocked with 1,000 books – as well as possessing a school library" (Atkinson, 1998). Social variables also play an important role in a child's early literacy, such as the socioeconomic level of the family and parental reading skills. Conversely, higher reading and writing performance is associated with more reading materials in the home, family involvement in the student's education, and discussions at home about reading in general. These variables all provide a strong foundation for acquiring literacy skills.

Defining clearly what is meant by the term 'educational disadvantage' is problematic. Kellaghan et al (1995) observe that "although the term educational disadvantage is widely used, there have been remarkably few efforts to define it". The National Economic and Social Forum (NESF) take a narrow viewpoint when it says that educational disadvantage "must be defined in terms of the generally adverse outcomes for young people without formal education and qualifications"

(NESF, 1997). This understanding differs from more recent usage of the term. Educational disadvantage as defined in Section 32 (9) of the *Education Act (1998)* (Government of Ireland) means “the impediments to education arising from social or economic disadvantage which prevent students from deriving appropriate benefit from education in school”. Boldt and Devine et al (1998) describe educational disadvantage as “a limited ability to derive equal benefit from schooling compared to peers”. The Combat Poverty Agency states that the term ‘educational disadvantage’ refers to a situation whereby individuals in society derive less benefit from the education system than their peers. It may manifest itself in many ways, most notably in poor levels of participation and achievement in the formal education system (Combat Poverty Agency, 1993). A child may be regarded as disadvantaged at school if, because of economic, cultural or social factors, the competencies that he or she brings to school differ from those valued in schools. Where participation and achievement in the education system are impeded by economic or social factors, the state seeks to eliminate or compensate for the sources and consequences of educational disadvantage.

In Ireland, disadvantage is taken generally to refer to poor socio-economic circumstances. Among these are poverty, lack of education, a high rate of unemployment, high crime levels, poor school attendance, truancy, failure at school, early drop-out from school, disruptive behaviour, violent and criminal behaviour, family dysfunction and substance abuse (Boldt and Devine, 1998). Educational disadvantage and poverty are closely linked. Research (Kelleghan et al 1995, 2005; Smyth 1999; Smyth and Hannon 2000) illustrates that those from poorer socio-economic communities “are more likely to underachieve in the education system than their peers from higher income backgrounds” (Kelleghan et al, 2005). Disadvantage, in the context of education, is considered to result from discontinuities between children’s knowledge, skills and attitudes and the demands of schools (Kelleghan et al, 1995).

A number of Irish studies have found that students attending schools with a high proportion of disadvantaged students, or schools designated as disadvantaged, have

significantly lower reading achievement scores than their counterparts in non-designated schools or in standardization samples (e.g. Archer & O’Flaherty, 1991; McDonald, 1998; Weir & Eivers, 1998; Weir, Milis & Ryan, 2002).

Several research studies have shown that the achievement of students in schools designated as disadvantaged is significantly below those of students in other schools. Weir, Milis and Ryan (2002) found that the average attainment of sixth-class pupils in reading and mathematics was significantly lower than that of pupils nationally. They found that the attainment of students in schools where the levels of disadvantage were particularly severe was lower than students in disadvantaged schools generally. The PISA [Programme for International Student Assessment] surveys (2000, 2003, 2006) measured the reading performance of students attending designated disadvantaged post-primary schools in Ireland. The PISA reports found that students in such schools achieved a mean score on a combined reading literacy scale that was one-half of a standard deviation below the mean score of students in non-designated schools (Shiel, Cosgrove, Sofroniou & Kelly, 2001; Eivers, Shiel & Cunningham, 2006). The PISA studies found that, while Irish students achieved the fifth-highest score among twenty-seven OECD countries with regard to literacy, 11% of Irish students were at or below Level 1 on the PISA reading proficiency scale. This means that 11% of Irish fifteen-year-olds can complete only the most basic of reading tasks. The studies also found that the achievement scores of students in designated disadvantaged schools were significantly lower than those of students attending non-designated schools. In the 1998 National Assessment of Reading in fifth class (primary level), one student in ten was identified as having reading difficulties of a serious nature (Cosgrove et al., 2000).

2.8 Previous Studies on the Accelerated Reader

A growing body of research related to AR exists. Numerous research studies have been carried out over the past number of years which explore the relationship between the AR program and student reading achievement and/or student reading motivation. Although most educators agree on the general concept that the more

reading a student does, the better the reader that student will become, most of the studies addressing the AR program focus on the quizzes, points and incentive features of this reading management program and seek to determine whether these features have a positive impact on student reading achievement/motivation.

In the first UK study of Accelerated Reader, Vollands, Topping and Evans (1999) found that the program, even when less than fully implemented, yielded gains in reading achievement for at-risk readers that were superior to gains from regular classroom teaching. Topping and Fisher (2003) investigated Accelerated Reader in 13 schools of different types spread across the UK, the majority socio-economically disadvantaged. On both paper- and computer-based reading tests, on aggregate, pupils in the 13 schools gained in reading at abnormally high and statistically significant rates. Rudd and Wade (2006) matched specialist schools implementing Accelerated Reader with similar schools where the program was not implemented. Average standardized test scores for reading improved in five out of six treatment schools. One of the main advantages identified was the personalized learning aspect of the program. In schools using the AR Program, surveys administered to both teachers and pupils indicated that pupils were motivated by the immediate feedback the program provides.

Pavonetti, Brimmer and Ciplewski (2003) investigated the claim that AR motivates children to be lifelong readers by measuring if students exposed to AR in primary school would be more likely to continue higher levels of recreational reading in secondary school. Secondary school students using AR who had also used AR in primary school showed a significant increase in their amount of reading while those students not using AR in secondary school after using it in primary school showed a significant decrease. However, students not exposed to AR in primary school were reading more relative to their AR-exposed peers.

Tangible rewards as motivational tools are often associated with the use of the AR program in the United States and this practice has been criticized (Kohn, 1993; Carter, 1996) as actually leading to diminished motivation in reading. A study by

Vollands, Topping, and Evans (1999) found that even socio-economically disadvantaged primary school students in Scotland were totally disinterested in any tangible rewards, but they were highly motivated by the individualized performance feedback inherent in the program. Nontangible incentives of teacher praise and constructive feedback have proven more motivational than tangible rewards (Cameron and Pierce 1994).

2.9 The Role of the School Library in Raising Students' Achievement

During the past twenty five years research has been conducted internationally endeavouring to identify and measure the impact that school libraries have on the development of children's' and adolescents' literacy skills. The IFLA/UNESCO School Library Manifesto (IFLA, 2000) sets forth that there is a meaningful relationship between the school library and learning and at its core establishes that the provision of information and access to reading materials is "fundamental to functioning successfully in today's society which is increasingly information and knowledge based" and that there is an established body of evidence that demonstrates that "students achieve higher levels of literacy, reading, learning, problem-solving and information and communication technology skills" when teachers and school librarians work co-operatively.

There is clear evidence that active reading programmes initiated and encouraged by the school library can foster higher levels of reading, comprehension, vocabulary development, and language skills. Indeed, research spanning many decades highlights that when there is access to diverse reading materials, more reading is done, and literacy development is fostered (Todd, 1995; Moore & Pouloupoulos, 1999; Rich, 1999; Kuhlthau (1993).

Providing opportunities for voluntary reading impacts positively on reading comprehension scores (Elley, 1991; Krashen, 1993, 2001; McQuillan, 1997). Krashen (2001) concludes that students "with libraries and librarians read more books than those in school libraries with no staff. And, children with no libraries at

all read the least. Amount counts!” Research has shown that people who have access to more books read more (Brassell, 2004; Smith, 1998). Those who read more test better on measurements of comprehension, vocabulary, spelling, and questions of general knowledge (Cunningham & Stanovich, 1998; Nagy, Herman, & Anderson, 1985). Anderson, Wilson and Fielding (1988) showed that the more students read books, the better they performed on measures of reading comprehension, vocabulary, and fluency. Provided that students have access to books that interest them (e.g. on subjects they like, in their primary language) and books they can choose and discuss on their own, their reading attitudes will improve (Brassell, 1998, 2003; Krashen, 2004).

A number of studies have been undertaken to measure the role of the school library with respect to students’ development of reading skills, subject-related knowledge, and information literacy. Since 1993, Keith Lance has conducted an extensive range of studies based in different geographical regions in the United States. These have used quantitative, statistical data to determine the role of both primary and secondary level school libraries on students’ academic attainment. His most recent investigation, *The Illinois Study* (Lance, Rodney & Hamilton-Pennell, 2005) confirms findings from previous studies that factors that have a significant effect on students’ test performance include the librarian’s work with regard to inter-staff collaboration and the development of technology; the quality of staffing and collection; and students’ usage of the library and its collection including all print and electronic resources. Additionally, Lance and other researchers who have adopted his quantitative model (Baugham, 2000; Baxter & Smalley, 2003; Burgin & Bracy, 2003; Callison, 2004; Hall-Ellis, 1995; Rodney, Lance & Hamilton-Pennell, 2003; Smith, 2001) have demonstrated that students’ test scores are also influenced by the size and range of the school library collection as well as the librarian’s active engagement in the role of instructor or educator. Lance’s studies also found that students who attended schools with well-funded school libraries achieved on average higher test results regardless of the socio-economic environment in which their schools were located. This finding was supported by a subsequent study of school

libraries in Texas (Smith, 2001), that adopted a similar quantitative methodology to measure the impact of school libraries on students academic achievement. Surveying 600 school libraries, across the primary and secondary educational levels, this study found that students who attended schools that employed a professional school librarian achieved better academic results than those who were enrolled in schools without a librarian. The Texas Study argues that while socio-economic factors are the most significant determinant of academic achievement, the characteristics of the school library “may account for up to 8 per cent of the variance in reading-related test scores” (Smith, 2001). One conclusion reached from the Texas Study is that “libraries play a very special role in providing enrichment to students from disadvantaged backgrounds by providing additional help to develop skills to succeed” (Williams, Wavell & Coles, 2001).

While Lance’s quantitative model has provided statistical evidence that school libraries do have an impact on students’ academic attainment, there has been an emergent body of research that is based on the view that quantitative assessment of test scores results alone is not a sufficient measure of the impact of school libraries on students’ educational progress (Vallender, 2000). Todd (2002) describing the development of qualitative research in the study of the impact of school libraries on students’ educational attainment defines these studies as on a smaller scale, but complementary to statistical evaluations and states:

The micro-research examines more closely the myriad dimensions of the complex relationship between student learning and engagement with and use of a variety of information sources and formats in the information environment, particularly in the context of specific curriculums.....

The findings of this developing body of qualitative and methodologically triangulated research investigations (Callision, 2001; Haslett, 2005; Haycock, 1995; Loertscher & Woolls, 2002; Oberg, 2001; Streatfield & Markless, 1994; Williams & Wavell, 2001) have demonstrated the importance of evaluating students’ use of information and the library with respect not only to standardised test results but as

well to how students are provided opportunities to develop a range of skills and how the library impacts on students' learning attitudes. Included within this is the important role of the school library in promoting reading (Elley, 1991; Foertsch, 1992; Krashen, 1993, 2001; Libscomb, 1992; McQuillan, 1997). Williams and Wavell (2001), through a case study approach, found that reading interventions by the school librarian had a significant effect on the attitudes of students who were characterised as reluctant readers. When the school library is an integral part of the learning mindset of a school, a real difference can be made to students' achievement of outcomes.

In Ireland research on school libraries is in its early stages (Coghlan et al, 1999; Haslett, 2002, 2005). To a great extent this is because of the inconsistent and somewhat sparse provision of school library resources throughout the country across all levels of education. The importance of providing all children in Ireland with access to library resources is emphasised in both An Chomhairle Leabharlanna's report *Joining Forces: Delivering Libraries and Information Services in the Information Age* (1999) and in the Department of the Environment and Local Government's document *Branching Out: A New Public Library Service* (1998). The Library Association of Ireland has recommended that it should be legislated that schools be provided with libraries (2000). In *The School Library in the 21st Century: an Agenda for Change* (2004), the School Library Association Republic of Ireland (SLARI), in describing the importance of a nationwide school libraries system, makes the following points:

The situation at second-level where no Schools Library Service exists is most unsatisfactory... Today's second-level students need the support which can be offered by an effective and dynamic school library to help them with all aspects of their development and in particular with the development of independent learning and research skills.

Despite the extensive quantitative and to a lesser degree, qualitative, research internationally that has made the case that a well resourced school library with a

professionally qualified librarian has a significant impact on students' reading skills and educational outcomes, few second-level schools in Ireland have the kind of school library services as described in SLARI's recent policy document.

2.10 Conclusion

This literature review serves as a backdrop to the investigation into the use of a computer-based reading development programme, facilitated and managed through the school library, in a second level school in the context of educational disadvantage. The literacy development of children and young people was discussed, and the new ICT-based literacies of the modern world were outlined. The pedagogical implications of ICT use were considered and the rationale for the integration of ICT-based teaching and learning methodologies into the education system, with particular reference to the areas of educational disadvantage and literacy development, were discussed.

The literature reviewed emphasised the necessity for education systems and school curricula to move from the static, traditional forms of teaching and learning into a system that recognises the central importance of ICT-based literacy and learning for successful and critical participation by today's students in the knowledge society.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter seeks to give an accurate description of the research design and the methodology used during the research. Firstly, the case study approach that was taken is described and justified and the specific research questions are then identified. Secondly, a description of the main elements of the research design is given – literature review, document analysis, observations, questionnaires and interviews. Consideration is also given to ethical issues involved in the research and also to the limitations of the research. An overview of the research process is also provided.

3.2 Research Design and Method

“Research design is governed by the notion of fitness for purpose” (Cohen et al. 2007). Traditionally, in a variety of disciplines, children have been allocated a voiceless role in research. There was a view that rather than being participants, children were the objects of research studies. Of late, researchers are beginning to adopt a more child-oriented approach to their studies, emphasising the importance of children’s rights in the research process from initiation to recommendations. Of late, questions have been raised about the purpose of children’s studies, e.g., are we conducting research about children, or are we conducting research for children? Increasingly, researchers have recognised the need to develop collaborative and respectful methodologies in working with children of all ages. These methodologies should strive to place the child in the centre of the research process, accord respect to the child’s perspective, listen to the voice of the child, and, optimally, empower the child to participate in deciding what the aims of the research should be. As with all marginalised groups, this kind of emancipatory and participatory approach would help researchers to determine whether their efforts truly are serving those intended. In developing a methodological approach for this study, an emphasis will be placed

on enabling students in the participating school to contribute their views and voices to the investigation.

3.3 Methodology

According to Walker (1985) the term methodology is used interchangeably with the terms methods and techniques. Walker states that “a methodology should specify methods but only in order to justify their use for defined purposes in specified situations and circumstances.” For the purpose of this study the meaning of methods adapted by Cohen et al (2007) will be used, where they define methods as:

...the range of approaches used in educational research to gather data which are to be used as a basis for inference and interpretation, for explanation and prediction... we extend the meaning to include not only the methods of normative research but also those associated with the interpretive paradigm – participant observation, role-playing, non-directive interviewing, episodes and accounts.”

In constructing a methodological framework for this study, a case study approach, based on grounded theory (Glaser and Strauss, 1967), has been selected. “Case studies are detailed investigations of individuals, groups, institutions or other social units. The researcher conducting a case study attempts to analyse the variables relevant to the subject under study” (Polit and Hungler 1983). Case study can be defined as “an umbrella term for a family of research methods having in common the decision to focus on inquiry around an instance” (Adelman et al, 1984). Case study deals with “the interaction of factors and events” because “sometimes it is only by taking a practical instance that we can obtain a full picture of the interaction” (Nisbet and Watt 1980). Case study differs from other research methods because attention is focused on the individual case and not the general (Cohen et al. 2007). “A case study focuses on a bounded system, usually under natural conditions, so that the system can be understood in its own habitat” (Stake 1988).

Research in the fields of psychology and education has made extensive use of the case study strategy. In selecting the case study as a method, the researcher opts to study a phenomenon in detail, by focusing on one particular instance, as opposed to a wide range of examples as used in survey research. By focusing on the individual case, it is possible to explore in depth, the intricate network of factors, which work together to determine the nature of the phenomenon being studied. Conducted in the case's natural setting, without the imposition of artificial controls, this approach enables a researcher to analyse phenomena as they occur. The aim is to present a richly detailed report of the intricate web of factors, e.g., policies, relationships, personalities, facilities and events that contribute to the specific phenomenon under investigation.

According to Hitchcock and Hughes (1995), case studies:

- Will have temporal characteristics which help to define their nature;
- Will have geographical parameters allowing for their definition;
- Will have boundaries which allow for definition;
- May be defined by an individual in a particular context, at a point in time;
- May be defined by role or function;
- May be shaped by organisational or institutional arrangements.

It is for these reasons that a case study approach has been chosen as the research methodology for this study. The examination of the impact and effectiveness of the Accelerated Reader program in a second level school in the context of educational disadvantage is specifically, geographically, socially, economically and educationally localised. As a result case study has been deemed to be the most appropriate methodology

3.4 Methodological Approach

The methodological approach adopted by the researcher determines the direction the study will take. The fundamental question for the researcher is one of a quantitative or qualitative framework. Scriven (1972) refers to quantitative and qualitative as

objective and subjective, emphasising the contrast between them. He goes on to explain:

In the first of these contrasts, 'subjective' refers to what concerns or occurs to the individual subject and his experiences, qualities and dispositions, while 'objective' refers to what a number of subjects or judges experience – in short, to phenomena in the public domain.

Stake (1995) views the distinction between the qualitative and quantitative methods as a “matter of emphasis – for both are mixtures”. He goes on to elaborate on the three main differences in emphasis between the qualitative and quantitative approaches:

- (1) the distinction between explanation and understanding as the process of inquiry,*
- (2) the distinction between a personal and impersonal role for the researcher, and*
- (3) a distinction between knowledge discovered and knowledge constructed”*

In this study, a range of different methods, or triangulation, will be used to generate data. Increasingly social science researchers recognise the compatibility of qualitative and quantitative methods (Berkowitz, 1996). Combining methods can compensate for the possible limitations of a single approach:

Triangulation can mean combining several qualitative methods, but it can also mean combining qualitative and quantitative methods. Here, the different methodological perspectives complement each other in the study of an issue and this is conceived as the complementary compensation of the weaknesses and blind spots of each single method (Flick, 1998).

Informed by the range of quantitative and qualitative international studies of the school library’s impact on reading development and learning experiences and of the use of computerized learning programs in general, and the Accelerated Reader Program in particular, for the development of literature-based reading, the researcher will use a triangulated methodological approach, combining qualitative and

quantitative research instruments in order to resolve the research questions. By employing methodological triangulation the researcher aims to address the limitations of single methods, extend the scope and depth of the findings, as well as to contribute to the scientific rigor of the study.

Qualitative research is inherently multi-method in form. However, the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question. (Denzin and Lincoln, 1998).

Triangulation allows a researcher not only to test the validity of emerging themes, but also contributes to the construction of a multi-faceted, in-depth understanding of the case under study.

Triangulation is not a tool or a strategy of validation, but an alternative to validation. The combination of multiple methods, empirical materials, perspectives and observations in a single study is best understood, then, as a strategy that adds rigor, breadth, and depth to an investigation (Denzin and Lincoln, 1998).

Proposed methodologies:

Students: Pre and post reading tests; Questionnaires; Observation;
Group Interviews
Librarian: Semi-structured interview
Teachers: Semi-structured interviews

3.5 The Research Question

In examining the implementation of the Accelerated Reader Program through the school library in a second level school in the context of educational disadvantage, the research questions were as follows:

- Can the Accelerated Reader Program, when implemented through a professionally staffed school library, impact on the reading comprehension

and literacy development of underachieving adolescent students who are participating in the Junior Certificate School Programme?

- To what extent do participating students' reading levels (as determined by the AR diagnostic test the Standardized Test for Assessment of Reading (STAR) reflect their reading levels as determined by the nferNelson Group Reading Test II (GRT II) Standardised Reading Test?

3.6 Case Study Setting

The case study school selected for this study is a designated disadvantaged co-educational school that caters for second-level students and is situated in the inner city area of Dublin city. The school is a non-selective school which is administered by the City of Dublin Vocational Education Committee (CDVEC) and the Board of Management. There are approximately 410 students attending this school, with 130 students participating in the JCSP Programme. The school has a total teaching compliment of 40.

The school library was established in 2002 under the first phase of the JCSP Demonstration Library Project. The library has a collection of eight thousand books, approximately two thousand of which have AR quizzes.

3.7 Research Participants

The selected participants for this study were two mixed class groups of first year students in the case study school. These students were chosen on the basis of their prior selection for participation in the JCSP Programme in the school and also on the basis of the wide range of literacy difficulties which had been identified among the groups. These students were chosen to pilot the Accelerated Reader Program in the school and their participation in the Program was facilitated and supported by their English teachers through their English classes, and by the school librarian through their timetabled library classes and their out of school hours use of the school library.

3.8 Research Timeline

Research Process	Time Frame (2008-2009)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Review Literature	_____													
Write Literature Review	_____													
Research Design	_____													
Questionnaire Composition	_____													
Obtain Permissions	_____													
Observations	_____													
Reading Test Administration	_____													
Administer Questionnaires	_____													
Focus Group Work	_____													
Interviews	_____													
Statistical Analysis	_____													
Write up Results	_____													
Present Findings	_____													

3.9 Data Collection

The research approach for this study relied on a range of methods of data collection. The main methods used to obtain the data necessary to evaluate the Accelerated Reader Program in the case study school were:

- Pre and post reading tests;
- Observation;
- Questionnaires;
- Interviews
- Group interviews with students

3.9.1 Pre and Post Reading Tests

Since the initiation of the JCSP Demonstration Library Project, JCSP students in the library schools have had their reading skills assessed using the Group Reading Test II (6-14) nferNelson. While it is acknowledged that there are limitations to this particular reading test, it has been used to triangulate the more anecdotal and

qualitative evidence of students' reading development as documented by librarians, school staff, parents and the students themselves. It is also used to provide comparative baseline reading skills information across all thirty schools participating in the JCSP Demonstration Library Project. The GRTII tests are norm-referenced standardised reading tests. This means that students' results can be interpreted in relation to the results of other students of the same age. This allows any student's performance to be benchmarked against national standards of reading.

It is an aim of this research to compare the participating students GRTII reading test results with their reading test results from the Accelerated Reader STAR reading assessment in order to ascertain whether the AR STAR Program determines students' reading ages and reading development in a manner comparable to those of a recognised norm-referenced standardised reading test.

3.9.1.1 The Accelerated Reader Program's Standardized Test for Assessment of Reading (STAR))

The AR program's STAR reading assessment is a computerised diagnostic reading assessment developed by the Reading Renaissance Company (the developers of the Accelerated Reader Program). The STAR reading assessment requires students to read passages of varying difficulty – the difficulty level changes based on the student's responses – as a means of determining the student's reading level. The STAR assigns each student an individual grade equivalent (GE) reading level. This GE reading level is further used to assign AR point goals. For example, a student with a GE reading level of 10.0 would be assigned an AR point goal of 60 points; a student with a GE reading level of 4.0 would be assigned an AR point goal of 25 points, etc. Finally, the GE reading level is also used to assign a Zone of Proximal Development (ZPD) for each student. This ZPD provides each student with a reading level range to select books appropriate to his/her reading level.

The STAR reading assessment was completed by all participating students on three occasions over the course of this study – in September 2008 and in February and May 2009.

3.9.1.2 The nferNelson Group Reading Test (GRT)

Originally published in the mid 1980s, the Group Reading Test (GRT) and its successor the Group Reading Test II (GRTII) is a short, easy-to-administer standardised group reading test with alternate forms to prevent copying and allow retesting. It is designed to assess the reading skills of children as young as six and also to monitor their progress up to the age of fourteen. The publishers claim that pupils enjoy taking the test as it uses everyday language and situations, yet stretches their vocabulary and comprehension skills.

GRT II (6-14) incorporates three multiple-choice tests:

- Sentence Completion Forms A and B: two 48-item alternate tests, consisting of an introductory set of picture recognition questions, followed by sentences which have to be completed;
- Sentence Completion Forms C and D: two 45-item alternate tests of sentence completion skills;
- Context Comprehension Forms X and Y: two 40-item alternate tests of context comprehension where missing words are to be supplied for a series of four continuous prose passages.

The GRTII reading test was administered to all students participating in this study in September 2008. Students were retested in May 2009.

3.9.2 Observation

According to Stake (1995), qualitative research emphasises placing an interpreter in the field:

...to observe the workings of the case, one who records objectively what is happening but simultaneously examines its meaning and redirects observation to refine or substantiate those meanings.

Stake goes on to claim that observations lead the researcher towards greater understanding of the case. “Refining the plan of observation is directed by the case.”

There are two main types of observation: participant observation and non-participant observation. In the former according to Cohen and Mannion (2007):

...the observer engages in the very activities he sets out to observe. Often his cover is so complete that as far as the other participants are concerned, he is simply one of the group.

They go on to describe the non-participant observer as “one who stands aloof from the group activities he is investigating and eschews group membership” (ibid). Data collected for this research project through observation in the case study school was through non-participant observation. In non-participant observation according to McKernan (1991) “the researcher is unobstructive and does not engage in the roles and work of the group as a group member...the researcher deliberately does not feign membership of the group.”

Observation plays a major role in our understanding of the case. In the Case Study school, observation gave the researcher a greater insight into the issues. Stake (1995) emphasised the importance of relevant observations:

“We need observation pertinent to our issues. If our case is a curriculum and a main issue is about opposition to the content of that curriculum, we should not expect to make most of our observations in classrooms, that is not where opposition is likely to be expressed.”

In relation to the issue of the implementation of the Accelerated Reader Program in the Case Study school for example, observations yielded very valuable data. Were adequate facilities, equipment and book stock for running the Program available in the school? Did students have ready access to these facilities, etc? Were students engaging positively with the Program? Is reading development a priority in the school? Was the school library and librarian seen to be playing a central role in supporting literacy development in the school? These questions/issues were used to structure observations and to help the researcher capture the ethos or climate of the setting, thus yielding a valuable insight into the case. Data obtained from direct observation usually compliments information obtained from other techniques. Observation is the best technique for getting a “real life” sense in the real world (Robson, 2002). Stake advises researchers to “look at a few aspects...we choose opportunities identified partly by issues helping us to make a better acquaintance with the case.” (1995).

3.9.3 Questionnaires

Questionnaires are a quick and relatively simple way of generating a large volume of information (Tilstone, 2002). Questionnaires fall into two types – open and closed. Closed questions are quick and easy to complete and straight forward to code, but they do not give participants the chance to add remarks (Cohen & Mannion, 2007). Closed questions are presented in such a way that they limit the number of responses a participant may give (Verma & Mallick, 1999). Closed questions can be answered with yes or no, true or false, multiple choice answer options or an attitude using a Likert scale (Heinemann & Falk, 2005). According to Bell (2005), “the more structured the questions, the easier it will be to analyse data”. Open questions on the other hand, allow participants to write their own opinions on a subject. They are not restricted to matters of fact and are often used to find out opinions.

For the purposes of this study, a closed question questionnaire was selected for administration to the participating students. The questionnaire was designed to assess the students’ perceptions of AR Program, the school library and their own

reading ability and development. Simple wording was used throughout the questionnaire to ensure that it would be understood by all the students. Bell (1996) agrees with this simple approach to questionnaire design and suggests against the use of double-barrelled, leading or complicated questions.

3.9.4 Questionnaire Pilot Test and Completion

According to Cohen & Manion (2007), pre-testing of questionnaires is of vital importance if they are to be a success. Questionnaire piloting has several functions, but it is mainly done to increase validity and practicability. One important purpose of piloting is to eliminate ambiguities or difficulties in wording (Cohen & Manion, 2007). Bell (2005) notes that piloting a questionnaire enables the researcher to see if all questions and instructions are clear and allows the researcher to remove any items which do not yield usable data.

For the purposes of this study, piloting of the questionnaire was deemed to be extremely important as it was to be given to students between the ages of twelve and fourteen, many of whom had various levels of reading difficulties. The draft questionnaire was piloted with a school librarian in another JCSP Library Project school. Her role was to test the questionnaire and determine if the students might find any aspects of it difficult to understand or follow. Four first year JCSP students were involved in the piloting process. The piloting process found two of the questions to be unclear and both of these were reworded for the final version.

3.9.5 Administration of the Questionnaire

Following the receipt of signed letters of consent from the parents/guardians of all participating students, the questionnaire was administered to the students towards the end of May 2009. The questionnaire was handed out and answered during a single class period. Due to the possibility of a 'non-response' to or a 'non-completion' of the questionnaire by some students and the questionnaire findings not representing the views of all of the students who used the AR Program, the researcher arranged for the questionnaire to be completed during the students'

English class under the supervision of the English teachers. Therefore, assistance was given to any students who needed it and students who were absent on the day the questionnaire was completed by the class group were facilitated to complete it at a later date. This resulted in a 100% response rate and negated the difficulties associated with non-response. “Non-response is a problem because of the likelihood, repeatedly confirmed in practice, that people who do not return questionnaires differ from those who do” (Moser & Kalton, 1971).

3.9.6 Interviews

The purpose of interviews in the broad sense are many and varied, from evaluating or selecting a person in some respect, to testing hypotheses or to sampling respondents opinions as in doorstep interviews. For the purpose of this discussion the use of the interview will be limited to that of a research tool. In qualitative research according to Bogdan and Biklen (1982), interviews may be used in two ways:

Either they may be the dominant strategy for data collection, or they may be employed in conjunction with participant observation, document analysis or other techniques. In all these situations the interview is used to gather descriptive data in the subjects' own words so the researcher can develop insights on how subjects interpret some piece of the world.

Moser and Kalton (1971) describe the interview as “a conversation between interviewer and respondent with the purpose of eliciting certain information from the respondent.” Preparation for interviews follows much the same procedure as for questionnaires. According to Bell (1996) issues or topics need to be selected, questions devised, methods of recording and analysis considered, schedules agreed and piloted. Stake (1995) endorses this need for sound interview planning:

It is terribly easy to fail to get the right questions asked, awfully difficult to steer some of the most informative interviewees on to your choice of issue.

Stake goes on to advise the researcher to have a short list of “issues-oriented questions” indicating a concern about discussing these issues and completing an agenda:

The purpose for the most part is not to get simply yes and no answers but descriptions of an episode, a linkage, an explanation. Formulating the questions and anticipating probes that evoke good responses is a special art. (Stake, 1995)

The interviewer needs to be aware of the pitfalls of subjectivity and possible bias. There can develop an antagonism or a desire to please between the interviewer and the subject. The interviewer may also tend to seek out answers that support his/her preconceived ideas.

In relation to preparatory work, the first consideration is the type of interview, that is, how structured it should be. For the evaluation of the Accelerated Reader Program in the Case Study school, the interview was a very important source for data collection. For this research project, the researcher rejected the structured interview, in which questions are predetermined and rigidly followed with all respondents, as being too restrictive. Similarly, an entirely non-directive interview, in which interviewees are free to talk without interruption or intervention was also ruled out as it was feared that this would not produce a clear picture of the issues which the interviewer wished to address. A semi-structured type interview was chosen as the preferred type as it offers some measure of control of the interview. It allows for the possibility of following the same format of questioning for each interviewee and thus ensures that all relevant areas are looked at. The semi-structured interview also permits the interviewer the freedom to probe more deeply into interesting or conflicting answers.

3.9.6.1 Piloting the Interview

The aim of the pilot interview was to demonstrate its ‘fitness for purpose’ concerning both its feasibility and its improvement (Cohen et al, 2000). The interview in this study was piloted with a teaching colleague of the researcher. The

experience of the pilot was both positive and beneficial. It helped to refine questioning skills, gather feedback and gather data. Data from the pilot interview is not included in this report. The amendment to the interview schedule, made on the basis of the pilot interview, was the inclusion of more probing questions. These were used to tease out the responses of the interviewees.

3.9.6.2 Administering and Recording the Interview

Detailed, formal letters of information and consent forms (Appendix ?) explaining the general nature and timescale of the proposed data collection were sent to the school Principal, the relevant English teachers and the librarian. The letters invited these individuals to contribute to the study by taking part in an interview with the researcher at their school at a time convenient to them. Anonymity and confidentiality were assured. In drafting the interview schedules (Appendix ?), questions were constructed to provide specific, focused answers, as well as more open-ended questions that would allow participants to elaborate in their own words, drawing upon their experiences and individual areas of expertise. The interview schedule was designed as “an open-ended instrument used to help direct the dialogue” (Berkoitz, 1996) and provided participants with the freedom to contribute fresh insights while ensuring that each responded to questions constructed to resolve the research questions. The interview schedule was designed to gain the adults’ perspectives on the impact of the AR Program on the students’ reading development and also their perspectives on the part played by the school library and the school librarian in implementing the AR Program in the school. All of the interviews with the adult participants were audio-recorded and transcribed.

3.9.7 Group Interviews with Students

The research design included provision to build on the data gathered in the student questionnaires by interviewing a small number of the participating students. In doing this the interviews were used to “delve deeper into the motivations of respondents and their reasons for responding as they did” (Kerlinger, 1970). The use of interviews further validated the other methods used in the research.

This final phase of data collection was comprised of informal group interviews with sub-groups of eight students from each of the two participating classes. The students who participated in this phase of the research were selected on the basis that they represented a cross-section of the range of literacy levels, gender composition and AR participation levels of all students involved in the study. All students selected for participation in the group interviews were issued in advance, with letters of information and consent forms (Appendices B and C) to take home for their parents or guardians to sign.

The group interviews with students took place in May 2009. The researcher met with each of the two groups individually in the school library. The class teacher was present for each interview session but did not participate in the discussion. In each case, the researcher introduced herself and explained to the students the purpose of the discussion and the importance of any contributions they had to make. This introduction served to create a relaxed environment and allowed the researcher to establish rapport with the students. Once students signalled that they understood the nature and purpose of the group work, each was invited to contribute to the discussion.

For the most part, these informal group interviews were non-directive in format with the students being allowed to talk freely and without interruption. The researcher assumed the role of a guide to gently steer the students back to the subject of the discussion as and when necessary. The researcher provided the students with prompts for discussion and allowed the students to respond to these prompts in a free and open manner. The students responded well to this interview format with the result that a very interesting and engaging discussion took place with each group.

These informal group interviews were audio-recorded with the permission of each student participant. The recorded interviews were subsequently transcribed.

3.10 Analysis of the Data

Data from the pre-coded questionnaire questions was entered and analysed using Microsoft Excel spreadsheets. A combination of formulae, functions and filtering of the data was used in order to count the group data and to find patterns.

The interview data was analysed using a process of “continuous data analysis” (Hammersley & Atkinson, 1983). This process involves a series of steps as follows:

1. Establishing units of analysis by reading and re-reading the data;
2. Creating a domain analysis by putting the units of data into clusters to form domains or ‘categorisation’ (Lincoln and Guba, 1985);
3. Establishing relationships and connections between these domains;
4. Making speculative inferences;
5. Summarising: At this stage the concepts used were a combination of those derived from the data and those inferred.

Observational data was recorded and analysed under a number of headings.

The STAR and GRTII reading test results were entered, analysed and compared using Microsoft Excel spreadsheets.

3.11 Ethical Considerations

As participant, researcher and practitioner there are ethical responsibilities. Throughout the research process the values of openness, democracy, accountability and rigour were maintained. Duties existed in relation to equality and consent of participants, confidentiality and protection of respondents and openness of motives and bias in the research study. Throughout the study, particular attention was paid to the following:

3.11.1 Informed Consent

Informed consent is the “bedrock of ethical procedure” (Cohen et al, 2000). It is the procedure “in which individuals choose whether to participate in an investigation

after being informed of facts that would be likely to influence their decisions” (Diener & Crandall, 1978). In order to achieve this, a covering letter was sent to the Principal, the teachers, the librarian and the parents/guardians of the students participating in the AR Program in the school, synopsising the Program and the associated research and requesting permission from the potential adult participants and the parent/guardian of each child to agree to participation in the study.

The letter gave:

- A fair explanation of the aims and procedures of the research study;
- An offer to answer any queries or to provide further clarification;
- A reassurance that participation was voluntary;
- A reassurance that responses would be treated as private and confidential;
- A reassurance that no individual participant would be identified in the study.

3.11.2 Access and Acceptance

“Permission to carry out an investigation must always be sought at an early stage” (Bell, 1996). Permission was sought from the JCSP Support Service management, the school Principal and the school Librarian to engage in the research.

3.11.3 Privacy and Confidentiality

To protect the privacy and confidentiality of the participants, the following measures were taken throughout the study:

- Respondents were not asked to give their name in the questionnaire or in the interview;
- Questionnaire results, interview recordings and transcripts, reading tests and AR reports were kept in the researcher’s own possession and not disclosed to any outside party;
- Questionnaire results, interview recordings and transcripts, reading tests and AR reports will be destroyed following the completion of the University of Limerick assessment process.

As well as these specific measures taken, the researcher followed a set of conditions and guarantees offered for a school-based research project (Bell, 1996). These conditions were followed from the outset of the research study:

- All participants were given the opportunity of anonymity;
- All data gathered was treated confidentially;
- Interviewees were able to verify statements;
- Participants will be offered a copy of the completed report;
- The research will be assessed by the University of Limerick for examination purposes only. Should the question of publication arise at a later date, permission will be sought from the participants.
- It is hoped that the final report may be of benefit to the school and to the participants in the research.

3.12 Limitations

In order to ensure the appropriate validity of this software program and its implementation through a professionally staffed school library, the researcher would ideally have liked to have included an evaluation of the use of the program in another JCSP school, but one which did not have a JCSP Project Library or librarian.

The original intention of the researcher for this research study was to include two JCSP participant schools in the research process. Both of the identified schools were in the early stages of introducing the AR Program in the school, but only one had a JCSP Project Library and librarian. However, it took much longer than anticipated to establish the AR Program in the non-library school and therefore this school had to be excluded from the evaluation.

Another limitation of the study was the absence of a control group. As there was no other first year class group within the school with reading literacy abilities of a similar level to those of the participating classes, it was not possible to include a control group in the study.

The use of the questionnaire as a research instrument may be regarded by some as limiting. It is true to say that a questionnaire can limit the extent to which issues can be explored in greater depth. However, the use of follow up group interviews provided a strong qualitative aspect which enriched and supported the research process.

CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

This chapter outlines the findings obtained by the researcher. These findings were collected from questionnaires, observations, semi-structured interviews and group interviews, STAR reading tests and GRTII reading tests. The research took place over a period of one academic year, beginning in September 2008 and ending in May 2009. The participants for the study were a group of thirty-five First Year students in the case study school. All participating students were using the Accelerated Reader Program for the first time.

The questionnaire was administered to the students during the month of May 2009. The questionnaire was read to the participants who chose one option for each answer.

Observations were carried out in the school library and the school computer room on three occasions throughout the year. Students' engagement with the AR program, their levels of concentration, their reading skills, their involvement with and use of the school library (both during and outside of school hours), etc. were observed during these sessions.

The STAR reading test was completed by all participating students at the end of September 2008. The test was repeated by all students in February 2009 and again in May 2009.

The GRTII reading test was administered to all participating students in September 2008. The repeat test was administered in May 2009.

Individual interviews with the English teachers and the School Librarian and group interviews with students took place in May 2009.

Because each of the research instruments employed was unique, different methods for data analysis were used to account for the specific nature of each. The following sections will present for each research instrument both the analytical methods employed as well as the findings from the data collected.

4.2 Student Questionnaire

The student questionnaire was designed to enable students in the case study school to provide their opinions about the AR Program and their individual reading patterns as well as about their school library. The questionnaire was developed using a range of multiple choice closed questions, each of which required the selection of a single response.

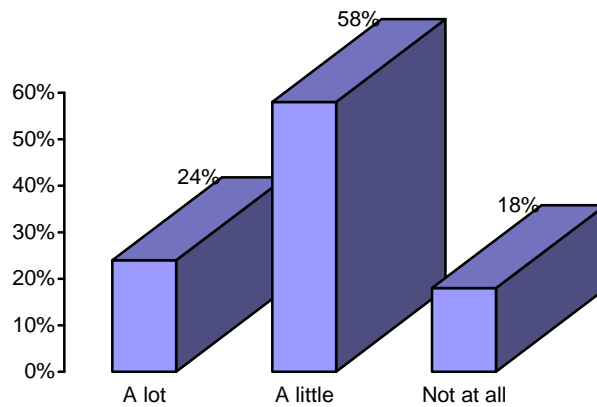
Of all returned questionnaires, 62% were completed by females and 38% by male students. This is representative of the overall gender balance in the school.

Student Questionnaire Responses

Question 1. “I am...”

Male	62%
Female	38%

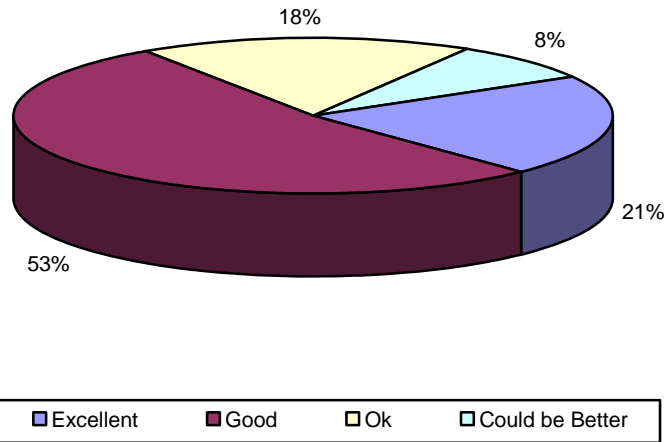
Question 2. “I like reading...”



Question 3. “I like to read...”

Every day	29%
Every week	27%
Every month	0%
Sometimes	33%
Never	11%

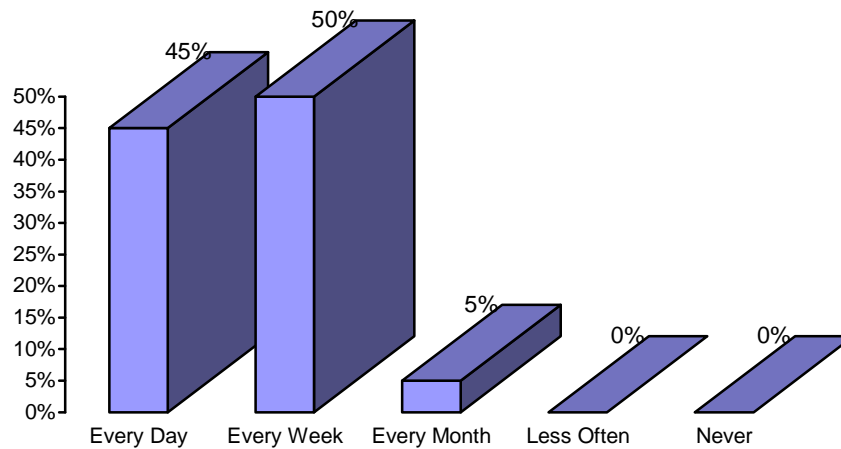
Question 4. “My reading is...”



Question 5. “I like using the Accelerated Reader Program...”

A lot	37%
A little	52%
Not at all	11%

Question 6. “I use the school library...”



Question 7. Do you use the school library in your free time (during lunch time, before or after school)?

Yes	89%
No	11%

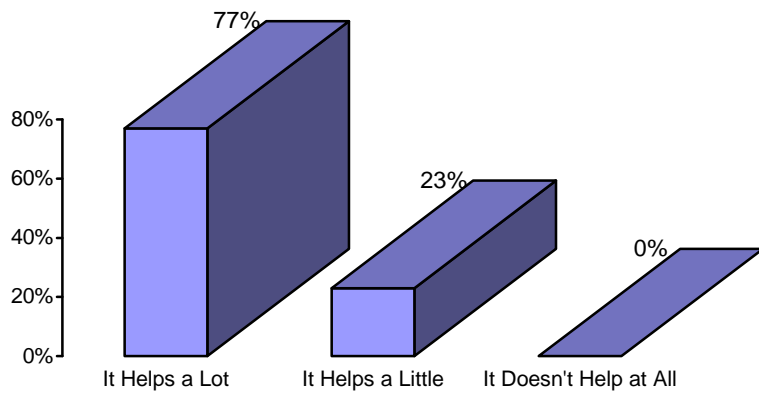
Question 8. Do you enjoy doing the AR quizzes?

Yes	83%
No	17%

Question 9. Where do you do the AR quizzes?

In the school library only	71%
In the computer room only	0%
In both the school library and the computer room	29%
Elsewhere in the school	0%

Question 10. Do you think that the AR Program is helping you to read better?



Question 11. Which of the following do you prefer to read?

Fiction (Story books)	44%
Non-Fiction (Information books)	18%
Both	38%

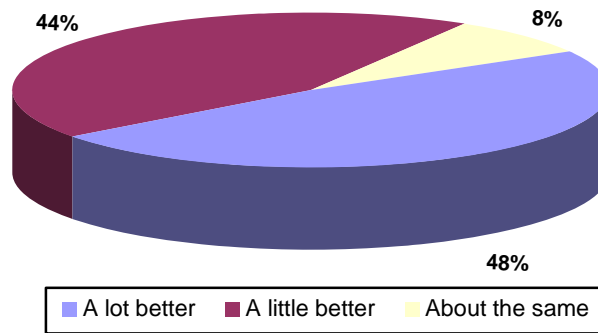
Question 12. Do you think the AR quizzes are...

Fun	18%
Ok	62%
Boring	20%

Question 13. Do you only read books that have AR quizzes?

Yes	74%
No	26%

Question 14. Since starting secondary school, do you think that your are able to read...



Question 15. Would you like to continue using the AR Program next year?

Yes	70%
No	30%

4.3 Group Interviews with Students

In addition to the closed question student questionnaire, group interviews were conducted with a selection of students from each participating class group. This provided the students with the opportunity to contribute, in their own words, their more individualised views on the AR Program, on their individual reading experiences and abilities and on their school library. The following are a selection of their responses:

4.3.1 The Accelerated Reader Program

“I really enjoy using the AR Program. I am reading a lot more because of it. My reading is a lot better now than it was at the start of first year. I must have read at least ten books – imagine that!”

“I love using the computers to do the tests and the quizzes. It’s much better than writing”.

“I’d like to go on using AR next year. It keeps your brain functioning as well. We do it first class on Friday morning – and it gets you going for the day. It makes you ready for the next class – your brain is working.”

“I almost always only read the AR books – to get the points off them. You don’t get any points for reading the other books in the library.”

4.3.2 Reading Experiences and Abilities

“I read my pages to my Ma every night. I sometimes go to bed and read until I conk out.”

“I don’t like reading but I like doing the quizzes. And I like coming to the library. It’s deadly.”

“I wouldn’t just read a book just for the sake of it. I never read as many books in one year before. I read about 20 books this year. I didn’t read any books when I was in 6th class.”

“I always try to read the harder books – to get more points and reach my target.”

“I have read about twenty seven books this year and I am happy with that amount because that is a huge step from Primary school”.

“We read over a million words this year. We are word millionaires!”

4.3.3 School Library

“It is good to have a library in the school because you can print stuff and all. We had a history test and we wanted to print something - you could just print it in the library.”

“We had only kinda half a library in primary school. We only got to go there an odd time and only with the teacher. We could never use it after school. And it had no librarian – so it wasn’t a real library”.

“I love having a school library – it’s great. [Librarian] helps with our homework. You can go in after school. She will always try to get you the books you want.”

“We had a library in our primary school – but nobody read to us.”

4.4 Interviews with Teachers and School Librarian

Upon completion of the transcription of the audio recordings of the interviews with the two English teachers and the school librarian, the data was entered into NVivo 7 qualitative analysis software for coding and analysis. From the nature of the questions contained in the original semi-structured interview schedules (Appendix D), as well as from the content and depth of the conversations that developed during the individual interviews, a range of categories and themes emerged from the data that inform the presentation of the qualitative findings from this phase of the research study.

The teachers and librarian in the participating school were asked questions to assess the impact of the AR Program on their students’ literacy development, enjoyment of reading and use of the school library. Their responses can be categorised according to a number of predominant themes.

4.4.1 Motivation

All of the adult participants discussed the impact the AR Program has had on student motivation. The overall consensus was that the computer-based aspects of the program were a major contributor to students’ levels of engagement with and enjoyment of the Program. Both teachers stated that, in their view, the Program’s emphasis on encouraging students to progress in their reading by continuously

striving to move to higher points, and therefore more challenging, books, was a positive feature. One teacher stated:

“...but really it’s the motivating more than the competitiveness. They challenge themselves. They are so eager to build up their points, to build up the book level. I think it’s the book level actually more than the points that they are interested in.”
Teacher 1

The school librarian similarly discussed specifically the issue of increased motivation among the students using the Program. She identified that in some cases this motivation stemmed from a level of positive competitiveness among particular students:

“One of the biggest impacts of the AR Program is that it has motivated them to read. The motivation among the students has been brilliant. There is competitiveness there – but in a positive sense. They are really excited about reading now – at first they were not. At first they would say “I am not going to read a book or I will only read one and that’s it” – but at the end they were getting really excited about it.”
School Librarian

All the adults stated that, in their view, the immediacy of feedback provided by the Program and the fact that it was computer-based was very motivational for the students:

“You read your book, you finish your book on Tuesday night, you come in before school starts on Wednesday morning to do your quiz... They have immediate feedback. They run to me, they get it signed. They print it off, come and get it signed, they get their comment and bring it home. There is immediacy about it.”
Teacher 2

“...and they are very, very aware themselves. They are very bought into it. They really love it. They see it as a challenge and are motivated to do well...”
Teacher 1

“The students really enjoy using the Program because it is on the computer, because it uses software. If they had to write reviews, etc. they would not be nearly as engaged. The fact that it is computer-based is a very strong factor in its success.”
Teacher 2

On the issue of extrinsic rewards, all the adult participants agreed that while they had provided a limited amount of extrinsic rewards to the students throughout the year, extrinsic rewards were not necessary for the Program to succeed:

“Before the Easter holidays we did our first round of awards – laminated certificates. They were delighted. Then again at the end of the year at the Awards Ceremony with the whole school, we gave awards (certificates and book tokens) for greatest improvement, etc. However, I would say that it had been very successful all through the year without any awards being offered.”

School Librarian

“...the reading and the certificate is motivation in itself.”

Teacher 1

4.4.2 Library Impact

Because one of the aims of this study was to investigate the impact of having a professionally staffed school library on the introduction of a computer-based reading development programme, the adults were asked to give their views on how the school library and librarian had contributed to the implementation of the Program. Comments from the two English teachers included:

“Yes, the library has definitely had a huge impact on the success of the Program because there again I would have said the kids are very in control and they are able to monitor their own reading. I find I don’t have the time or I don’t like to tell them do your tests in the library class. We don’t have enough computers to do it in the class. So they come and they do it themselves after school and it’s great because it makes them independent.”

Teacher 1

“...I don’t think I would have been able to run it successfully without the library.”

Teacher 2

“I actually don’t think it could work if you didn’t have a library because part of the carrot for them in the initial stages is their Thursday library class. So I actually can’t see, I think it would be very, very difficult to administer if you didn’t have a library.”

Teacher 2

“It’s just wonderful ... I have been a teacher for ages and ages. I just think that the library is so essential... you forget what it was like before we had a library because I just couldn’t imagine the school functioning without the library now.”

Teacher 2

“And it’s not the librarian and the teacher, if you know what I mean, it’s the team. And it works so, so well.”

Teacher 2

“If we didn’t have a library it would be much more difficult to run the Program. The expertise of the librarian being there and being able to recommend books to the students on what they might like and also her expertise of being able to constantly source suitable books. No-one else would have that expertise.”

Teacher 1

“And of course the kids are on a first name basis with [Librarian]. It’s a very different relationship. I don’t think they would have been as inclined to come to me and ask for a book. They might come and boast about their reading but it’s a different relationship. I think the library and librarian are invaluable to the school.”

Teacher 1

“And you know in the current economic climate, you sometimes think ...what are they going to cut next? As long as it’s not the library.”

Teacher 2

4.4.3 Literacy Skills

All of the adult participants discussed the impact the AR Program has had on the literacy skills and reading development of the participating students. They all stated that, in their view, the literacy skills of the students had improved through their use of the Program. They spoke in particular about students’ increased enjoyment of reading. Teachers’ comments included:

“I just think it is magic. I mean to hear children talking about authors and saying – one kid said to me coming up to Christmas – and he wouldn’t be one of the good readers. He was reading one of the Barrington Stokes – a particular author – and he said to me ‘Miss when you are going around during the holidays, if you see any books by (and he wrote down the name of the author and Barrington Stokes), would you get the books and I will pay you for them out of my Christmas money’. Now I just think that is wonderful – when they start actually having a conversation about

books and they are prepared not to buy footballs or whatever, they are prepared to buy books – then you’ve got them.”

Teacher 2

“I now see the students recommending books to each other. This is something I have been trying to encourage every year with my classes but it was always very difficult. But this group now chat to each other about books. Which I mean is really what it should be all about.”

Teacher 1

Similarly, with regard to increased confidence and enjoyment of reading, the school librarian commented that:

“Their reading has become more fluent. They are more willing to read with you. They want to read and they want to tell you all the time how well they have done and what they have read and how well they have done in their tests.”

School Librarian

One teacher referred to the impact the Program has had on the development of the participating students’ writing and vocabulary:

“Where I have noticed it really would be in their own personal writing. You can see the transfer into their own personal writing. Particularly what really struck me was in the area of dialogue. That they were so comfortable that they knew exactly how to do it. They are able to build up layers of a story using dialogue. Plus the fact that the vocabulary they use has increased hugely.”

Teacher 2

This view was supported by the school librarian who commented:

“Their teachers are commenting on how much the students’ vocabulary has improved.”

School Librarian

4.4.4 AR Reports and Communication with Parents

All of the adult participants commented on the positive reaction of parents to the introduction of the AR Program and on how access to the Program data had enhanced their level of communication with parents re their child’s literacy

development. One aspect that was identified as being particularly useful was the ability to show parents examples of their child's AR reports and to discuss with parents, either by telephone or at Parent/Teacher meetings, how they could support and encourage their child in their literacy development. The feedback from parents was identified as being overwhelmingly positive. Comments from teachers included:

"The parents took away the reading list and were very impressed to see this is the amount of books my child has read and a number of the parents would have said that they discussed the books at home and they read with them."

Teacher 1

"Students would have said that their parents were very much aware of it because of the result sheets for the comments going home. And their parents were delighted. And their parents wanted them to read."

Teacher 2

The school librarian spoke about how she uses a range of AR reports to support her in her work and in tracking students' reading development:

"I use about ten of the AR reports regularly, and of course the students receive a TOPS report for every quiz completed. The reports are a great help in identifying those students that are progressing well and also those that are not doing so good."

School Librarian

The AR software includes an in-built facility called 'Renaissance Home Connect' which allows parents and students to log in to a website to view the student's reading practice and progress towards targets. The adult participants in this study stated that this facility had only been used on a very small scale this year. However, they do intend to expand usage of this aspect of the Program in future years:

"While we did use it to a limited extent this year, we hope to formalise its use next year. Also, an increasing amount of the students now have internet access at home, so that should make it easier."

School Librarian

4.4.5 Negative Aspects

While the overall consensus amongst the adults interviewed was that, as a reading development programme, particularly within the provision of a professionally run school library, the AR Program has operated very successfully within the school and has had an overwhelmingly positive impact on the participating students, some negative aspects to the implementation and operation of the Program were also identified. One teacher commented that, while the fact that the Program was computer-based was one of the main reasons for its success in terms of student engagement, the fact that it was ICT reliant could also be problematic:

“One major problem is obviously if the Internet is down – and that’s a problem we have had recently – it was down for about 2 weeks. Kids couldn’t access the tests. And I lost track and they lost track of it and it was unfortunate as we came to the end of the year. It was a messy way to finish up.”

Teacher 1

Both teachers agreed that their overall experience of implementing and operating the AR Program with their students was very positive. However, they both acknowledged that this was due, in no small part, to the presence in the school of a school librarian who took over the vast majority of the administration of the Program, including installation of the software, inputting of student data, running of reports, sourcing and cataloguing of books, etc. One teacher commented:

“We experienced very few problems in this school. But I could see if you were a teacher running the Program in a school that didn’t have a library or a librarian - that it would be very easy to give up because you do need supports.”

Teacher 2

As the school librarian was not only involved with the operation of the Program on a day to day basis, but also with its implementation and administration, her experiences of difficulties with the Program were somewhat different to those of the teachers. She outlined some of the difficulties she encountered as follows:

“The system setup was quite time-consuming. Installing the software, knowing all of the requirements (Adobe, Flash8, etc.) - this was all very complicated in the beginning... We still have some problems when students do their STAR tests – some things might not work.”

“It is also very difficult to use the software if you are doing anything out of the ordinary. The regular reports are quite straightforward. But if you are setting up a new class or a new teacher it is quite complicated.”

“One of my main issues with the Program is the selection of books that have quizzes on the system. In my opinion there are not nearly enough titles listed for students at the lower reading age levels i.e. at level 3 and under.”

“There is also a shortage of Irish titles on the list.”

“I also think that some of the vocabulary used in the quizzes and in the STAR reading tests may be quite difficult for the students and may sometimes be inappropriate for their reading levels.”

“The reading choice for the students is narrowed – they cannot choose from the whole library. Only a limited number of the books in the library are in the AR collection. The AR students tend to ignore all of the other sections and this limits their exposure to potential enjoyable reading experiences.”

School Librarian

4.5 Observations

Observation 1

Date: 12/02/2009

Location: School Library

Time: 10.00

Length of Observation: 60 Minutes

Number of Students: 23

Activities students were engaged in: Weekly Library Class (all classes in the participating school are of one hour duration).

On entering the library for their library class, the students were observed to immediately take out their library books – every student was observed to have brought their library book with them in their bag. Students who had finished reading

their books were asked to return the books to the library counter and to select another book. The school librarian reminded these students that they should always try to change their books outside of class time i.e. before or after school, or at lunch time, so that class time would not be taken up with this activity.

When all of the students had their books selected, the class was asked to sit down. The school librarian and class teacher then opened a discussion with the students about the books they had read, the quizzes they had taken, who had done well, etc. Students were encouraged to recommend books to each other and three students gave a short summary of the book they had just read to the rest of the class.

Following this class discussion, the students began a period of silent reading of their AR books. During this time the school librarian and the class teacher spent time with individual students. They mainly focussed on those students who had been highlighted as 'Trouble Value' or 'At Risk' in their AR Diagnostic Reading Practice Reports. The adults chatted to the individual students about their books and assisted them to select other books within their reading range. The school librarian also spent some time reading to one individual student.

Two students were observed taking AR quizzes on the library computers (although they were reminded that this should normally be done outside of class time). The students were observed to be very familiar with the computerised aspects of the AR Program. They were confident in accessing the website, in logging in to the system (using their personal ID numbers) and in navigating to the correct quiz for the book they had just finished reading. The students spent 5 and 7 minutes respectively completing the quizzes. On completion of their quizzes, the Reading Practice TOPS Report was printed automatically for each student. This report gives them their score on the quiz they have just completed, their average percentage correct, their school year summary of progress to date, etc. A sample TOPS report is given in Appendix I. The students showed their reports to the school librarian. The librarian read and signed the reports, wrote a short note to the students' parents on

each one i.e. "X is doing really well in his reading". She then put a positive sticker on the reports, praised the students and asked them to show their reports to their English teacher and parents. This immediate availability of results and feedback was observed to be very affirming for the students.

The final ten minutes of the class period were given over to the students writing down their homework which consisted of 10 pages of reading from their AR books. (The AR students in this school are given 10 pages of reading every night and are encouraged to come to the library in their own time to do their quizzes and to change their books). Before the end of the class, all the students brought their journal to either the school librarian or the class teacher to show their reading progress since the last class.

The class ended with the students putting their AR readers into their bags and leaving the library for their next class. Some of their comments to the librarian on their departure included:

"I'll be back at lunchtime Miss. Keep me a computer!"

"This book won't last me for a whole week. I'll be back for a new one tomorrow."

"Be sure to keep that book I asked you for. [Student] said it was deadly!"

Observation 2

Date: 22/05/2009

Location: School library

Time: 8.00am

Length of Observation: 60 Minutes

Activities students were engaged in: Reading; Homework; Borrowing library books; Returning library books; Using library computers; Doing AR quizzes; Information queries to librarian.

The library in the case study school is open for students and staff use from 8.00am each morning. An average of 40 students were using the library at any one time in the observational period 8.00am to 9.00am.

Those students present who were participating in the AR Program were observed to be confident and comfortable in their use of the library and obviously had a very positive relationship with the school librarian. Those involved in taking AR quizzes were observed to be very familiar with the process and were almost totally self-reliant in taking the quiz on the library computers. It was noted that the AR students were given priority of access to the library computers for the purpose of taking their AR quizzes. A total of six students were observed taking AR quizzes during this observational period. As was found during the previous observation, the AR students presented as being confident with using computers in general, and with the AR Program in particular. They seemed to enjoy taking the computer quizzes and were engaged with the process. A level of competitiveness was observed between two individual students who each seemed to be very aware of the progress the other was making. However, this presented as a healthy and positive competitiveness with the students being motivated to work hard to achieve better results. On completion of their quizzes, the students were given immediate feedback on their progress through their Reading Practice TOPS Report and through the school librarian who signed their reports and provided comments for their English teachers and parents.

Those AR Program students who were borrowing books were observed to be very familiar with the layout of the library in general and with the location of the AR coded books in particular.

The school librarian was out on the library floor at all times and was observed to be quietly assisting and guiding those students who needed assistance. The librarian was obviously familiar with the interests and abilities of the individual students and was observed to guide students not only towards books that might be of interest to

them, but also towards books that would be accessible to the students in terms of their reading ability.

Observation 3

Date: 22/05/2009 **Location:** School Computer Room **Time:** 10.00am

Length of Observation: 35 Minutes

Number of Students: 15

Activities students were engaged in: Completing the STAR reading test on the computers.

One first year class of students was observed completing the STAR reading test. This was the third time that these students had completed this test and they were all obviously familiar with the process. The vast majority of students were able to log on to the AR system without any assistance, with only one student requiring help as she had forgotten her ID number. On taking the test, the students were first of all presented with some practice questions by the computer system to familiarise them with the process and to allow the computer program to assess their reading levels prior to commencement. On completion of the practice questions, they were automatically progressed to the actual STAR test.

All students were observed to be engaged with the task. They presented as confident computer users with good keyboard and mouse skills. They worked their way methodically through the test questions and asked for assistance from the adults present when necessary. No instances of misbehaviour or refusal to co-operate were observed among the student group. They seemed to enjoy working on the computers and this led to their engagement with the task at hand.

The class English teacher, a Special Needs Assistant and the School Librarian were present to assist students with any difficulties and to guide them through the

completion of the test. Very few difficulties were in fact observed with students only requesting assistance on procedural issues e.g. which computer to use, rather than on how to actually access and use the computer program.

4.6 Reading Tests

Analysis and comparison of the results of the GRTII and STAR reading tests taken by the participating students in September 2008 and again in May 2009 revealed some interesting findings, both in terms of the reading development of the participating students and also in terms of the comparative findings of the two test types.

Tables 1 and 2 provide a breakdown of the comparison in reading test results for those students who participated in the current research and who were tested using both test types in September 2008 and who were retested in May 2009.

Table 1: Summary of Increases, Maintenance and Decreases in Reading Ages

Students Tested Sept. 2008 + May 2009	GRTII Test Percentage	STAR Test Percentage
Students whose reading ages increased	100	62
Students who maintained the same reading age	0	8
Students whose reading ages decreased	0	30

Table 2: Levels of Reading Age Increases/Decreases

Level of Change (Yrs + Mths)	GRTII Test Percentage	STAR Test Percentage
+ 3.00 ⁺	8	8
+ 2.00 to 2.11	15	0
+ 1.00 to 1.11	23	23
+ 0.07 to 0.11	16	23
+ 0.01 to 0.06	38	8
No change	0	8
- 0.01 to 0.06	0	15
- 0.07 to 0.11	0	15

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Introduction

The purpose of this study has been to determine whether a specific computer-based reading development programme i.e. the Accelerated Reader Program, when implemented through a professionally staffed school library, actually impacts on the reading comprehension and literacy development of underachieving adolescent students who are participating in the Junior Certificate School Programme in a designated disadvantaged school. The study also sought to determine the extent to which the participating students' reading levels as determined by the AR diagnostic test the Standardized Test for Assessment of Reading (STAR) reflects their reading levels as determined by the nferNelson Group Reading Test II (GRT II) Standardised Reading Test.

In order to resolve these research questions, the study endeavoured to measure variables related to the participating students' experiences of using the AR Program, their reading comprehension and literacy development over the duration of the study and their comparative reading age development. The study also endeavoured to assess the adult participants' experiences of the AR Program, together with their views on its impact on students' literacy development and overall engagement with their learning.

From a comparison of the data gathered from the range of quantitative and qualitative research instruments used in this study, a number of consistent findings emerged through this methodological triangulation. An analysis of these findings is presented in this chapter. A study of the literature from chapter two is intertwined thematically with the findings from the previous chapter, and discussed in some detail.

5.2 ICT and Reading Development

One of the main areas of focus for this study was to evaluate the impact of a computer-based reading development programme on the literacy levels and reading comprehension of the participating students. From the findings that emerged across all of the research instruments used in the study, it is evident that the main contributory factor leading to the students' positive engagement with the AR Program was that it was computer-based. Students reacted very positively to the personalised learning aspects of the Program and were motivated by the immediate feedback which the Program provides. The study findings show that the participating students, many of whom would find the broadcast learning styles of the traditional classroom difficult to cope with, reacted very positively to being given the opportunity to become interactive with their learning. They enjoyed using the computers to do their quizzes and take their STAR tests and presented as being very much engaged with their own reading development.

It was the view of the adults that the students' consistent immersion in this focused, computer-based reading development programme with its' emphasis on encouraging students to progress in their reading, to continuously strive towards more challenging books and which provided them with instant feedback on their progress, was a very positive and motivational method of supporting literacy development.

5.3 Reading Attitudes and Patterns

Questions two through four in the student questionnaire sought to gather data on the participating students' attitudes to reading. The vast majority of the students (eighty two percent) stated that they liked reading, with twenty four percent stating that they like reading 'a lot'. With regard to frequency of reading, twenty seven percent of students stated that they liked to read at least every week, with twenty nine percent stating that they liked to read every day. Of the remaining students, only eleven percent indicated that they never liked to read with the others stating that they enjoyed reading occasionally.

The questionnaire also sought to explore the students own perceptions of their reading ability. A surprising seventy four percent of respondents indicated that they felt that their reading was good (fifty three percent) or excellent (twenty one percent) with only eight percent stating that they felt that their reading ‘could be better’. As the cohort of students who participated in this study have, on average, reading ages that are between two and three years behind their chronological age, this finding indicates that, despite these literacy difficulties, the students have developed a positive attitude to reading and a high level of self-belief. This finding is supported by the data from the student group interviews where the participating students presented themselves as eager and engaged participants in the Accelerated Reader Program in the school. During the interviews, the students identified themselves as selective readers with the ability to discuss the types of books they liked to read and they displayed a willingness to take on more challenging reading experiences. It was clear from the questionnaire findings and interview discussions that, at the end of their first year in secondary school, the majority of students now saw themselves as much more able and prolific readers than they had been in their Primary school years, with ninety two percent stating that they felt that their reading skills had improved, including forty eight percent who felt that they are now able to read ‘a lot better’ than at the beginning of first year.

During their interviews, all of the adult participants discussed the impact the AR Program has had on improving the reading skills of the participating students. All the adults stated that, in their view, the literacy skills of the students had improved through use of the Program. Aspects of the AR Program which were identified as contributing to this improvement included, in particular, the increased amount of time given to reading activities, the emphasis given to reading skills development by the AR Program and the students’ immediate engagement with the Program due to the fact that it was computer-based. It was the view of the adults that this cohort of students had, during the course of their first year in secondary school, developed an engagement with their reading that was at a significantly higher level than that of previous first year cohorts with similar levels of literacy difficulties.

5.4 Motivation and Rewards

From analysis of the findings across all of the research instruments used in this study, one finding that emerged very strongly was that use of the AR Program had a significant and positive impact on students' motivation and engagement with reading. The students presented as being very aware of the progress they had made with their reading since the introduction of the Program and were very eager to discuss this progress. They also displayed a determination to continue to progress to reading more challenging books.

As discussed in Chapter 2, tangible rewards as motivational tools are often associated with the use of the AR program in the United States. However, the findings from this study support the findings of previous studies by Vollands, Topping and Evans (1999) and Cameron and Pierce (1994) in that the participating students were, on the whole, disinterested in tangible rewards, but were rather more highly motivated by the individualised performance feedback inherent in the Program and the nontangible incentives of teacher, librarian and parental praise and constructive feedback.

5.5 Impact of School Library

Responses to questionnaire and interview questions related to the impact of the school library and librarian on student learning and engagement with their education process indicate that the library plays a crucial role in both of these areas.

While all students indicated that they use the school library on a regular basis, with forty five percent of them using it every day, this is not confined to compulsory, timetabled attendance in the library during class time. A very significant finding of this study was that eighty nine percent of the student participants utilise the services and facilities of their school library in their own free time i.e. during lunch time and/or before or after school. This is a very strong indication of the importance of the school library in the lives of these students and of the significant role that the

library plays in education and learning within the school – both within and outside of regular school hours.

With regard to the implementation and operation of the AR Program in particular, the school library was identified as being very much instrumental to the success of the Program. The findings from this study indicate that the school library in the case study school serves as a student ownership space whereby students can independently select books, take quizzes on the library computers and engage in self-directed learning. These findings reflect Williams and Wavell's (2001) case study findings that reading interventions, when implemented through a professionally staffed school library, had a significant effect on the attitudes and reading skills development of students who were characterised as reluctant readers.

There was agreement amongst the adults that the single most important factor leading to the successful implementation and operation of the AR Program in the school was the presence of the school library and the involvement of the school librarian. Both teachers indicated very strongly that, in their view, the AR Program could not have operated, or at least not operated as successfully, if the school did not have a library. All of the adults indicated that two very important aspects of the success of the Program were the own-time availability of the library computers to the participating students and the level of teamwork between the class teachers and the school librarian. This supports the established body of evidence, as outlined in Chapter 2, that “students achieve higher levels of literacy, reading, learning, problem-solving and information and communication technology skills” when teachers and school librarians work co-operatively (IFLA, 2000).

5.6 Accelerated Reader Implementation

More than thirty reports can be generated with AR to assist teachers and librarians with their guidance of the reading development of the students in their charge. Findings from the case study school indicate that of the range of report options available, only ten are used on a regular basis. Time constraints were identified as

the reason that the remainder of the reports were not utilised. However it was emphasised by the librarian that she felt that there was a level of duplication of data across the various reports available and that the reports that were in use in the case study school provided all of the information necessary to implement and manage the Program successfully. (See Appendix I for a selection of sample AR reports.)

5.7 Negative Aspects of the AR Program

While the overall evidence from this study demonstrates that the AR Program is an innovative and successful reading development intervention, the study findings did also reveal a number of negative aspects of the Program.

The fact that the Program is ICT reliant was identified as being potentially problematic if internet access was unavailable in the school for any length of time. As the level of ICT support in Irish second-level schools varies enormously, with only very low levels of support available in many schools, this could cause serious disruption to the operation of the Program.

Another drawback of the AR Program identified in this study is the nature of the comprehension questions. Most AR quiz questions are concerned with literal rather than inferential reading comprehension. The adult participants stated that in order to quickly gain the maximum points, some more proficient readers could choose to read at a low level. That is, they could choose short and easy books rather than being challenged by longer and more difficult books that are more likely to emphasise inferential reading comprehension. This highlights the importance of ongoing reading guidance for participating students to ensure appropriate reading choices.

The low number of books on the AR reading list by Irish authors and/or set in an Irish context, emerged as a negative finding of this research. Evidence from previous research has indicated that struggling readers engage much more positively with books containing characters they can identify with and/or settings they can

relate to. In addition, the low number of books on the list which were suitable for and accessible to those students with the lowest reading levels was identified as another negative factor.

In addition, it was a view of the adults that some of the vocabulary used in the AR quizzes and in the STAR reading tests was inappropriate in an Irish context and was sometimes confusing for the students. An example given was that of one of the practice questions in the STAR reading test where the student is asked to fill in the missing word in the following sentence:

We went for a _____ in the car

In an Irish context, the most appropriate word to insert here would be the word 'drive' and indeed this was the word chosen by the majority of the students. However, the correct word as determined by the AR Program is 'ride', a word which, while appropriate in an American context, is totally inappropriate in Ireland.

The restricted title choice of books by participating students is another potential drawback of the AR Program. Both in questionnaire responses and in interview discussions, the majority of students stated that they restricted their reading to AR listed books. When asked if they only read AR books, seventy four percent of students responded positively. However, while the school librarian did agree that reading choices were limited for the group, she was of the opinion that in many cases, and in particular with regard to the most struggling readers, this limiting of choice was helpful to them in that it allowed them to select appropriate reading materials without being overwhelmed by having to select from among the entire stock of the school library.

5.8 Comparison of Reading Test Results

One of the research questions which this study aimed to resolve was to determine the extent to which the participating students reading levels as determined by the GRT II

standardised reading test reflected their reading levels as determined by the AR STAR reading test.

As can be seen from the reading test comparisons in Tables 1 and 2 in the previous chapter, there was a high level of discrepancy between the test results. The GRT II test results show that one hundred percent of the participating students demonstrated a reading age increase over the duration of the study. The STAR reading test results however only show a reading age increase among sixty two percent of the students, with eight percent showing no change and thirty percent actually showing a decrease.

Similarly, the reading test findings highlight a wide variation with regard to the extent of reading age improvement. The results of the GRT II tests show that twenty three percent of students experienced a reading age improvement of two or more years. The comparable finding with the STAR test is just eight percent. Both tests found that twenty three percent of students displayed a reading age improvement of between one and two years. However, closer analysis of the results shows that, while the percentage number of students with this level of increase was the same for both tests, the actual student groupings were different.

The only finding from this study, outlined earlier in this chapter, which might go some way towards explaining at least some of this reading age differential is that some of the vocabulary and terminology used in the STAR reading test can be confusing or inappropriate in an Irish context and may therefore cause students to score at a lower reading level on the test.

Despite these discrepancies between the findings of the two test types, the results of both tests show evidence of significant improvements in the reading abilities of the majority of the participating students over the course of the study.

5.9 Conclusion

Analysis of the findings of this study suggests that the AR Program, when implemented through a professionally staffed school library, can have a significant impact on the reading comprehension and literacy development of the participating students. Students enjoyed using the Program and were motivated by this ICT-based learning tool.

Analysis of the results of the two different types of reading tests administered to the students at the beginning and end of the study however, highlighted discrepancies between the two tests with the result that it is not possible to draw conclusions on the actual reading age development of the participating students. To do this would require further analysis of the two test types with regard to their level of difficulty, their appropriateness in an Irish context, etc. This is outside the scope of the current study. However, in so far as the test results can be compared, it can be concluded that immersion in the AR Program over the course of one academic year contributed towards significant reading age improvements for the majority of participating students.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

Adolescent literacy has been defined as “the set of skills and abilities that students need to read, write and think about the text materials they encounter. Becoming literate is a developmental and lifelong process” (Berman et al, 2005). In the twenty-first century this includes becoming literate with electronic and multimedia texts as well as conventional written material.

The range of outcomes influenced by levels of literacy is broad and relates not only to individuals, but also to communities and the nation as a whole. Aspirations, community and civic participation, family life and employment are all linked to literacy levels.

We can project many benefits beyond the obvious economic opportunities that come with academic success. Young people who read literature understand that there is a world beyond the immediate horizon, that their own circumstances do not necessarily represent normalcy and that there are values and possibilities more uplifting and universal than those often found in their own everyday lives.

Improving reading comprehension for adolescent students who have been identified as underachievers is not a task which is easily accomplished. As the literature review in this study demonstrated, students of this age, regardless of their academic achievement, are bombarded with competing interests at this time in their lives, especially in the social area. Reading as an activity of choice does not compete with other alternatives as students advance through their teenage years. This problem is further compounded for underachievers in reading who need to increase their reading activity in order to improve their comprehension ability. Furthermore, these struggling and unsuccessful readers have, by the time they reach secondary school,

often developed a lengthy repertoire of coping strategies, none of which involves engaging in the kind of literate activities that will develop their facility with literacy.

Adolescents who struggle with literacy typically bring a history of frustration and failure to their transactions with texts. In secondary school this frustration is compounded by the expectation that they are no longer learning to read, but instead reading to learn. These students are frequently asked to engage in reading and writing activities across subject areas that are frustrating to them. It is not uncommon for students to respond to this frustration with inappropriate outbursts or passive disengagement. For many of these students, learning how to get by without reading can take precedence over learning to be a better reader.

6.2 Literacy and ICT

If the literacy that is taught in school does not engage young people and is delivered almost exclusively through a medium that young people use less frequently, then it is unsurprising that literacy standards continue to cause concern. Literacy needs to be more broadly defined in classroom practice, in a way in which it is relevant to the twenty-first century lived experience. Teachers and school librarians must tap into the interests and passions of their students and literacy interventions must evolve in order to embrace non-traditional forms of literacy as well as non-traditional forms of learning practice.

Given the link between reading enjoyment and reading attainment (Twist et al, 2007), it is vital that schools offer literacy activities that are enjoyable and that motivate young readers. Bridging the gap between personal and school experiences of literacy is essential for maintaining the interest of students. Teachers and school librarians need to empower themselves to promote reading as an enjoyable activity that can enhance young people's reading, writing, speaking and listening skills. This, in turn, will motivate skill acquisition and create the positive attitude to reading that the OECD found so powerful as a determinant of social mobility among fifteen year olds (OECD, 2006).

The information age prompts reconsideration of the ways in which students are taught. ICT can be powerful as a tool for engaging students, for motivation and for self-directed learning. As Bean (2000) noted, being literate in the new millennium is not simply reading and writing print texts; people need to be sociotechnically literate to navigate a world filled with computers, email, the Internet, and digital media.

The evidence from this study demonstrates that innovative ICT-based programmes and interventions, such as the Accelerated Reader Program, when implemented through a professionally staffed school library, can have meaningful impacts on the literacy levels, educational outcomes and aspirations of underachieving students. The study findings show that, with good quality implementation, the AR Program can contribute to teacher and librarian effectiveness, in terms of value added in reading and student engagement with their learning.

Integrating technology into the schools curriculum in a meaningful and creative way remains a challenge for some schools. Comprehensive technology integration requires many resources, takes time and necessitates appropriate school planning in order for the process to take place in a truly coordinated and developmental manner. As teachers and librarians implement technology into their classrooms and libraries, their vision of the role of technology also develops. However, it must be remembered that placing intelligent software in classrooms and libraries does not guarantee it will be used intelligently. Information technology is not a replacement for the teacher or librarian professional, but a tool with the potential to enhance their effectiveness. In the case of AR, as for other learning information systems, appropriate and sufficient high-quality training and support for teachers and librarians is needed if implementation integrity is to be sustained at the level necessary to raise student attainment. Or as Everhart (1998) expressed it, “For a computerized reading management program to be successful, it may not lie in the features of the software, but ultimately in the people running it.”

6.3 Recommendations

This study has identified an area within second-level education, where the application of computer technology with the appropriate educational software, within the school library, can be used to enhance the literacy skills of underachieving adolescent students in a designated disadvantaged school. Further research is required to substantiate these findings with a more comprehensive study that would incorporate some or all of the following:

- The assimilation of new ideas into working practice takes time and the scale of this project does not allow for long term analysis of changes. A longitudinal study which would track student progress throughout their Junior Cycle years and indeed into Senior Cycle and beyond, would contribute greatly to the body of knowledge in this area.
- As no control group was available for this study, further research should, where possible, include a control group.
- A comparative study of the implementation and operation of the AR Program in a JCSP school without a school library or school librarian would provide further valuable information on the impact of the AR Program and on the impact of the school library on students' reading development and attitudes to learning.
- There is scope for further research to investigate more fully other value-added aspects of school library contributions to ICT-based learning.
- The home environment of participating students also needs to be investigated. Research is needed to investigate whether home environments are conducive to reading and whether parents are supporting their children's reading. Programmes to promote family literacy should be an important component in a school's literacy design. Research in this area should result in guidelines on how best to develop such programmes.
- This study has highlighted the need for further comparative research into the appropriateness and reliability of the various reading tests (both standardised and non-standardised) being used with JCSP students in Irish schools.

BIBLIOGRAPHY

Adams, M.J. (1995). *Beginning to read: Thinking and learning about print*. Cambridge: The MIT Press

Adelman, G., Jenkins, D. and Kemmis, S. (1984). *Rethinking Case Study*. In J. Bell, T. Bush, A. fox, J. Goodey, S. Gortory, Educational Management. 93-102, London: Paul Chapman.

An Chomhairle Leabharlanns (The Library Council) (1999). *Joining Forces: Delivering Libraries and Information Services in the Information Age*. Dublin: An Chomhairle Leabharlanna.

Anderson, R.C., Wilson, P.T. & Fielding, L.G. (1988). *Growth in Reading and how Children Spend their Time Outside of School*. Reading Research Quarterly, 23, 285-303.

Archer, P., & O'Flaherty, B. (1991). Literacy problems among primary school leavers in Dublin's inner city. *Studies in Education*, 7, 7-13.

Atkinson, J. (1998). *The acquisition of literacy*. Cambridge: The MIT Press.

Baughman, J.C. (2000). *School Libraries and MCAS Scores*. A paper presented at a symposium sponsored by the Graduate School of Library and Information Science, Simmons College, Boston, Massachusetts, October 26, 2000. Available online at <http://artemis.simmons.edu/~baughman/mcas-school-libraries/Baughman%20Paper.pdf>

Baxter, S.J. & Smalley, A.W. (2003). *Check it Out! The Results of the School Library Media Program Census, Final Report*. St Paul, MN: Metronet. Available online at <http://metronet.lib.mn.us/survey/index.cfm>

Bean, T.W. (2000). *Reading in the content areas: Social constructivist dimensions*. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Volume III* (pp. 629-644). Mahwah, NJ: Erlbaum.

BECTA (2005). *Using Software to Develop Skills: Recording and Presentation* [Online]. Available online at: http://www.ictadvice.org.uk/index.php?section=tl&catcode=as_cr_02&country=eng&rid=4322 (Accessed 15/04/2009).

Bell, J. (1987). *Doing Your Research Project*. Milton Keynes: Open University Press.

Bell, J. (1996). *Doing Your Research Project*. Buckingham: Open University Press.

Bell, J. (2005). *Doing your research project: a guide for first-time researchers in education*. Buckingham: Open University Press.

Berkowitz, S. (1996). *Using Qualitative and Mixed Method Approaches*. In R. Reviere, S. Berkowitz, C.C. Carter & C.G. Ferguson (Eds). *Needs Assessment: A Creative and Practical Guide for Social Scientists*. London: Taylor and Francis.

Berman, I., et al (2005). *Reading to Achieve: A Governor's Guide to Adolescent Literacy*. Washington DC: NGA Center for Best Practices

Bogdan, R.C. and Biklen, S.K. (1982). *Qualitative Research for Education: An Introduction to Theory and Methods*. Boston: Allyn and Bacon, Inc.

- Boldt ,S and Devine, B, (1998). *Educational Disadvantage in Ireland: Literature Review and Summary Report* in Boldt S, Devine B, Mac Devitt D & Morgan M (1998) *Educational Disadvantage and Early School Leaving Discussion Papers*, Dublin, Combat Poverty Agency p10.
- Brandt, D. (2001). *Literacy in American Lives*. Cambridge: Cambridge University Press.
- Brassell, D. (1998). *Maestro, can we go to the library today: The role of the School Library in the improvement of reading attitudes and achievement among bilingual elementary students*. In R. Constantino (Ed.), *Literacy, access, and libraries among the language minority population* (pp.155-174). Lanham, MD: Scarecrow.
- Brassell, D. (2004). *Read Alouds Rule! How Guests Reading Aloud Affect What one Classroom's Students Read*. Florida Reading Quarterly, 40 (4), 8-13.
- Burgin, R. & Brown Bracy, P. (2003). *An Essential Connection: How Quality School Library Media Programs Improve Student Achievement in North Carolina*. Spring, TX: Willow Research and Publishing. Available online at www.rbargin.com/NCschools2003/
- Calkins, L. (1997). Motivating readers: Five ways to nurture a lasting love of reading. *Instructor*, 106 (5), 32-33.
- Callison, D. (2001). *The Twentieth Century School Library Media Research Record*. In A. Kent and C. Hall (Eds). *Encyclopedia of Library and Information Science*, Vol 71, supplement 34. New York: Marcel Dekker: 339-369.
- Callison, D. et al (2004). *Survey of Indiana School Library Media Programs: A Collaborative Project Between the Association for Indiana Media Educators & Indiana University – Indianapolis, School of Library and Information Science*. Presented at the 2004 AIME Conference, Indianapolis, IN, November 2004. Available online at www.ilfonline.org/Units/Associations/aime/Data/index.htm

Cameron, J. and Pierce, D.W. 1994. Reinforcement, reward, and intrinsic motivation: A meta-analysis. *Review of Educational Research* 64: 363-423.

Carbo, M. (1994). Sharply increasing the reading ability of potential dropouts. In Robert Morris (Ed.), *Using What We Know About At-Risk Youth: Lessons from the Field* (pp. 129-138). Lancaster, PA: Technomic.

Carr, M. & Claxton, G. (2002). Tracking the development of learning dispositions. *Assessment in Education*, 9(1), 9-37.

Carter, B. 1996. Hold the applause! Do Accelerated Reader and Electronic Bookshelf send the right message? *School Library Journal* 42, no. 10: 22-25

Chall, J. S. (1983). *Learning to read: The great debate* (3rd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Assoc.

Clark, C. and Dugdale, G. (2008). *Literacy changes lives: An advocacy resource*. National Literacy Trust

Coghlan, V., Quigley, P. & Walton, R. (1999). *Library File: Making a Success of the School Library*. Dublin: Library Association of Ireland.

Cohen, L, Manion, L. and Morrison, K. (2000). *Research Methods in Education*. 5th ed. New York: Routledge

Cohen, L, Manion, L. and Morrison, K. (2007). *Research Methods in Education*. New York: Routledge

Collins, J. and Blot, R.K. (2003). *Literacy and literacies: Texts, power, and identity*. New York: Cambridge University Press.

Combat Poverty Agency (2003). *Annual Report*. Dublin: Combat Poverty Agency

Cosgrove, J., Kellaghan, T., Forde, P., & Morgan, M. (2000). *The 1998 Assessment of English Reading (with comparative data from the 1993 assessment)*. Dublin: Educational Research Centre.

Cunningham, A.E., & Stanovich, K.E. (1998, Spring/Summer). *What Reading Does for the Mind*. *American Educator*, 8-15.

Denzin, N. K. and Lincoln, Y. S. eds., (1994). *Handbook of Qualitative Research*, Thousand Oaks, CA: Sage

Department of Education and Science (2005). *DEIS: Delivering Equality of Opportunity in Schools*. Dublin: Stationery Office.

Department of the Environment and Local Government (1998). *Branching Out: A New Public Library Service*. Dublin: Stationery Office.

Diener, E. & Crandall, R. (1978). *Ethics in Social and Behavioural Research*. Chicago: University of Chicago Press.

Dugdale, G. & Clark, C. (2008). *Literacy Changes Lives: An Advocacy Resource*. London: National Literacy Trust.

Eivers, E., Shiel, G. & Cunningham, R. *Ready for tomorrow's world? The competencies of Ireland's 15-year-olds in PISA 2006*. Dublin: Educational Research Centre.

Elley, W. (1991) 'Acquiring Literacy in a Second Language: the Effect of Book-Based Programs'. *Language Learning* 41 (3), 1991, pp375-411.

- Everhart, N. (1998). *Evaluating the School Library Media Center: Analysis Techniques and Research Practice*. Englewood, CO: Libraries Unlimited.
- Flick, U. (1998). *An Introduction to Qualitative Research*. London: Sage Publications Ltd.
- Florida Center for Reading Research. 2004. Accelerated Reader. Accessed Apr. 15, 2009, www.fcrr.org/FCRRReports/PDF/Accelerated_Reader.pdf.
- Foertsch, M. (1992). *Reading In and Out of School*. US Department of Education.
- Gee, J.P. (2000). Discourse and sociocultural studies in reading. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds), *Handbook of reading research* (Vol. III). Mahwah, NJ: Erlbaum.
- Glaser, B. G. and Strauss, A. L. (1967). *The discovery of grounded theory: strategies for qualitative research*. Chicago.: Aldine
- Grossen, B. (1997). *30 years of research: What we know about how children learn to read*. Santa Cruz, CA: Center for the Future of Teaching and Learning, (ERIC Document Reproduction Service No. 415-492).
- Hall-Ellis & Berry, M.A. (1995). *School Library Media Centers and Academic Achievement in South Texas*. Texas Library Journal, Vol. 71, no 2: 94-7.
- Hammersley, M. & Atkinson, P. (1983). *Ethnography: Principles or Practice*. London: Methuen.
- Hanafin, M. (2007). *Teaching and Learning in the 21st Century* [press release], 10 September 2007, available: http://www.techcentral.ie/small_business/ICT_teaching_2013/view [accessed 13 May 2009].

Harste, J.C. (1985). Portrait of a new paradigm: Reading comprehension research. In A. Crismore (Ed.), *Landscapes: A State-of-Art Assessment of Reading Comprehension Research, 1974-1984* (Final Report USDE-C-300-83-0130). Bloomington, IN: Language Education, Indiana University.

Haslett, D. (2002). *The Borrowers at School: A Report on Primary School Libraries*. Dublin: Library Association of Ireland.

Haslett, D. (2005). *Room for Reading: The Junior Certificate School Programme Demonstration Library Project: Research Report*. Dublin: JCSP, CDU.

Haycock, K. (1995). *Research in Teacher-Librarianship and the Institutionalization of Change*. In: Anonymous Literacy: Traditional, Cultural, Technological: 23rd Annual Conference of the International Association of School Librarianship (IASL) (Pittsburgh, Pennsylvania: July 17-22, 1994): 94-103. Kalamazoo, MI: IASL.

Heinemann, M. & Falk, B. (2005). *The Power of Questions: A Guide to Teacher and Student Research*. Portsmouth: Reed Elsevier, Inc.

Hitchcock, G. and Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research*. 2nd ed., London: Routledge Falmer.

Honig, B. (1997). *Reading the Right Way*. *The School Administrator*, 54 (8), 6-15.

IFLA/UNESCO (200). *School Library Manifest*. International Federation of Library Associations and Institutions

Kassam, Y. (1994). *Who benefits from illiteracy? Literacy and empowerment*. In Z. Morsy (Ed.), *The challenge of illiteracy: from reflection to action*. New York: Garland Publishing.

Kelleghan, T., Weir, S., ÓhUallacháin, S., & Morgan, M. (1995). *Educational Disadvantage in Ireland*. Dublin: Department of Education, Combat Poverty Agency, Educational Research Centre.

Kerlinger, F. (1970). *Foundations of Behavioural Research*. New York: Hold, Rinehard and Winston.

Kirsch, I., de Jong, J., Lafontaine, D., McQueen, J., Mendelovits, J., & Monseur, C. (2002). *Reading for change: Performance and engagement across countries*. Paris: Organisation for Economic Co-Operation and Development (OECD).

Kohn, A. 1993. *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Boston: Houghton Mifflin.

Krashen, S. (1993). *The Power of Reading: Insights from the Research*. Libraries Unlimited Inc..

Krashen, S. (2001). *Text and Tech: The Two-Way Bridge to Learning*. Presentation at the American Library Association, San Francisco, CA.

Krashen, S.D. (2004). *The Power of Reading* (2nd ed.). Englewood, CO: Libraries Unlimited.

Kuhlthau, C.C. *Seeking Meaning: a Process Approach to Library and Information Services*. Ablex, 1993.

Lance, K.C., Rodney, M.J., & Hamilton-Pennell, C. (2005). *Powerful Libraries Make Powerful Learners: The Illinois Study*. Canton, IL: Illinois School Library Media Association. Available online at www.islma.org/pdf/ILStudy2.pdf

Lerner, J. (2003). *Learning Disabilities, Theories, Diagnosis, and Teaching Strategies*. Houghton Mifflin Company, Boston.

Lincoln, Y. & Guba, E. (1985). *Naturalistic Inquiry*. New York: Sage Publications.

Lipscomb, L. (1992). *Recreational Reading and its Effects on the Reading Achievement of First Through Third Graders*. Unpublished doctoral dissertation. University of Texas, Austin.

Literacy Partners of Manitoba (1999). *Lets Talk About Literacy*

Loertscher, D. & Woolls, B. (2002). *Information Literacy Research: A Review of the Research: A Guide for Practitioners and Researchers* (2nd ed). Hi Willow Research and Publishing, 2002.

Lunzer, E.A. and Gardner, K. (eds) (1979), *The Effective Use of Reading*, London: Heinemann Educational for the Schools Council

Lunzer, E.A. and Gardner, K. (1984), *Learning from the Written Word*, Edinburgh: Oliver and Boyd

Lyon, G.R. (1998). *Why reading is not a natural process*. *Educational Leadership*, 55 (6), 14-18

McDonald, E. (1998). Reading achievement and educational disadvantage. *Irish Educational Studies*, 17, 208-221.

McKernan, J. (1991). *Curriculum Action Research*. London: Kogan Page

McMillan, J.H. (1995). *Successful literacy passport test remediation: Strategies for elementary and middle school students*. *Research Report*. Richmond, VA:

Metropolitan Educational Research Consortium. (ERIC Document Reproduction Service No. ED 311 393).

McQuillan, J. (1997). *Access to Print and Formal Instruction in Reading Acquisition*. Unpublished doctoral dissertation. University of Southern Carolina.

Moore, D.W., Bean, T.W., Birdyshaw, D., & Rycik, J.A. (1999, September). Adolescent literacy: A position statement for the International Reading Association. *Journal of Adolescent and Adult Literacy*, 43, (1), 97-112.

Moore, P. & Pouloupoulos, N. (1999) '*Butterflies and Elephants in the Classroom: Teachers Researching Information Literacy*' Scan 18 (4), 1999, pp49-53.

Moser, C. and Kalton, G. (1971). *Survey Methods in Social Investigations*. London: Heinemann Educational Books Ltd.

Nagy, W., Herman, P., & Anderson, R. (1985). *Learning Words from Context*. *Reading Research Quarterly*, 20, 233-253.

NALA (2004). *Position Paper on ICT and Literacy*. [Online]. Available at: http://nala.ie/common/download_file.cfm/.../ict_paper_may_03.pdf . Accessed 01/04/2009

NCTE, (2007). *21st Century Literacies*. Dublin: Author

NESF, (1997). *Early School Leavers and Youth Employment*. Dublin: Author.

Nisbet, J. and Watt, J. (1980). *Case Study*, Rediguide 26, University of Nottingham School of Education.

Oberg, D. (2001). *Demonstrating that School Libraries Improve Student Achievement*. Access, Vol. 15, No. 1.

Organisation for Economic Co-operation and Development [OECD]. (1999). *Measuring student knowledge and skills: A new framework for assessment*. Paris: Author

Organisation for Economic Co-operation and Development [OECD]. (2002). *Reading for Change: Performance and Engagement Across Countries. Results from PISA 2000*. New York: Author.

Organisation for Economic Co-Operation and Development [OECD] (2006). *Assessing scientific, reading and mathematical literacy: A framework for PISA 2006*.

Pavonetti, L.M., Brimmer, K.M. & Ciplewski, J.F. 2003. Accelerated Reader: What are the lasting effects on the reading habits of middle school students exposed to Accelerated Reader in elementary grades? *Journal of Adolescent and Adult Literacy* 46, no. 4: 300-311.

Pittner, M. & Coit, D. (1999). *Reading programs to improve skills*. Media and Methods, 36, 42-44

Polit, D. and Hungler, B. (1983). *Nursing Research Principles and Methods*, Sydney 2nd ed., Toronto: Lippincott Company.

Prensky, M. (2001). *Digital Natives, Digital Immigrants*. From *On the Horizon* (MCB University Press, Vol. 9 No. 5, October 2001)

Prensky, M. (2008). *Turning on the Lights*. In *Educational Leadership*, Vol. 65, No. 6. March 2008.

Rich, W. 'Enhancing the Participation and Achievement of Girls in School Science'. Scan 18 (2) , 1999, pp46-50.

Risley, T.R. & Hart, B. (1995). *Meaningful Differences in the Everyday Experiences of Young American Children*. Baltimore: Paul H. Brookes Publishing Co.

Risley, T.R. & Hart, B. (2006). *Promoting Early Language Development*. In N.F. Watt, C. Ayoub, R.H. Bradley, J.E. Puma & W.A. LeBoeuf (Eds). *The Crisis in Youth Mental Health: Critical Issues and Effective Programs, Volume 4, Early Intervention Programs and Policies*. (pp. 83-88). Westport, CT: Praeger.

Robson, C. (2002). *Real World Research*. 2nd ed. Oxford: Blackwell.

Rodney, M.J., Lance, K.C. & Hamilton-Pennell, C. (2003). *The Impact of Michigan School Librarians on Academic Achievement: Kids Who Have Libraries Succeed*. Lansing: MI: Library of Michigan. Available online at www.michigan.gov/documents/hal_Im_scllibstudy03_76626_7.pdf

Rudd, P., & Wade, P. (2006). *Evaluation of Renaissance Learning Mathematics and Reading Programs in UK Specialist and Feeder Schools*. London: Authors.

Scheffel, D. L. [Significant reading improvement among underachieving adolescents using LANGUAGE! A structured approach](http://findarticles.com/p/articles/mi_hb6516/is_2_40/ai_n29009815)" Reading Improvement. FindArticles.com.17 Feb, 2009.

http://findarticles.com/p/articles/mi_hb6516/is_2_40/ai_n29009815

School Library Association Republic of Ireland (SLARI) (2004). *Policy Statement: The School Library in the 21st Century: An Agenda for Change*. Dublin: SLARI

Scriven, M. (1972). *The Concept of Comprehension: from Semantics to Software. Language Comprehension and the Acquisition of Knowledge.* Washington: W.H. Winston and Sons

SDPI (2004) *Addressing Educational Disadvantage*, Dublin: SDPI

Selwyn, N, Gorard, S, Madden, L. and Furlong, J. (2002). *Technology and lifelong learning: Are we cutting IT?* Cardiff University School of Social Sciences. Paper presented to the 'All-Wales Education Research' Conference, University of Wales Conference Centre, Gregynog, 3-5 July 2002.

Shiel, G., Cosgrove, J., Sofroniou, N. & Kelly, A. (2001). *Ready for life: The literacy achievements of Irish 15-year-olds with comparative international data.* Dublin: Educational Research Centre.

Slavin, R.E. & Madden, N.A. (1989). What works for students at risk: A research synthesis. *Educational Leadership*, 46: 4-12.

Smith, E.G. (2001). *Texas School Libraries: Standards, Resources, Services and Students' Performance.* Austin, TX: Texas State Library and Archives Commission. Available online at www.tsl.state.tx.us/ld/pubs/schlibsurvey/survey.pdf

Smith, F. (1988). *Joining the Literacy Club: Further Essays into Education.* Portsmouth, NH: Heinemann.

Smyth, E. (1999), *Do Schools Differ: Academic and Personal Development among Pupils in the Second-Level Sector.* Dublin: Oak Tree Press.

Smyth, E. and Hannon, D. (2000), 'Education and Inequality' in Nolan, B., O'Connell, P. and Whelan, C., *Bust or Boom*, Dublin: IPA; NESF (2002), *Early School Leavers Forum Report No 24*, Dublin: NESF.

Stake, R. (1988). *Case Study Research: Complementary Methods for Research in Education:* American Educational Research Association.

Stake, R. (1995). *The Art of Case Research*. Thousand Oaks, CA: Sage Publications.

Streatfield, D. & Markless, S. (1994). *Invisible Learning? The Contribution of School Libraries to Teaching and Learning*. Library and Information Research Report, No 98. London: The British Library

Tapscott, Don. (1998). *Growing up Digital: The Rise of the Net Generation*. New York: McGraw Hill

Tharp, R., Gillimore, R., (1988). *Rousing Minds to Life, Teaching, Learning and Schooling in Social Context*. University of Cambridge, New York.

Todd, R.J. (2002). *School Librarians as Teachers: Learning Outcomes and Evidence-Based Practice*. Paper presented at the 68th IFLA Council and General Conference in Glasgow, Scotland, 18-24 August 2002.

Todd, R. J. 'Integrated Information Skills Instruction: Does it Make a Difference?'. *School Library Media Quarterly* 23 (2), 1995, pp133-139.

Topping, K.J., and Fisher, A.M. (2003). Computerised formative assessment of reading comprehension: Field trials in the U.K. *Journal of Research in Reading*, 26(3), 267–279.

Twist, L., Schagen, I and Hodgson, C. (2007). *Readers and Reading: the National Report for England 2006 PIRLS (Progress in International Reading Literacy Study)*. Slough: NFER.

Vallender, E.J. (2000). *Measuring the Contribution of a Secondary School Library to Successful Teaching and Learning*. University of Plymouth. Unpublished Master of Education (Med) dissertation.

Verma, G. and Malick, K. (1999). *Researching Education: Perspectives and Techniques*. London: Falmer Press.

Vollands, S.R., Topping, K.J. and Evans, R.M. 1999. Computerizes self-assessment of reading comprehension with Accelerated Reader: Action research. *Reading and Writing Quarterly* 15, no. 3: 197-211.

Weir, S., & Eivers, E. (1998). *The Breaking the Cycle scheme in urban schools: A report for 1996/97*. Report to the Department of Education and Science. Dublin: Educational Research Centre.

Weir, S., Milis, L., & Ryan, C. (May, 2002). *The Breaking the Cycle scheme in urban schools: Final evaluation report*. Report to the Department of Education and Science. Dublin: Educational Research Centre.

Williams, D., Wavell, C. & Coles, L. (2001). *Impact of School Library Services on Achievement and Learning*. Aberdeen: The Robert Gordon University for Resource: The Council for Museums, Archives and Libraries.

APPENDICES

APPENDIX A

LETTER OF CONSENT FOR PARTICIPATION IN THE STUDY

This study is intended to evaluate the impact of the Accelerated Reader Program, when facilitated through a school library setting, on the reading development of students participating in the Program in your school. Participation in the study is voluntary. There are no physical or psychological risks associated with this study.

I, _____, understand the purpose of this study and I agree to participate. I understand that all my answers will be used for the purposes of this study only and that I will not be personally identified in the final work.

Signed: _____

Date: _____

APPENDIX B

Parental Permission Letter

JCSP Demonstration Library Project
CDVEC Curriculum Development Unit
Captain's Road
Crumlin
Dublin 12

15th September 2008

Dear Parents/Guardians,

My name is Kathleen Moran and I am employed as Senior Librarian with the Junior Certificate School Programme Support Service. I am currently conducting research, as part of my studies with the University of Limerick, to evaluate the impact of the Accelerated Reader Program on the reading development of students participating in the Program in [School Name]. My study involves interviews with the school librarian and teachers as well as work with students who have participated in the Accelerated Reader Program during the course of the 2008/2009 school year.

The research with students will consist of a short group exercise followed by the students being asked to complete a questionnaire outlining their experience of using the Accelerated Reader Program. All work will be conducted at school, during school hours, and at a time that will be convenient both for the students and their teachers. Your child's participation in this study is voluntary and would only take

place upon receipt of your written permission (please see attached Letter of Permission which can be returned by your child to the school librarian). The students participating in the study will not be identified by name in any publication of the work.

If you have any questions or wish to obtain further information about the study, please do not hesitate to contact me by phone at 087 2147787 or by email at kathleen.moran@cdu.cdvec.ie

Thank you for your time.

Yours sincerely

Kathleen Moran

Senior Project Librarian

Junior Certificate School Programme Demonstration Library Project



APPENDIX C

LETTER OF PERMISSION FOR PARTICIPATION IN THE STUDY

This study is intended to evaluate the impact of the Accelerated Reader Program on the reading development of participating students. Participation in the study is voluntary. The research will be conducted at your child's school during school hours. There are no physical or psychological risks associated with this study.

I, _____, parent/guardian of
_____ (Student's name)

have read and understood the Letter of Information provided to me by Kathleen Moran, and I give permission for my child's participation in the research project. I understand that all information obtained during the research will be used for the purpose of this study only and that my child will not be identified by name in any written document.

Signed: _____

Date: _____

Please sign and return to the School Librarian at [School Name]

APPENDIX D

INTERVIEW SCHEDULE - ADULT

1. When did you first start using the Accelerated Reader Program?
2. Which year group do you use the Program with?
3. In your opinion, has there been a noticeable improvement in the reading and literacy development of those students participating in the Program?
4. In your opinion, do students discuss their books and reading more since using AR?
5. What do you think students would say about participation in the AR Program? Have you heard them talk about the Program?
6. Do you believe that the work of the school librarian and the presence of a school library have had an impact on the implementation of the program in your school? If so, in what ways?
7. How does the library support your work with students' literacy development – particularly in relation to use of the AR Program?
8. How do you rate the reporting aspects of the AR Program?
9. Do you use the report findings in your communication with parents?
10. Do you intend to continue using the AR Program with your students in future years?
11. What challenges did you face in implementing and using the AR Program?

Thank you for your time and contributions to this research study

APPENDIX E

Student Questionnaire

1. I am Male
 Female

2. I like reading a lot
 a little
 not at all

3. I like to read every day
 every week
 every month
 sometimes
 never

4. My reading is excellent
 good
 ok
 could be better

5. I like using the Accelerated Reader Program
 a lot
 a little
 not at all

6. I use the school library
 every day

- every week
- every month

7. Do you use the school library in your free time (during lunch time, before or after school) yes
 no

8. Do you enjoy doing the AR quizzes?
 yes
 no

9. Where do you do the AR quizzes?
 the library
 the computer room
 elsewhere in the school

10. Do you think that the AR Program is helping you to read better?
 it helps a lot
 it helps a little
 it doesn't help at all

11. Which of the following do you prefer to read?
 fiction (story books)
 non-fiction (information books)
 both

12. Do you think the AR quizzes are?
 fun
 ok
 boring

13. Do you only read books that have AR quizzes?
- yes
 - no
14. Since starting secondary school, do you think that you are able to read:
- a lot better
 - a little better
 - about the same
15. Would you like to continue using the AR Program next year?
- yes
 - no

Thank you for taking the time to complete this questionnaire.

Your help is greatly appreciated!

APPENDIX F

INTERVIEW TRANSCRIPT – TEACHER 1

Q. How many students are in your class?

A. At the moment we have 15 students in the class. We were 17 initially and 2 students left, both because they were not being challenged enough in the class, in that particular group. One child has just moved to Ireland from Poland and he has been put in ---. It wouldn't be the weakest stream in the school but it would be one of the weaker streams. And then the other child I think had been just misplaced and they moved on for that reason.

Q. Have you been using AR from the start of 1st year?

A. Yes from the start of the year. I think we might have had 2-3 weeks at school before we actually started using it properly. But we would always introduce the kids to the library in the first day really. They come in and they get settled. And in the first official class they would have the rules and all the rest. So they were informed at the start that they would be using this programme but because we were trying to figure it out ourselves and get the initial tests up and running it took about 3 weeks but really since then and they've been using it and obviously the reading is something they have been doing since the start. It's just not specifically reading the AR books.

Q. And in your opinion has there been a noticeable improvement in their reading – compared to previous years' students who would not have been using AR?

A. Yes, absolutely. I think there is an improvement yes but I think what has been most helpful is that it is easier to monitor what that improvement has been for individual students. To see the improvement, I mean the kids know more about this really than I do because they have been monitoring themselves intensely from the

start of the year. And they can see when they need to read a little bit more. The teacher has asked me to read 10 pages a night. I want to do a bit better – I'm going to read 15 pages a night. You know and challenge themselves and you know it's been a learning experience for all of us I suppose. With the points system with each book being allocated a point, initially we were just looking at book levels and trying to raise the book levels and we just ignored the points. But then we realised the points weren't building up because yes we were looking at book levels and trying to read as many books as possible but they weren't being challenged enough – the length of the book, the content, the story of the book was not maybe as challenging as it could be. So they're challenging themselves further all the time and the points were the first thing that highlighted that to themselves I suppose really.

Q. And you think they are competitive then in terms of their reading?

A. No not really. And that is what my concern would have been at the start because there is a points system. And I would have nearly have used that to kind of motivate the ones who were not reading as well as I would have liked or who were not as committed to it. We had a pie chart and we totted up all the points and put it up on the board and they could all see where they fitted in. But really it's the motivating more than the competitiveness. They challenge themselves. They are so eager to build up their points, to build up the book level. I think it's the book level actually more than the points that they are interested in.

Q. They like the more challenging books?

A. Absolutely yes.

Q. And do you think that they are talking more about reading now? Do they discuss their reading with each other?

A. Yes, they recommend books to each other which is what I had been trying to encourage every year with my classes you know because it's very difficult. Some kids find it a bit daunting to come in. They don't know where to look for a book. I find that with my third years now as well that – maybe their confidence levels, some

of the boys I would say are nearly ready for the senior level English you know. But they are reluctant to go over there because they don't see themselves as being that well able. But this group they chat more about the books. They recommend what each other would or might be interested in. Which I mean that is really what it should be all about.

Q, And what would you think they would say themselves about participating in this programme?

A. Oh they love it, absolutely love it. Actually the 2 boys who changed classes, one of their concerns would have been that they did not want to give up doing this. And of course they can, it doesn't impose on their work. Actually yes one of the boys his class would still be doing it anyway. The other boy he has to do that on his own. He comes into the library and sorts himself out with the books.

Q. I am also looking at running this programme in conjunction with having a JCSP library in this school. Do you think that the work of the school librarian and the presence of a library have an impact on how successfully the programme can be implemented here?

A. Yes, definitely because there again I would have said the kids are very in control or they are able to monitor their own reading. I find I don't have the time or I don't like to tell them do your tests in the library class. We don't have enough computers to do it in the class. So they come and they do it themselves after school and it's great because it makes them independent. But at the same time you do want to be there, you want to be able to congratulate them for doing well. And I can't be there all the time. But [Librarian] would be here and they need, I think they need the contact with a teacher or the librarian as well as just being able to do it independently. It's two positives I suppose.

Q. And the actual access to books. If there wasn't a library in the school, would you have had the stock to run it or enough variety of stock?

A. No – I don't think I would have been able to run it successfully without the library.

Q. How do you think that the library supports your work with the students' literacy development particularly in relation to AR?

A. I wouldn't be up on the books, on what the kids are interested in. So to be able to go to [Librarian] and to see her there flicking through all the books and being able to recommend what they might be interested in or maybe steer clear of this or maybe read this book first. I just don't have the time and space in my day to be able to do that. And of course the kids are on a first name basis. It's a very different relationship. I don't think they would have been as inclined to come to me and ask for a book. They might come and boast about their reading but it's a different relationship. I think it's invaluable really to the school.

Q. How would you rate the reporting aspects of the programme? Do you use the reports?

A. I know they have been doing the comprehension tests at the end of each book. There are vocabulary tests as well and we haven't really used them. One or two of the kids would have looked at them.

Q. Do you intend to continue using the programme with next year's 1st years?

A. Yes. With next year's first years and I presume that the first year group will continue it as well into second year.

Q. And you would like to continue with this group?

A. Yes I know again I will have a weaker group again than this next year and I hope to use it. I hope it will be appropriate. I will need to speak to [Librarian] about that. As far as I know we intend using this with all the first years next year because everyone has been impressed by it.

Q. What challenges did you face? Was there anything negative about it that you would say?

A. Not about the programme itself. But I suppose there were issues initially trying to get the kids to come in after school. And there will always be one or two that maybe aren't as committed and we've had to follow them. But you're going to face those challenges anyway no matter what programme you're running. The other thing as well is obviously if the net's down – and that's a problem we have had recently – it was down for about 2 weeks. Kids couldn't access the tests. And I lost track and they lost track of it and it was unfortunate as we came to the end of the year. It was a messy way to finish up. But that wouldn't be the fault of the programme. It was just unfortunate really.

Q. Some schools using AR use a rewards system. If they reach a certain level they are rewarded for that. Do you use rewards or do you think it is self-motivating?

A. We have used the award certificates but we have only used them once. The reading and the certificate is motivation in itself.

Q. Do you give extrinsic rewards? Are they working towards getting a voucher or an MP3 player or whatever?

A. No – the reading and the certificate is motivation in itself. I know that we only gave one cert this year and I think a lot of that was because it was the first year and we didn't know where we needed to be. It was a little difficult to organise it initially.

Q. Finally, communication with parents in the home. Does the programme facilitate that and do you use the results?

A. Yes, it was lovely actually because we had two parent teacher meetings this year. And obviously you had your report and your list of comments and all that. But the parents took away the reading list and were very impressed to see this is the amount of books my child has read and a number of the parents would have said that they discussed the books at home and they read with them. There was one parent who

said that they were reading to each other. And that's not something that the school would have asked them to do. It's possibly something they might have taken from primary school. But a lovely thing to have seen, you know, just to see them reading with their parents and developing that side of their relationship with them. So you know you want to gather as much information as possible for those occasions. As well as that you know I have one child you a girl who is very capable but a bit lazy and her attendance isn't good and it is great to have it to say that she is one of the better readers in the class but look she has only read four books since Christmas or whatever and you know it's a piece of evidence you can use to try to put pressure on the child to work harder and to get the mother to get the child in more often. It's very, very obvious.

APPENDIX G

INTERVIEW TRANSCRIPT – TEACHER 2

Q. You are the English teacher of one of the groups participating in AR in the school

A. Yes

Q. And how many are in the group?

A. 23

Q. Do you feel, having used the AR from the beginning of 1st year, that it has contributed to their development in any significant way?

A. Absolutely. Definitely their reading and we will know when [Librarian] has the results because we have just tested them. And we have also given them the entry test again to see if their reading age has increased. Where I have noticed it really would be in their own personal writing. You can see the transfer into their own personal writing. Particularly what really struck me was in the area of dialogue. That they were so comfortable that they knew exactly how to do it. They were able to build up layers of a story using dialogue. Plus the fact that the vocabulary they use has increased hugely.

Q. And would you find a noticeable difference in this group from previous 1st year groups?

A. Absolutely

Q. And do you think that AR has contributed to that?

A. Absolutely.

Q. How do you think the students themselves feel about the Program. Do you think they enjoy using it?

A. Now what I have been doing stage by stage is - I did it at Christmas and I have just done it again as part of their summer test. They wrote about their experience of AR. In the Christmas one I asked them about the books they were reading and what they thought of it and did they think their reading had improved. This time what I included was – I asked them questions about their parents, did their parents know, how did their parents feel about it. And I asked them how they would talk to a person starting off, what they would say to a person starting off about AR and I was absolutely amazed at their responses about their parents. That if I was to give you one statement for the lot – they would have said that their parents were very much aware of it because of the result sheets for the comments going home. And their parents were delighted. And their parents wanted them to read. What I have done with each set of them is I have given a representative selection to [Librarian] so that she has them there and they are the actual written comments of the children on it. The students really enjoy using the Program because it is on the computer, because it uses software. If they had to write reviews, etc. they would not be nearly as engaged. The fact that it is computer-based is a very strong factor in its success.

Q. I am also looking at the Programme in that it is run in a school that has a JCSP library. How do you think the library and the presence of a librarian has contributed to the success of the programme in this school?

A. I don't think it could work if you didn't have a library or perhaps how shall I put it – I actually don't think it could work if you didn't have a library because part of the carrot for them in the initial stages is their Thursday library class. So I actually can't see, I think it would be very, very difficult to administer if you didn't have a library.

Q. Do you think having the AR books catalogued separately and that this is looked after by the librarian is something that has contributed to the success?

A. Yes. It just takes that layer away from the teacher and you can concentrate on the teaching. It just takes that administrative part away.

Q. Do you find that the students only read the books that have the AR quizzes or do they read from other stock of the library as well.? Does it focus them entirely on the AR quizzed books?

A. Now how shall I put this. [Teacher 1's] perception might be different to mine. I introduced at the beginning a sort of competitive element to it. Because there would be a large number of boys in the class. They would all be very sporty and they understand competition. So I said that at mid-term break we would have 4 prizes – highest no. of books read; highest no. of points; most improved; and the hardest worker. So that was that competition. Then it escalated to Christmas and we did 4 prizes again and it really, really concentrated them on just reading books that have the test – which was no bad think really because they took ownership of it very, very much. And what they wanted to do was to be on what they said were the 'black dot' books. But you know, I think they were motivated to read anyway – just by being able to use the computers.

Q. So they were being challenged to move up?

A. Yes. Plus when they got the feedback sheet – always, always, always put a comment, bring it home and stick it on the fridge. And I know this worked from the parents – that they would bring it home, they would stick it on the fridge. And the other thing was if a kid wasn't reading, or wasn't reading what I felt they were capable of – phone call home. Just talk to the parents, tell them how important it is for their child and with 2 or 3 in particular who weren't reading, that really, really worked.

Q. The reporting aspects of the programme. How do you rate those? Do you think they are helpful? Do you think they are used? In terms of reporting their progress and in reporting the no. of books they have read and so on – do you find that this is a valuable aspect of it?

A. Oh absolutely. And again the children will be able to tell you themselves. If they look along the line, because they are so familiar with it. They know the terminology, they know everything. I think that the feedback the kid gets after doing a test. You read your book, you finish your book on Tuesday night, they come in before school starts on Wednesday morning to do their test. They have immediate feedback. They run to me, they get it signed. They print it off, come and get it signed; they get their comment and bring it home. There is an immediacy about it. It has come to the point where in class we have got to the stage now where they will say Miss I have to do a test after school, I have to do a test at lunchtime, and they would be that bought into it that they would actually eat their lunch and come in to the library to do their test, or they would wait back after school.

Q. Do they therefore do all of their quizzes outside of class time?

A. They do all of their quizzes outside of class time, yes.

Q. And do they resent that in any way?

A. No. They have got to the point that this is just the way it happens, and they do it.

Q. And do they always do it in the library?

A. Always in the library. Or sometimes on a Friday, they have computers last class. And the computer teacher will let them at the end of class if they need to do a test and get a book. You see because they can't go home on Friday without having a book. He will let them do the test so that they can come down and get a book for the weekend.

Q. Do you intend to continue using AR in the future – with the students you have now and also with incoming 1st years next year?

A. Incoming 1st years have to. And I don't know, I haven't spoken to [Librarian] yet, but I would hate to think that my particular 1st year group that I have this year, that they weren't going to continue with it. Because I think that if you take them, they

have it for a year and then you drop them – it would be such a shame as they are doing so well.

Q. On speaking to the students themselves, they say that if they don't have AR next year, they won't read as much. They know it is what is making them read.

A. Yes they do. And they are very, very aware themselves. They are very bought into it. They really love it.

Q. Have you identified any challenges in terms of implementing or running it? Or any negatives in terms of how it operates?

A. Not here. But I could see if you were a teacher running it in a school that didn't have a library; it would be very easy to give up because you do need supports. Apart from that now I just think it is magic. I mean to hear children talking about authors and saying – one kid said to me coming up to Christmas – and he wouldn't be one of the good readers. He was reading one of the Barrington Stokes – a particular author – and he said to me Miss when you are going around during the holidays, if you see any books, and he wrote down the name of the author and Barrington Stokes, would you get the books and I will pay you for them out of my Christmas money. Now I just think that is wonderful – when they start actually having a conversation about books and they are prepared not to buy footballs or whatever, they are prepared to buy books – then you've got them.

Q. With regard to the library. How do you think the library contributes to literacy and reading development – in general?

A. It's just wonderful. I have been a teacher for ages and ages. I just think that the library is... you forget what it was like before we had a library because, I just couldn't imagine the school functioning without the library.

Q. That is a strong statement.

A. I could not image how. And I certainly think that whatever we did before it came - I couldn't imagine the school functioning without it.

Q. I was here early this morning and it was bursting at the seams with students.

A. Oh it was crowded. And that is every morning. And at lunch time the same way. I do lunch supervision on a Tuesday and you will see there a certain no. of children who sit down, eat their lunch in 30 seconds flat, and then they go around and in the door in a flash. You don't even have to ask where they are going. Because they are gone in and they spend 10 minutes, say eating their lunch, 20 minutes in the library. Same thing at half three. They are not allowed, except for the class that's doing library at that particular time, no other students are allowed into the library until the class has gone out. The kids are lining up at half three to get in. I mean I just think that it is pure magic.

Q. And everyone seems to read here?

A. Yes, everybody does. And there is one fellow – [Name] who is Venezuelan. [Name] came to us in Sept. He had spent 3 months in another school but his 1st language was Spanish. When [Name] came, he had minimal English – to the point where I had a list of phrases in Spanish – well done, do you understand, are you finished. [Name] is now one of our best readers. He has been using AR. You should see the work he can produce in English. Now his parents are very good. His father did work with him at home as well. It's phenomenal

Q. Does having the resources of the library makes it easier?

A. Oh yeah. [Former Librarian] was super. [Librarian] is super. And it's not the librarian and the teacher, if you know what I mean, it's the team. And it works so, so well – it really does. And you know how you think ... what are they going to cut next. As long as it's not the library.....

APPENDIX H

INTERVIEW TRANSCRIPT – SCHOOL LIBRARIAN

Q. Can you comment on the impact that has AR had on the students

A. It has had a huge impact in that it has motivated them to read. The motivation among the students has been brilliant. Competitiveness and all of that. They are really excited about reading now – at first they were not. At first they would say – I am not going to read a book or I will only read one and that's it – but at the end they were getting really excited about it.

Q. Do the students enjoy using AR?

A. Yes because it is on the computer, because it uses software. If they had to write reviews, etc they would not be as engaged.

Q. So do you think that the fact that it is computerised is important?

A. The computer is a very strong factor in its success.

Q. Can you outline some of the impacts?

A. Their reading has become more fluent. They are more willing to read with you. They want to read and they want to tell you all the time how well they have done and what they have read and how well they have done in their tests. Their teachers are commenting on how much their vocabulary has improved.

Q. How do you think the library has contributed?

A. The library is a central focal point. They can come in here, check out their books, do their quizzes. They get priority on the computers if they want to do a quiz. They

have the guidance of the librarian. They come for library class and they also do it in English class. They get silent reading time in the library for it

Q. Do you think the programme could be successfully implemented without a library?

A. If there was no library it would be more difficult to run. The expertise of a librarian being there and being able to recommend books to them on what they might like and being able to source books constantly. That is very important

Q. Do you think that having access to a wide range of books is important?

A. Yes, but it depends on the no of students using it I suppose. With the 40 students doing it we had enough books but not enough at the lower level. We have tried to get lower level books – but they don't seem to be available. Also, sometimes they can't choose if there are too many books – so limiting their selection can be a good thing.

Q. Can you comment on the reporting aspects of the Program.

A. There are a wide range of reports options available. I use about ten of the AR reports regularly, and of course the students receive a TOPS report for every quiz completed. The reports are a great help in identifying those students that are progressing well and also those that are not doing so good.

Q. Do you use the 'Home Connect' option in the AR Program?

A. While we did use it to a limited extent this year, we hope to formalise its use next year. Also, an increasing amount of the students now have internet access at home, so that should make it easier

Q. As School Librarian – how would you estimate your percentage involvement in the Program vis a vis that of the teachers?

A. I do more than the others with the computer and with the students when they come in to do their quizzes. I give them time in their library class once a week but

not otherwise. Of all of the time that's given to AR by all involved – I would do I suppose 50% and the teachers would do 25% each

Q. Who is responsible for co-ordination of the Programme?

A. I do that with one of the teachers doing some of it. Checking that students are doing their tests, etc.

Q. In your opinion, has students enjoyment of reading increased since they started using AR?

A. Yes for most students I would think so. For others they say oh no do I have to read it or read from this section. But you can usually encourage them. For the majority of them it would definitely have increased their capacity to read everything.

Q. How has Program supported you in your role?

A. I suppose it highlights those who aren't doing as well as they could be doing or as well comparatively to others in their class. You can see they are not quizzing as often, they are not reading every night – they get 10 pages of reading homework every night. You can easily pick up on those who are not doing their homework. It is a focus as well for the library when they come for library class its part of the library class. Encouraging them to read because everybody has to be reading on the Program. It gets them to come in more often as well and to use the library.

Q. Do you see students as being competitive?

A. Absolutely - but I think it's a good thing. Those I notice as being particularly competitive I think it's a good thing. They are showing what they get in their quizzes. They are peering over somebody's shoulder doing their test to see how they are getting on. It is a healthy competitiveness. There is competition in many areas of life.

Q. Do you operate and awards scheme here?

A. Only towards the end of the year we started to do that. Before the Easter holidays we did our first round of awards – laminated certificates. They were delighted. Then again at the end of the year at the awards ceremony with the whole school. We gave awards for greatest improvement, etc. Certificates and book tokens. But it had been very successful all through the year without any awards being offered.

Q. Would you recommend AR to other schools?

A. Yes. We have recently recommended it to a local primary school – for 6th class coming in to 1st year. Yes I would definitely recommend it.

Q. Have you experienced any difficulties or identified any negative aspects of the Program?

A. The setup was quite time consuming. Installing the software, knowing all of the requirements (Adobe, Flash8) etc. We still have some problems when students do their STAR tests – some things might not work. At the beginning it was all very complicated even though the support from the company was very good. It is also very difficult to use the software if you are doing anything out of the ordinary. I can do all of the regular reports. But if you are setting up a new class or a new teacher it is quite complicated. My main thing is the selection of books at the lower levels. For me at levels under 3 there are not enough. That's for the lower reading ages. There is also a shortage of Irish titles. There are very few actually. I have recommended the inclusion of some titles to the company. I suppose also the choice being narrowed – they can't choose from the whole library. Some say that this may be a good thing. I also think that some of the vocabulary used in the quizzes and in the STAR reading tests may be quite difficult for the students and may sometimes be inappropriate for their reading levels.

Q. Do the participating students only read AR books?

A. Yes. It depends again on the student but those who are competitive yes they only want to select AR books. Is this a negative – I think it means that we need to come

up with something next year that you have a block of AR for 6 weeks and then read anything other than that section for 3 weeks and then go back to it.

Q. Is there anything else you would like to add?

A. Overall I am very happy with it. I am looking forward to expanding the whole Program next year. We were very lucky that we were doing it with first years. They were very open to it. The second years will also be fine. But third years I don't know how likely they will be to take to the idea.

Q. Why did you decide to keep your AR books in a separate section of the library?


A. Because it brings them all together. It is difficult enough for them even in that small area choosing the books. You are choosing a yellow sticker book but also looking for a 1.6 level book. So it is quite difficult. Even within that area it takes them a huge amount of time. If they had to choose from within all the fiction shelves it would take them forever. Initially I had them in alphabetical order but that caused problems. But I now find that this system works best.

APPENDIX I

SAMPLE ACCELERATED READER REPORTS

School: [REDACTED]
 Class: [REDACTED]

Teacher: [REDACTED] Year: 7

What I Read	How I Did
Half Moon Investigations by Colfer, Eoin ATOS BL ^a : 4.2 Quiz Number: 210631 F/NF: Fiction Quiz Date: 21/10/2009 12:45 Word Count: 60,954 Interest Level: Middle Years (MY) TWI: Read Independently	Correct: 10 of 10 Percentage Correct: 100%  <i>Super Work, Jacob!</i> Points Earned: 9.0 of 9.0

My Progress	
Not within marking period	
Average % Correct: - No Target Set	Points Earned: - No Target Set
Average ATOS BL: - No Target Set	Marking Period Totals Quizzes Passed: - Quizzes Taken: - Words Read: -

My School Year Summary			
01/09/2009 - 21/10/2009 (16% Complete)			
Average % Correct:	97.5%	Quizzes Passed: 4	Last Certification: -
Points Earned:	30.3	Quizzes Taken: 4	Date Achieved: -
Average ATOS BL:	4.7	Total Words Read: 208,471	Certification Target: -

Teacher

Comments:

School: ██████████

Pretest Dates: 01/09/2008 - 23/07/2010

Posttest Dates: 01/09/2008 - 23/07/2010

Report Options

Reporting Parameter Group: All Demographics [Default]

Group By: Class

Sort By: Last Name

Class: 201

Pupil	Class	Teacher	Test Date	SS	ZPD	Est. Reading Age	Est. NCL-Reading ^b	Est. ORF ^c
██████████	████	██████████	02/10/2008	695	4.2-6.4	11:05	4b	
			26/05/2009	522	3.3-5.2	10:00	3a/4c	
██████████	████	██████████	02/10/2008	477	3.1-4.8	9:07	3a/4c	
			26/05/2009	425	2.9-4.2	9:02	3b	
██████████	████	██████████	26/09/2008	538	3.4-5.4	10:01	4b	
			22/05/2009	574	3.6-5.6	10:05	4b	
██████████	████	██████████	19/09/2008	425	2.8-4.1	9:02	3b	
			22/05/2009	507	3.3-5.2	9:10	3a/4c	
██████████	████	██████████	19/09/2008	612	3.8-5.9	10:09	4b	
			26/05/2009	778	4.3-7.0	12:02	4a/5c	
██████████	████	██████████	26/09/2008	467	3.1-4.7	9:06	3a/4c	
			26/05/2009	394	2.8-3.9	8:11	3b	
██████████	████	██████████	25/09/2008	575	3.6-5.6	10:05	4b	
			26/05/2009	643	4.0-6.2	11:00	4b	
██████████	████	██████████	19/09/2008	91	1.3-2.3	6:04	1a/2c	
			20/05/2009	226	2.1-3.1	7:06	2b	

^bNCL: National Curriculum Level

^cEst. ORF: Estimated Oral Reading Fluency is only reported for tests taken in years 2-5.

Historical data included.

School: [REDACTED]
 Teacher: [REDACTED]

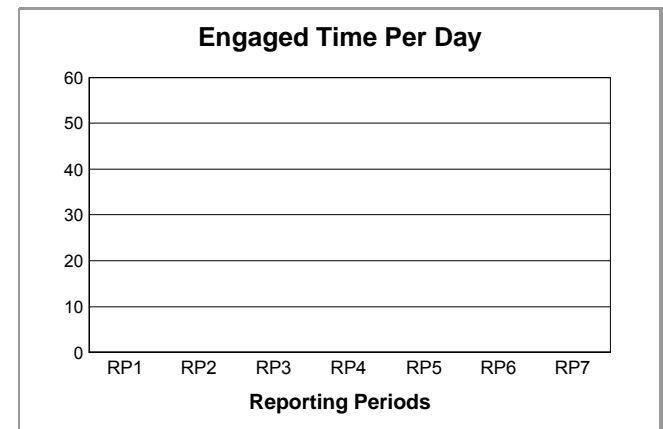
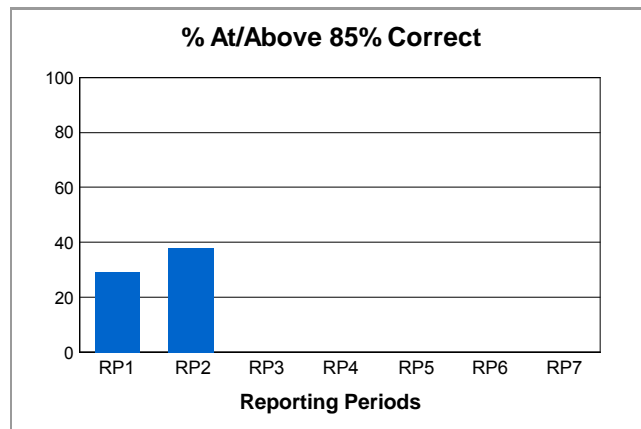
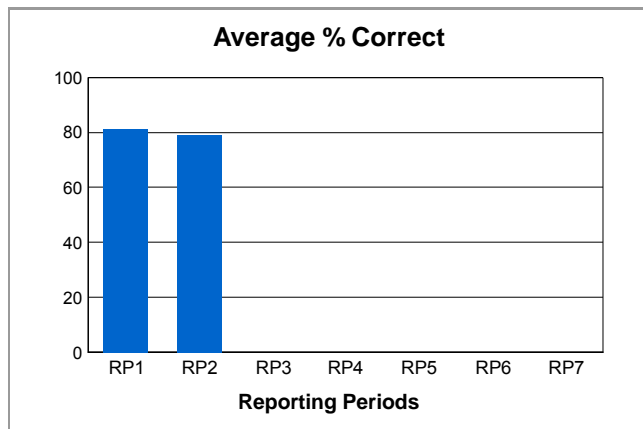
Last Consolidated Date: 06 October 2009 2:21 AM

Report Options

Reporting Parameter Group: All Demographics [Default] RP1: 26/08/08 - 26/05/09 (2008-2009)
 Reporting Level: Teacher RP2: 03/09/08 - 23/12/08 (Second Term)
 Group By: Teacher

Teacher: [REDACTED]

Class	Average % Correct							% of Pupils At/Above 85% Correct							Engaged Time Per Day							
	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7	
[REDACTED] Accelerated Reader, 101	-	-						-	-						-	-						
[REDACTED] Accelerated Reader, 202	81	79						29	38						-	-						
Summary	81	79						29	38						-	-						



Report Summary

	Average % Correct							% of Pupils At/Above 85% Correct							Engaged Time Per Day							
	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7	
Summary	81	79						29	38						-	-						

Average % Correct: Average score on Reading Practice Quizzes

% of Pupils At/Above 85% Correct: For a group, shows the percentage of pupils who averaged 85% correct or above on quizzes. For a pupil, displays a dash (-).

Engaged Time Per Day: An estimate of the time pupils are engaged in reading practice. Displayed in minutes. It is based on a test score from STAR Reading™ or STAR Early Literacy™ and points earned in Accelerated Reader. Score not reported unless pupils were tested with a STAR assessment within the last 12 months.

District: [REDACTED]
 School: [REDACTED]
 Teacher: [REDACTED]

Last Consolidated Date: 06 October 2009 2:21 AM
 Reporting Period: 26/08/08-26/05/09 (2008-2009)

Report Options

Reporting Parameter Group: All Demographics [Default]
 Reporting Level: Teacher
 Group By: Teacher

Teacher: [REDACTED]

Class	Number of Pupils	STAR Reading™ Grade Equivalent	Accelerated Reader™										
			Average % Correct	Pupils At/Above 85%		Pupils Below 85%		Median Points	Engaged Time Per Day	ATOS BL		% Independent	% Fiction
				Total	%	Total	%			Expected Range	Average Actual		
[REDACTED] Accelerated Reader, 101	23	-	-	-	-	-	-	-	-	-	-	-	
[REDACTED] Accelerated Reader, 202	24	10:09	81	5	29	12	71	14.8	-	3.4-5.4	3.9	94	100
Summary	47	10:09	81	5	29	12	71	14.8	-	3.4-5.4	3.9	94	100

Report Summary

	Number of Pupils	STAR Reading™ Grade Equivalent	Accelerated Reader™										
			Average % Correct	Pupils At/Above 85%		Pupils Below 85%		Median Points	Engaged Time Per Day	ATOS BL		% Independent	% Fiction
				Total	%	Total	%			Expected Range	Average Actual		
Summary	47	10:09	81	5	29	12	71	14.8	-	3.4-5.4	3.9	94	100

Grade Equivalent: Score from the first STAR Reading assessment of the year

Average % Correct: Average score on Reading Practice Quizzes

% of Students At/Above 85%: Shows the percent of students who averaged 85% correct or above on quizzes. For a student, displays a dash (-).

Median Points: Shows the total points earned for individual students and the median for groups. For a group, half the students earned more points than the median; half earned less.

Engaged Time Per Day: An estimate of the time students are engaged in reading practice. Displayed in minutes. It is based on a test score from STAR Reading or STAR Early Literacy™ and points earned in Accelerated Reader. Score not reported unless students were tested with a STAR assessment within the last 12 months.

School: [REDACTED]

Reporting Period: 01/09/2008 - 23/07/2010
(Custom)

[REDACTED]

ID: ●●●●

Test Date	Class	Teacher	SS	ZPD	Est. Reading Age	Est. NCL-Reading ^a	Est. ORF ^b
26/09/2008	101	[REDACTED]	538	3.4-5.4	10:01	4b	
15/01/2009	101	[REDACTED]	468	3.1-4.8	9:06	3a/4c	
27/02/2009	101	[REDACTED]	416	2.8-4.1	9:01	3b	
22/05/2009	101	[REDACTED]	574	3.6-5.6	10:05	4b	

Number of Tests: 4



School-to-Home Report for [REDACTED]

Printed 06 October 2009 10:58:00

School: [REDACTED]
Class: [REDACTED] Accelerated Reader, 202, 2009 -
2010 School Year

Reporting Period: 26/08/08-26/05/09 (2008-2009)

Renaissance Learning™ Products	[REDACTED]	Class Average	School Year 8 Average
Reading			
Accelerated Reader (Reading Practice)™			
Average Percentage Correct on Quizzes	88%	81%	78%
Engaged Time per Day - Reading (in minutes)	7	-	-
Average ATOS BL	3.7	3.9	3.8
STAR Reading (Standardized Test)™			
Scaled Score (Scale 0-1400)	827	612	552
Est. NCL - Reading	4a/5c	4b	4b
Est. Reading Age	12:07	10:09	10:03

Teacher

Parent (Guardian)

School: [REDACTED]

Reporting Period: 01/09/2008 - 23/07/2010
Custom

[REDACTED]

Year: 8

Class: [REDACTED]
Teacher: [REDACTED]

There are no quizzes for this pupil during this reporting period.

[REDACTED]

Year: 8

Class: [REDACTED]
Teacher: [REDACTED]

Words Learned: 47		Words Possible: 55		Quizzes Taken: 5		Avg Word Year: 5.5	
Word	Y	Word	Y	Word	Y	Word	Y
chameleon	12	navigation	6	^c huddled	5	experiment	4
gullible	11	predicted	6	hurled	5	panting	4
injustice	9	tense	6	ignore	5	ruin	4
^c prehistoric	9	vulture	6	intent	5	sore	4
cache	8	^c appreciation	5	miracle	5	^c stole	4
^c endangered	8	boring	5	mysterious	5	crowded	3
recycle	8	brilliant	5	peered	5	dashed	3
^c creative	7	certificate	5	relaxed	5	explained	3
^c trophy	7	congratulations	5	skipper	5	^c forgot	3
beacon	6	dreadful	5	survived	5	interesting	3
cautiously	6	frantically	5	crouched	4	powers	3
determined	6	fury	5	encyclopedia	4		

Summary

	First-Try			Second-Try			Overall		
	Correct	Possible	%	Correct	Possible	%	Correct	Possible	%
New Words	40	55	73	7	12	58	47	67	70
Review Words	8	9	89	-	-	-	8	9	89

[REDACTED]

Year: 8

Class: [REDACTED]
Teacher: [REDACTED]

There are no quizzes for this pupil during this reporting period.

[REDACTED]

Year: 8

Class: [REDACTED]
Teacher: [REDACTED]

There are no quizzes for this pupil during this reporting period.

[REDACTED]

Year: 8

Class: [REDACTED]
Teacher: [REDACTED]

There are no quizzes for this pupil during this reporting period.