Literacy Matters!

An hour that brings the power to reading related skills.

The effectiveness of ‘Power Hour’ on childrens’ motivation to read, attitudes towards reading, self-esteem, comprehension, vocabulary and spelling skills.

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Submitted in partial fulfillment of the requirements of the Higher Diploma in Arts in Psychology at Dublin Business School, School of Arts, Dublin.

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March 2014
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Acknowledgements

I would like to extend my sincere gratitude to Pauline Hyland, my supervisor and mentor, who provided me with unwavering leadership and guidance throughout the research process.
1. Abstract

Objective: The aim of this study was to evaluate the efficacy of the ‘Power Hour’ literacy intervention on children’s literacy and social-cognitive skills, in comparison with the natural progression of those who receive whole-class teaching. Method: A brief experimental analysis using a quantitative between-participant design was employed to examine the effects of the intervention conditions across a 10-week period. Fifty third class children, aged 8-9 years, from two Irish primary schools completed measures to assess their level of motivation,
self-esteem and attitudes towards reading. Standardised assessments were utilised to compare the childrens’ level of vocabulary, comprehension and spelling. *Results:* Post-intervention literacy mean values were higher for the experimental group but not significantly so. In relation to the social-cognitive skills, a strong significant difference was found. The strongly significant levels of motivation, self-esteem and attitudes towards reading detected following the ‘Power Hour’ intervention shows promise for the future acquisition of higher order literacy skills. *Conclusion:* Therefore, a longitudinal study is required in order to analyse the lasting effects of this intervention further.

2. **Introduction**

In the past few decades researchers have become increasingly interested in childrens’ language and literacy skills, with a special focus recently on reading development (Gersten & Geva, 2003). Literacy is an intrinsic component of daily life and there are many people who fail to meet the literacy standards required in order to function within society (Machin and McNally, 2004). According to the National Adult Literacy Agency (2013),
‘the Organisation for Economic Co-Operation and Development (OECD) Adult Skills Survey shows that 1 in 6 Irish adults are at or below level 1 on a five level literacy scale…At this level a person may be unable to understand basic written information’.

It is outlined within research that this outcome is derived from inadequate literacy teaching techniques within primary schools (National Literacy Strategy, 2011). Early success in reading is imperative in becoming a fully functioning literate adult (Swerling & Sternberg, 1996). Allan Wigfield (2010) highlights that research on children’s reading has a long, rich history from which, we have gained extensive knowledge into how children learn to read. Intervention for children with poor literacy learning skills has become a renowned part of schools’ provision and of national educational policy (National Reading Panel, 2000; Earl et al., 2003; DfES, 2003). A predominant emphasis has been placed on evidence based interventions: interventions where there is research evidence to support the efficacy of the approach, (Brooks, 2007; Scammacca et al., 2007; Slavin et al., 2008). Not only is reading achievement cited by researchers as being critically important to children becoming lifelong, avid readers, positive attitudes towards reading, motivation to read and self-confidence in reading are also major determinants (Baker, Scher, & Mackler, 1997; Guthrie, Wigfield, Metsala, & Cox, 1999; Mullis, Martin, Gonzalez, & Kennedy, 2003; Mullis, Martin, Kennedy, & Foy, 2007). Research highlights that the development of children’s early literacy and reading skills, positive attitudes and self-concept were accomplished through exposure to modelled reading behaviours, access to reading resources and participation in early literacy activities (Duncan, et al., 2007; Mullis, Martin, Kennedy, Trong, & Sainsbury, 2009).

Children who believe that they are good readers and enjoy reading tend to read more and have a higher reading achievement than their less positive counterparts (Guthrie, Hoa, Wigfield, Tonks, Humenick, & Littles, 2007; Wigfield & Guthrie, 1997; Wang & Guthrie,
2004). It is clear from research that there is a significant association between a child’s reading attitude and their actual reading ability (Cunningham, 2008). Reading is a cognitively challenging task which involves choice (Wigfield et al, 2004). In order for a child to make a choice they must be motivated to do so (Seitz, 2010). Therefore motivation plays a fundamental role in reading engagement. Literature highlights that children who are not confident in their own academic ability will lack motivation (Wigfield & Guthrie, 1997) and those who have enhanced reading comprehension, vocabulary and word recognition skills coupled with a more positive attitude towards reading are more likely to engage in reading activities, and these higher engaged readers are subsequently more motivated (Wigfield et al, 2008; Baker & Wigfield, 1999; McQuirter, 2010).

2.1 Comprehension, Vocabulary and Spelling - Their importance in reading

Since the emergence of Mailyn Jager Adam’s *Beginning to Read: Thinking and Learning About Print* in the 1990’s, many prominent educationalists have extrapolated and certified the efficacy of teaching reading, writing, phonics and spelling in the classroom (Clay, 1993; Fountas & Pinnell, 1996, 1998; Strickland, 1998; Cunningham, 2000; and Pressley, 2006). Much of the research on childrens’ reading has focused on cognitive aspects such as comprehension and word recognition (Baker & Wigfield, 1999). The National Assessment of Educational Progress (NAEP) conducted a large study that examined reading fluency among fourth graders in American schools and found 44% not to be fluent with grade-level stories (Pinnell et al., 1995). This study also confirmed the well deliberated relationship between reading fluency and comprehension and found there to be a strong positive relationship between both variables. Students with poor reading fluency had greater difficulty understanding the meaning of what they read and students with a higher rate of reading fluency were better able to comprehend text (Jenkins, Fuchs, van den Broek, Espin, & Deno, 2003; NICHD, 2000). It is clear that schools seem to be focusing on the teaching
of reading for the purpose of passing a standardized test instead of focusing on children becoming lifelong readers. As cited in Cooter (1999) research indicates that young children read on average 7 to 8 minutes during the school day (Anderson, Hiebert, Scott, & Wilkinson, 1985). Teachers know that the development of fluent reading requires massive practice in order to satisfy student interest, build fluency, and increase vocabulary, therefore stressing the need for intense, precise literacy interventions.

Reading is an intricate and complex process that requires the learner to interact with print on many levels. It has long been acknowledged that effective and efficient word recognition skills are essential for proficient reading (Stanovich, Nathan, West & Vala-Rossi, 1985). Efficient processing at word level frees the reader to engage in higher order comprehension skills, such as making connections asking questions and making inferences about text (Harvey, & Goudvis, 2007). Word study addresses not only word recognition, but also vocabulary and spelling. These areas work in tandem to help learners develop into mature readers (McQuirter Scott, 2008).

Research also highlights that vocabulary knowledge is one of the best predictors of reading comprehension (Richek, 2005). This especially applies to children who are members of the junior school cycle, as reading comprehension can be predicted to a large extent by vocabulary, letter recognition and phonemic awareness (Aarnoutse, Van Leeuwe & Verhoeven, 2005). Vocabulary knowledge has been found also to promote reading fluency, improve academic achievement and enhance thinking and communication (Bromley, 2004).

It is not surprising that focused spelling instruction has also been shown to have an impact on reading comprehension and ability. A study carried out by Roberts and Meiring (2006) examined the effects of first grade spelling instruction on fifth grade reading comprehension. A significant advantage was evident in reading comprehension for fifth grade
students who, in first grade, received spelling instruction through the use of phonics as opposed to informally through literature.

Research has identified that inefficient phonological (word) processing is at the core of reading difficulties (Adams, 1990; Snow, Burns, & Griffin, 1998; Torgesen, Wagner, & Rashotte, 1994). This deficit is believed to develop into reading dysfluency (Felton, 1993; Jorm & Share, 1983; Stanovich, 1986; Wolf & Bowers, 1999), which in turn negatively affects childrens’ comprehension of text (Bryne, Freebody, & Gates, 1992; Juel, Griffith, & Gough, 1986). Furthermore, it has been long exposed that those who encounter early reading difficulties remain as poor readers throughout adulthood (Juel, 1988). By contrast, children who commence their school life as successful readers are likely to experience academic success, graduate from high school and college and find employment (Slavin, Karweit, & Madden, 1989; Snow, Burns & Griffin, 1998). Thus given the pivotal role reading plays in both the internal and external school environment and the cumulative long-term cost of illiteracy, highlighted earlier, early literacy intervention is crucial. Reading with accuracy, fluency, and expression provide children with opportunities to comprehend texts and to “integrate complex skills and strategies into an automatic, independent reading process” (Allington, 2002, p. 743). Such triumphant experiences with print are likely to contribute to childrens’ sense of self-efficacy, self-esteem as well as their interest in reading and reading achievement.

2.2 Social-cognitive aspects of reading - Motivation, Attitudes and Self-esteem

Most information that is gathered about reading is based on childrens’ skill and ability. It is rare for teachers to inspect the assistance of teaching methods, setting and their influence on performance and attitude (Lipson, 1990). Student performance on standardised reading tests is utilized globally as a common analysis of ability. However, it is somewhat uncommon for teachers to assess their personal teaching methods and affect upon students’
attitudes, motivation and self-esteem. In the 1980s and 1990s research devoted considerable attention to cognitive processes involved in reading, failing to recognise the importance of social-cognitive influences (Barr, Kamil, Mosenthal, & Pearson, 1991; Pearson, Barr, Kamil, & Mosenthal, 1984; Ruddell, Ruddell, & Singer, 1994). Yet because reading is an effortful activity that children often can choose to do or not to do, it also requires high levels of motivation (Baker & Wigfield, 1999; Bong & Skaalvik, 2003). Countless studies have highlighted that levels of motivation predict achievement (Baker & Wigfield, 1999); therefore, finding ways to enhance motivation and engagement in literacy is critical in interventions that seek to overcome illiteracy.

Previous research identifying reading motivation as a multidimensional construct (e.g., Baker & Wigfield, 1999; Wigfield & Guthrie, 1997) provided the foundation for our conceptualization of reading motivation. This research proposes that children have a range of intrinsic and extrinsic motivations for reading or not reading, including but not limited to their beliefs about reading and themselves as readers (self-esteem). Positive forms of motivation increase reading amount, which in turn increases reading comprehension, which exhorts a positive effect on reading achievement resulting in children having increased positive attitudes towards reading (academic and recreational) (Cunningham & Stanovich, 1997; Guthrie, Wigfield, Metsala, & Cox, 1999). It is clear that reading is a complex multidimensional process of interconnected cognitive and social-cognitive skills and research has repeatedly proven that each link is imperative for efficient and effective execution. Research has shown that measuring an individual’s attitude towards a precise action or behaviour can predict how an individual will preform if presented with the option to engage in the specific activity (Ajzen, Timko, & White, 1982). The strive to improve literacy skills and reading performance overshadows the influence of childrens’ social-cognitive functions (McKenna & Kear, 1990). Some researchers propose that reading performance can be
influenced by a child’s attitude toward s reading (Swanson, 1982). However there remains an ongoing debate on the causality of the relationship, whether it is that attitudes affect reading or reading affects attitudes (Organisation for Economic Co-Operation and Development [OECD], 2003; Quinn & Jadav, 1987). Nevertheless there appears to be a shared association between an individual’s attitude towards reading and their reading ability.

Reading attitudes are typically defined as a reader’s affect towards reading (Alexander & Filler, 1976; Mathewson, 1994; McKenna, Kear, & Ellsworth, 1995). The motivational consequences of reading attitudes are that children with more positive attitudes are more motivated to read (Renninger, Hidi, & Krapp, 1992; Schiefele, 1996), thus highlighting the imperative relationship between attitudes towards reading and motivation to read. As in every domain of learning, motivation is crucial. Most children begin school with positive attitudes and expectations for success, however moving through the primary sector children become disaffected, and increasingly so thereafter, due to stressful encounters and failure on an academic level (Parker & Paradis, 1986; Bong & Skaalvik, 2003). The majority of reading problems faced by today’s adolescents and adults are the result of problems that could have been avoided or resolved in their early childhood years through the implementation of strategic approaches and early intervention (Snow et al., 1998).

Research highlights that the readability of a text can have a major impact on the child’s ability to understand what they are reading, thus impacting on their comprehension ability (Linderholm et al., 2000; Rasinski, 2003). The difficulty level of a text, or readability level, is often determined by the sentence and word difficulty of a passage (Rasinski, 2003), which can be calculated using researched formulas, such as the Spache formula (Spache, 1953), the Dale-Chall Formula (Dale & Chall, 1948) and the Flesch-Kincaid Grade Level Readability Score (Kincaid, Fishburne, Rogers, & Chissom, 1975). Rasinski (2003) highlights three reading levels into which childrens’ reading ability can be categorised;
independent, instructional and frustration. Research illustrates that the level the child is reading at impacts on their ability to comprehend material (Hunt, 1996). Those who occupy the “frustration” level struggle to decode and comprehend the text and research has found that it is those who are frustrated with reading material that maintain a negative attitude toward reading (McKenna, Kear, & Ellsworth, 1995). From this we are given an insight into the working relationship between social-cognitive and literacy skills, a working relationship that should be capitalised on and developed.

Recurring failures to succeed and self-concept issues often complicate a student’s ability to learn any of a variety of reading skills. Schunk and Zimmerman (1997) found that students who doubt their ability to learn give up quickly when faced with new challenges. Therefore, reading instruction for struggling readers should focus on the rebuilding of damaged self-concepts. This can be accomplished through successful experiences and encouraging teacher interaction. McKenna and Kear (1990) were the first to recognise that reading assessment was mainly focused on comprehension and most failed to consider social cognitive influences, especially attitude. Kush and Watkins’ (1996) study noted that a decline in reading attitudes occurred gradually throughout elementary school, especially among males. Also an American national survey, completed on 18,000 children ranging from 1st grade through to 6th, supported these findings. It was reported that negative attitudes towards reading developed gradually throughout elementary school and there seemed to be a relationship between negative attitudes towards reading and reading ability (McKenna, Kear, Ellsworth, 1995). From this we can infer that ability and attitudes towards reading are intertwined, particularly concerning those who are less-able readers. Researchers have queried the focus on reading ability alone, and ask whether a similar focus should be placed on student social-cognitive functions; attitudes, motivation and self-esteem (Pachtman & Wilson, 2006). Numerous studies report how positive self-concept (self-esteem) and self-
efficacy (motivation) facilitate students’ academic engagement, persistence and effort (Skaalvik and Rankin, 1996; Skinner, Wellborn, and Connell, 1990), intrinsic motivation (Gottfried, 1990; Harter, 1982; Mac Iver, Stipek, and Daniels, 1991; Meece, Blumenfeld, and Hoyle, 1988; Skaalvik, 1997, 1998; Skaalvik and Rankin, 1996), academic performance and achievement (Marsh, 1992; Marsh et al., 1988; Marsh and Yeung, 1997a; Shavelson and Bolus, 1982; Skaalvik and Hagtvet, 1990; Skaalvik and Vals, 1999), and even career selection (Betz & Hackett, 1981, 1983), thus illustrating the copious benefits of high levels of social-cognitive skills. Plotnik (1993) captures the link between attitude and motivation brilliantly, if attitude is a belief or opinion that prompts individuals to act in a specific way then motivation examines physiological and psychological factors that cause them to act in that way. This untapped process could be the key to unlocking future literacy success.

2.3 ‘Power Hour’ - A new saviour for literacy

The National Literacy Strategy (2011) has highlighted that there has been no considerable improvements in literacy skills in Irish primary schools over the last three decades, despite considerable investment. Based on the literature discussed above, the ‘Power Hour’ literacy intervention aims to improve literacy skills while also incorporating the social-cognitive aspects of the reader in order to equip children with the skills necessary to become efficient, successful readers, with positive attitudes and high levels of motivation and self-esteem. It is a literacy intervention adapted from the Reading Recovery programme, which was first implemented as an early intervention to prevent reading failure in New Zealand in 1970’s (Burroughs-Lange & Douetil 2005/2006). “Power-Hour” is an intensive programme of Reading and Writing completed over a 10 week period, which gives the children countless opportunities to read books at their own level of competency and engage in various phonic and word recognition activities. Over the course of one hour children engage in a number of “stations” where activities are tailor made to their own level of competence. Over time the
complexity of what they can do in both reading and writing is gradually increased by providing the children with the necessary problem-solving skills. This literacy work station model is outlined in the *Effective Literacy and Numeracy practices for DEIS Schools* created by the Department of Education and Science in 2009. It states that during each literacy hour, the children have an opportunity to spend time at four different work stations. The four stations incorporate focused activities in guided reading (new reading), independent/familiar reading, writing and word-detective work (phonics, vocabulary extension and sentence construction) (Department of Education and Science, 2009). In relation to the first station, Guided/New Reading, each day the children are challenged to discover new ways to go beyond their current operating ability and lift their literacy processing through the introduction of new texts. The purpose of this station is to provide children with an opportunity to develop and employ strategic procedures in order to read new texts. During the second station, Independent/Familiar Reading, the children read previously seen readers, allowing for the development of fluency, comprehension, speed and enjoyment. Throughout the third station, children are supported to improve their abilities in blending and segmenting words (to make and break words), identify different common blends and highlight initial and final sounds through various games and activities. The aim of this station is to provide children with the opportunity to work on their spelling skills. They are exposed to how words work, so that they can make a fast visual analysis of their reading. In the final station, the writing station, children are encouraged to work independently, to develop their skills as a writer by incorporating the novel strategies they have discovered and developed from the previous three stations. Children write sentences based on their own experiences, using words that they encounter in their readers and also high frequency words that have been highlighted during reading. The children also answer lower and higher order questions related to the
graded reader they have previously read. This station aims to cement the use of strategies that aid children in improving their comprehension and writing skills.

In order for the stations to be run simultaneously, the mainstream class teacher is assisted by the school’s learning and special education support teachers. The mainstream class teacher is responsible for the guided reading station and the learning-support teacher directs the word-detective station. Station teaching is a form of team-teaching/co-teaching. Jang’s (2006) study on the effects of team-teaching highlighted that those who received team-teaching obtained higher results than those who received traditional teaching, thus, supporting the basis of the ‘Power Hour’ literacy intervention. Jang (2006) outlined that research has shown team-teaching to be “an effective way of constructing deep learning of concepts” (Jang, 2004, p. 179). Walther-Thomas’s (1997) evaluation of co-teaching models across 23 schools in America also demonstrates the positive outcomes that can be achieved through station teaching, such as improved academic and social skills for low-achieving students, improved attitudes and self-concepts reported by students with disabilities and more positive peer relationships”. Thousand, Villa, and Nevin (2006) reinforce these findings and remark on the numerous benefits of station teaching, “decreased referrals to intensive special education services, increased overall student achievement, fewer disruptive problems, less paperwork, increased number of students qualifying for gifted and talented education services, and decreased referrals for behavioural problems” (Thousand, Villa, and Nevin, 2006, p. 240). The research exemplified above indirectly supports the foundations of the “Power Hour” literacy intervention.

Machin and McNally (2004) evaluated the effect of “the literacy hour”, (which in theory is equivalent to the “Power Hour” literacy intervention,) in English primary schools on pupil attainment. “The literacy hour” was first introduced in 1996 as part of the National Literacy Project (NLP), before it was implemented nationally in September 1998. A daily
'literacy hour' was introduced into most primary schools in England as part of the government's *National Literacy Strategy* (NLS). The central aim was to improve literacy standards, (which were at an all-time low), through explicit teaching. This project was undertaken in about 400 English primary schools. Machin and McNally (2004) focused their research on pupil attainment and the policy’s potential impact on the gender gap. The results were supportive of their hypotheses and illustrated that those receiving the explicit literacy teaching had higher attainment levels and also highlighted that the literacy hour was more effective for boys, thus reducing the gender gap in primary schools. However, this study focused on “the literacy hour” being implemented within a whole class setting, and also no higher cognitive influences were investigated, such as motivation, attitudes and self-esteem. Much research has demonstrated that small group/station/precision teaching is more beneficial in aiding pupil attainment and is more effective than whole class teaching (Brooks, 2013; Swanson & Hoskyn, 1998; Vaughn, Gersten & Chard, 2000; Scammaca et al, 2007; Slavin et al, 2008; Slavin, Lake, Groff, 2009; Slavin et al, 2009; Slavin & Smith, 2009, Singleton, 2009). Social cognitive influences have also become a hot topic of investigation, with researchers highlighting their power over literacy development (Baker, Scher, & Mackler, 1997; Guthrie, Wigfield, Metsala, & Cox, 1999; Mullis, Martin, Gonzalez, & Kennedy, 2003; Mullis, Martin, Kennedy, & Foy, 2007). Torgesen et al. (2007) summarized six critical factors at the core of proficient reading performance; fluency of text reading, vocabulary, or the breadth and depth of knowledge about the meaning of words; active and flexible use of reading strategies to enhance comprehension, background, or prior knowledge related to the content of the text being read, higher level reasoning and thinking skills and motivation and engagement for understanding and learning from text. There has not been a sufficient amount of research completed in this area relating to the Irish context and literacy station teaching in comparison to whole class teaching.
McIntyre (2005) and colleagues and Vellutino (2004) and colleagues have indicated that the successful nature of literacy interventions with differing theoretical frameworks and various implementation features has fashioned diverse conclusions. This causes complications for schools in trying to assess what will be most effective for the particular demography and learning needs of their children. Therefore, the question arises as to what purpose is there in the evaluation of the ‘Power Hour’ literacy intervention. Scammacca (2007) and colleagues and Singleton (2009) state that effective interventions contain the following elements; a strong focus on phonological decoding and word-level work, supported and independent reading of progressively more difficult texts, writing exercises, practise of comprehension strategies while reading texts and instruction that is systematic and intensive. ‘Power Hour’ encapsulates all the above elements. It is an intensive, structured intervention, which allows children to experience collaboration in a small interactive group, supporting the views of many theorists. As highlighted above, researchers have stated that small group settings are more effective than larger groups (Brooks, 2013; Swanson & Hoskyn, 1998; Vaughn, Gersten & Chard, 2000; Scammaca et al, 2007; Slavin et al, 2008; Slavin, Lake, Groff, 2009; Slavin et al, 2009; Slavin & Smith, 2009, Singleton, 2009). Brooks (2013) and Singleton (2009) explain that interventions for longer than one term do not necessarily produce proportionally greater benefits, as evidence shows that the first 12 hours of instruction are most beneficial. Short daily sessions (10 – 12 minutes) appear to be most effective for programme delivery (Singleton, 2009). The ‘Power Hour’ intervention also incorporates these aspects as it is a short and precise, daily intervention, spanning out over 10 weeks. At school, educational benefits are also witnessed when children read aloud. The skill involved with reading aloud, that of oral reading ability, has exhibited a significant relationship with overall reading achievement (Pinnell et al., 1995). In addition, growth in
oral reading fluency has been positively correlated to enhancement in reading comprehension (Jenkins, Fuchs, van den Broek, Espin, & Deno, 2003).

2.4 Research Questions

In the current paper the aim is to address three hypotheses. The first hypothesis under investigation is that there will be a significant difference between those who participate in the ‘Power Hour’ literacy intervention and those who receive whole class teaching in social cognitive and literacy skills. Secondly, an investigation will be made into improvements demonstrated, hypothesising that there will be significant improvements between pre and post intervention scores in social-cognitive and literacy skills, for those who participate in the ‘Power Hour’ literacy intervention. Thirdly it is hypothesised that there will be a relationship between improved comprehension, vocabulary and spelling skills in the children who are participating in the ‘Power Hour’ literacy intervention and their attitudes towards recreational reading.

Literacy, the ability to read and write, is an essential component used by a child when cultivating a sense of well-being. Literature emphasises that children who are solid readers perform better in school, have a healthy self-image, and become lifelong learners, all traits which are vital in surviving in this competitive world (Nelson-Royes, 2012). Helping children to become more independent readers is a central goal of primary educators and schools should endeavour to place literacy development to the forefront of both their short and long term plans for the future (Bitter, Oday, Gubbins, & Socias, 2009). This research will highlight the significant influences that the ‘Power Hour’ literacy intervention can have on childrens’ social cognitive aspects (motivation, attitudes and self-esteem), literacy ability and academic achievement, so to inform literacy policies within schools.
3. Method

3.1 Participants

Four qualified primary school teachers, with an average of ten years teaching experience and fifty, 8 – 9 year old pupils (third class) of mixed ethnicity, from two urban primary Irish schools participated in this study. The student population was selected based on availability to the researcher and following informed consent from both principals, acting in loco parentis (see Appendix A). One school was automatically indentified as the experimental group as the intervention was recently added to the schools literacy policy in the light of the new School Self-Evaluation(SSE) process (n=25) and the other school, therefore, served as the control group (n=25). Both schools were already receiving reasonable literacy teaching and attainment with English standardised test results (Spring 2013) ranging from 1\textsuperscript{st} percentile to the 82\textsuperscript{nd}. This intervention was carried out on girls due to accessibility reasons. In addition, students receiving additional reading instruction in learning support or special education were not included in the results of this study for both groups.

3.2 Design

This study utilises a mixed design consisting of different elements depending on the hypothesis. The first and second hypothesis employ a between and within quasi-experimental repeated measure design to investigate the impact of the ‘Power Hour’ literacy intervention on childrens’ social-cognitive and literacy skills in comparison with those receiving conventional whole class teaching. The independent and dependant variables utilised can be seen below in Table 1 The third hypothesis yielded a correlation design in order to determine if there was a relationship between improved literacy skills in the children who are
participating in the ‘Power Hour’ literacy intervention and their attitudes towards recreational reading, variables used are outlined in Table 2. The intervention replaced the entire content and organization of the reading curriculum within the experimental school. The attainments of the children attending the experimental school were evaluated against a comparison group made up of children attending the control school, who received the whole class teaching approach. Consistent with the repeated measure design, evaluations of students’ social-cognitive and literacy skills were assessed prior to the implementation of the intervention. After ten weeks of the intervention, a post-test evaluation was conducted utilizing the same materials from the pre-test. A visual representation of the research design can be seen in Figure 1.

Table 1: An outline of variables used in hypothesis 1 and 2.

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<th>Hypothesis</th>
<th>Independent variable (IV)</th>
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<td>Social – cognitive skills:</td>
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<td>- Motivation to read</td>
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<td>Control</td>
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Table 2: An outline of variables used in hypothesis 3.

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Figure 1. Quasi-experimental repeated measure design.

3.3 Materials

3.3.1 Motivation for Reading Questionnaire

The measure employed to assess the childrens’ motivation to read was *the Motivation for Reading Questionnaire (MRQ)* (Wigfield and Guthrie, 1997). This 54-item questionnaire is designed to assess the 11 different aspects of reading motivation. Wigfield and Guthrie (1997) conceptualized 11 different dimensions of reading motivation, and Wigfield (1997) created a theoretical taxonomy consisting of three categories (see Appendix B for a listing of
the categories, dimensions, and questions). One category of the dimensions is based on the competence and efficacy belief construct. This category includes self-efficacy, the belief that one can be successful at reading (sample item: I am a good reader), and challenge, the willingness to take on difficult reading material (sample item: I like hard challenging books).

A third dimension in this category is work avoidance, or the desire to avoid reading activities (sample item: Complicated stories are o fun to read). The second category concerns the purposes children have for reading. The particular dimensions in this category comprise of several constructs from the motivation field, including intrinsic (curiosity, involvement, and importance) and extrinsic motivation (recognition, grades and competition). Intrinsic motivation refers to being motivated, curious, and interested in an activity for its own sake, rather than for extrinsic reasons such as working for a reward or grade (Deci & Ryan, 2000) (sample item: I have a favourite subject I like to read about). The last category addresses social purposes of reading, based on the engagement perspective’s premise that reading is inherently a social activity (Baker et al., 1996; Guthrie, McGough & Rice, 1996) and that social aspects of classrooms have an important impact on student achievement (Wentzel, 1996). One aspect is social reasons for reading, or the process of constructing and sharing the meanings gained from reading with friends and family (sample item; I often read to my brother or my sister). The second aspect is compliance, or reading to meet the expectations of others (sample item; I read because I have to). All items are scored on a Likert-type scale ranging from 1 (Very Different From Me) to 4 (A Lot Like Me). Cronbach’s alpha showed that the internal consistency reliabilities for the different dimensions ranged from .52 to .81 (Wigfield & Guthrie, 1997) (see Table 3).

Table 3. Reliabilities for the Factor-Based Reading motivation scale (Wigfield & Guthrie, 1997).
### Subscale

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>.68</td>
</tr>
<tr>
<td>Challenge</td>
<td>.80</td>
</tr>
<tr>
<td>Curiosity</td>
<td>.76</td>
</tr>
<tr>
<td>Involvement</td>
<td>.76</td>
</tr>
<tr>
<td>Importance</td>
<td>.52</td>
</tr>
<tr>
<td>Recognition</td>
<td>.69</td>
</tr>
<tr>
<td>Grades</td>
<td>.43</td>
</tr>
<tr>
<td>Social</td>
<td>.72</td>
</tr>
<tr>
<td>Competition</td>
<td>.81</td>
</tr>
<tr>
<td>Compliance</td>
<td>.55</td>
</tr>
<tr>
<td>Work Avoidance</td>
<td>.60</td>
</tr>
</tbody>
</table>

#### 3.3.2 Elementary Reading Attitude Survey

The instrumentation that will be used to measure the childrens’ attitudes towards reading is the *Elementary Reading Attitude Survey (ERAS)* (McKenna and Kear, 1990). The ERAS was developed by McKenna and Kear (1990) and is intended for use as a public-domain measure. The ERAS is a 20 item survey intended for an audience of children ranging from 1st class to 6th class. This 20-item, 4-node, pictorial rating scale is based on the cartoon character Garfield and comprises of two 10-item subscales for recreational and academic reading attitudes. The first ten questions relate to recreational reading attitude which focuses on reading for fun outside the school setting (sample questions: How do you feel about spending free time reading a book?). The second ten questions relate to academic reading attitude which examines the school environment; reading workbooks, schoolbooks and worksheets (sample question; How do you feel about learning from a book?). Garfield is imitating the emotions of the responder to the questions. These emotions range from a big smile and excited stance (4 points) to an angry scowl and tensed posture (1 point). The
middle responses have Garfield with arms crossed and a slight smile (3 points) or a slight frown (2 points) (McKenna & Kear, 1990). Thus, scores on each of the two subscales can range from 10 to 40 total points with a total reading attitude score between 40 and 80. All 20 items are represented in the Appendix C The survey takes approximately 30 minutes to administer. This time includes the distribution of surveys, the reading of the procedures and a thorough reading of each question twice.

McKenna and Kear (1990) sampled 138 American elementary students using their Elementary Reading Attitude Survey (ERAS). The validity of the academic subscale was examined through identifying teachers’ classification of the norm-group as being low, average or high readers. Overall, the mean subscale scores of the high readers were significantly greater than the low readers. Not only did this provide evidence on the validity of the academic subscale, it also raised questions relating to the relationship between teachers’ rating of reading ability and attitudes, which will be discussed in more detail in the discussion. The recreational validity was tested twice and both tests provided statistical significance. One tested students that were library card holders versus those without cards. Cardholders had a mean equal to 30.0 and non-cardholders a mean of 28.9. Another test was given for those with books checked out of the school library versus those without books checked out. Those with books out had a mean of 29.2 and those without a book out had a mean of 27.3. As for the academic subscale, the validity was tested using teacher formed groups of low, mid, and high level reading ability. The mean of the high level readers was 27.7 and the low level readers was 27 (McKenna & Kear, 1990). Kush, Watkins, McAleer and Edwards (1995) investigated this further and found empirical evidence related to the consistency of this relationship over time and Worrell, Roth and Gableko, 2007 questioned it across reading levels. Both studies emphasise its validity. Cronbach’s alpha was utilised on
the ERAS to determine reliability. The coefficients for the full scale ranged from .87 to .89 (McKenna & Kear, 1990).

3.3.3 The Lawseq Pupil Questionnaire

The Lawseq Pupil Questionnaire (Lawrence 1996) was utilised to assess childrens’ level of self-esteem pre and post intervention. This questionnaire consists of 16 items (four of which are distracters), these are highlighted in the Appendix D Each question had three possible replies: ‘yes’, ‘no’ or ‘don’t know’. These replies were scored 0, 1 or 2, with 2 indicating high self-esteem. The 12 answers were added together to give a total. The Lawseq was developed and extensively trialled for use with primary children from a series of 30 adjectives, through two sets of 40 questions in parallel form which were both administered to a random sample of 76 nine year olds (Lawrence 1996). The results from the two forms of the questionnaire were then compared. Questions showing less than 80% agreement were discarded. This left 12 items in both Forms A and B. Four other questions of an innocuous nature were then added to make the questionnaires less threatening, making 16 questions in all. Self-esteem is a notoriously complicated attribute to assess. Consequently, it is difficult to determine the construct validity and reliability (Cronenbach & Meehl, 1955; Kazdin, 2003). Lawrence’s Self-Esteem Questionnaire (LAWSEQ) was administered to 120 Year 1 pupils in six schools in Belfast, Northern Ireland. A principal components analysis indicated that the scale items were unidimensional and that the reliability of the scores, as estimated by Cronbach’s alpha, was satisfactory (0.73). (Rae, Dalto, Loughrey & Woods, 2011).

3.3.4 Drumcondra Primary Reading Test – Revised (DPRT-R)

The DPRT-R (Educational Research Centre, 2007) is a grouped administered test of silent reading. There are Reading Vocabulary and Reading Comprehension subsets at all six levels. At each level it is possible to generate a Total Reading score (the combined scores
from both the Vocabulary and Comprehension subsets). Each level of the test has two test forms: Form A and B. Two sets of norms are available for the DPRT-R: Spring norms, which should be used if the test is administered towards the end of the school year (March to June); and Autumn norms, which should be used if the test is administered at the beginning of the school year (October or November). The two subsets which comprise the DPRT-R at levels 3-6 take 1 hour 45 minutes to administer. This included time for completing identification information and sample items as well as actual testing time. The two subtests, Reading Vocabulary and Reading Comprehension, should be administered on the same morning, on either side of a short break. Pupils taking levels 3-6 of the DPRT-R may record their answers in two ways – using a hand-scorable answer sheet or a machine-scorable answer sheet. For the purpose of this study the hand-scorable answer sheet was used. The hand-scorable answer sheet can be scored using the appropriate scoring stencils and answer keys (see Appendix E for a list of instructions, answer keys and scoring). The Kuder-Richardson Formula (KR$_{20}$) was used to obtain an estimate of the internal consistency of the DPRT-R. KR$_{20}$ coefficients give a measure of the extent to which the questions in each test constitutes a whole, reflecting the degree to which different parts of the test or different questions are measuring the same attribute. The reliability coefficients for Total Reading, calculated from data obtained in the both Spring and Autumn standardisation studies, range from 0.94 to 0.96 (Educational Research Centre, 2007) (see Table 4).

Table 4. KR$_{20}$ Reliability Coefficients for DPRT-R Level 3, Forms A and B, Spring and Autumn (Educational Research Centre, 2007).

<table>
<thead>
<tr>
<th></th>
<th>Spring</th>
<th></th>
<th>Autumn</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Reliability</td>
<td>N</td>
<td>Reliability</td>
</tr>
<tr>
<td>Level 3, Form A</td>
<td>1141</td>
<td>0.93</td>
<td>482</td>
<td>0.92</td>
</tr>
<tr>
<td>Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>1141</td>
<td>0.90</td>
<td>482</td>
<td>0.91</td>
</tr>
</tbody>
</table>
3.3.5 Drumcondra Primary Spelling Test

The Drumcondra Primary Spelling Test (Educational Research Centre, 2007) is designed to be administered to pupils in first to sixth class in primary schools (see Appendix F for a list of instructions, answer key and scoring). The class levels correspond to Levels 1 to 6 of the test. There are two forms of the test at each level, Form A and B. However, only one can be administered during a testing session. The DPST takes 45-50 minutes to administer. The DPST includes three main types; word spelling, in which the pupil is asked to spell words called out by the teacher; sentences or story completion, in which the pupil is asked to write out the missing words in a text that is also read aloud by the teacher; error correction (‘mistakes’), where the pupil is asked to identify common spelling errors in each of several sentences, and to write in the correct spellings on the answer sheet. The content of the DPST was carefully chosen to ensure that it included both words that pupils would be likely to encounter in the course of reading, spelling and writing instruction in school, and words that are of high utility (high-frequency words). At each level of the test, the performance of the pupils can be reported in terms of raw scores, standardised scores and percentile ranks. For the purpose of this study raw scores will be utilised during data analysis. As well as the DPRT-R the Kuder-Richardson Formula 20 (KR20) was used to obtain an estimate of the internal consistency of the DPST. The DPST reliability coefficients estimated
by KR$_{20}$ were calculated from data obtained in the May 2002 standardised study (Educational Research Centre, 2007). The coefficients range in value from 0.949 to 0.965 (see Table 5).

**Table 5.** KR$_{20}$ Reliability Coefficients for DPST Level 3, Forms A and B (Educational Research Centre, 2007).

<table>
<thead>
<tr>
<th>Level/Form</th>
<th>N</th>
<th>KR$_{20}$ coefficient reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A</td>
<td>959</td>
<td>0.965</td>
</tr>
<tr>
<td>3B</td>
<td>1024</td>
<td>0.963</td>
</tr>
</tbody>
</table>

**3.4 Procedure**

**3.4.1 Assessment procedures**

After the process of informed consent teachers implemented the program from the first week in October to the second week in December, for a total of 10 weeks of instruction. The intervention was executed for 60 min, four times a week (Monday – Thursday), in the experimental school. Prior to and just after the 10-week intervention, students completed pre- and post-test assessments. The assessments included measures of motivation to read, attitudes towards reading, self esteem, reading comprehension, vocabulary and spellings. Each measure was given simultaneously to an entire class, usually during the regularly scheduled English lesson time slot. The measures were given over a 2-day period; the Motivation for Reading Questionnaire (Wigfield and Guthrie, 1997), *Elementary Reading Attitude Survey* (McKenna & Kear, 1990) and the Lawseq Pupil Questionnaire (Lawrence 1996) were given on the first day and *the* Drumcondra Primary Reading and Spelling Tests (Educational Research Centre, 2007) were administered on the second day. Because teachers did not want testing to be extended over two days, a combination of testing had to be done. The decision to administer the social-cognitive measures first was based on the concern that students might respond differently if they had just completed a reading/spelling test. The class teacher administered the reading literacy assessments to the children, under the supervision of
the researcher. Social-cognitive measures were administered by the experimenter. As far as was practicable, tests were presented in a fixed order to all participants, in their familiar classroom setting.

For the Motivation for Reading Questionnaire (Wigfield and Guthrie, 1997), children were told they were going to answer questions about their reading and that the questions had no right or wrong answers. They were given three practice items before beginning the actual questionnaire (see Appendix B for list of instructions). Children were allowed to read the questions on their own; the researcher and class teacher were available to answer questions the children had about wording of the items. The MRQ questions took approximately 20 minutes for the children to complete. Raw scores were used in all subsequent data analyses. The ERAS was administered to an entire class in 20 minutes. The researcher read the directions aloud while students read along silently (see Appendix C for a list of instructions). Following several practice items, students completed the 20 items of the ERAS. Completed ERAS forms were scored according to standardized instructions provided by McKenna and Kear (1990). Raw scores were used in all subsequent data analyses. The researcher verbally administered the Lawseq’s self-esteem questionnaire, and then told children to answer the questions based on how they generally felt about themselves, indicating that there were ‘no right or wrong answers’. Raw scores were used in all subsequent data analysis. The children were already familiar with the DPRT-R and DPST procedure, as they had completed this test in previous levels (1 and 2). For the purpose of this study 3rd class level was utilised. Instructions for administration and scoring can be seen in Appendix E and Appendix F.

3.4.2 Intervention

Teachers were previously familiar with the reading framework utilised in the ‘Power Hour’ literacy intervention. Meetings were held at three different time points during the intervention; before its implementation, a week into the intervention and again 5 weeks after
this. The meetings incorporated an exchange of ideas and discussion on the interventions progress, the benefits that could be seen and any weaknesses that needed to be addressed. The teachers divided the children into four small groups. These groups were based on the childrens’ standardised reading test results from the previous academic year. Children received an hour of direct teaching four days a week for 10 weeks. The children were given countless opportunities to read books at their own level of competency and engage in various phonic and word recognition activities. Over the course of one hour children engaged in four work ‘stations’, where activities are tailor made to their own level of competence. The four stations incorporated focused activities in guided reading (new reading), independent/familiar reading, writing and word-detective work (Department of Education and Science, 2009). Each station is previously described in detail in the introduction. Over time the complexity of what they could do in both reading and writing was gradually increased by providing the children with the necessary problem-solving skills. As highlighted in the introduction, in order for the stations to be run simultaneously, the mainstream class teacher was assisted by the school’s learning and special education support teachers. The mainstream class teacher was responsible for the guided reading station and the learning-support teacher directed the word-detective station.

3.4.3 Ethical concerns

The study involved a small degree of deception, as the children were told that the questionnaires would remain anonymous and that the teachers involved in the intervention would be unaware of a child’s responses. However, the surveys are numbered on the back and each number corresponded to a particular child. This small degree of deception is imperative in order to acquire the most accurate results from each child and also to make the child feel more comfortable when giving their true opinions. It is clear that an ethical issue arises due to one group receiving the intervention and the other group not, as the anticipated
outcomes of the intervention itself are believed to have potential positive impacts on future literacy attainment. However, this intervention is part of the experimental group’s new literacy improvement plan, i.e. SSE, is part of a balanced and integrated approach to supporting better learning and teaching in the Irish school system. It is an integral part of the Literacy and Numeracy Strategy, and will support schools in examining and reflecting on this aspect of their work in order to improve outcomes for pupils, which is not included in that of the alternative school. Hopefully the positive outcomes highlighted by this research can inform policy change within the school currently not implementing the intervention.

4. Results

The results are reported in three main sections. The baselines of both groups, in relation to literacy and social-cognitive skills, are compared and described in the first section. The second section examines the pre and post intervention results from both groups, while highlighting and describing any significant differences that may be found. In the third section a comparison is made between the pre and post-intervention results of both groups in social-cognitive and literacy skills, based on the findings from an Independent Sample T-test.

4.1 Pre intervention implementation baseline results of social-cognitive and literacy skills

Table 6: An Independent Samples T-test displaying the pre-intervention results of all variables for both groups.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Control</td>
<td>140.60</td>
<td>19.42</td>
<td>-2.11</td>
<td>48</td>
<td>.040</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>155.44</td>
<td>29.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>Control</td>
<td>53.96</td>
<td>8.22</td>
<td>-.27</td>
<td>48</td>
<td>.787</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>54.72</td>
<td>11.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>Control</td>
<td>31.52</td>
<td>2.97</td>
<td>4.01</td>
<td>36.11</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>26.36</td>
<td>5.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Before the implementation of the intervention an Independent Samples T-test highlighted differences between the baseline results of both groups, in both social cognitive and literacy skills, with differences in some variables being presented more significantly than others (see Table 6). When comparing the mean values of the social cognitive variables, no difference was identified between the two groups, in the children’s attitudes towards reading ($t(48) = -.27, p = .787$). However, the experimental group scored significantly higher in their motivation to read ($t(48) = -2.11, p = .040$), whereas the control group presented with significantly higher levels of self-esteem ($t(36.11), 4.01, p < .001$).

In relation to differences in literacy skills, the control group were found to have slightly higher levels of vocabulary and spelling skills (see Table 6), however, an independent samples t-test showed that the differences were not statistically significant (vocabulary: $t(48) = .56, p = .575$; spelling: $t(48) = .51, p = .611$). Additionally, the control group presented with higher levels of comprehension (see Table 6). This time the difference between the levels of comprehension of the control group and the experimental group were found to be statistically significant ($t(48) = 2.02, p = .049$).

4.2 Hypothesis 1: There will be a significant difference between ‘Power Hour’ and whole class teaching in children’s social cognitive and literacy skills.

Table 7: An Independent Samples T-test displaying the post-intervention results of all variables for both groups.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Control</td>
<td>136.08</td>
<td>18.77</td>
<td>-5.50</td>
<td>48</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>168.24</td>
<td>22.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>Control</td>
<td>51.04</td>
<td>9.72</td>
<td>-3.78</td>
<td>48</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>62.04</td>
<td>10.81</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>Control</td>
<td>30.40</td>
<td>3.77</td>
<td>-1.12</td>
<td>40.41</td>
<td>.270</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>31.40</td>
<td>2.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>Control</td>
<td>25.92</td>
<td>6.26</td>
<td>.64</td>
<td>48</td>
<td>.528</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>24.92</td>
<td>4.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Control</td>
<td>26.48</td>
<td>5.82</td>
<td>-1.01</td>
<td>48</td>
<td>.315</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>28.16</td>
<td>5.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spellings</td>
<td>Control</td>
<td>40.20</td>
<td>11.36</td>
<td>-1.76</td>
<td>42.41</td>
<td>.086</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>45.05</td>
<td>7.77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After the implementation of the intervention an independent samples t-test was employed again in order to assess differences in the post-intervention results of both groups. Differences can be seen when comparing the mean values, however, some are more significant than others (see Table 7). Social-cognitive skills presented with greater differences in mean values between the two groups, this is illustrated in Figures 2. and 3. In relation to attitudes, with the 95% confidence limits showing that the population mean difference of variables lies somewhere between -16.846 and -5.154, a strongly significant difference can be reported between the experimental and control groups (t(48) = -3.78, p < .001). Another interesting factor that also becomes apparent is that, as the experimental group’s attitudes towards reading increases the control group’s attitudes decrease (see Figure 2.). Therefore, illustrating that the experimental group’s increased positive attitudes towards reading can be attributed to the implementation of the literacy intervention. With regard to motivation to read, with the 95% confidence limits showing that the population mean difference of
variables lies somewhere between -43.917 and -20.403, a strongly significant difference can also be reported between the two groups (t(48) = -5.50, p < .001). Therefore in relation to the first hypothesis, the null can be rejected, as a significant difference was found between ‘Power Hour’ (experimental) and whole class teaching (control) in children’s attitudes towards reading and motivation to read. Even though it has been previously outlined that the experimental group had significantly higher levels of reading motivation initially (see Table 6), post-intervention results display an even greater difference between the groups again, especially in relation to the control group, as the childrens’ scores decreased from their baseline scores(see Figure 3.). Thus, again highlighting that the experimental group’s increased motivation to read can be attributed to the implementation of the literacy intervention.

![Figure 2. Differences in mean values of attitudes towards reading for experimental and control group’s pre and post intervention.](image)

Figure 2. Differences in mean values of attitudes towards reading for experimental and control group’s pre and post intervention.
No significant difference can be reported between the two group’s post intervention level of self-esteem ($t(40.41) = -1.12, p = .270$). Therefore the null is accepted, as there was no significant difference between ‘Power Hour’ and whole class teaching in children’s self-esteem. However, when comparing the mean values, the experimental group surpassed the control group, who previously had significantly higher level of self-esteem (see Table 7). Thus again highlighting the positive impact of the ‘Power Hour’ literacy intervention.

In relation to the post-intervention literacy scores, when interpreting the results from the independent samples t-test, no significant differences are outlined (comprehension; $t(48) = .64, p = .528$, vocabulary; $t(48) = -1.01, p = .315$ and spelling; $t(42.41), p = .270$). Therefore the null is accepted, as there is no significant difference between ‘Power Hour’ and whole class teaching in children’s literacy skills. That said, when studying the mean values between the two groups, it is clear that the experimental group surpassed the control group in vocabulary and spelling, this is illustrated in Figure 4. and 5. Additionally, even though the
control group score better in comprehension compared to the experimental group, the experimental group nearly gained twice as much as the control group between the two time points (see Table 8.). Therefore, no significant difference being present between the two groups could be due to the fact that the control group had significantly higher baseline levels of comprehension initially (see Table 6). (see Table 6).

Figure 4. Differences in mean values of vocabulary for experimental and control group’s pre and post intervention.
Figure 5. Differences in mean values of spelling for experimental and control group’s pre and post intervention.

Table 8. Difference in mean values of comprehension for experimental and control group’s post intervention.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre intervention</th>
<th>Post intervention</th>
<th>Mean gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>23.32</td>
<td>25.92</td>
<td>2.60</td>
</tr>
<tr>
<td>Experimental</td>
<td>20.08</td>
<td>24.92</td>
<td>4.84</td>
</tr>
</tbody>
</table>
4.3 Hypothesis 2: There will be significant improvements between pre and post intervention scores in social-cognitive and literacy skills, for those who participate in the ‘Power Hour’ literacy intervention.

Table 9: A Paired Sample T-test illustrating differences between literacy and social-cognitive skills means pre-and post-intervention for both groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Variable</th>
<th>Time Point</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Motivation</td>
<td>T₁</td>
<td>140.60</td>
<td>19.42</td>
<td>1.36</td>
<td>24</td>
<td>.188</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T₂</td>
<td>136.08</td>
<td>18.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attitudes</td>
<td>T₁</td>
<td>53.96</td>
<td>8.22</td>
<td>1.62</td>
<td>24</td>
<td>.119</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T₂</td>
<td>51.04</td>
<td>9.72</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Self-Esteem</td>
<td>T₁</td>
<td>31.52</td>
<td>2.97</td>
<td>1.47</td>
<td>24</td>
<td>.154</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T₂</td>
<td>30.40</td>
<td>3.77</td>
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<td></td>
<td>Comprehension</td>
<td>T₁</td>
<td>23.32</td>
<td>5.93</td>
<td>-2.56</td>
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<td></td>
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<td>T₂</td>
<td>25.92</td>
<td>6.26</td>
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<td></td>
<td>Vocabulary</td>
<td>T₁</td>
<td>23.40</td>
<td>7.01</td>
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<td>24</td>
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<td></td>
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<td>T₂</td>
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<td>5.82</td>
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<td>Spelling</td>
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<td>13.15</td>
<td>-3.86</td>
<td>24</td>
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<td></td>
<td></td>
<td>T₂</td>
<td>40.20</td>
<td>11.36</td>
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<tr>
<td>Experimental</td>
<td>Motivation</td>
<td>T₁</td>
<td>155.44</td>
<td>29.24</td>
<td>-2.41</td>
<td>24</td>
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<tr>
<td></td>
<td></td>
<td>T₂</td>
<td>168.24</td>
<td>22.42</td>
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<tr>
<td></td>
<td>Attitudes</td>
<td>T₁</td>
<td>54.72</td>
<td>11.30</td>
<td>-4.91</td>
<td>24</td>
<td>.000</td>
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<td></td>
<td></td>
<td>T₂</td>
<td>62.04</td>
<td>10.81</td>
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<td>Self-Esteem</td>
<td>T₁</td>
<td>26.36</td>
<td>5.72</td>
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<td>24</td>
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<td></td>
<td>T₂</td>
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<td>Comprehension</td>
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<td>5.39</td>
<td>-3.97</td>
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<td></td>
<td>Vocabulary</td>
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<td>7.04</td>
<td>-4.47</td>
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<td></td>
<td></td>
<td>T₂</td>
<td>28.16</td>
<td>5.89</td>
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A paired samples t-test was employed to compare pre and post intervention mean values for both the control and experimental groups (see Table 9). From this we can see a very strong significant difference between the two mean values in both social-cognitive and literacy skills (motivation; \( t(24) = -2.41, p = .024 \), attitudes; \( t(24) = -4.91, p < .001 \), self-esteem; \( t(24) = -4.63, p < .001 \), comprehension; \( t(24) = -3.97, p = .001 \), vocabulary; \( t(24) = -4.47, p < .001 \), spellings; \( t(24) = -6.19, p < .001 \)). Therefore, the null can be rejected, as there were significant improvements in social-cognitive and literacy skills for those who participated in the ‘Power Hour’ literacy intervention.

Even though a significant difference between pre and post intervention mean values for the control group in literacy skills was illustrated (comprehension; \( t(24) = -2.56, p = .017 \), vocabulary; \( t(24) = -3.28, p = .003 \), spellings; \( t(24) = -3.86, p = .001 \), which would be expected through natural maturation, the differences were not presented as strongly significant as the experimental results (see Table 9). Also, in relation to social-cognitive skills no significant difference between the two mean values can be reported for the control group (motivation; \( t(24) = 1.36, p = .188 \), attitudes; \( t(24) = 1.62, p = .119 \), self-esteem; \( t(24) = 1.47, p = .154 \)). Therefore, no significant improvements can be accounted for in relation to social-cognitive skills and to reiterate a previous statement their social-cognitive pre intervention mean values decreased in post intervention results, thus highlighting the positive impact of the ‘Power Hour’ literacy intervention on both social-cognitive and literacy skills in comparison to whole class teaching.

4.4 Hypothesis 3: There will be a relationship between improved comprehension, vocabulary and spelling skills in the children who are
Table 10. Multiple regression outlining the relationship between the predictor variables (comprehension, vocabulary and spellings) and the criterion (attitudes towards recreational reading).

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE (B)</th>
<th>β</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
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<tr>
<td>Comprehension</td>
<td>.21</td>
<td>.30</td>
<td>.17</td>
<td>.716</td>
<td>.482</td>
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<tr>
<td>Vocabulary</td>
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<td>.24</td>
<td>-.05</td>
<td>-.194</td>
<td>.848</td>
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<tr>
<td>Spellings</td>
<td>-.05</td>
<td>.18</td>
<td>-.07</td>
<td>-.304</td>
<td>.764</td>
</tr>
</tbody>
</table>

Note: $R^2 = .025$

* $\beta = \text{beta}$

A multiple regression was used to test whether improved comprehension, vocabulary and spelling skills, of the experimental group, were predictors of their attitudes towards recreational reading (see Table 10). The results of the regression indicated that the three predictors did not explain the variance ($R^2 = 1.11, F(3, 21) = .179, p = .909$). It was found that neither improved comprehension ($\beta = .17, p = .482, 95\% \text{ CI} = -.40 \ldots .83$), vocabulary ($\beta = -.05, p = .848, 95\% \text{ CI} = -.55 \ldots .45$) or spelling skills ($\beta = -.05, p = .764, 95\% \text{ CI} = -.43 \ldots .32$) predicted attitudes towards recreational reading for those who partook in the ‘power Hour’ literacy intervention. Therefore the null is accepted.

5. Discussion

This current study employed a mixed design to examine the differential effects of the ‘Power Hour’ literacy intervention versus the traditional whole class teaching approach. This intervention incorporates the use of station-teaching/team-teaching. The social-cognitive and literacy skills of fifty mixed ability primary school girls, aged 8-9 years, were assessed pre and post intervention. The primary aim of this research is to illustrate that collaborative, short, intense, precision teaching methods yield greater results over conventional teaching...
approaches, especially in relation to social-cognitive and literacy skills. The secondary objective is to highlight the equal importance that social-cognitive skills possess in reading attainment and illustrate their association with literacy skills, emphasising and defining their imperative interconnecting relationship.

In line with literature, the ‘Power Hour’ literacy intervention was primarily expected to enhance literacy skills, which in turn would promote the development of more positive social-cognitive skills. Furthermore, those who participated in the literacy intervention were expected to excel in all aspects of their reading ability, surpassing the natural progression of those who received conventional whole class teaching. In line with expectations, those who participated in the ‘Power Hour’ intervention overall displayed greater progression than the comparison group, however some measures were more significant than others. When comparing the improvements between both groups over the two time points, there are clear significant differences in social-cognitive skills attributed to those receiving the intervention. This supports the first hypothesis under investigation. Additionally, even though pre and post intervention result analyses on literacy measures, highlights that significant improvement was made for those who received conventional teaching, which is logical due to natural maturation over time, even greater significant differences were evident in the intervention group; thus highlighting the positive impact of the ‘Power Hour’ intervention and in turn supporting the second hypothesis. Moreover, those who received the intervention surpassed the social-cognitive levels of their counterparts. Even holding more importance is the fact that the social-cognitive levels of those receiving whole class teaching decreased, highlighting the importance of diversity in teaching methods and illustrating the divergent paths that can be created when utilising an alternative to the norm teaching approaches. This evidence cements the positive consequences that employing the ‘Power Hour’ literacy intervention can produce over conventional whole class teaching. However in saying that, no significant differences
are evident between the two groups in relation to literacy skills, even though those receiving
the intervention presented with greater differences in mean values, coupled with, generally
receiving higher results post intervention. However, this may be explained by the differences
presented in baseline scores between the two groups before the implementation of the
intervention, some being more significant than others, for example comprehension. This will
be explained in greater detail as a limitation to this study. Albeit in theory, these latter results
do not support the first hypothesis that there would be significant differences between the two
groups in literacy skills. Unfortunately, the third hypothesis under investigation also yielded
uninterpretable results, as no relationship was found between improved comprehension,
vocabulary and spelling skills in the children who are participating in the ‘Power Hour’
literacy intervention and their attitudes towards recreational reading. Therefore the null had to
be accepted. This may be the result of only having access to a small sample size, which will
be discussed in greater detail in the limitations section. However, the results described above
cement the core hypothesis addressed in this paper, that the ‘Power Hour’ literacy
intervention is a promising and effective literacy intervention, as the potential benefits and
positive effects of this collaborative, intensive and precise literacy intervention are clearly
outlined.

The results of this study not only validate the fundamental aim of this research but are
also in line with and are supported by a number of cognitive intervention studies and social-
cognitive research, some of which have been described in detail in the introduction. The
significant improvements made in social-cognitive and literacy skills pre and post
intervention correlates with the premise of much educational research. For example, a study
completed by Jang (2006) outlines that those who received team-teaching displayed greater
improvements and obtained higher results compared to those receiving conventional
methods. Also Walther-Thomas’ (1997) positive evaluation of co-teaching models, which is
described in the introduction, supports the basis of this paper’s findings. It found that low-achieving students with poor academic and social skills excelled in the co-teaching environment, resulting in improved attitudes and self-esteem, akin to those who participated in the ‘Power Hour’ literacy intervention. The outcome of this intervention analysis also supports the study completed by Machin and McNally (2004). Their research illustrated that children gained greater benefits from explicit literacy teaching as higher attainment levels were a product of instruction, parallel to the findings in this paper. Additionally, even though no significant differences in literacy levels were evident between the two groups, it is clear from the means values obtained that those participating in the intervention overall made increasingly more gains. Therefore the results of this paper supports much research which has demonstrated that small group/station/precision teaching is more beneficial in aiding pupil attainment and yields greater results than whole class teaching (Brooks, 2013; Swanson & Hoskyn, 1998; Vaughn, Gersten & Chard, 2000; Scammaca et al, 2007; Slavin et al, 2008; Slavin, Lake, Groff, 2009; Slavin et al, 2009; Slavin & Smith, 2009, Singleton, 2009). The positive results obtained by the implementation of the ‘Power Hour’ literacy intervention also supports the views of the National Reading Panel (NRP) (2000), Scammaca and colleagues (2007), Singleton (2009), Kennedy and colleagues (2012) and Eurydice Network (2011) as they have found that the most effective interventions in aiding pupil literacy attainment contain the following elements; a strong focus on phonological awareness, decoding and word-level work including learning of sight vocabulary, supported and independent reading of progressively more difficult texts, the development of fluent reading by reading and rereading familiar texts, access to a wide-variety of texts, meaningful writing exercises, explicit teaching and practice of comprehension strategies while reading texts and instruction that is systematic and intensive. ‘Power Hour’ encapsulates all the above elements and this can be contributed to its success. Also, the overall improvement found in literacy skills is in
line with research conducted by Macmillan (1997), McGuinness (1997), Solity and colleagues (2000) and Ehri, Nunes, Stahl and Willows (2001) outlining the positive impact of synthetic phonics implementation on children. This practice encourages the segmenting and blending of words, a station which is utilised in this intervention. Additionally, the positive literacy gains found within this study correspond to those found by the National Reading Panel (NRP); that the use of synthetic phonics is most effective.

The considerable change in attitudes towards reading, motivation and self-esteem support the premise of a well cited study completed by Briggs (1987). It was stated that a change in teaching methods can bring about change in children’s attitudes, as the environment in which children are immersed in has such a big impact in aiding the development of positive attitudes towards reading. This is also highlighted by Patrick and colleague (2007), who found that changing children’s classroom surrounds and including more intensive, structured activities increased motivational belief and achievement behaviours, akin to those presented in this study. Also children who are assimilated into an environment that sees other children reading books and enjoying the activity will have a more positive attitude toward reading from children who are never given the opportunity. The essence of this paper’s results also supports the fundamental research conducted by Guthrie and Wigfield (1997), on attitudes towards reading and motivation to read. In line with this paper, their research highlights that those with high literacy achievements become more motivated readers who hold healthy beliefs about themselves. However, contrary to this are the results presented by those who received whole class teaching. Even though significant literacy improvements were revealed, no significant difference was seen in social-cognitive measure, in fact the mean values decrease. This highlights the positive impact of the ‘Power Hour’ literacy intervention on children’s social-cognitive skills and suggests that more than just literacy achievement needs to be considered when aiming to improve childrens’ attitudes,
motivation and self-esteem. Worthy (1996) states that self-esteem and motivation is fuelled through participation in regular classroom experiences appropriate to their cognitive and maturity levels, with the inclusion of interesting and cognitively challenging books. This research is also supported by the core findings in this paper. Additionally, this paper supports the research completed by Baumeister and colleagues (2003). As like Baumeister, it was discovered that those who experience achievement, for this instance in literacy, also possess increased self-esteem and motivation. The increased results in both social-cognitive and literacy measure supports the theory behind the studies of Swanson (1982), Quinn and Jadav (1987), Parker and Paradis (1986), Renninger, Hidi and Krapp (1992), Schiefele (1996), Bong and Skaalvik (2003) and The Organisation for Economic Co-Operation and Development (OECD) (2003), who all suggest that there is a shared association between cognitive and social-cognitive elements of reading. Thus the research exemplified above, indirectly supports the foundations of the “Power Hour” literacy intervention and vice versa. Concerning the third hypothesis investigated, the multiple regression analysis was uninterpretable as no significant relationship was found between improved literacy skills and attitudes towards recreational reading. This result does not support previous studies as much research highlights that those who score higher on achievement tests demonstrate more positive attitudes towards recreational reading (Krashen 1993; Cunningham and Stanovich 1991; Stanovich and Cunningham 1993). Also Greaney(1980) and Anderson, Fielding and Wilson (1988) found that students’ reading achievement has been shown to correlate with success in school and the amount of independent reading they do. However, this was not to be the case here. This could be the results of many reasons, mainly the sample size utilised in this intervention which will be discussed in greater detail in the limitations section. This study also supports the qualitative research conducted by Palmer, Codling, and Gambrell (1994), who suggest that students' motivation to read can be influenced by social interaction,
as within this study teachers and children are continuously interacting. Similarly, Guthrie, Schafer, Wang, & Afflerbach (1993) views, who highlight that an instructional framework which includes the sharing of books and reading experiences with others and the ready availability of classroom reading materials have been found to be supportive of positive reading attitudes, are in line with the premise of this study. Barnett and Irwin’s (1994) study of childrens’ reading attitudes also supports the core findings of this paper, as they found a strong relationship between student attitudes and classroom activities. Their research demonstrated that reading instruction that relied on basal readers and worksheets negatively affected student attitudes, whereas instructional methods that avoided such practices positively affected reading attitudes.

5.1 Limitations

The following features appear likely to have contributed to the effectiveness of the current intervention programme; age appropriateness of activities, structured small-group format, daily activities, preplanned systematic design and intensive teacher instruction. However, the failure to find a significant differential effect on certain key measures is disappointing at first sight, but there are likely to be a number of explanations for these null effects, which have contributed to the limitations of this study.

5.1.1 Design

The design of this quasi-experimental study poses questions. A small number of third class children from two primary schools, in a little urban school district were employed which may not allow findings to be generalised. Furthermore, when parents and the school board become involved, it is almost impossible to achieve true random assignment when implementing research interventions. In educational research, most studies utilise a quasi-experimental design because of these difficulties and the hesitation by the schools to allow a researcher to assign interventions to classrooms (Ary, Jacobs, Razavieh, & Sorensen, 2009).
Not being able to achieve true random assignment may be the reason behind significant discrepancies in baseline results between the two groups, which may be the reason behind why significant differences were not seen in literacy skills between the two groups, even though those who received the intervention showed greater improvements in mean values. Also because of the size of the study and the involvement of the researcher in implementing and supervising the intervention, there is a possibility that the students’ attitudes and behaviour could have been altered due to these reasons (Bogdan&Biklen, 1982). Finally, the length of the study is another variable that causes concern. It is difficult to document considerable changes in literacy attainment during a ten-week period, as it is clear that it is a complex process that takes time and effort. Children were assessed at the beginning and the end of the intervention, however it is important, to follow up on childrens’ literacy achievements longitudinally, to study the lasting effects of the intervention. Also it is hoped that the significantly positive increases in social cognitive skills would prove to enhance literacy attainment in the future, thus supporting the second hypothesis of this study; that those who receive the ‘Power Hour’ intervention would surpass their counterparts, who receive conventional teaching, on a cognitive and social-cognitive level. The results of this study therefore show promise for the future development of these children.

5.1.2 Sample

Even though a structured small-group sample was shown to be effective in achieving most of the outlined hypotheses, it has also proved to have its drawbacks. As previously suggested, there is a need for a larger, more diverse sample, representing a greater range of ability and different class levels. This discrepancy may be the reason behind the third hypothesis yielding a null effect, as it is advised to employ at least 15 participants per predictor when utilising a multiple regression analysis. Thus for this study, as there were three literacy skill predictors used to assess attitudes towards recreational reading, at least 45
or more participants should have been employed in each sample, 20 more than what was used. According to Stevens (1996) and Tabachnick and Fidell (2007) the results obtained with small samples do not generalise, therefore have little scientific value. Inconsistency in ethnicity between the groups also features as a limitation, as more than half of those receiving the intervention were of non-national origin. Even though research may highlight that there are no correlational effects between ethnicity and cognitive and social-cognitive skills (Baker & Wigfield, 1999), it is long hypothesised that language acquisition is subject to boundaries and can be only truly acquired within a critical period and children falling outside this period may experience difficulties in becoming fluent (Lenneberg, 1967), therefore, having a negative effect on the hypothesised results of this study. Another issue that needs to be addressed is that of gender imbalance. Due to accessibility reasons, this study was conducted on girls only and research suggests that this sole ‘female factor’ could have contaminated results, as the outcomes are predicted before they can even be obtained; as girls will be positively motivated, possess higher competence beliefs in reading (Marsh, 1989; Wigfield et al., 1997) and display more positive attitudes towards reading (Kush & Watkins, 1996; McKenna et al., 1995). Therefore, in theory be more positive about reading in general, thus influencing their reading attainment and their school success (Madden, Slavin, Karweit, Dolan, & Wasik, 1993). However, boys have proven themselves to excel under intensive intervention conditions, as they obtain better post intervention results (Taylor, 2008) and a study completed by Cook (2012) highlights that gender does not appear to be a factor in reading attitude, therefore, verifying the validity of this study.

5.1.3 Teacher attitudes

The effectiveness of this literacy strategy is, in essence, governed by teachers’ attitudes towards change, the expectations they hold for children and their interest in personal development. It seems as if educators may not recognize the effects of their teaching methods
on students’ attitudes toward reading and subsequently their attainment (Short & Pierce 1990). The majority of teachers who participated in delivering the intervention were accepting of new practices, however, some were apprehensive about increased workload which in turn affected their attitude towards the intervention. This may have prevented greater literacy gains, as their negative attitude towards the intervention, may have affected their efficiency in delivering the intended skills under investigation. As stated by Solity (2000), ‘the single most significant change needed to create a climate for success requires that all those working in the education system assume that all children can learn and reach age-appropriate targets when given the right teaching’, (p56). Another limitation is the minimal amount of teacher input in this study. The teachers in the treatment group anecdotally indicated they observed a significant improvement in the cognitive and social-cognitive skills of their students, but a formal analysis was not conducted. While only four teachers were used in this study, data regarding teachers’ perceptions of their students’ reading attitudes and motivation could have also been collected. The above issues raises promise for future research, as the monitoring of teachers’ perceptions and the raising of expectation is an important feature of raising achievement (Eivers, Shiel, Perkins & Cosgrove, 2005).

5.2 Implications

The results produced not only link to positive associations outlined in previous research but have also drawn reports of improved quality in classroom environments, greater literacy achievements, positive attitudes toward reading, increased motivation to read and high levels of self-esteem. Therefore, this intense and structured teaching approach should inform policy and aid policy makers, curriculum developers, teachers and not to forget parents in designing and implementing early intervention programmes that will enhance childrens’ development. This study also highlights the importance of teachers employing diverse teaching methods, receiving training and support and utilising age-appropriate
materials and activities, to successfully implement early literacy programmes, while maintaining their regular curriculum. Another practical implication of these findings is that it is important to study a variety of instructional practices that influence students outside the school context as childrens’ academic attitudes have also been shown to be linked to home literacy practices occurring before formal school entry (Scarborough & Dobrich, 1994) and to parental attitudes toward reading (Beech, 1990). These results suggest that schools must involve parents in this endeavour to achieve maximal positive effects. This emphasis may prove to be one strategy particularly rewarding for young boys who remain most at-risk for future reading difficulties, as they interact with intervention more positively (Taylor, 2008).

5.3 Future research

As just noted, future research should be targeted toward classroom and home activities, that enhance cognitive and social cognitive skills. Comparative studies could be useful in comparing different levels of training for teachers and the impact of including home literacy activities. Also, it would be interesting to build on this research by conducting interview studies with children of different ages, to capture more fully their sense of their specific and general reading motivations, attitudes and self-concept and how they believe that these social-cognitive aspects relate to higher cognitive functioning, such as literacy skills. The motivation measure incorporated childrens’ general motivational view, thus more specific research into this area is warranted. Previous research highlights that higher intrinsic motivation leads to reading more (Wigfield, & Guthrie, 1997) and as outlined by Bandura (1977), efficiency, a dimension of intrinsic motivation, is the strongest predictor of achievement. Therefore, it is possible that the amount one reads (recreationally) correlates with achievement (Anderson et al., 1988; Cipielewski & Stanovich, 1992; Cunningham & Stanovich, 1991). Alternatively, it is also possible that the correlation of amount of reading and achievement documented by other investigators is mediated by reading motivation. The
three variables of reading amount, motivation and achievement, need to be measured simultaneously to permit an examination of these alternatives. This issue awaits future research. This study measured the impact of the ‘Power Hour’ literacy intervention on comprehension, vocabulary and spelling skills, however, there is much more to language (Purcell-Gates, 2004). Future research, within the literacy realm, would benefit from the investigation of the impact of this intervention on a more specific set of literacy skills, such as phonological awareness, morphology, syntax, and pragmatics. An interesting direction for future study should include or even focus on the aforementioned components, address limitations and most importantly examine the long-term predictability of social-cognitive skills as well as their reciprocal relationship with pre-existing reading skills in the prediction of future levels of reading achievement.

5.4 Conclusion

To become lifelong literacy learners, children must be motivated to engage in literacy activities, possess positive attitudes towards reading activities and hold high levels of self-esteem. Much is known about the essential elements of effective literacy programs (i.e., alphabetics, vocabulary, comprehension, fluency, and writing; National Institute of Child Health and Human Development, 2000; Pressley, 2001), however, we also know that simply including these elements in instructional frameworks is not enough to ensure success and achieve the elusive goal of closing the achievement gap between literacy and illiteracy (Gamse, Bloom, Kemple, & Jacob, 2008; Taylor et al., 2003). It is not sufficient only to possess the cognitive skills necessary for reading. This study provides important new information about the nature of literacy interventions, the importance of diverse teaching methods and how they relate to increased reading activity and achievement and most importantly, social-cognitive skills.
The development of motivation and the sculpting of positive reading attitudes in young children is clearly essential. The importance of knowing the reading attitudes of students has relevance for teachers of all students. Understanding how students feel about reading early in their academic careers may aid teachers to construct programmes and employ instructional strategies that build on positive attitudes towards reading.

Researchers in personality and social psychology have long been interested in the role of self-related perceptions, particularity in individuals who are essentially similar, however, feel differently about themselves and choose different courses of action, depending on how they construe themselves. Undoubtedly, these self-perceptions and beliefs are profoundly rooted in one’s achievement and reinforcement history. Much research has highlighted that it is these established subjective convictions about oneself which play a determining role in an individual’s future growth and development (Bandura, 1997; Markus and Nurius, 1986). Therefore, it is only reasonable that self-esteem receives a great deal of attention from educational psychologists and the teaching profession (Byrne, 1986). As children possess different levels of cognitive, social and emotional engagement in school, which can have adverse effects on shaping the early paths that govern life’s direction, it is vital that structured interventions aim to enhance and capitalise on a positive meaning of self in childrens’ minds.

To conclude, investigation into childrens’ cognitive reading abilities, along with their social-cognitive skills is imperative in optimising child development and minimising potential negative implications on society in the future. The better understanding of cognitive and social-cognitive abilities will enable teachers to foster learning and create inclusive classroom environments, where children will flourish, embrace the enjoyment of reading and reap its rewards.
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RMC Research Corporation, Centre on Instruction.

*Contemporary Educational Psychology,* 21, 3–18.


*Appendix A*
Appendix B
Appendix C
Part B: Stories

Example: When it is _________ I play outside.

Bedtime Tales.

Grandma told the ________ a bedtime tale. It was a _____ about a ______
and his many adventures. He lived in a ______ in the _________ of his
kingdom. He ________ against many villains. Parts of the tale ________ the
children, but other parts were very happy. As Grandma ____________, she
__________ that the children were already __________.
The Match.

Teacher _______ two teams to play a game of football. There were _________ players on each team. In the first half, both teams had many shots on _________, but the teams were _______ at half-time. Early in the second half, Anne scored the _________ of goals to give her side the ______. Paul said that Anne had _________ the ball, but teacher said the goal was good. Anne’s team _________ with delight at the final _________, because they had won. Paul and his team were not _________.

Part C: Mistakes

Example: The children like runing and jumping. ______________

1. Tom used red pante on his picture. ______________
2. The ring was on her middle fingur. ______________
3. A sharp nife was used to cut the cake. ______________
4. Walk around to the frunt of the house. ______________
5. We ran around the trak five times. ______________
6. It was an amasing sight. ______________
7. Steptember is my favourite month. ______________
8. She is fourteen years old. ______________
9. The cat had a narow escape. ______________
10. He put the salt and pepper on the table. _________
11. It was a waist of time. _______
12. The thieves ran away with her money. ________
13. The monkies were swinging from the trees. _________
14. They sheltered from the shour of rain. __________
15. Everyone had the correct anser. ____________
16. He put a bandage over the woond. ______
17. They visited a castle in the next cownty. __________
18. She needed new clotes for her holidays. __________
19. There are many ilands off the coast. __________
20. The old chairs were stored in the celar. __________

DRUMCONDRA PRIMARY SPELLING TEST.
ANSWER BOOKLET LEVEL 3 (FORM B)

Part A: Words

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Part B: Stories

Example: When it is ________ I play outside.

Sunday Morning.

It was a ________ Sunday morning. The_____ went for a run in the park. They ran along the main _______ towards the bandstand. They took a short _______ as they were getting________. They watched some people _______ kites.

Then they ran _______ the park for another_________ minutes. There was a heavy ________ of rain. They ran home and _________ their clothes.
The New Book.

Greg read some _______ in his new book. One was about a ________ who ________ down all the houses in his village. Everyone was happy when he fell off a ______ into the sea below. Then Greg read about two ________ witches. One of them tried to come down a ______, and was ________ when she became stuck. The other _________ for frogs on the dark ________, but couldn’t find any. Greg _________ at the silly witches.

Part C: Mistakes

Example: The children like runing and jumping. ______________

1. Tom used red panted on his picture. ______________
2. The ring was on her middle fingur. _____________
3. A sharp nife was used to cut the cake. _____________
4. Walk around to the frunt of the house. _____________
5. We ran around the trak five times. ______________
6. The musik was very loud. _____________
7. They went swiming in the lake. _____________
8. There was a loud screm from the crowd. _____________
9. The old lady wore a chawl to keep her warm. ______________
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<tr>
<td>10.</td>
<td>The dust made her sneeze.</td>
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<td>11.</td>
<td>It was a wast of time.</td>
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<td>The thieves ran away with her money.</td>
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<td>13.</td>
<td>The monkies were swinging from the trees.</td>
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<td>They sheltered from the shour of rain.</td>
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<td>Everyone had the correct anser.</td>
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<td>16.</td>
<td>The wind blow out the candel.</td>
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<td>17.</td>
<td>He bought a new lethur jacket.</td>
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<td>18.</td>
<td>The man blew the whisle to start the race.</td>
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<td>19.</td>
<td>The bager lives in a sett.</td>
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<td>20.</td>
<td>They walked over the wodden bridge.</td>
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