

**Reading Recovery: An Intervention to Accelerate  
Literacy Levels and Attitudes towards Reading and  
Writing.**

Aibhin Hearty

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

Supervisor: Pauline Hyland

Head of Department: Dr. S. Eccles

March, 2015

Department of Psychology

Dublin Business School

## Table of Contents

|   |           |
|---|-----------|
| <b>1. Abstract .....</b>                            | <b>5</b>  |
| <b>2. Introduction .....</b>                        | <b>6</b>  |
| 2.1 Literacy.....                                   | 6         |
| 2.2 Reading Recovery .....                          | 7         |
| 2.3 Reading Recovery – International .....          | 8         |
| 2.4 Reading Recovery – Ireland .....                | 9         |
| 2.5 Theories .....                                  | 10        |
| 2.6 Critique of Reading Recovery .....              | 11        |
| 2.7 Attitudes towards Literacy .....                | 11        |
| 2.8 Rationale .....                                 | 13        |
| 2.9 Limitations .....                               | 14        |
| 2.10 Hypotheses .....                               | 15        |
| <b>3. Methods .....</b>                             | <b>17</b> |
| 3.1 Participants .....                              | 17        |
| 3.2 Design .....                                    | 18        |
| 3.3 Materials .....                                 | 18        |
| 3.3.1 An Observation Survey .....                   | 19        |
| 3.3.2 Mary Immaculate Reading Attainment Test ..... | 20        |

|  |           |
|--|-----------|
| 3.3.3 Attitudes Towards Reading and Writing Survey ..... | 21        |
| 3.4 Procedure .....                                      | 21        |
| 3.5 Ethical Concerns .....                               | 22        |
| <b>4. Results .....</b>                                  | <b>23</b> |
| 4.1 Pre-Intervention Baseline Scores.....                | 23        |
| 4.2 Hypothesis 1 .....                                   | 25        |
| 4.3 Hypothesis 2 .....                                   | 29        |
| 4.4 Hypothesis 3 .....                                   | 31        |
| 4.5 Hypothesis 4 .....                                   | 34        |
| <b>5. Discussion .....</b>                               | <b>35</b> |
| 5.1 Hypotheses .....                                     | 35        |
| 5.2 Previous Research .....                              | 36        |
| 5.3 Strengths of Research .....                          | 38        |
| 5.4 Weaknesses of Research .....                         | 39        |
| 5.5 Implications .....                                   | 40        |
| 5.6 Future Research .....                                | 41        |
| 5.7 Conclusion .....                                     | 42        |
| <b>Reference List .....</b>                              | <b>43</b> |
| <b>Appendices .....</b>                                  | <b>47</b> |

### **Acknowledgements**

I wish to express my sincere gratitude to my supervisor Pauline Hyland, for all her support and guidance throughout this research. I also wish to thank my family and fiancé for their continued support and patience.

## **1.0 Abstract**

The aim of this study was to evaluate the efficiency of “Reading Recovery” as an early intervention for literacy, and to measure the correlation between attitudes and literacy levels. A quasi-experimental analysis using a between group design, measured the effects of the intervention across a twelve week period. Four participants received the intervention, and six participants did not. Reading Recovery and standardised assessments measured reading comprehension, fluency, phonemic awareness, and writing accuracy. The experimental group improved significantly across three time points, and scored significantly higher than the control group in most assessments at time three. Attitudes towards reading and writing significantly improved with rising literacy scores for experimental participants. Reading Recovery was successful in improving literacy scores and attitudes, and should be considered for broader research across Irish schools.

## **2.0 Introduction**

In a climate, where one in ten children in Irish schools has a serious difficulty in reading and writing (Department of Education, 2011), literacy levels continue to be a target for improvement in education systems nationwide. The English curriculum (Primary School Curriculum, 1999) is successfully taught to most students in Irish schools. For a minority however, intervention is needed. This project seeks to research the success of an intervention called “Reading Recovery” (Clay, 1974), on literacy scores of under achieving children in a socially and economically disadvantaged school. Furthermore, it seeks to measure the attitudes of these children towards reading and writing as they progress through school. It aims to build upon previous research of Marie Clay (1974), in examining the success of Reading Recovery as a tool for improving literacy levels with emergent readers.

### **2.1 Literacy**

In defining literacy, the National Council for Curriculum and Assessment encompass the cognitive, affective, socio-cultural, historical, creative and aesthetic dimensions of reading and writing (Kennedy, et al. 2012, p. 10). Literacy includes reading, writing, communication and oral language in both print and digital format. Younger children, between three and eight years, fall within the “emergent literacy” category. Whitehurst and Lonigan (1998) define emergent literacy as “skills, knowledge and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing” (as cited by Kennedy et al, 2012, p.11).

Varying dimensions of literacy are researched. Cognitive psychologists focus on phonological awareness, psycholinguists focus on meaning, socio cultural theorists draw upon the role of culture and society, and theoretical perspectives look at children’s motivation, engagement and sense of self efficacy (Kennedy et al., 2012, p. 12). All research

into the teaching of literacy demonstrate the constructive, interactive processes of reading and writing, whereby the learner is actively constructing meaning from text (Clay, 2011, p. 102)

This is a core teaching of the creator of Reading Recovery, Marie Clay.

## 2.2 Reading Recovery

In the 1970's, educator and psychologist Marie Clay developed a school-based intervention for reading called "Reading Recovery" in New Zealand. It is designed to be an intensive, daily, one-to-one intervention for the lowest achieving literacy learners between the ages of five to seven. Children that receive the intervention are first assessed according to Clay's Observation of Early Literacy Achievement (2005). It was developed to meet the unique need to assess emergent literacy in young children. The survey is comprised of six literacy tasks with established validity and reliability: letter identification, word test, concepts about print, writing vocabulary, hearing and recording sounds in words, and text reading. The lowest achieving children in these categories are candidates for the intervention. Each thirty minute lesson is taught by a trained Reading Recovery teacher for a period of twelve to twenty weeks (Reading Recovery Annual Report for Ireland, 2014, p. 2).

Clay (2008, p. 1) believed once children are equipped with the strategies for problem solving words, self-monitoring and self-correcting, they have the ability to achieve average levels and maintain proficiency in the classroom. The intervention originated in New Zealand and there has been a wide dissemination of the programme internationally, spreading to countries including the United States, Britain, Ireland, Spain and France. A plethora of research (Schwartz, 2005; Lyons, 2003; Holliman, 2003) demonstrates its success, and helps to maintain its popularity and practice after almost forty years.

### 2.3 Research of Reading Recovery – International

The European Centre for Reading Recovery (2010-2011) found that 81% of formerly illiterate children caught up with their peers using the Reading Recovery intervention. This is five times the average rate of progress for children of this age.

Demonstrating further research, Schwartz (2005) found the early intervention of Reading Recovery helps the processing system for reading and writing. He compared groups that received the intervention with a comparison group that received no intervention, across fourteen American states. He assessed seventy four children in total. The intervention group showed a significantly higher performance than the comparison group across three sub tests (concepts about print, writing vocabulary, dictation), and positive results for the rest (reading power, word and letter identification).

Marie Clay (2008, p. 11) emphasized that the teaching of Reading Recovery lasts between twelve to twenty weeks, and its benefits are long term success of its pupils. Holliman (2003) found children that received Reading Recovery achieved national curriculum average in reading. A comparison group obtained a lower achievement at a three month follow up, displaying the longevity of the intervention, supporting Clay's hypotheses.

Similar research to Holliman (2003), an eight year Longitudinal Analysis of Reading Recovery (1993 – 2000) provided by the Sioux Falls School District (Homan, 2002), found that approximately 80% of the discontinued Reading Recovery students continued to perform at or above average performance in reading (as cited by Moeller, 2002).

The research above displays the success of Reading Recovery as a literacy intervention. Pinnell et al. (1994), decided to build upon this research. They compared Reading Recovery to three other early intervention programmes, differing from one another

in group size, amount of teacher training, and whether or not they adhered to Reading Recovery instruction. The results found that following seventy lessons of the intervention, the students in the Reading Recovery group out-performed the students in the other three intervention programs in an array of measures of reading achievement.

Reading Recovery continues to expand worldwide. In 2010, Ohio State University, a leading centre for Reading Recovery research, received a Scaling Up Works Grant from the US Education Investing in Innovation. According to the Center for Research on Education and Social Policy (2015, *para.* 1), this grant allows for the up-skilling and training of more teachers and teacher leaders, expanding the programme across the United States until September 2015.

#### 2.4 Research of Reading Recovery – Ireland

Implementation of Reading Recovery in Ireland seeks to adhere to the English Curriculum (Primary School Curriculum, 1999). The English curriculum is based upon five principles: listening, speaking, reading and writing are integrated in the process of learning a language; importance of learning through language; developing oral language is equally important as reading and writing; teaching reading is part of a rich and varied curriculum based on the child's overall experience of language and of the world; and the process of writing is as important as the product (Reading Recovery Annual Report for Ireland 2012-2013, 2014, p. 4).

According to the Reading Recovery Annual Report for Ireland 2012-2013 (2014, p. 5), success of the intervention is evident throughout Irish schools also. This report found that between 2012 and 2013, Reading Recovery was taught in 361 schools nationwide, supported by 442 teachers trained in Reading Recovery. A total 2,810 children benefitted from the intervention, with 95% of children who reached age based literacy levels, and 540 children

who were removed from the special educational needs register following the intervention (Reading Recovery Annual Report for Ireland, 2012-2013). Building upon these findings, this project seeks to measure the possible successes of the intervention in an inner city Dublin school, within a twelve week period.

## 2.5 Theories

Marie Clay developed the Reading Recovery programme (1973) drawing upon various educational theories. Lev Vygotsky (1978) proposed the concept of the zone of proximal development (ZPD). It is defined as the distance between the child's actual development (tasks a child can do independently) and the child's potential development (tasks the child can do with adult help, or in collaboration with more capable peers) (Lyons, 2005, p. 48). Clay agreed with Vygotsky's belief that instruction leads to the development of the child's mind and contributes to emotional growth and well-being. Clay states (2008, p.2) that learning opportunities provided must "draw upon the strengths the child has already demonstrated and relate to the new learning needs that have become apparent". Based upon the zone of proximal development came the term "scaffolding" that Clay mentions in her teaching of Reading Recovery;

"the teacher creates a lesson format, a scaffold, within which she promotes an emerging skill" (Clay and Cazden, 1990) as cited by Conner, n.d.

Reading Recovery supports the work of Piaget (1977), and constructivism. Children are seen as active thinkers rather than passive. More complex cognitive structures are formed as children's schema become modified, combined and reorganized (Cook, 2005). This research seeks to measure the development of children's schemas and adaptation to problem solving in reading and writing. It looks to explore the ability of a Reading Recovery teacher

to build upon a child's abilities and needs (i.e. their zone of proximal development), in a highly structured manner.

## 2.6 Critique of Reading Recovery

Although Reading Recovery has proven to be highly successful following research (Schwartz, 2005; Lyons, 2005, Holliman, 2003) some critique its effectiveness for various reasons. Hiebert (1994) argued the cost-effectiveness of Reading Recovery. He found that small group tuition leads to similar outcomes, and the cost of one-to-one tuition is too high (on average US\$8,000 per child, when considering specialised teaching costs). This was responded to by Reading Recovery researchers by the fact that early intervention can reduce referrals and placement in special education (Reading Recovery Council, 2002). Some argue over measurement and testing of Reading Recovery students. An open letter from reading researchers (2002) entitled "Experts Say Reading Recovery is Not Effective, Leaves Too many Children Behind" sparked some controversy among the Reading Recovery practitioners and researchers. It argued a bias in assessment, as those responsible for the students collect the data. Some called for norm-referenced testing to be used, and state that Clay's Observation Survey does not give accurate representation of children's literacy level.

## 2.7 Attitudes Toward Literacy

Research (Cunningham, 2008; Lyons, 2005) has shown that children's exposure to literacy impacts directly on their attitudes towards reading and writing. Cunningham (2008) found children's attitudes became more positive as the quality of literacy in their environment improved. Classroom and home environments that are rich in literacy were found to impact directly on the children's attitude towards reading and writing. He found a significant relationship between student's attitudes and their level of literacy development. Attitudes improved as their literacy scores increased. Lyons (2005, p.2) emphasises the importance of

the affective side of learning to read and write. Emotions are essential to thinking and are part of the learning process.

Alexander and Filler (1976) related children's attitudes toward reading to a "system" of feelings that cause the learner to approach or avoid a reading situation (as cited by Cunningham, 2008, p. 20). Many researchers (Alexander and Filler, 1976; Smyth, 1998) have looked at the influence one's attitude has upon reading and writing. Alexander and Filler (1976), stated feelings about reading should influence how much one involves oneself in reading. Similar to this, Smyth (1998) states "the emotional response to reading is the primary reason most readers read" (as cited by Cunningham, 2008, p. 20).

Dombey (1999) was also interested in the link between children's attitudes towards reading and literacy levels. She states whether children read or not is determined by their attitudes toward reading, as reading is a process of getting meaning from text. She gives four areas that affect the child's attitude towards reading; the child's personal experiences; confidence in reading; parents attitude towards reading; and the teachers way of teaching reading (as cited by Wang, 2000, *para. 4*). According to this, the school can help nurture a positive attitude towards reading and raise levels of reading and writing ability. This project seeks to build upon some of Dombey's (1999) theory, as the teacher's way of teaching reading plays such a critical role.

Two important international assessment initiatives have researched children's literacy levels throughout Europe. The Programme for International Student Assessment (PISA), and the Progress in International Reading Literacy Study (PIRLS), all emphasise the constructivist approach to teaching literacy. The Organisation for Economic and Corporate Development (OECD) 2010, and PISA (2009), have drawn attention to the literacy standards in Irish schools. PISA administered testing to fifteen year olds in sixty countries. In earlier

years Ireland achieved mean scores on literacy significantly higher than the corresponding OECD average. In 2009 the scores were not significantly different to the average. According to the OECD and PISA (2009), ranking in PISA of literacy levels dropped from 5<sup>th</sup> place in 2000 to 17<sup>th</sup> in 2003. A total of 19% were found to be low achieving readers in 2009, compared to 11% in 2000. Such statistics have caused alarm to the education system in Ireland, and one of the key methods of addressing the high levels of low achievers in literacy is early intervention. A working document, “Overcoming School Failure: Policies that Work” issued by the Department of Education and Skills in 2011, identifies early intervention as an important step in preventing early school leaving.

## 2.8 Rationale

“Good literacy and mathematic skills among all young people is fundamental to the life chances of each individual and essential to the quality and equity of Irish society” (National Strategy to Improve Literacy and Numeracy among Children and Young People, 2011-2020, 2011, p. 9).

Early intervention is essential in addressing the particular cohort of children that struggle with the English curriculum in the classroom, and who require additional support. Therefore an intervention that is efficient and effective in bridging the gap for those under-achieving children is important in Irish schools. A mounting body of research supports Reading Recovery both on an international scale (Schwartz, 2005; Homan, 2002; Clay 2008) and in Ireland (Reading Recovery Annual Report, 2013-2014). Current statistics in Ireland previously outlined, display the huge success of Reading Recovery in many of our primary schools.

Literacy levels impact upon future educational, social, and financial stances. Ireland is recovering from financial crisis where unemployment rates were lowest at 14.7% in

2012 (Central statistics Office, 2013). Literacy levels impact on future employment levels (National Strategy to Improve Literacy and Numeracy among Children and Young People, 2011-2020, 2011, p. 9), and overall quality of life. Early intervention to prevent school failure is therefore essential, to prevent early school leaving and boost overall society. Reading Recovery has been found to give positive results regarding the acceleration of children's literacy levels, and prevent potential future failure (Clay, 2012, p. 14). Therefore it is a practical intervention to research. This project seeks to investigate its effectiveness in an educationally disadvantaged school in Dublin. Furthermore, measuring these participant's attitudes towards literacy, may help researchers gain insight into the role of affect in literacy development.

## 2.9 Limitations

Although the Reading Recovery Annual Report 2013-2014 demonstrates the success of Reading Recovery in Irish primary schools, there is a lack of research in Ireland, comparing a group receiving the intervention with a group not receiving the intervention. This project seeks to measure and compare two groups of children; children who take part in Reading Recovery intervention, and children who do not receive the intervention. The intervention group has the lowest achieving children, and the comparison group includes below average achievers. Critics of Reading Recovery say it does not use norm-referenced testing, and may be biased. The present research uses Clay's Observation Survey (Clay, 2005), MICRA T norm referenced test (Wall & Burke, 2004), and the Student Attitudes Toward Reading and Writing Survey (Trehearne, Healy, Williams, & Moore, 2003), pre intervention, during intervention, and post intervention. These methods address any bias of methods of measurement.

There is a lack of research into the attitudes of children toward reading and writing, relative to their own literacy levels. This research measures children's attitudes and literacy levels at three different time points (basal line, six weeks, and final twelve weeks). There is also limited research like this in Ireland, tracking attitude levels in relation to changing literacy levels.

This research seeks to investigate Reading Recovery as an intervention in an educationally disadvantaged school in Dublin. It caters for current practice and reform in Irish schools in order to prevent early school leaving. Such policies include the School Completion Programme, and Delivering Equality and Opportunity in Schools (DEIS), implemented by the Department of Education and Skills since 2005. Schools classed as educationally disadvantaged receive grants to address standards of literacy (as well as other academic and social areas). The practice of Reading Recovery is at the heart of this, and therefore deems a current and appropriate subject for educational research.

### 2.10 Hypotheses

This study seeks to consider if Reading Recovery Intervention leads to accelerated progression in literacy levels, compared to a control group, and if there is a relationship between children's literacy levels and their attitude towards reading and writing. From these considerations the following hypotheses are formulated:

1. There will be a significant improvement in literacy scores for the experimental group, between time point 1 (baseline) and time point 3 (12 weeks).
2. There will be a significant difference in literacy scores between the control group and the experimental group at time point 3.
3. There will be a significant relationship between literacy scores and attitudes towards reading and writing.

4. There will be a significant improvement between those that receive Reading Recovery intervention and attitudes towards reading and writing.

As the proverb says “A book is like a garden carried in a pocket”. The gift of reading is one which all children have the right to receive, and all teachers have the right to give. Finding the tools to do this will help this “garden” to grow. This research seeks to measure the quality of some of these tools (Reading Recovery) in the Irish education system.

### **3.0 Methods**

#### **3.1 Participants**

The participants are ten children in total, are aged between six and seven and are in first class in primary school. They all attend the same school, in an area of educational disadvantage. The school is categorised as DEIS (Delivering Equality of Opportunity in Schools) Band 1 (Department of Education and Skills, 2005, *para* 1). According to the Department of Education's guidelines (2005, *para*, 1), "Band 1" is the most severe level of disadvantaged school, based upon unemployment rates, family size, local authority housing, lone parenthood, and number of travellers.

The participants were chosen through purposive sampling. The ten lowest achieving children in literacy (based on previous assessment and consultation with class teachers) were assessed using an Observation Survey (Clay, 2005). These are the initial Reading Recovery assessment procedures. The four lowest achieving children in these assessments were selected to receive the intervention. Six other children that scored poorly make up the control group, and would not receive any extra support in literacy.

A maximum of four children can receive the Reading Recovery intervention due to teaching time. This is the reason for a limited number of those receiving the intervention. Each child in the experimental group receives thirty minute highly structured, daily lessons by a trained Reading Recovery teacher.

### 3.2 Design

This design is composed of two groups; the experimental group and the control group. Four children that receive Reading Recovery intervention form the experimental group. The six other children that receive no intervention form the control group. This design conducts quasi-experimental and correlational research. Measuring all the children's test scores across three different time points is a quasi-experimental design. Measuring the children's attitudes towards reading and writing in comparison to their literacy scores is correlational.

Regards hypothesis one, the independent variables are the two time points (T1 and T3), and the dependent variables are the participants literacy scores in Reading Recovery and standardised testing. The group (whether experimental or control) is the independent variable and literacy scores are the dependent variable for hypothesis two. Hypothesis three and four follow correlational research. As hypothesis three is reciprocal in nature, as attitudes and literacy scores are inter-dependent, it has a bi-directional relationship. The two time points (T1 and T3) are the two criterion variables for hypothesis four, and children's attitudes are the dependent variable.

### 3.3 Materials

The following materials were required for the present research: Mary Immaculate Reading Attainment Test (MICRA-T) booklets (Wall & Burke, 2004)<sup>1</sup>, An Observation Survey (Clay, 2005)<sup>2</sup>, Student Attitudes Toward Reading and Writing Survey (Trehearne, Healy, Williams, & Moore, 2003),<sup>3</sup> Reading Recovery parent/guardian consent form (refer to *Appendix A*), Reading Recovery learning support room in school, selection of Reading

---

<sup>1</sup> These are under copyright so a copy cannot be included. The supervisor retains a copy.

<sup>2</sup> These under copyright so a copy cannot be included. The supervisor retains a copy.

<sup>3</sup> This is under copyright and cannot be included. The supervisor retains a copy.

Recovery books from level 1-24, Reading Recovery daily individual templates<sup>4</sup>, whiteboard and magnetic board, magnetic letters, blackboard, sand tray, selection of word games: dice, snap, pairs, selection of writing materials: markers, pens, chalk, whiteboard markers, paintbrushes, folders, and writing booklets.

### 3.3.1 An Observation Survey (Clay, 2005)

These are a series of assessments that are used to measure six areas of literacy. They are referred to as “Reading Recovery” assessments throughout this project. They include letter identification, word test reading, writing vocabulary, hearing and recording sounds in words, concepts about print, and taking a record of the level of book the child is able to read.

Each procedure is administered orally and the child responds through calling out answers or writing. Letter identification includes the child naming the letter or the sound each letter makes. There are 54 symbols in total (Clay, 2005, p. 82). Word test reading involves the child reading 23 words that are considered “high frequency” words in the English language (Clay, 2005, p. 91). The survey assesses writing vocabulary of the child by giving him/her ten minutes to write as many words as possible, noting the child’s behaviours, such as left to right sequencing, language level, message quality and directional principles (Clay, 2005, p. 97). Another section is “Hearing and Recording Sounds in Words” (HRSW) (Clay, 2005, p. 111). It monitors the child’s phonemic awareness and letter sound relationships, by calling out a sentence and letting the child record it. The fifth part of the survey; Concepts about Print (CAP), assesses the child’s knowledge of reading a printed text, such as one to one word reading, punctuation marks, and left to right orientation of reading (Clay, 2005, p. 37). Finally, the survey takes a “Running Record” (Clay, 2005, p. 49) of a child reading a story, to assess what level he/she is at. This involves taking a record of each word the child

---

<sup>4</sup> These are under copyright so a copy cannot be included. The supervisor retains a copy.

says, marked either correctly or by the error he/she makes (Clay, 2005, p. 50). Running Records that result above 90% are appropriate, and anything below is regarded as too difficult (Clay, 2005, p. 51).

Clay believes the Observation Summary tasks inform the teaching process, parents and the administrators as behaviours are noted throughout, and books read outside of the school curriculum (Clay, 2005, p. 3). A Cronbach Alpha to assess reliability of each sub test were found to be 0.78 for Concepts About Print, 0.95 for Letter Identification, 0.92 for Word Reading, 0.96 for Hearing and Recording Sounds in Words, and 0.98 for Running Records (Clay, 1993) (as cited by Clay, 2005, p. 160 – 161). A test-retest found 0.97 reliability for Writing Vocabulary (Clay, 1993) (as cited by Clay, 2005, p. 160).

### 3.3.2 Mary Immaculate Reading Attainment Test (MICRA T) (Wall & Burke, 2004)

This is a norm-referenced reading test, developed since 1987, that is used across the country (Wall & Burke, 2004, p.1). This is referred to as “standardised tests” throughout this project. As it is norm referenced, pupil’s results are interpreted in relation to other pupils of the same age/class across the country (Wall & Burke, 2004). It assesses word recognition, phonics, and early reading comprehension. There are a total of 50 questions, divided into three sections. The first section assesses word recognition, drawing upon sight vocabulary and phonetic words (Wall & Burke, 2004, p. 3). Section two contains 12 sets of nonsense words that the child must phonologically decipher (Wall & Burke, 2005, p. 3). The final section assesses the child’s reading comprehension, where he/she responds to questions in cloze-type sentences (Wall & Burke, 2005, p. 3). Each child completes a booklet. The first two sections are explained by the administrator through following a transcript. The final section is completed by the child independently. The test can be administered with a whole

class or individually. A Cronbach Alpha found a reliability of 0.97 (Wall & Burke, 2004, p. 39).

### 3.3.3 The Student Attitudes Toward Reading and Writing Survey (Trehearne, Healy, Williams, & Moore, 2003)

This is a survey designed to assess young children's attitudes towards reading and writing (Cunningham, 2008, p. 23). It consists of four questions and four possible answers. The survey asks; "How do you feel when someone reads to you? How do you feel about writing a message or a story? How do you feel about sharing a book with a friend? How do you feel about sharing your writing with a friend?" Participants have four faces to choose from to represent their feelings. One is a very big smiley face (very happy), one is a smiley face (happy), one is a neutral face (neutral) and one is a face with a frown (sad) (Cunningham, 2008, p. 23). Each face is explained clearly to the participant before they answer each question. They answer through colouring in a face that corresponds to their feelings. Reliability statistics will not be reported as each question is analysed separately.

### 3.4 Procedure

A list of the lowest achieving children with literacy in first class was gathered. This was decided through previous assessments in June of senior infants and September of first class, and consultation with each class teacher.

Each of the ten children was assessed individually using the Observation Survey procedures (Clay, 2005) by a fully trained Reading Recovery facilitator; the current researcher, in the learning support room. Assessing all elements took between 45-55 minutes per child. Each oral response was recorded in specific recording sheets by the administrator. Each child was assessed in the same manner. The four overall lowest scores were those that

would receive the intervention (experimental group), and the six others were not to receive the intervention (control group). Their class teachers were given a copy of the assessments.

Following these assessments the MICRA-T (Wall & Burke, 2004) was delivered to all ten children together in a larger room. Children sat at individual tables, and there was no print visible. Including a ten minute break, the assessment took 50 minutes in total.

The Attitudes Toward Reading and Writing Survey was administered in the learning support room individually to ensure each child fully understood the feeling the faces depicted. This survey took approximately 5 minutes for each child.

These procedures were taken at three different time points. Time point one in October 2014 (baseline), time point two in December 2014 and time point three in February 2015. There was a six week school time interval between each testing. All data used throughout this research was inputted using IBM SPSS Statistics 22.

### 3.5 Ethical Concerns

A parent/guardian of each child receiving the intervention met with the Reading Recovery teacher to discuss the intervention, and to sign consent forms. Each parent/guardian was informed that he/she had the right to withdraw their child from the intervention at any time. They were invited into the school to observe a lesson also.

Children that did not receive the intervention were monitored by their class teacher, and classroom support where required was given throughout the research. Every assessment result was given to each class teacher so they were aware of their progress.

Following the results at time point 3, extra support was allocated to the children that did not progress to the expected standard. Teachers, the principal and parents were informed about any literacy concerns throughout the testing.

## **4.0 Results**

This section provides the overall findings in sequence, across five sections. The first section summarises baseline scores in literacy and attitudes for both groups, before any intervention. The other four sections address the four hypotheses. Section two measures literacy scores between two time points for the experimental group. Section three measures the difference in literacy scores between both groups at time point three. Section four compares the attitudes towards reading and writing in relation to literacy scores. The final section details the relationship between those that received Reading Recovery intervention, and their attitudes towards reading and writing.

### **4.1 Pre intervention baseline results of literacy scores.**

The four lowest achieving children in the assessments were selected for the intervention. Therefore, the experimental group scored lower than the control group in most tasks. Due to the non-parametric nature of the test scores observed, a Mann Whitney U test was used to compare the baseline results for both groups in Reading Recovery assessments (Observation Survey, Clay, 2005) and standardised testing (Micra T, Wall & Burke, 2004). *Table 1* summarises the findings.

Table 1 *Baseline mean rank scores in Observation Survey (Clay, 2005) and Micra T (Wall & Burke, 2004) for experimental and control groups.*

| <b>Variables</b>   | <b>Groups</b> | <b>N</b> | <b>Mean</b> | <b>SD</b> | <b>U</b> | <b>p</b> |
|--------------------|---------------|----------|-------------|-----------|----------|----------|
| Letter             | Experimental  | 4        | 42.00       | 1.83      |          |          |
|                    | Control       | 6        | 44.00       | 5.10      | 7.50     | .168     |
| Book Level         | Experimental  | 4        | 0.25        | 0.50      |          |          |
|                    | Control       | 6        | 1.67        | 1.03      | 3.00     | .022     |
| Word Reading       | Experimental  | 4        | 3.50        | 1.73      |          |          |
|                    | Control       | 6        | 7.50        | 2.51      | 2.00     | .016     |
| Writing Vocabulary | Experimental  | 4        | 5.25        | 2.87      |          |          |
|                    | Control       | 6        | 7.50        | 2.43      | 6.00     | .099     |
| HRSW               | Experimental  | 4        | 16.75       | 1.89      |          |          |
|                    | Control       | 6        | 26.17       | 4.22      | 0.00     | .005     |
| CAP                | Experimental  | 4        | 10.75       | 1.26      |          |          |
|                    | Control       | 6        | 11.83       | 1.83      | 8.50     | .223     |
| MICRA T            | Experimental  | 4        | 4.75        | 1.71      |          |          |
|                    | Control       | 6        | 9.83        | 3.31      | 2.00     | .016     |

SD = Standard Deviation HRSW = Hearing and Recording Sounds in Words CAP = Concepts About Print  
MICRA T = Mary Immaculate Reading Attainment Test

A Mann Whitney U test revealed that at time point 1 (baseline), some of the scores in Reading Recovery tests differed significantly between the experimental and control groups. Book level ( $U = 7.50$ ,  $p = .022$ ), word reading ( $U = 2.00$ ,  $p = .016$ ) and hearing and recording sounds in words ( $U = 0.00$ ,  $p = .005$ ) differed significantly. The other tests; letter identification ( $U = 7.50$ ,  $p = .168$ ), writing vocabulary ( $U = 6.00$ ,  $p = .099$ ), and concepts about print ( $U = 8.50$ ,  $p = .223$ ) did not differ significantly. A Mann Whitney U test found the

experimental group and the control group differed significantly in the standardised assessment ( $U = 2.00$ ,  $p = .016$ ).

4. 2 Hypothesis 1: There will be a significant improvement in literacy scores for the experimental group, between time point 1 and time point 3.

Hypothesis one predicts that there will be a significant improvement between time point 1 and time point 3 in both sets of literacy assessments for the experimental group. To measure literacy improvement for both groups, a non parametric measure for the small sample size was used. A Wilcoxon test compared the scores between time point 1 and 3 (see *table 2 and 3*).

Table 2 A Wilcoxon table displaying the difference in Reading Recovery scores between time point 1 and time point 3.

| <b>Variables</b>        | <b>Mean</b> | <b>SD</b> | <b>z</b> | <b>P</b> |
|-------------------------|-------------|-----------|----------|----------|
| Letter Identification 1 | 42.00       | 1.83      |          |          |
| Letter Identification 3 | 53.00       | .82       | -1.83    | .034     |
| Book Level 1            | .25         | .50       |          |          |
| Book Level 3            | 15.50       | 4.36      | -1.84    | .033     |
| Word Reading 1          | 3.50        | 1.73      |          |          |
| Word Reading 3          | 22.00       | 1.41      | -1.83    | .034     |
| Writing Vocabulary 1    | 5.25        | 2.87      |          |          |
| Writing Vocabulary 3    | 31.00       | 5.48      | -1.83    | .034     |
| HRSW 1                  | 16.75       | 1.89      |          |          |
| HRSW 3                  | 35.00       | 2.16      | -1.83    | .034     |
| CAP 1                   | 10.75       | 1.26      |          |          |
| CAP 3                   | 20.5        | 1.73      | -1.83    | .034     |

SD = Standard Deviation HRSW = Hearing and Recording Sounds in Words CAP = Concepts About Print

Table 3 A Wilcoxon Test table displaying the difference in standardised test scores between time point 1 and time point 3.

| <b>Variables</b> | <b>Mean</b> | <b>SD</b> | <b>Z</b> | <b>P</b> |
|------------------|-------------|-----------|----------|----------|
| Micra T t1       | 4.75        | 1.71      |          |          |
| Micra T t3       | 19.00       | 2.16      | -1.84    | 0.033    |

SD = Standard Deviation MICRA T = Mary Immaculate Reading Attainment Test

As the hypothesis predicts an “improvement” in scores across these time points, the measurement is one tailed. The Wilcoxon test supports the hypothesis, as it found a significant difference in scores between time point 1 and time point 3 for all Reading Recovery assessments (*table 2*). Book level showed strongest significance in improvement ( $z = -1.84, p = .033$ ) and is represented in *figure 1*.

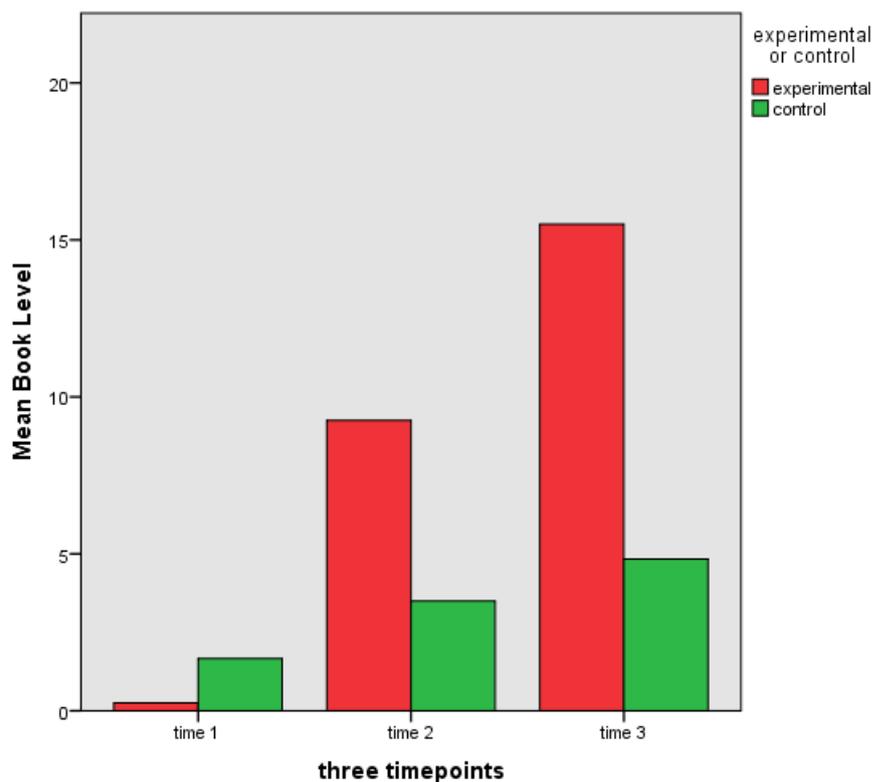


Figure 1 Bar chart displaying book levels across 3 time points for both groups.

*Figure 1* shows the progression through book level for the experimental group. It also compares their progression to the control group. It can be seen that their book level accelerates faster than the control group, from below control group scores at time point 1, to above control group scores at time point 3.

The Wilcoxon also found scores differed significantly between time point 1 and time point 3 in standardised assessment ( $z = -1.84, p = .033$ ), (*Table 3*). Therefore, hypothesis one may be accepted, and the null rejected. *Figure 2* presents the experimental group's progression in comparison to the control group.

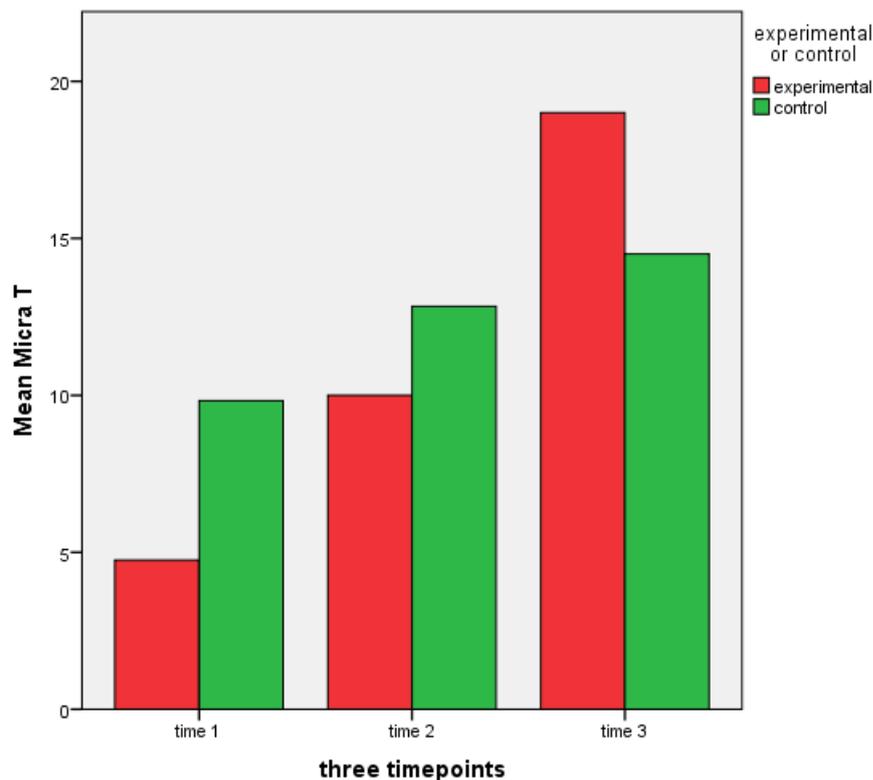


Figure 2 *Comparison of Micra T (Wall & Burke, 2004) scores for experimental and control groups across three time points.*

*Figure 2* demonstrates the improvement in standardised test scores for the experimental group. It also demonstrates the experimental group accelerating at a faster pace to the control group in standardised test scores, something that Reading Recovery seeks to achieve (Clay, 2008, p. 1).

To further support the significance of improvement across time points, a Friedman test was carried out to measure the differences between time points for both literacy assessments. The Friedman test found significant differences between the time points in

literacy scores for the experimental group. Perhaps due to the small sample size and reduction of power, each of the six Reading Recovery scores found the same level of significance between time point 1 and 3 ( $\chi^2 (2) = 4.00, p = .046$ ), and standardised test ( $\chi^2 (2) = 8.00, p = .018$ ). The results therefore, substantially support the hypothesis that literacy scores significantly improved between pre and post intervention for the experimental group.

4.3 Hypothesis 2: There will be a significant difference between the control group and the experimental group in literacy scores at time point 3.

As there is a small sample size, a non-parametric test was chosen to measure this hypothesis. A Mann Whitney U test compared Reading Recovery scores and standardised test scores between the two groups, at time 3. This measure found that the experimental group scored significantly higher in five out of the six tests in Reading Recovery (see *table 4*) therefore supporting hypothesis two, and rejecting the null. The most noted significance was in book level ( $U = .00, p = .009$ ). No significance was found in concepts about print ( $U = 3.50, p = .067$ ), and therefore the null is accepted for this test.

Table 4 A Mann Whitney U Table displaying the difference in Reading Recovery scores between time point 1 and 3.

| Variables             | Group        | Mean Rank | U    | p    |
|-----------------------|--------------|-----------|------|------|
|                       | Experimental | 1.83      |      |      |
| Letter Identification | Control      | .82       | 2.00 | .030 |
| Book Level            | Experimental | 50        | 0.00 | .009 |
|                       | Control      | 4.36      |      |      |
| Word Reading          | Experimental | 1.73      | 0.50 | .013 |
|                       | Control      | 1.41      |      |      |
| Writing Vocabulary    | Experimental | 2.87      | 0.00 | .010 |
|                       | Control      | 5.48      |      |      |
| HRSW                  | Experimental | 1.89      | 1.00 | .019 |
|                       | Control      | 2.16      |      |      |
| CAP                   | Experimental | 1.26      | 3.50 | .067 |
|                       | 20.5         | 1.73      |      |      |

HRSW = Hearing and Recording Sounds in Words CAP = Concepts About Print

A Mann Whitney U found the experimental group and control group did not differ significantly in the standardised test. (U = 3.00, p = .054) In this case, the null is accepted. It can be noted however, that the scores are approaching near significance.

Analysing these overall results, hypothesis two can be partially supported. The experimental group scored significantly higher than the control group in five out of six Reading Recovery tests. In these cases the null is rejected. Scores in one Reading Recovery test, and the Micra T (Wall & Burke, 2004) did not differ significantly, and in those cases the hypothesis is rejected, and the null accepted.

4.4 Hypothesis 3: There will be a significant relationship between literacy scores and attitudes towards reading and writing.

Attitudes towards reading and writing were measured by answering four relative questions. *Table 5* outlines participant’s responses to each of the four questions, across three time points. Responses to each question gradually change across the time points, and attitudes can be seen to improve. The responses can be seen to shift from mostly “sad” or “neutral” at time 1, to “very happy” or “happy” at time 3.

*Table 5: Attitudes towards Reading and Writing responses, across three time points.*

|   | Responses  | Frequency | Percent | Frequency | Percent | Frequency | Percent |
|---|------------|-----------|---------|-----------|---------|-----------|---------|
| How do you feel when someone reads to you?                | very happy | 0         | 0.00    | 0         | 0.00    | 4         | 40.00   |
|   | happy      | 0         | 0.00    | 5         | 50.00   | 6         | 60.00   |
|   | neutral    | 7         | 70.00   | 5         | 50.00   | 0         | 0.00    |
|   | sad        | 3         | 30.00   | 0         | 0.00    | 0         | 0.00    |
| How do you feel about writing a message or a story?       | very happy | 0         | 0.00    | 0         | 0.00    | 3         | 30.00   |
|   | happy      | 0         | 0.00    | 3         | 30.00   | 5         | 50.00   |
|   | neutral    | 4         | 40.00   | 7         | 70.00   | 2         | 20.00   |
|   | sad        | 6         | 60.00   | 0         | 0.00    | 0         | 0.00    |
| How do you feel about sharing a book with a friend?       | very happy | 0         | 0.00    | 3         | 30.00   | 4         | 40.00   |
|   | happy      | 0         | 0.00    | 4         | 40.00   | 6         | 60.00   |
|   | neutral    | 7         | 70.00   | 3         | 30.00   | 0         | 0.00    |
|   | sad        | 3         | 30.00   | 0         | 0.00    | 0         | 0.00    |
| How do you feel about sharing your writing with a friend? | very happy | 0         | 0.00    | 1         | 10.00   | 3         | 30.00   |
|   | happy      | 0         | 0.00    | 4         | 40.00   | 6         | 60.00   |
|   | neutral    | 4         | 40.00   | 5         | 50.00   | 1         | 10.00   |
|   | sad        | 6         | 60.00   | 0         | 0.00    | 0         | 0.00    |

A non-parametric correlation was used due to the small sample size. A Spearman's rho correlation found varying levels of significance between Reading Recovery scores and attitudes towards reading and writing. These correlations are summarised in *table 6*.

*Table 6* A Spearman's rho correlation table, displaying the relationship between attitudes towards reading and writing and literacy scores.

| Variable                              |                 | letter identification | book level | duncan word test | writing vocabulary | hearing and recording sounds in words | concepts about print | micra t3 | someone reads a story to you | writing story | share book with a friend | share writing with a friend |
|---------------------------------------|-----------------|-----------------------|------------|------------------|--------------------|---------------------------------------|----------------------|----------|------------------------------|---------------|--------------------------|-----------------------------|
| letter identification                 | Correlation     |                       |            |                  |                    |                                       |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) |                       |            |                  |                    |                                       |                      |          |                              |               |                          |                             |
| book level                            | Correlation     | .563                  |            |                  |                    |                                       |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .091                  |            |                  |                    |                                       |                      |          |                              |               |                          |                             |
| duncan word test                      | Correlation     | .548                  | .645*      |                  |                    |                                       |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .101                  | .044       |                  |                    |                                       |                      |          |                              |               |                          |                             |
| writing vocabulary                    | Correlation     | .543                  | .920**     | .757*            |                    |                                       |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .105                  | .000       | .011             |                    |                                       |                      |          |                              |               |                          |                             |
| hearing and recording sounds in words | Correlation     | .689*                 | .726*      | .528             | .602               |                                       |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .027                  | .017       | .117             | .066               |                                       |                      |          |                              |               |                          |                             |
| concepts about print                  | Correlation     | .612                  | .531       | .802**           | .610               | .532                                  |                      |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .060                  | .114       | .005             | .061               | .113                                  |                      |          |                              |               |                          |                             |
| micra t                               | Correlation     | .808**                | .489       | .620             | .511               | .787**                                | .785**               |          |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .005                  | .151       | .056             | .131               | .007                                  | .007                 |          |                              |               |                          |                             |
| someone reads a story to you          | Correlation     | .469                  | .217       | .036             | .178               | .426                                  | .394                 | .644*    |                              |               |                          |                             |
|                                       | Sig. (2-tailed) | .171                  | .548       | .921             | .622               | .219                                  | .259                 | .045     |                              |               |                          |                             |
| writing story                         | Correlation     | .451                  | .655*      | .460             | .795**             | .230                                  | .538                 | .351     | .154                         |               |                          |                             |
|                                       | Sig. (2-tailed) | .191                  | .040       | .181             | .006               | .522                                  | .109                 | .320     | .670                         |               |                          |                             |
| share book with a friend              | Correlation     | .108                  | .361       | .180             | .428               | .213                                  | .538                 | .286     | .583                         | .463          |                          |                             |
|                                       | Sig. (2-tailed) | .766                  | .306       | .619             | .218               | .554                                  | .109                 | .423     | .077                         | .178          |                          |                             |
| share writing with a friend           | Correlation     | .430                  | .412       | .330             | .626               | .465                                  | .399                 | .590     | .407                         | .651*         | .407                     |                             |
|                                       | Sig. (2-tailed) | .215                  | .237       | .352             | .053               | .176                                  | .253                 | .073     | .244                         | .041          | .244                     |                             |

A variance of significance was found between the four attitudes and literacy tests. Attitude two (writing a story) correlated significantly with book level ( $r_s(30) = .66, p = .040$ ), and writing vocabulary ( $r_s(30) = .80, p = .006$ ). The strong significance between writing a story and writing vocabulary is represented in *figure 3*. Attitude one (someone reads a story to you) correlated significantly with Micra T scores ( $r_s(30) = .64, p = .045$ ). It can be noted, that some tests are approaching significance, such as attitude four (sharing writing with a friend) and writing vocabulary ( $r_s(30) = .63, p = .053$ ). One may also observe that other variables relate significantly, although are not directly related to this hypothesis. The other tests do not significantly correlate with the attitudes, and in these cases, the null is accepted.

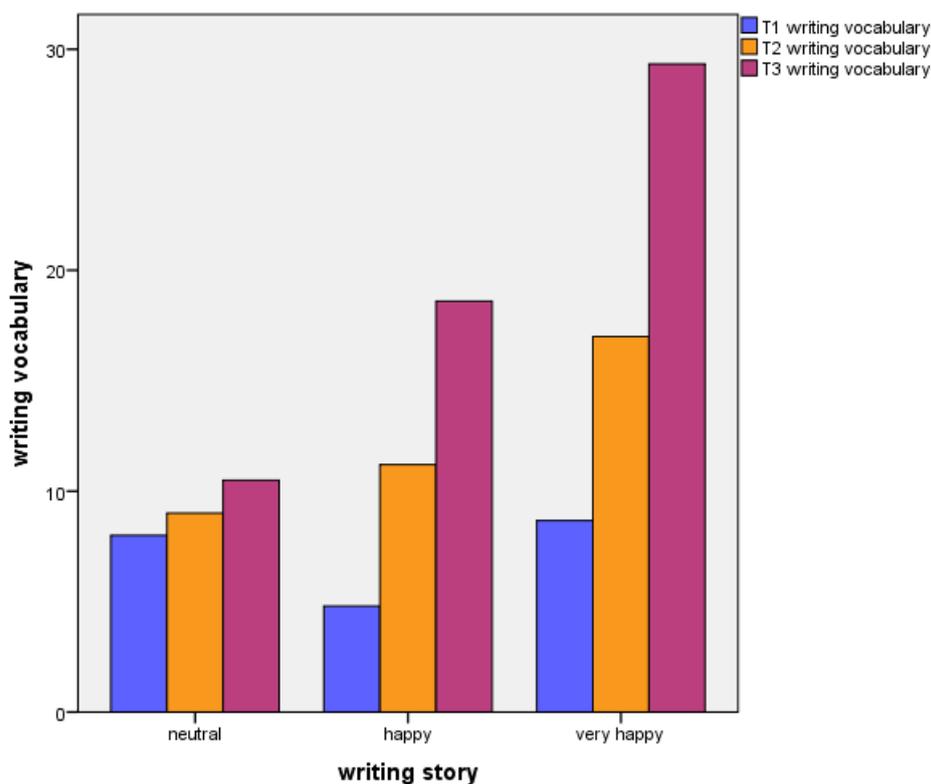


Figure 3 Bar chart representing the relationship between writing vocabulary and attitude towards writing a story.

*Figure 3* compares the relationship between the writing vocabulary test scores in Observation Survey (Clay, 2005) and attitude towards writing a story. Attitudes can be seen to grow more positive, with more responses to “very happy” towards time point 3.

Overall, hypothesis three is partially accepted, as some of the literacy scores significantly correlate with attitudes, and some do not.

#### 4.5 Hypothesis 4: There will be a significant improvement between those that receive Reading Recovery intervention and attitudes towards reading and writing.

Part of this project was to focus specifically on the effects of Reading Recovery intervention, and its positive influence on attitudes towards reading and writing. Therefore, a non-parametric Wilcoxon test test was used to measure the significance of four attitudes towards reading and writing between time point 1 and 3 for the experimental group. A Wilcoxon test found a significant improvement across all four attitudes between time 1 and time 3. As it was measuring improvement, the results are one tailed. Attitude 1 ( $z = -1.89$ ,  $p = .029$ ), attitude 2 ( $z = -1.86$ ,  $p = .032$ ), attitude 3 ( $z = -2.00$ ,  $p = .023$ ), and attitude 4 ( $z = -1.86$ ,  $p = .032$ ) all support this hypothesis, and therefore the null is rejected.

## **5.0 Discussion**

This research employed a quasi experimental design to measure the effectiveness of a literacy intervention programme for a period of twelve weeks. Literacy scores and attitudes towards reading and writing were measured in a bi-directional manner. This project aimed to support current research in using an intervention to improve literacy levels, in order to prevent deteriorating literacy rates and early school leaving (Department of Education and Skills, 2011). Marie Clay, the founder of Reading Recovery (1973), developed this intervention to help equip children that are struggling to read, with the tools to become independent readers and writers (Clay, 2008, p. 1). In line with her teaching, this research used the intervention to scaffold the children with appropriate skills and strategies to read and write independently. It was evident through assessing the participants running records of books, and writing performance at the final assessments, that this aim was fulfilled. As a result of improving literacy scores, attitudes also improved.

### **5.1 Hypotheses**

In line with research (Schwartz, 2005; Clay, 2008), it was expected that participants who received the intervention would improve at a more accelerated pace than those that did not receive the intervention. All participants' literacy scores improved between time point 1 and time point 3, therefore supporting hypothesis 1. Hypothesis two predicted a significant difference in scores between the experimental and control group by time point 3. There was a significant difference in five out of six Reading Recovery scores. There was no significant difference in standardised test scores. However it should be noted, that the results were approaching near significance. The highly structured style of Reading Recovery instruction may have enhanced participants' abilities in completing Reading Recovery assessments, resulting in a significant difference. The standardised testing involves a different style of

assessment that either groups would not experience as much. This may account for the varied levels of significance in tests. Hypothesis three predicted a significant relationship between attitudes towards reading and writing and literacy scores. This hypothesis was partially supported, as attitude towards writing a story significantly correlated with book level and strongly correlated with writing vocabulary. Attitudes towards someone reading a story to you correlated with the standardised test. Although other attitudes are seen to improve, their overall level of significance was poor. The small sample size may have affected the power of this correlation. The final hypothesis directly focused upon the participants receiving the intervention, stating that there would be a significant improvement between those that receive Reading Recovery and attitudes towards reading and writing. A significant improvement was found between each of the attitude scores and the experimental group. Therefore hypothesis four is accepted.

## 5.2 Previous Research

Clay (2008, p. 11) outlined the time frame of Reading Recovery; that it is a short-term intervention with the aim to accelerate improvement for those children in literacy. This research fully supports Clay's teaching (2008), as within a twelve week period, scores for the children receiving the intervention, accelerated at a significantly higher level to the control group.

Clay (2008, p. 1) states the aim of reading Recovery is for the children to receive average levels for their classroom. According to the standardised testing, the experimental group received average scores for their class group, therefore supporting this. Furthermore, the class teachers reported the children in the experimental group were managing comfortably in the classroom with literacy tasks.

The approach used for this research is similar to that of Schwartz (2005). He compared two groups, an experimental group receiving Reading Recovery, and a control group. He found there a significant difference across three sub tests in Observation Survey (Clay, 2005) by the end of the intervention. This research, although on a smaller scale, found a significant difference across all Reading Recovery measures at time point 3.

Building upon national research, The Reading Recovery 2012-2013 Annual Report, outlined the benefits of Reading Recovery instruction throughout Irish schools, finding 95% participants achieved age based literacy levels. This research further supports the success of Reading Recovery in Ireland, with results significantly improving on all parts between time point 1 and time point 3.

Not only do the positive results from this research support other studies, it addresses some of the critique regarding Reading Recovery. The report “Experts Say Rise in Reading Recovery is Not Effective, Leaves Too Many Children Behind” (2002) stated there was a bias in assessments used for Reading Recovery, and called for standardised measurement also. This research however used both Reading Recovery and standardised assessments to address any issue of bias. Participants improved significantly in both sets of assessments, contradicting this reports critique.

Further studies have investigated the importance of children’s attitudes towards literacy. Cunningham (2008, p. 32) found there was a significant relationship between children’s attitudes towards reading and writing. Similarly, there was a significant improvement in all attitudes for the experimental group, relative to their rising literacy scores. The bi-directional nature of literacy scores and attitudes was more prominent with the experimental group than the control group, perhaps because their literacy score were higher.

This attitudinal research further supports the work of Lyons (2002, p. 2) who highlights the importance affect plays in learning to read.

### 5.3 Strengths of the Research

As this was a quasi-experimental design, that required intensive, highly structured, daily lessons with the experimental group, it was important to have direct access to the participants. This research allowed for this, and all participants in the research were monitored daily. Access for pre-intervention, during intervention, and post intervention testing was also easily accessible for the researcher. Consistency like this helped to contribute towards the intervention being delivered in an extremely effective manner, and potentially yield more significant results.

Reading Recovery is currently being developed throughout Ireland, and statistics in the Reading Recovery Annual Report, 2012-2013 show that it is being taught in schools all over the country effectively, with 95% of participants reaching class average. The fact this intervention is currently being utilised on a national scale and more teachers are being trained in it, research into its effectiveness is very relevant for current educational practice. There is limited research on it at a national scale however. This research yielded many significant results, and therefore may provide schools with an insight into its potential. The fact many of the results showed significant improvement in literacy scores within a minimal time frame, demonstrates the ability of Reading Recovery to be used as an effective intervention in schools. The Department of Education is currently attempting to address falling literacy rates, and prevent early school leaving (Department of Education and Skills, 2011, p. 7). This research may therefore contribute towards future educational development in Ireland.

Correspondingly, as the scores yielded significance in many areas, the children that received this intervention have reaped its benefits. Children that were struggling to read and

write at class level are now reading books at a significantly higher level than pre-intervention. Consequently, as the research found, those children's attitudes have improved, linking with overall self-esteem. The control group, although may not have accelerated to the extent of the experimental group, have also improved in all test scores. As this research is documented (through assessments at three time points), the control group were being continually monitored. Their class teacher was given assessments at each time, and post intervention results have given insight into the children that now require further support. This highly structured form of assessment has therefore provided teachers and parents with specific areas to focus on in literacy.

#### 5.4 Weaknesses of the Research

Strength of the research was the effectiveness of Reading Recovery. It did however highlight the slower progression of six other participants that did not receive extra support. This was the consequence of having the control group to compare with. It should be noted that children highlighted the need for further support will receive it following the research.

One important part of making the intervention effective is daily teaching. Attendance of one of the children in the experimental group however was poor, and this child did not perform as well as the other three in some of the tests. Book level was the most dramatic difference, as the child with poor attendance finished at at a much lower book level to the other three.

The sample size was very small. The reasons for this have been explained, although it means one cannot generalise the results on a larger scale. All the participants attended the same school, in inner city Dublin. It therefore may not be a fair representative of how the intervention works on a national scale, in other types of schools.

As previously mentioned, Dombey (1999) outlines the importance the school environment and home life play in a child's literacy development. The participants in this project were in the same school, but ranged across three classrooms. Therefore, some experienced a different teaching style, a different classroom environment, as well as a different home environment. These factors may have influenced their literacy development across the twelve week period, which could not be measured in this project.

Finally, the length of the study was quite limited, and the longevity of results may not be included in its analysis. For ultimate effectiveness of the intervention to be measured, a longitudinal study may be more effective, measuring three month, six month, and one year follow up assessments. Reading Recovery does follow up assessments, but for the purpose of this research and limited time frame, this was not possible for the present study.

### 5.5 Implications

By timepoint 3, the experimental group scored significantly higher than the control group in Reading Recovery tests, and higher in standardised testing. This final assessment highlighted children in the control group that required extra support. As the class teachers and principal were aware of assessment scores, learning support time was allocated to the struggling children to accelerate their progress. Two of these children that were struggling in class were assigned to the next block of Reading Recovery intervention. This research managed to accelerate the struggling readers from timepoint 1, and highlight those in need for additional support from timepoint 3. Therefore this research may be considered beneficial in all aspects.

The intervention was successful in improving the four participant's literacy scores. They experienced intensive daily lessons that were highly structured. There are concerns without this further support their progress may plateau. Therefore the Observation Survey

(Clay, 2005) requires a three month, six month and one year follow up to ensure their progress continues. This will be monitored following the research.

Finally, this research found a significant improvement in attitudes towards reading and writing for all children that received the Reading Recovery intervention. Changing attitudes were related to their increased literacy scores. The result of this, with hope, is their positive attitudes will continue to further aid their literacy development in a bi-directional manner.

### 5.6 Future Research

Interestingly, this research gives many possibilities for future research. As mentioned, the longevity of results could be documented, by measuring and comparing participants' scores after three months, six months, and one year. These follow up assessments are part of the Reading Recovery intervention, and help to explore the lasting impact the Reading Recovery intervention can give. Furthermore, measuring these children's scores in standardised testing all through primary school may give insight into the lasting benefits this intervention gives.

This research was based in a single school in inner city Dublin. As results were significant for literacy scores, it would be interesting to conduct the same method on a larger scale throughout the country – involving, rural and urban schools. If similar results were found, a larger number of children would benefit from this intervention. A larger sample size may also give researchers and teachers further insight into the effectiveness of the intervention. The researcher could measure attitudes towards reading and writing also, building upon the limited research that exists in Ireland in this area.

Should research into Reading Recovery in Ireland develop on a broader scale, the Department of Education and Skills, curriculum and policy makers, and educators may gain insight into the most effective methods in addressing falling literacy rates and early school leaving. Building upon this research, Reading Recovery may play a leading role for future in education.

### 5.7 Conclusion

Every child has the right to be able read and write, and should not leave school without these tools (Department of Education and Skills, 2011, p. 9). One of the key successes to ensuring this, and preventing failure, is early intervention. This research investigated an intervention that has continued to develop since the 1970's. Reading Recovery (Clay, 1973), is widely used in Irish schools; however research into its effectiveness is limited. This research measured the opportunities that Reading Recovery has to offer in improving children's literacy development. Following significant results in this research, it is an intervention that should continue to be researched and put into practice throughout Irish schools to improve literacy levels. The interdependence between attitudes and literacy scores is evident from this research also, and provides optimism for improving literacy skills nationwide.

## References

- Borba, M. (2002). Reading power in half an hour. *Journal of Reading Recovery*, 4, p. 13-16.
- Center for Research on Education and Social Policy. (2015). *Funded Evaluation of Reading Recovery*. Retrieved from [www.cpre.org/rr](http://www.cpre.org/rr)
- Central statistics Office (2013). *Seasonally Adjusted Standardised Unemployment Rates (SUR)*. Retrieved from <http://www.cso.ie/en/statistics/labourmarket/principalstatistics/seasonallyadjustedstandardisedunemploymentratesur/>
- Clay, M. (2005). *An Observation Survey of Early Literacy Achievement*. New Zealand: Heinemann.
- Clay, M. (2008). *Literacy Lessons. Designed for Individuals. Part One Teaching Procedures*. New Zealand: Heinemann.
- Clay, M.. (2008). *Literacy Lessons. Designed for Individuals. Part Two Teaching Procedures*. New Zealand: Heinemann.
- Conner, P. (n.d.) Scaffolding: Fostering Active Learning Using Varied Levels of Assistance. Retrieved from [https://readingrecovery.org/images/pdfs/Conferences/NC11/Handouts/Conner\\_Ohio%20Scaffolding%20HO.pdf](https://readingrecovery.org/images/pdfs/Conferences/NC11/Handouts/Conner_Ohio%20Scaffolding%20HO.pdf)
- Cook, J., & Cook, G. (2005). *Child Development. Principles and Perspectives*. Retrieved from <http://www.pearsonhighered.com/samplechapter/0205314112.pdf>

Cunningham, D. (2008). Literacy Environment Quality in Preschool and Children's Attitude Toward Reading and Writing. *Literacy Teaching and Learning*. 12(2) p. 19 – 36.

Retrieved from <http://files.eric.ed.gov/fulltext/EJ899638.pdf>

Department of Children and Youth Affairs (April 2012). Guidance for Developing Ethical Research Projects Involving Children. Dublin. *Department of Children and Youth Affairs*. Retrieved from

[http://www.dcy.gov.ie/documents/Publications/Ethics\\_Guidance.pdf](http://www.dcy.gov.ie/documents/Publications/Ethics_Guidance.pdf)

Department of Education and Skills (2011) *Literacy and Numeracy for Learning and Life*.

*The National Strategy to Improve Literacy and Numeracy among Children and Young People*. Cork. Retrieved from

[https://www.education.ie/en/Publications/Policy-Reports/lit\\_num\\_strategy\\_full.pdf](https://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf)

Holliman, A. & Hurry, J. (2013). The Effects of Reading Recovery on Children's Literacy Progress and Special Educational Needs Status: A Three Year Follow Up study.

*Educational Psychology*. 33(6) 719-733. doi: 10.1080/01443410.2013.185048

Institute of Education of London (2011). Reading Recovery receives high success despite uncertainties. *Institute of Education University of London*. Retrieved from

<http://www.ioe.ac.uk/60007.html>

Kennedy, E., Dunphy, E., Dwyer, B., Hayes, G., McPhillips, T., Marsh, J.,... M & Shiel, G.

(2012) *Literacy in Early Childhood and Primary Education (3-8 years)*. Retrieved from

[www.ncca.ie/en/Publications/Reports/Literacy\\_in\\_Early\\_Childhood\\_and\\_Primary\\_Education\\_3-8\\_years.pdf](http://www.ncca.ie/en/Publications/Reports/Literacy_in_Early_Childhood_and_Primary_Education_3-8_years.pdf)

Lyons, C. A. (2003). *Teaching Struggling Readers. How to use Brain-based Research to Maximise Learning*. Portsmouth: Heinemann.

May, H., Gray, A., Gillespie, J. N., Sirinides, P., Sam, C., Goldsworthy, H., Armijo, M. & Tognatta, N. (August 2013). *Evaluation of the i3 Scale Up of Reading Recovery. Year one report 2011-2012. CPRE: Consortium for Policy Research in Education*. Retrieved from

[http://www.cpre.org/sites/default/files/researchreport/1488\\_readingrecoveryreport.pdf](http://www.cpre.org/sites/default/files/researchreport/1488_readingrecoveryreport.pdf)

Mc Kenna, M. C., and Kear, D. J. (1990). Measuring Attitude Toward Reading: A New Tool for Teachers. *The Reading Teacher*. 43(9) 626-639. Retrieved from <http://www.istor.org/stable/20200500>

Moeller, A. J. (2002). Reading Recovery: A Scientifically Based Analysis. Retrieved from <http://chemmovies.unl.edu/diss/moeller/moeller.pdf>

National Council for Curriculum and Assessment (2015). *Primary School Curriculum. English Language Teacher Guidelines*. Retrieved from [www.ncca.ie/uploadfiles/Curriculum/Eng\\_Gline.pdf](http://www.ncca.ie/uploadfiles/Curriculum/Eng_Gline.pdf)

Professional Development Service for Teachers (n.d.) *Reading Recovery PDST*. Retrieved from <https://sites.google.com/a/pdst.ie/region-2-pdst/region-2/reading-recovery>

Reading Researchers (2002). *An Open Letter: Experts Say Reading Recovery is Not Effective, Leaves Too many Children Behind*. Retrieved from <http://www.wrightslaw.com/info/read.rr.ltr.experts.htm>

- Reynolds, M., & Wheldall, K. (2007). Reading Recovery 20 Years Down the Track: Looking Forward, Looking Back. *International Journal of Disability, Development and Education*. 54(2) 199-223. doi: 10.1080/10349120701330503
- Schwartz, R.M. (2005). Literacy Learning of At Risk First Grade Students in the Reading Recovery Early Intervention. *Journal of Educational Psychology*. 97(2) 257-267. doi: 10.1037/0022-0663.97.2.257
- Sylva, K. Hurry, J., and Peters, S. (1997). Why is Reading recovery Significant? A Vygotskian Critique of an Early Reading Intervention. *European Journal of Psychology of Education*. 12(4) 373-384. doi: 10.1007/BF03172799
- Tanner, E., Brown, A., Day, N., Kotecha, M., Low, N., Morrell, G.,... Purdon, S. (2010). Evaluation of Every Child A Reader. *Department of Education*. Retrieved from <http://ilc.ioe.ac.uk/rr/documents/DFE-RR114.pdf>
- The Psychological Society of Ireland (2011). Code of Professional Ethics. Dublin. *The Psychological Society of Ireland*. Retrieved from <http://www.psychologicalsociety.ie/find-a-psychologist/PSI%202011-12%20Code%20of%20Ethics.pdf>
- Wall, E. and Burke, K. (2004). *MICRA-T Mary Immaculate College reading Attainment Tests. Level 1. Test Manual*. Longford: CJ Fallon.
- Wang, Y. (2000). Children's Attitude Toward Reading and their Literacy Development. *Journal of Instructional Psychology*. 27(2). Retrieved from [www.freepatentsonline.com/article/Journal-Instructional-psychology/63365166.html](http://www.freepatentsonline.com/article/Journal-Instructional-psychology/63365166.html)

## **Appendices**

Appendix A: Reading Recovery consent form.

### What if you have any concerns?

If you have any questions or worries about the information that we collect, or how we use it, your child's Reading Recovery teacher will be very pleased to show you and talk to you about it.

### What we need you to do to help us

We need to include information about your child's Reading Recovery programme, and to do that we need your consent. Please complete below and return this form to your child's Reading Recovery teacher.

|   |  |
|---|--|
| I consent to information about my child's Reading Recovery programme being collected by the International Literacy Centre |  |
| Name of child   |  |
| Signed by parent/carer/guardian   |  |
| Name of parent/carer/guardian   |  |
| Date  |  |

Thank you very much for your help and support.

For queries and further information on Reading Recovery, please contact:

International Literacy Centre, UCL Institute of Education,  
University College London, 20 Bedford Way, London  
WC1H 0AL

Tel: 020 7612 6585 Email: [ilc@ioe.ac.uk](mailto:ilc@ioe.ac.uk)  
Web: <http://ilc.ioe.ac.uk/>

## Reading Recovery data collection

Information for parents, carers and guardians



