

Unpacking the Relationship Between Learning to Read and Mental Health: Using an Ethnographic Case Study Approach

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Abstract Many children and youth who struggle to read experience the effects in both their school lives and their personal lives. Learning to read can and often does have benefits that extend well beyond the classroom. This multi-method, multi-perspective qualitative study follows three boys as they transition from struggling readers to more competent readers while participating in an intensive reading intervention. The purpose of this study is to further our understanding of the relationship between improved ability to read, and mental health. Dynamic stories are told about the three boys through ethnographic observations, and formal and informal interviews, with data provided by the reading instructors, classroom teachers, parents, the researcher, and the students themselves. The findings clearly show that learning to read has more than academic merit with a discernible impact on the mental health of the three boys who had once struggled to read.

Keywords Mental health · Reading · Behaviour · Emotional and behavioural disorders (EBD) · Self-efficacy

1 Introduction

Reading is arguably the most important academic skill for children to accomplish, often considered the cornerstone to all learning. This paper reports the findings of a qualitative study that describes the process of learning to read, and the concomitant changes in the mental health of three students. Despite experience and conventional wisdom acknowledging the interrelatedness of reading difficulties and poor mental health or problem behaviours, there has been surprisingly little work in this area.

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This research uses a multi-perspective, ethnographic case study approach to show the evolution of three boys, in an intensive reading intervention, as they become more competent readers. Data were provided by the students, their parents, their classroom teachers, two reading instructors, and the researcher.

1.1 Study Purpose

The purpose of this research was to report descriptions of the lived experiences of three boys with both reading and mental health challenges as they progressed through an intensive reading intervention. Through a synthesis of the data I hope to enhance our understanding of how improving the ability to read for struggling readers may simultaneously benefit their mental health. The guiding research questions then are:

- (1) In what ways does an intensive reading intervention affect struggling readers?
- (2) How are changes in reading accompanied by changes in the mental health of previously struggling readers?

1.2 Context

The reading intervention, offered in a mid-sized city in central Canada, was research-based and used direct instruction to provide systematic and sequential lessons that focused on the development of reading decoding skills and, to a lesser extent and, when necessary, comprehension. This intensive intervention program, with one-on-one instruction, remediated reading difficulties of students who were reading at least one year, and usually two years, behind their peers. The instructors taught foundational and developmental reading skills including phonemic awareness, phonics, fluency, vocabulary, and comprehension; skills that are consistent with those identified by the National Reading Panel (NRP) as essential components of an effective reading program (National Institute of Child Health and Human Development 2000). They also included morphology, based on the findings of recent studies (e.g., Carlisle 2010). The reading intervention was structured and systematic while remaining sufficiently flexible to meet the needs of individual students. The Reading Room, a pseudonym, was privately operated, which limited availability to students whose parents could afford the fees or could obtain a bursary from a community agency or organization. The students in the program had generally experienced substantial and sustained difficulties in reading prior to enrolling in the program.

2 Rationale

This study sought to unravel and comprehend the complex and intertwined relationship between improved ability to read and mental health. There have been many studies with varied findings about this relationship. Research has shown that poor mental health adversely affects achievement (e.g., Murphy et al. 2015), and vice versa, poor achievement negatively affects mental health (e.g., Morgan et al. 2012). This study explored the ways in which mental health changed as struggling readers learned to read.

There has been a paradigm shift in the literature as reading difficulties in the past were shown to be associated with problem behaviours or emotional and behavioural disorders (EBD); it is now recognized that behavioural concerns are often manifestations of underlying mental health concerns. The earlier research reported that students with EBD often had coexisting academic and reading deficits (Levy and Chard 2001; Strong et al. 2004). Studies have also shown that problem behaviours (Trout et al. 2003), attention (Barriga et al. 2002), and more recently mental health (e.g., Dahle et al. 2011) are related to reading achievement. Specifically related to mental health, students with reading difficulties have been found to be characterized by feelings of low or inadequate self-efficacy (Ingesson 2007), feelings of anxiety (Dahle et al. 2011; Grills-Taquechel et al. 2012), somatic complaints, depression, and in some cases suicidal ideation (e.g., Dahle et al. 2011).

3 Methodology

This qualitative study was designed to create a detailed descriptive account of the experience of each of three boys as they progressed through the intervention, including any changes noted in their academic achievement, reading attitude, general and reading self-efficacy, attention, and their mental health. Reading ability was measured pre- and post-intervention using the *Test of Word Reading Efficiency* (TOWRE), subtests of the *Woodcock-Johnson*, and the *Gray Oral Reading Test-Fourth Edition* (GORT-4). Progress throughout the intervention was gauged qualitatively by observing what was being taught (word level difficulty and passage difficulty), the rate at which students advanced (reading progressively longer words and more difficult passages), time on task, and changes in attitude towards reading (increased willingness to read and engagement in reading). Changes in social, cooperative, and interactive behaviour were also recorded through observations, informal interviews with the students and the reading instructors throughout the intervention, and through formal semi-structured interviews with all participants following the intervention.

3.1 *Participants*

Three boys, Dillon, Logan, and Mason, ranging from Grades two to four began an intensive one-on-one reading intervention because of sustained difficulties they had experienced learning to read. Dillon came from a disadvantaged and challenging background, and his foster mother feared that he would not learn to read, because at age seven he did not know the sounds of the letters. He began the intervention as a non-reader when he was in Grade two. In addition, Dillon had been identified with a behavioural exceptionality. Although Logan was a struggling Grade 3 reader, his story unfolded in stark contrast to Dillon's. Logan came from a book-rich, supportive, and stable family, and was identified as having both a learning disability and as being extremely gifted (at the 99.9 percentile on an intelligence test). Logan struggled with decoding, but was still able to comprehend, and began the intervention with his sense of self reasonably intact. His mother described some emotional and behavioural concerns she had noticed with Logan, but his classroom teachers hadn't noticed any. Mason had a similar upbringing to Logan, but he began the intervention clearly affected by too few successes in school over too many years. Mason was able to decode reasonably well, but lacked fluency and comprehension. As the oldest of the three boys, he began the program when he was in Grade four—by this time he was becoming aggressive at home, and had been diagnosed with depression. Through the intervention all three boys made gains in their reading ability and demonstrated additional gains that clearly extended well beyond the classroom.

3.2 *Data Collection*

In this multi-perspective study, data were collected from a number of sources. All classroom teachers responsible for teaching the students were invited to participate in this study; one was interviewed for each of Dillon and Mason. Because Logan was in French Immersion three classroom teachers were interviewed: his French language classroom teacher (Jalen) who also taught him social studies and visual art; his English language teacher (Sydney) who also taught him health; and Angie, his French Immersion teacher who taught him science, math, drama, dance, and physical education. Angie was also the Student Support Teacher at Logan's school and provided one-on-one or small group instruction for Logan. The reading instructors, Jenelle and Helen, alternated days of instruction for Logan; Allyson and Jenelle alternated days for Dillon and Mason. Data was also provided by the students themselves, as well as their mothers (Logan and Mason) and an aunt/foster mother (Dillon).

Data were collected through ethnographic observations, and formal and informal interviews. Each student participant was observed every other day that they participated in the reading intervention; Dillon was observed for approximately 40 h,

Logan approximately 24 h, and Mason approximately 35 h. Post-intervention formal, semi-structured interviews with parents, classroom teachers, reading instructors, and the students were conducted in order to gather information on their perspectives as to what had changed for the student since beginning the intervention. All formal interviews were audio-recorded and transcribed verbatim. Informal interviews with the reading instructors were conducted throughout the reading intervention of all three student participants, and were recorded by notes made at that time.

3.3 Data Analysis

This multi-method, multi-perspective study was designed to elicit as much information about each case as possible. The cases were analysed separately by incorporating data from all participant groups—the students, the parents, the reading instructors, classroom teachers, and the researcher. Through an analysis of this data, it was possible to describe the relationships among the students' growing ability to read and their learning, social behaviour, and mental health.

Standard methods of qualitative theme analysis (Patton 2002) were used to analyse the interview data, facilitated through the use of NVivo 10, a data management system that helped organize, manage, and analyse the data. Interview transcripts were coded in order to identify categories, themes, and patterns. An initial reading of the transcripts identified issues and ideas as they emerged (inductive approach), providing the groundwork for subsequent coding. The documents were then reviewed again in search of additional data that supported these initial coded categories (deductive approach). Categories were subsequently merged to form a more focused coding framework that led to the identification of emergent themes. Each case was initially analysed and described separately, recognizing its individuality and unique situation. Subsequently, however, a cross-case analysis was performed in order to discern and highlight differences and similarities among the three cases. The observation data was then used to augment the findings of the interviews by verifying and providing substantive evidence for the emergent themes. The findings reveal important connections between developing reading skills and the mental health of all three boys.

4 Results

To varying degrees, the three participants made gains in their ability to read. Logan made the greatest gains, while both Dillon and Mason made smaller gains than had been expected and, in Allyson's view, gains not consistent with the typical gains of students in the intervention. Of the three, Mason showed the least improvement with only small gains in fluency (rate and accuracy) and comprehension. Table 1

Table 1 Pre- and post-intervention reading comprehension scores

Student	Grade/Age (at initial assessment)	Number of sessions	Comprehension: Pre-intervention grade equivalent	Comprehension: Post-intervention grade equivalent
Dillon	2.2/8 year 8 month	93	<1.0	2.0
Logan	3.1/8 year 0 month	50	<1.0	4.2
Mason	4.4/9 year 5 month	72	2.2	2.4

provides a synopsis of some of the key information related to the reading of each of the three boys. Reading comprehension was assessed using the Gray Oral Reading Test (Revised-4) (GORT-4). Because the ultimate goal of reading is comprehension, it was used as a general indicator of reading improvement.

4.1 Case Study 1: Dillon

In spite of getting extra help at school and home and attending Kumon, Dillon continued to struggle with reading. When he started at The Reading Room, Dillon's reading was extremely limited. He did not recognize any sight words except his name which he identified by its first letter D, nor did he know the sounds of many letters (Tanya—his aunt/foster mother). Shelley, Dillon's classroom teacher, said that Dillon started the school year in September as a D student in reading and writing, but was "shining" in math, science, and social studies, as a B student.

In addition to his struggles with reading, Dillon experienced emotional and behavioural challenges. Shelley described Dillon as a "behaviour student" and was concerned for his emotional well-being. Jenelle considered Dillon to be a "fragile kid" who was "quite volatile" and although he was "very curious about things, and about the world, and learning" he was also guarded and "cautious in his responses."

Changes in Dillon: "When I started coming here ... it made my life better."

As Dillon's ability to read improved, so did his writing, his attitude towards reading, and his on-task behaviour. These elements might have been expected to contribute to improved learning in his school experience, but participants reported mixed observations and perspectives regarding his behaviour upon full-time return to school. However, all observations confirmed that while he was attending the reading intervention, he exhibited fewer inappropriate behaviours and developed enhanced self-efficacy for academic learning, particularly in reading and writing. He became happier and was less volatile and labile.

4.2 Case Study 2: Logan

All of his teachers reported that Logan was highly intelligent and that there was a clear discrepancy between his verbal ability and his reading and writing ability. The amazing aspect that teachers and reading instructors alike frequently made reference to was his uncanny ability to comprehend, despite his apparent difficulties with decoding (observation, October 27, 2010). Sydney described his reading: “it was so segmented ... there was no flow to it, he was not a fluent reader at all even at that level. And yet ... his comprehension was there, and in fact *beyond*, he could make inferences, and make connections.” Logan was formally tested with the results indicating that he was gifted with a learning disability.

Stacie, Logan’s mother, described Logan as “struggling in reading, sounding out little bits—it was painful.” She perceived that Logan’s reading difficulties led to frustration and problem behaviours prior to the intervention: “by the end of the day ... he’s just so frustrated; and the frustration and acting out, when you tried to get him to do stuff, he showed a lot of anger, and frustration.” In contrast, his classroom teachers considered him to be a cooperative and compliant student who was “eager to please, pleasant, happy ... questioning, very inquisitive, doesn’t have a whole lot of social skills for the group type activities, he would rather be on his own by himself” (Angie). Sydney, who had known Logan since Kindergarten, described him as being “a very timid, shy, uncertain, cried easily, reluctant participant ... who needed lots of encouragement and kindness and softness,” and Jalen described him as being “quite quiet, and he likes to follow the rules, and he is not disruptive at all.”

Changes in Logan: “my reading wasn’t very good, and I really wanted to go, actually *really* wanted to go [to The Reading Room].” When Logan started to make gains in reading, participants noticed a series of changes they thought evolved along with his developing ability. Despite his challenges with reading Logan had managed to maintain his self-esteem and therefore no change in his self-esteem was reported by any of the participants. However, with changes reported in his academic learning in both English and French, a better attitude towards reading and school, improved behaviour at home, and improved emotional well-being as well as a sense of empowerment, learning to read was an important and powerful achievement for Logan.

4.3 Case Study 3: Mason

A psychoeducational assessment indicated that Mason had weaknesses in reading, writing, and processing speed and was identified as having a language-based learning disability. Mason was also diagnosed with a depressive disorder. According to Jenelle, Mason could decode single syllable words “adequately,” but he did not have any multi-syllable word attack skills, and he lacked prosody. Jenelle described his reading as “fairly fatiguing, lots of errors, lots of misreads,

substitutions and insertions, so really reading was not an enjoyable experience, or a fulfilling experience and I think it was quite frustrating.” According to his classroom teacher, Sandra, writing was also effortful for Mason, describing it as “such a chore, and it’s messy” she would often have to ask him to rewrite his work because it was illegible.

Sandra described Mason as “Just a great kid” who was not achieving his potential and was deliberately very quiet with a “please don’t notice me” purpose. Similarly, Allyson considered Mason to be “very quiet, very obedient, always did what you asked, but ... usually looked like a pretty sad, little kid,” and Jenelle, described Mason as “well behaved, flat liner emotionally or so guarded that he lets very little out, helpful, cooperative, kind, interested, curious ... and yeah, also shutdown.”

Changes in Mason: “he just seems like a happier kid.” For Mason, the change emphatically commented on in the interviews was the change in his emotional well-being—specifically his improved confidence and disposition. Although no-one specifically referred to his depression, most participants described him as a much happier person. Both his mother and classroom teacher described his general self-efficacy as extending beyond the classroom and into sports—he had become more confident and would now take the puck and even scored a few goals, something he would not even have attempted before.

5 Discussion and Conclusions

This study reports three cases, of three struggling readers, each reported by adults in their lives to be experiencing concomitant mental health concerns. In addressing the first research question—*In what ways does an intensive reading intervention affect struggling readers?*—this study provides evidence that an improved ability to read positively affected the achievement, attitude, ability to attend, behaviour, mental health, and sense of empowerment of the student participants. The second research question—*How are changes in reading accompanied by changes in the mental health of previously struggling readers?*—was also supported by the data in this study. Gains in the mental health of the student participants in this study are related to improved general self-efficacy (or confidence), self-efficacy for academic learning, and improved disposition with participants described as being “happier” and “smiling more.”

It is not the purpose of this research to suggest causality but to instead illustrate the broad effects learning to read can have on the mental health of students. Not only do students benefit academically, but emotionally as well. Furthermore, as problem behaviours are often, at least in part, manifestations of challenged or poor mental health, behaviour problems are also likely to be mitigated when reading improves. Participants in this study reported both positive changes in social competence and a reduction in problem behaviours.

Improved mental health and behaviour clearly has positive repercussions for the individual student, their classroom, school, and home environments. Most telling are the reports by the two mothers that their sons' gains in reading also improved their family dynamics and home environments. By successfully teaching reading to struggling readers, who through time often struggle with respect to their self-concept and emotional well-being, we can also improve their mental health. We know how to teach reading; by doing so, students may potentially make gains in two important areas—in their mental health, as well as in their ability to read.

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