

Teachers' perceptions of students with late emerging reading disabilities

by

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ABSTRACT

The purpose of this study was to determine teachers' perceptions of students who begin displaying signs of reading difficulty in the upper elementary grades (fourth grade and higher). The research additionally aims to identify differences in perceptions of teachers teaching grades one through three as compared to those teaching grades four through six regarding their awareness of Late Emerging Reading Disability and areas of intervention for these students. The research also investigates the areas, which teachers associate with reading difficulty among children beyond fourth grade. An online survey was utilized to collect data from teachers in six schools in Central Iowa districts.

Seventy-nine teachers responded to the survey amongst which 58 were early elementary teachers and the other 21 were intermediate elementary teachers. Significant differences between early elementary and intermediate elementary teachers were found for the likelihood of a child being identified with reading difficulties in elementary grades, with the early elementary teachers indicating a higher likelihood of identification of students with reading difficulties in early elementary grades. The research study also found significant differences for the likelihood of identification of students with reading difficulties in intermediate grades, with intermediate elementary teachers indicating a lower likelihood that students with reading difficulties in intermediate grades will be identified. The results also showed that both groups of teachers prioritized intervention for early elementary students struggling in reading in the areas of phonemic awareness and phonics. Both groups of teachers shifted the areas of intervention to vocabulary and comprehension for a student struggling with reading in intermediate elementary grades. The study however did not find significant differences between the two groups of teachers in prioritizing intervention for

students identified in early elementary grades versus those identified in late elementary grades.

In associating factors with reading difficulties in intermediate elementary grades, significant differences were reported for “lack of appropriate instruction,” with the early elementary teachers associating “lack of appropriate instruction” with late emerging reading difficulties to greater extent than did intermediate elementary teachers. The narrative responses from open-ended questions clearly indicated that teachers in both groups lacked knowledge about the phenomenon of Late Emerging Reading Disability.

Thus to summarize, findings indicate that teachers in the early elementary and intermediate elementary grades lack awareness about the concept of Late Emerging Reading Disabilities. Also, the likelihood of students being identified with reading disabilities is perceived by teachers as much lower in the intermediate grades than the likelihood of being identified in the early elementary grades. Thus the research findings may help create awareness among elementary teachers to look out for students who begin struggling in reading in intermediate elementary grades and thereby provide appropriate and timely intervention.

CHAPTER 1. INTRODUCTION

Statement of the Problem

Reading plays an imperative role in education and everyday life. It is a skill acquired by people when given appropriate opportunities and most people acquire it with ease. In the primary grades (one through three) the major challenge for students is the acquisition of reading skills. Reading is a skill necessary for children's success both in school and throughout life (Anderson, Hiebert, Scott, & Wilkinson, 1985; Deno, 1989). Low reading achievement is related to a number of social problems including high school dropout rates, teen pregnancies, delinquency, unemployment and homelessness (McGill-Frazen, 1987). In our education system reading is used most frequently to gauge the effectiveness of learning.

The National Assessment of Educational Progress (NAEP, 1996) reported that 36% of nine-year-olds failed to reach the level of "partially developed skills and understanding" and 7% could not accomplish simple reading tasks. In another study in 1998, the National Assessment of Educational Progress (NAEP) reported that 42% of fourth graders read below basic levels and these problems persisted even in higher grades. Even though the reading problems of children are detected early, unfortunately the difficulties persist even in higher grades. Juel's (1998) findings revealed that the probability of a poor reader in first grade remaining a poor reader at the end of fourth grade was .88. Scarborough's (1990) documented that children's deficits in phonemic awareness, vocabulary and rhyme recitation skills by preschool can predict later reading problems.

Word knowledge and comprehension are interrelated therefore students who have poor vocabulary will probably struggle with comprehension (Anderson & Freebody, 1981).

Students in upper elementary grades are expected to comprehend increasing amounts of expository text. However students who lack content-related vocabulary and background information are less likely to have acquired strategies for comprehending expository text (Gregg & Sekeres, 2006). Most upper elementary teachers and those teaching higher grade levels usually perceive that children possess appropriate reading skills to grasp content knowledge. Teachers in higher grades frequently perceive that teaching reading is the responsibility of early elementary teachers and thus many of them struggle to help children read and comprehend in higher grades. (Alvermann & Nealy, 2004; Alvermann, Phelps, & Ridgeway, 2007).

According to Chall (1983), fourth grade is considered a crucial stage in the reading development of a child. This is the time when one observes a pedagogical shift from “learning to read” to “reading to learn.” However some students experience a decline in their reading performance when they are exposed to more challenging and rich reading materials. The performance of these children follows a trajectory similar to their peers until third grade, but then begins showing a downward trend in grade four. Because these children did not demonstrate difficulty in reading in the primary grades, they often go unnoticed in the intermediate grades. This phenomenon of declining reading performance in grade four was termed the “fourth grade slump” and was introduced by Chall (1983). Another term, which has emerged in recent years, is “Late Emerging Reading Disability” which also explains the concept of sudden deterioration in reading (Leach, Scarborough, & Rescorla, 2003). The existence of this construct has also been documented by Lipka, Lesaux, and Siegel (2006) and Compton, Fuchs, Fuchs, Elleman, and Gilbert (2008). Some research in the area of Late Emerging Reading Disabilities has also focused on disadvantaged children. Hart and Risley

(1995) suggested that children from low-income homes are exposed to fewer words and texts, which thereby impacts their vocabulary and comprehension. According to Hart and Risley, a high functioning first grader knows twice the number of words as compared to a low performing peer and as these students progress to higher grades the gap keeps widening. Chall and Jacobs (2003) studied students from low-income status and found similar results. Their study also revealed that the students displayed deficits in the area of vocabulary in grade four but that did not impact their performance on comprehension. Their comprehension scores began declining in grade six which suggests that these students used contextual cues to compensate for vocabulary deficits. However as words they encountered became more unfamiliar their comprehension declined as well.

These prevalence rates are a major concern because students who are identified with any reading difficulty after third grade are not attended to in the same manner as their younger peers with reading difficulty (DeFord, Lyons, & Pinnell, 1991). These children identified with reading deficits after the primary grades exhibit heterogeneous difficulties. Thus some children may display deficits in areas of comprehension and others show word-level deficits; some children display deficits in overall components of reading (Leach et al., 2003).

Purpose of the Study

The purpose of this study was to identify the perspectives of early elementary teachers compared to intermediate elementary teachers about students identified with reading difficulties in early elementary and later grades. The study also examined the differences in intervention provided to the students with reading difficulties identified in the early

elementary grades as compared to those identified with difficulties in the intermediate elementary grades. Thus, this study was designed to help in understanding teachers' awareness about Late Emerging Reading Disabilities and the nature of intervention provided to these students in the intermediate elementary grades.

Research Questions

The research questions guiding this study were:

1. To what extent do the perceptions of early elementary teachers differ from intermediate elementary teachers regarding children identified with reading difficulty in early elementary grades compared to those identified in intermediate elementary grades?
2. How do early elementary and intermediate teachers prioritize intervention in the five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary and Comprehension) based on the early or late identification of the student?
3. Which factors along with five areas of reading do early elementary teachers and intermediate elementary teachers perceive to be associated with reading difficulties?
4. How aware are the elementary school teachers about Late Emerging Reading Disabilities?

CHAPTER 2. LITERATURE REVIEW

The acquisition of reading skills is of paramount importance for the educational and intellectual development of an individual. A strong connection between early reading accuracy and later academic development has been repeatedly documented (National Research Council, 1998; Torgesen, 2002). The onset of elementary education includes introducing textbooks as an educational tool and thereby exposing children to print. Some researchers have conceptualized theories to explain the reading process (Hoover & Gough, 1990; LaBerge & Samuels, 1974; Rosenblatt, 1982) and others have talked about stages through which the reader moves to become proficient (Chall, 1983). Some of the popular theories and models in the field of reading are briefly discussed below.

Theories of Reading

One of the popular theories that came into being in the 1930s was Reading Response theory (Rosenblatt, 1982). According to Rosenblatt, reading is a transition process involving the reader and the text. Both of these play an important role in understanding the meaning of the text. The “transition” takes place when an individual reads a text and brings his/her prior knowledge, life experiences, and current emotions to the understanding of the text.

Rosenblatt also brings in the concept of the efferent and aesthetic reader modes. If a reader is reading for seeking information then he/she is in an “efferent mode” and if the reader brings personal emotion and tries to make connections and judgments about the text then he/she is in an “aesthetic mode.” However according to (Rosenblatt, 1982) for transition to take place the reader should be in an aesthetic mode.

Another popular theory of reading came with the work of Hoover and Gough (1990). They outlined the “Simple View of Reading” in which reading is comprised of decoding and linguistic comprehension. The term “decoding” refers to the ability to transpose print into word, while “linguistic (listening) comprehension” refers to the ability to interpret words, sentences or conversations. According to this theory, poor reading skill results from one of three conditions: (a) when decoding is adequate but linguistic comprehension is poor (b) when linguistic comprehension is adequate but decoding is poor, or (c) when both linguistic comprehension and decoding are not developed adequately. Thus adequate decoding and linguistic comprehension skills help in developing reading comprehension.

There are also a few cognitive models of reading, which have distinguished two kinds of processes: bottom-up and top-down. The bottom-up process takes input from the outside world, which comprises letters and words and puts these together to help in comprehending the text. In this model, a student moves from part to whole to identify the meaning of the text. The top-down process, on the other hand, assumes that an individual’s prior knowledge and expectations interact with his/her understanding of the text during reading. According to this approach, meaning drives reading and it proceeds from whole to part.

Two popular theories based on the bottom-up model are Gough’s (1972) Reading Model and the Theory of Automatic Information Processing by LaBerge and Samuels (1974). Learning to read involves increasing automaticity in processing word units (e.g., letter–sound correspondences), processing these units into recognizable words, and connecting the words while reading a passage (LaBerge & Samuels, 1974). According to Gough (1972) readers begin by identifying sounds in words and then stringing together sounds to identify words. Thus this helps the reader to put the words together to infer the

meaning of the text. LaBerge and Samuels (1974) introduced the concept of automaticity or the ability to recognize and decode words immediately and without hesitation. According to their model if reading occurs without much stress on decoding then improved comprehension will result.

The top-down model focuses on higher-level processes interacting with the inflow of information. Several conceptualizations of this process exist (Goodman, 1976; Kolars, 1972; Levin & Kaplan, 1970). All these theorists share a common view about top-down processes. According to them, readers engage in active hypothesis testing as they read the text. These theories assert that readers sample the textual information to verify their hypotheses, therefore the reading process is driven by higher level processes rather than lower level stimulus analysis.

All these theories emphasize readers' experiences, linguistic exposure, and the ability to string sounds together, but there are other theories, which focus on teaching letter sound correspondence to develop reading ability. There has been significant research on the aspects which impact reading. There is some evidence which points towards phonological awareness as a key to reading success (Stanovich, Cunningham, & Cramer, 1984; Stanovich, Cunningham, & Feeman, 1984). According to Chall (1983, 1996), reading development has certain stages and a child moves through these stages to become a proficient reader. Chall's model has explicitly described what a child experiences when he moves through these stages.

Stages of Reading

There are six stages in Chall's reading development model. Stage 0 (up to age 6) is a pre-reading stage that is characterized by children's growth in knowledge and use of spoken

language. Increasing control of words (vocabulary) and syntax is apparent. In addition, children acquire some beginning understandings of the sound structures of words. For example, they learn that some words sound the same at the beginning (alliteration) and/or the end (rhyme), that spoken words can be broken into parts, and that the parts can be put together to form whole words. Most children also acquire some knowledge of print at this stage.

In Stages 1 and 2 (Grades 1-3), children learn the letters of the alphabet and the correspondences between the letters and the sounds that they represent. By the end of Stage 1, children acquire a general understanding of the spelling-sound system. By Stage 2 (Grades 2-3), confirmation of what was learned in Stage 1 takes place and children learn to apply the knowledge gained in Stage 1 to read words and stories. Children learn to recognize words composed of increasingly complex phonic elements and read stories composed of increasingly complex words. At this point, children are ready to make the important transition from "learning to read" to "reading to learn."

In Stages 3 and 4 (Grades 4 –12), children begin to move from narrative to expository text. Thereby children are exposed to more information, which enhances their thoughts and experiences. Growth in word meanings (vocabulary) and background knowledge are primary goals of this stage. Children read selections from an increasingly broad range of materials (e.g., textbooks, magazines, encyclopedias) about an increasingly broad range of topics (e.g., history, geography, science). Most reading is to acquire new facts, concepts, or procedures. In Stage 4 (High School), students must deal with more than one viewpoint. Dealing with more than one set of facts, competing theories, and multiple interpretations provides not only

multiple viewpoints, also knowledge of how to acquire new points of view and how to acquire increasingly complex concepts.

At Stage 5 (age 18 and above), the highest stage of reading development, readers can read materials in the degree of detail and completeness that is needed to serve their purposes. Readers select materials to serve their purposes; they know what not to read as well as what to read. They analyze, synthesize, and make judgments about what they read. At this stage, reading is constructive. The reader constructs knowledge and understanding from reading what others have written.

Chall (1983, 1996) suggested that students who are unable to make a transition from Stage 2 to Stage 3 are usually the ones experiencing difficulties in academic success. These are the students who struggle in the area of recognizing increasing complex phonic elements, which makes it difficult for them to read complex text. Thus lack of exposure to a wide variety of texts further impedes their awareness about various topics, thereby impacting their academic progress.

Essential Aspects of Reading Instruction

According to National Reading Panel (NRP; National Institute of Child Health and Human Development, 2000), one of the primary goals of reading is fluency, which is defined as the “ability to read orally, with speed, accuracy and proper expression.” (NRP, 2000, p. 11). In a study conducted by the NRP (NICHD, 2000), the results indicated that after the primary grades, an increase in reading complexity often causes students to experience difficulty in schoolwork even if they have done well previously. Students with inadequate fluency are likely to avoid both oral and silent reading because of fear of failure. These

students who avoid reading are less exposed to new ideas and vocabulary, which may impact their academic and intellectual footing (Worthy & Broadus, 2002). The NRP (NICHD, 2000) also found a strong correlation between fluency and comprehension.

Perfetti (1977) suggested that slow word processing speed interferes with reading automaticity, which therefore affects comprehension. Thus, both rapid reading of high-frequency words and rapid decoding as a means to enhance text understanding appear critical for typical reading development (Fuchs, L. S., Fuchs D., Hosp, & Jenkins, 2001; Kuhn & Stahl, 2003; Meyer & Felton, 1999).

According to the National Reading Panel report (NICHD, 2000), the five areas crucial for reading instruction are Phonemic awareness, Phonics, Fluency, Vocabulary, and Comprehension. Thus all these areas play a pivotal role in becoming a proficient and fluent reader.

Phonemic awareness refers to understanding different sounds of spoken language, which work together to make words. Phonemes constitute the smallest unit of spoken language. The English language consists of about 44 phonemes and these combine to form syllables and words (Spencer, 2007). Some words consist of one phoneme like “a,” but most words consist of a blend of phonemes; for example, the word “ship” has 3 phonemes /sh/ /i/ /p/. It is also essential to understand the difference between phonemes and graphemes. Graphemes are written or printed representations of phonemes. The relationship between a grapheme and a phoneme is a letter–sound correspondence. For example the word ship has 4 graphemes (s, h, i and p). Therefore phonemic instruction aids in reading comprehension through its influence on word reading.

Phonics refers to the relationships between the letters (graphemes) of written language and the individual sounds (phonemes) of spoken language. This also aids in children's knowledge of systematic and predictable relationships between written letters and spoken sounds. This symbol-sound relationship helps in recognizing familiar words accurately and automatically, and also in decoding new words. Thus phonic instruction contributes to children's ability to read words both in isolation and in connected text.

Fluency is another important component of reading instruction. Fluency is the ability to read text accurately and quickly. Fluent readers can group words quickly, thus they do not have to concentrate on decoding words and can focus on what text means. A study by the National Assessment of Educational Progress found that 44% of the students in a sample representative of the nation's fourth graders were low in fluency (NICHHD, 2000). The study found that students who scored low on measures of fluency also scored low on measures of comprehension, suggesting that fluency is a neglected skill in many American classrooms and therefore affects students' reading comprehension.

Vocabulary also plays an important role in reading and comprehension. It refers to the words we must know to communicate effectively. In the early stages of learning to read, most readers rely on their oral vocabulary to make sense of words they see in print. As readers begin to read advanced texts, they need to learn meanings of new words, which are not part of their oral vocabulary, to become effective readers.

Comprehension is the culmination of all of the reading skills and ultimate goal of learning to read. Comprehension involves accurately drawing meaning from the written text. Mastery of the four areas discussed above enables comprehension. According to the NRP (NICHHD, 2000), comprehension is an active process that requires an intentional and

thoughtful interaction between the reader and the text that can be explicitly taught through text comprehension instruction.

Difficulties in Reading

Different aspects may influence the comprehension of reading material. In research by Gough and colleagues (Gough & Tunmer, 1986; Hoover & Gough, 1990), these variables are divided in two categories: (a) those pertaining to skill in reading words, and (b) those pertaining to skill in parsing sentences and integrating the results of parsing into the reader's knowledge base. Decoding is essential, but not sufficient, to identify words in print form. While decoding helps in translating print into language, comprehension is necessary in making sense of this linguistic information.

Research has shown that poor comprehenders have deficits in the areas of receptive vocabulary and semantic processing (Nation & Snowling, 1998a, 1998b, 1999). The results of these studies also found that poor comprehenders showed difficulties in grammatical understanding of sentences. Nation and Snowling (1997) found that 7 to 9 year-old poor comprehenders also had difficulty answering questions. In a study by Cain, Oakhill, Bryant, and Barnes (2001), 8 year-old poor comprehenders and age-matched typical readers were taught a lesson about an imaginary planet. After this lesson was taught to criterion, children were read a six-episode story about the planet, and then tested on literal and inferential questions. Typical readers recalled more literal information and made more correct inferences than poor comprehenders. This study ruled out lack of knowledge and memory problems as primary causes of poor comprehension and inference-making difficulties (also see Cain, Oakhill, & Elbro, 2003; Oakhill, Cain, & Bryant, 2003).

Tasks that require phonological awareness, such as identifying the first sound in a word, blending phonemes into a word, or analyzing the constituent sounds in a word, are often identified as effective predictors of reading development (Brady & Shankweiler, 1991). Some children may exhibit poor comprehension in the absence of problems with word reading. These children experience difficulties in inference making rather than decoding. Most of the research has focused on children identified with reading disabilities (Catts & Kamhi, 2005; Shaywitz, 2003; Vellutino, Fletcher, Snowling, & Scanlon, 2004) and most of this work has been directed more towards specific deficits like dyslexia. Some researchers have also begun to investigate children with comprehension difficulties (Cain et al., 2001; Nation, Clarke, Marshall, & Durand, 2004). These children exhibit significant deficits in reading comprehension despite their near-normal abilities in decoding. Research suggests that almost 5% to 10% of children may show similar patterns in reading difficulty (Nation & Snowling, 1997; Yuill & Oakhill, 1991).

Emergence and Identification of Learning Disabilities

The original definition of a learning disability was “a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subject resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors.” (Kirk, 1962, p. 263). Kirk (1963) associated learning disabilities with children who had disorders in the development of language, speech, reading and associated communication skills needed for social interaction. Around 1968, “specific learning disability” was added as a federally

designated category of special education (U.S. Office of Education, 1968). The definition for learning disability did not change until 1977, when another inclusionary area was added, that is discrepancy between achievement and intellectual ability, for each of the areas in which learning disability could occur. These areas were (1) oral expression, (2) listening comprehension, (3) written expression, (4) basic reading skill, (5) reading comprehension, (6) mathematics calculation, and (7) mathematical reasoning (United States Office of Education, 1977, p. G1082). In addition, the definition explicitly stated that other disabilities (e.g., sensory disorders, mental retardation) and conditions such as environmental, cultural or economic disadvantage could not be considered as primary reasons in identifying a learning disability. These criteria led school districts to use psychometric tests in determining eligibility for learning disability. This procedure of using a discrepancy model measures a child's IQ as part of his/her eligibility for special education services. In order for the child to qualify for special education services there has to be a significant discrepancy between his/her academic performance and his/her intellectual ability (as measured by IQ). More recently, this approach has been widely criticized and also referred to as a "wait to fail" model (Donoven & Cross, 2002; Fuchs, Mock, Morgan, & Young, 2003) because children had to be performing well below their ability level to be considered eligible for receiving help in special education programs. This lag in providing appropriate intervention to these students further increases the achievement gap and thus these students rarely catch up even with individual support (Brown & Doolittle, 2008).

Fuchs (2003) proposed a dual discrepancy model that considered the child's level of achievement and rate of growth and how these were impacted by intervention. In 2004, the U.S. Congress reauthorized the Individuals with Disabilities Act of 1997. This revised law

reinforced closer interaction between regular classroom and special education programs. IDEA 2004 permits the use of an alternative identification process, which starts early and assesses how well students respond to evidence-based intervention. This alternative method is termed Response to Intervention (RTI). In the RTI process, schools make informed decisions as early as possible by identifying students exhibiting learning and behavioral problems. After identifying these students, their learning environments are modified to address their difficulties (Stepanek, 2008). The RTI process involves systematic monitoring of students' responses to these modifications, thereby identifying students not benefitting from instruction. These students are then provided evidenced based intervention and, based on their response, the intensity and the focus of the intervention are adjusted (Johnson, Mellard, Fuchs, & McKnight, 2006).

The National Research Center on Learning Disabilities (NRCLD) (Mellard, 2007) described the common features present in RTI implementation.

- 1) Multiple tiers of increasingly intense interventions. Usually RTI is a three-tier process. The first tier of intervention focuses on core curriculum and general classroom instruction that all students receive. The second tier is for students whose performance is below expected levels and therefore requires intervention to keep them from falling further behind. The third tier focuses on those students who have not progressed after getting intervention in previous tiers. This is the tier in which students often go through further evaluations to identify specific learning disabilities (Stapanek, 2008).
- 2) Implementation of differentiated curriculum. At the second and third tiers students receive intervention based on differentiated curriculum or instructional

strategies. The interventions for students are chosen considering which strategy aligns more appropriately to their needs.

- 3) Instruction delivered by personnel other than classroom teachers. At tier one, classroom teachers provide similar instruction to all students. At tiers two and three the classroom teachers collaborate with other school personnel like Title 1 teachers or reading strategists thereby coordinating classroom instruction with intervention. At these tiers other school personnel like reading teachers also deliver instruction.
- 4) Variation in the duration, frequency, and time of interventions. The different intervention tiers vary in staff roles, duration, frequency and other features. All these are clearly described in school's RTI system and help students, teachers and parents to understand what the course of intervention looks like.

RTI models ensure that students receive high quality evidence-based instruction in general education classrooms. If the student does not respond to classroom instruction then further intensive intervention is planned for him/her. The student's progress is monitored regularly and if he/she responds well, the school may withdraw the support and return the child back to regular instruction. However if the student does not respond well he/she may be provided more intensive interventions. If the student continues to struggle after additional support is provided, he/she may be ultimately referred to special education. At all these tiers consistent communication with parents is very essential (NRCLD, 2006).

Thus the RTI model provides intervention based on the student's needs, which further helps in overcoming the "wait to fail" situation. By providing timely intervention, the RTI model helps in reducing the number of students falling behind. It helps in identifying

students who need special education services in a timely manner, thereby providing them intervention. It also helps in identifying students who are not achieving academic goals due to lack of instruction instead of disability and thereby preventing these students' referral to special education.

Origins of Late Emerging Reading Disabilities

Over the years there has been a lot of emphasis on disabilities that emerge early in children's school experiences. Even though children's reading competency develops throughout the school years, the majority of the emphasis in reading has been placed on the primary years. Chall (1983) argued that even though there are significant numbers of students who experience reading disability (RD) in their early years, there are some students who show difficulty after fourth grade. This phenomenon has been referred to as the "fourth grade slump." As a child moves to the upper elementary grades, the academic subjects become increasingly challenging and so do the expectations. According to Chall (1983), the main focus during the primary grades is "learning to read" and thereafter it becomes "reading to learn." Juel (1991) reported that initially children often rely on memorization of words and thus succeed in the early primary grades. However, they begin having difficulty in higher grades when words become phonologically and morphologically complex.

Also as a child moves through the primary grades, there is a shift from word recognition and spelling towards comprehension skills. This is when academic demands on the child increase exponentially with regards to vocabulary, conceptual text and comprehension. At this stage a student's below average performance on reading comprehension is a sign that he/she may have fallen behind despite successful acquisition of

initial reading skills. This often goes undetected in schools because some children may have been doing well in the early elementary grades but with increased academic challenges, they begin to show signs of decline in their performance. In the primary grades if students' acquisition of word recognition skills is not developing appropriately they are often referred for evaluation to assess the need for special education. Most young children identified with a reading disability are classified on the basis of lower word processing skills rather than comprehension (Nation & Snowling, 1997; Yuill & Oakhill, 1991). The following section summarizes the existing body of research on Late Emerging Reading Disabilities.

Existing Research on Late Emerging Reading Disabilities

Currently there is limited research available in the area of Late Emerging Reading Disability. Some researchers have also referred to Late Emerging Reading Disability as fourth grade slump (Chall and Jacobs 2003). Research findings on Late Emerging Reading Disabilities document deficits in the areas of word processing, comprehension or both. Some researchers have suggested Late Emerging Reading Disabilities are more common among populations of disadvantaged children. According to Chall and Jacobs (2003) children from disadvantaged families have less exposure to higher-level vocabulary and reading content, which thereby impacts their reading comprehension in higher grades. In the following sections, current research findings on Late Emerging Reading Disabilities are described followed by concerns in the area.

Conventional Perspective

Leach, Scarborough, and Rescorla: Nature and types of late emerging reading disabilities. Leach et al. (2003) studied students with early identified and late identified

reading disabilities to examine the degree of heterogeneity in the various components of reading. The study involved 161 participants with 74 fourth graders and 87 fifth graders from 12 elementary schools in two neighboring districts. Six of the schools served affluent neighborhoods and the other six belonged to diverse socioeconomic groups. The participants were selected on the basis of information provided by their parents. The research further narrowed down the eligible participants by establishing specific criteria. Each child had to be a native English speaker, enrolled in the school district before second grade, parents of these participants had to give consent for future contact, and all the participants had to have a full-scale IQ score above 70.

On the basis of school records and information from parents, students were assigned to one of five groups: Early school identified-persistent, Early school identified-transient, Late school identified, Parent concern, and No history. All the students from the Late school identified group and the Parent concern group were selected, however only 50% of students were selected from other groups. Each child was assessed individually for reading related skills, abilities and attitudes. Along with this, past data were also collected for the same skills from school records. Because the study's goal was to measure individual differences, the tests were administered in the same order so that potential effects of fatigue would be similar throughout.

The analysis of the data collected was done in six strategic steps. The first step identified students with reading deficits, which was followed by assigning participants to different reading groups based on deficits, such as reading comprehension deficit, word level deficit, deficit in both comprehension and word level reading, or no reading deficit. In the third step these groups were compared based on their performance in the areas of literacy. In

the fourth step the students with reading deficits were compared based on their educational histories and reading deficit group status and it was found that most of the cases overlapped based on school records and researchers' findings. However there were twenty-two students who had reading deficits but were not identified by the school. In the fifth step students with late and early emerging disabilities were compared on the measures that were used for assessment to identify a profile of students identified early versus late. Finally students' standardized test scores were compared to their current performance to identify the reading achievement of the sample to the district it was drawn from.

The hypothesis of the study was that most of the fourth and fifth graders with late identified reading disabilities would have difficulty in the area of comprehension. However the results showed that 35% students had word level processing deficits with adequate comprehension levels, 32% students had poor comprehension skills and appropriate word level skills. The remaining 32% of the students exhibited difficulties in the area of comprehension and in word level processing skills. The researchers were also interested in looking at how the early identified and late identified groups differed in the severity of their reading difficulties. The results indicated that children in both categories had similar profiles with respect to the area of deficits. This result provided limited support for the research hypothesis regarding the severity of difficulties in the early and late identified groups. The study revealed that students who demonstrated reading disabilities in later elementary grades did not demonstrate deficits in early elementary grades. Thus, the researchers suggested educators should be alert for students who were successful in earlier elementary grades but show an abrupt dip in their scores in the intermediate grades.

Catts, Adolf, and Weismer: Language deficits in poor comprehenders. Catts, Adolf, and Weismer (2006) studied children with specific comprehension deficits and compared them to typical readers and children with specific decoding deficits. The researchers also used the underlying principle of the “Simple View of Reading” which states that poor comprehenders have normal phonological processing abilities and poor decoders perform poorly on phonological processing but relatively better on comprehension. This study was divided in two parts. The students who took part in this study were also a part of an epidemiologic study of language impairments in kindergarten. All those children who displayed language impairments were selected to participate in this study. Non-impaired children were also selected to take part in this study to identify the patterns displayed by poor and good readers.

Study 1 compromised three groups of eighth graders: 57 children with poor reading comprehension but normal word recognition, 27 children with poor word recognition but normal comprehension and 98 children with normal word recognition and reading comprehension based on reading comprehension and word recognition composite scores in eighth grade. All these students were tested on eighth grade measures of language comprehension and phonological processing. The results of this study revealed that poor comprehenders (identified based on reading achievement in eighth grade) displayed deficits in the area of language comprehension but normal abilities in phonological processing. The children with poor phonological awareness performed poorly in that area but did relatively well on reading comprehension. The results also suggested that poor comprehenders have difficulty in drawing inferences when compared to typical readers and poor decoders and this can be due to problems in working memory. The results of this study were in accordance

with the Simple View of Reading theory. However this led to another question about whether these distinctions in students were primarily present in eighth grade or were present in earlier grades too.

In Study 2, the researchers studied the disparity among the groups in earlier grade levels. This being a longitudinal study, data for participants were also gathered in kindergarten, second and fourth grades in the areas of language comprehension and phonological processing. The results showed that students who were poor comprehenders in eighth grade were also experiencing difficulties in reading comprehension in early elementary grades. The study also suggests that students identified as poor decoders in eighth grade scored in the normal range in language comprehension in earlier grades. However poor decoders displayed deficits in the areas of phonological processing in early elementary grades and these were similar to deficits seen in eighth grade. Looking at the results of both the studies it is evident that even though poor comprehenders may have been experiencing difficulties in early elementary grades, these deficits in early grades did not meet diagnostic criteria and therefore may not have been clinically evident. Thus, poor decoders and poor comprehenders may be less likely to be differentiated on the basis of reading comprehension in the early grades.

In order to help identify children with deficits in a timely manner Catts et al. have suggested that children be classified based on the Simple View of Reading. That is, children should be categorized based on their strengths and weakness in the areas of word recognition and reading comprehension. This system will help in identifying children with deficits in the area of reading and in providing early intervention, thereby reducing the intensity of these problems.

Lipka, Lesaux, and Seigel: Retrospective analyses of grade 4 students' reading development. Lipka et al. (2006) conducted a longitudinal study to understand the trajectory of reading development within a group of children with reading disability (RD) who were followed from kindergarten through fourth grade. There were a total of 44 children selected from 18 schools in one school district in Canada. Twenty-two children in this sample were typically developing (TD) readers and the other 22 were classified as reading disabled (RD). The children were classified based on their performance on Wide Range Achievement Test-3 reading subtests. If the children in the sample performed below the 25th percentile they were classified as belonging to the RD group and if their performance was at or above the 30th percentile they were classified as TD. Examining the different trajectories of the RD group, three subgroups emerged from the research. Poor readers (PR) scored below the 25th percentile on the reading subtest for all five years. Borderline readers (BR) were the students whose scores fluctuated between the 25th and 35th percentile from kindergarten through third grade. Late Emerging Reading Disabled students performed above the 35th percentile from kindergarten through third grade. The analysis revealed that 32% of the RD children belonged to the PR subgroup, 32% belonged to the BR subgroup, and the remaining 36% belonged to the Late Emerging Reading Disability subgroup. The results also showed that, when compared to typical readers, children who were classified as belonging to the Late Emerging Reading Disabled group did not display any significant differences in their scores on the WRAT-3 in grades one and two. However by grade three Late Emerging Reading Disabled subgroups scores fell below 25th percentile.

The PR group performed lower than all subgroups on different reading measures over five years. The BR group also displayed below average performance in different reading

subtests of WRAT-3, but they displayed some fluctuation in their performance compared to PR group. The Late Emerging Reading Disabled group displayed the most unusual characteristics, they showed a significant decrease in their word-reading and word-attack skills compared to typical readers. Also the findings revealed that the Late Emerging Reading Disabled group displayed phonological difficulties in grade three and four much later than RD group. The students in the Late Emerging Reading Disabled group also showed variability in their comprehension scores. The researchers in this study emphasized longitudinal testing of children with reading disabilities and increase awareness among educators about the students whose scores begin to decline after fourth grade.

Compton, Fuchs, Fuchs, Elleman and Gilbert: Latent transition modeling of students with late emerging reading disability. Compton, Fuchs, L. S., Fuchs, D., Elleman and Gilbert (2008) studied a sample of 177 children who had participated in a longitudinal project sponsored by the National Research Center on Learning Disabilities. In this study the researchers focused on response to intervention (RTI), which consists of a multitier structure of providing intervention. The purpose of the present study was to focus on identification of children who did not display signs of reading difficulty until the intermediate grades. Data were collected from first through fourth grade for 177 participants selected from 42 first grade classrooms in sixteen schools from two school districts. All students were screened on tests of word processing, letter naming and phonological processing. Based on their performance, six poor readers were selected from each class. Initially during the study, word identification fluency was used as a measure to assess reading growth in the first grade, followed by measures of reading outcomes at the end of first, second, and fourth grade.

The researchers used latent transition modeling to analyze data from first to fourth grade and from second to fourth grade. The latent transition model helped the researchers gauge the performance of the participants at the end of first grade and to identify students who were typically developing (TD) and those who showed evidence of a reading disability (RD). The students who fell in the TD category at the end of first grade were classified again at the end of second and fourth grade as belonging to the TD group or the RD group based on their performance. At the end of the first grade 163 students were identified as TD and the other 14 students belonged to RD group. Amongst the 163 students, 155 were categorized as TD at the end of fourth grade and eight children transitioned to the RD group. This was done in order to identify children who transitioned consistently from first grade to second and then to fourth. The results revealed that TD status and RD status were fairly stable across time with only five children transitioning from TD to RD. These five children did not show any signs of disability during first and second grade, however they transitioned to the RD group at the end of grade four. Also the results showed that five children who were later identified as RD received tutoring in the first grade. The researchers suggested that perhaps the tutoring given to these students helped them develop skills to stay in the TD group in grade 2; however these students were unable to cope with increasing demands placed on comprehension and reading in fourth grade and transitioned to RD. The observation that these students' performance was in the normal range in first and second grade, but below normal in fourth grade indicates that the reading difficulties of these children were not late identified, but late emerging.

Alternative Perspectives

Chall and Jacobs: Poor Children's Fourth Grade Slump. Chall and Jacobs (2003) gave a new insight by studying the differences in the reading test scores of economically advantaged and economically disadvantaged children, as well as examining how the gaps increased with age for children who are economically disadvantaged. Their sample of 30 students was drawn from a small city in the industrial northeast. Ten students each were chosen from grades 2, 4, and 6 and followed for two years; all these students had low-income status. Each participant was tested in the areas of reading and language. The results of the study revealed that all the children from low-income groups performed as well as the normative population in grades 2 and 3. However in grade four there was a downward trend in students' scores. The area that was impacted most was word meanings, followed by reading comprehension and oral reading. One possible reason suggested for this slump was lack of automaticity and fluency. The findings also revealed that students' vocabulary began to decelerate in grade four however their comprehension scores were quite comparable to grade level peers until grade five. These students began struggling in comprehension by grade six. Thus it can be hypothesized that these children were using contextual information to compensate for poor vocabulary and thereby succeeding in comprehension until the later elementary grades. In conclusion it was suggested that students who display difficulties in reading in intermediate grades will later have difficulties with content study.

Current Status of Late Emerging Reading Disability

The studies described above reflect converging evidence that there exists a valid construct, now known as Late Emerging Reading Disability. Other studies, not primarily

focused on the construct of Late Emerging Reading Disabilities have also reported similar findings. One major concern in the area of identification of reading disability is the issue of stability. In a longitudinal study of identifying students with dyslexia, Shaywitz, S. E., Escobar, Shaywitz, B. A., Fletcher, and Makuch (1992) discovered that only 28% of students classified in grade one as dyslexic were also found to be dyslexic in grade three. Thus they inferred that the diagnosis for dyslexia varies from year to year and therefore lacks stability.

In this longitudinal study with a representative population sample, Shaywitz et al. (1992) found that 42% of fifth graders with RD had late-emerging reading disability. Shaywitz et al. (1992), Leach et al. (2003) and Lipka et al. (2006) have also observed that a lack of age appropriate phonological processing after grade 2 often leads to poor reading at the age appropriate word level in grade 4 because with increasing word complexity these children start faltering in reading. This finding is also consistent with Juel's (1991) argument that some children often rely on memorization of words initially but this strategy becomes ineffective in higher grades. Leach et al. also reported that the reading skill deficits (e.g., word reading, reading comprehension, vocabulary) of the late-emerging group were as severe as those of the children in the study who had early-emerging deficits. In order to confirm the hypothesis, Leach et al. examined the school records of the late emerging group and found that these students' early reading performance was almost at par with the typical readers in that sample. These findings suggested that the reading difficulties were not just identified late but actually emerged late.

The current models available for early identification of students who display reading deficits in later elementary school are inadequate (Catts et al., 2005). According to Compton et al. (2008), the inability to identify early indicators of Late Emerging Reading Disabilities

poses a significant challenge to the benefits of early identification included in RTI models. Although evidence exists about the characteristics of children with Late Emerging Reading Disabilities (Leach et al., 2003; Lipka et al., 2006), there is no research on early indicators, which can help in designing an intervention program to prevent late-emerging difficulties.

When defining dyslexia one focuses on the reading achievement of a child and thus children whose reading difficulties are not apparent often are undetected (Scarborough, 1990). The population of children with significant reading difficulties is often at risk for negative life outcomes such as depression, unemployment, homelessness and suicide (Lipka et al., 2006). Thus it is essential for educators to be aware that there exist a significant number of students whose reading performance is in the normal range in the early elementary grades but declines below the normal range in or after fourth grade (Leach et al., 2003; Lipka et al., 2006). The research in the field of Late Emerging Reading Disabilities is quite limited as of now and most of it focuses on the students. We know little about teachers' awareness of Late Emerging Reading Disabilities or the interventions they would recommend for use with this population of students. All of this makes it imperative to fill in the gaps that exist in the field and thereby increase awareness about Late Emerging Reading Disabilities.

This study addressed these issues by examining the following research questions:

1. To what extent do the perceptions of early elementary teachers differ from intermediate elementary teachers regarding children identified with reading difficulty in early elementary grades compared to those identified in intermediate elementary grades?

2. How do early elementary and intermediate teachers prioritize intervention in the five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary and Comprehension) based on the early or late identification of the student?
3. Which factors along with five areas of reading do early elementary teachers and intermediate elementary teachers perceive to be associated with reading difficulties?
4. How aware are the elementary school teachers about Late Emerging Reading Disabilities?

CHAPTER 3. METHOD

The purpose of this study was to measure differences in the perceptions of early elementary and intermediate elementary teachers regarding providing instruction and intervention in the five areas of reading. The survey items required teachers to differentiate between the instructions they would provide to a student identified as experiencing reading difficulty in early elementary grade versus a student identified in later elementary grade. The study also identified the extent to which teachers believed in the existence of Late Emerging Reading Disabilities and the causes associated with this phenomenon.

Participants and Setting

The target population for this study was elementary school teachers teaching in public schools in six Central Iowa school districts for the 2010-2011 academic year. These six school districts were selected because the researcher or her committee members had contacts at each of these schools. Thus, this was a convenience sample. For the purpose of this study, school district offices were contacted regarding the research proposal, which had been approved by Institutional Review Board at Iowa State University (see Appendix A). After receiving approval from each of the six school districts, the survey was sent to school administrators who forwarded it to the potential participants. All the teachers who participated were employed in public elementary schools in Central Iowa school districts. The study included full time general education teachers and special education teachers teaching grades one through six. Substitute teachers, as well as teachers of “specials” (art, music, physical education) were not part of the target population.

Teachers were asked to complete the following demographic information: gender, years of experience, grade level currently teaching, teaching endorsements currently held and highest level of education. Table 1 summarizes the demographic characteristics of early elementary and intermediate elementary teachers. The majority of the respondents for this study were females. In the current sample 73% of teachers belonged to early elementary group and the other 26% were intermediate elementary teachers. The teachers in both the groups did not always add up to the total number because some respondents did not answer all the demographic questions.

Table 1
Demographics

| | Early Elementary (1-3) <i>N</i> =58 | Intermediate Elementary (4-6) <i>N</i> =21 |
|-----------------|--|---|
| Gender | | |
| Male | 1 | 1 |
| Female | 56 | 19 |
| Past Experience | | |
| 0-2 | 6 | 4 |
| 3-5 | 14 | 4 |
| 6-10 | 14 | 6 |
| 11-15 | 10 | 2 |
| >15 | 14 | 5 |

| | Early Elementary (1-3) | Intermediate Elementary (4-6) |
|--------------------------------|------------------------|-------------------------------|
| | <i>N</i> =58 | <i>N</i> =21 |
| Teaching endorsements/licenses | | |
| Elementary education | 57 | 19 |
| Early childhood education | 14 | 5 |
| Special education | 13 | 7 |
| Reading endorsement | 33 | 10 |
| Middle school endorsement | 4 | 2 |
| Others | 15 | 6 |

Instrument

All the participants were assessed using a researcher-developed survey instrument. The participants received an email (containing a link to the online survey) sent by the school administrator. The survey consisted of three sections (see Appendix B). Section 1 explained the purpose of the study, described the researcher's expectations of the participant teachers, and informed participants of their right to decline or withdraw at any time. Participants who declined to give consent to participate in the study were thanked for their time and not allowed to proceed to the survey. A complete copy of the survey is presented in Appendix B. Section 2 solicited information related to teachers' perceptions of students with reading difficulties and Section 3 sought demographic information.

Description of Survey Content

The survey consisted of nineteen questions targeting full time teachers at elementary schools in Iowa. The survey had seven demographic questions, seven rating scale questions and five open-ended questions. The frequently used terms in this questionnaire are lower elementary grades and intermediate elementary grades. The lower elementary grades are defined as the first through third grade and the intermediate elementary grades refer to the fourth through sixth grades. Even though the research was focused on Late Emerging Reading Disabilities, the researcher chose to use the term “difficulty” for the survey so as not to influence teacher’s perceptions. Had the researcher used the term “disability,” the teachers’ perceptions may have only focused on students with disabilities rather than student experiencing reading difficulties in the intermediate grades.

Following the presentation of survey information and consent procedures in Section 1, the questions in Section 2 transitioned from general to specific issues about reading difficulties experienced by elementary students. Survey questions (SQ) 2 and 3 gathered information about likelihood of identifying students in early elementary grades and in the intermediate elementary grades. A six point Likert scale was used, with responses including Always (5), Often (4), Sometimes (3), Rarely (2), Never (1), and Don’t Know. In order to understand how teachers would prioritize the area of reading instruction for students in the early elementary grades, SQ4 asked teachers to rate each of the five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary and Comprehension) using a five point Likert scale, with responses including Essential (5), High Priority (4), Medium Priority (3), Low Priority (2), and Not a priority (1). SQ5 provided teachers with a case study of a 7 year old struggling with reading in grade 1. Specific information about difficulties experienced by

the student along with factors which may not be responsible for the student's difficulties were also explained in detail to avoid any confusion. Based on this information, teachers were asked to prioritize reading instruction in the five reading areas for the case study student using the same Likert scale as for SQ4. SQ6 was an open-ended question, which asked teachers to fill in the number of hours they would devote to intervention for the student mentioned in the SQ5 case study.

In order to understand how teachers would prioritize the areas of reading instruction for students who first display reading difficulties in the intermediate elementary grades, SQ7 asked teachers to mark the five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary and Comprehension) using a five point Likert scale with response options including Essential (5), High Priority (4), Medium Priority (3), Low Priority (2), and Not a priority (1). Following the same pattern as for SQ5, SQ8 provided a case study of a 10 year old, who begins struggling in reading and comprehension in grade 4. Specific information about difficulties experienced by the student along with factors which may not be responsible for the student's difficulties were also explained in detail to avoid any confusion. Teachers were asked to prioritize reading instruction for the case study student in the five reading areas using the same Likert scale as for SQ7. SQ9 was an open-ended question, which asked teacher to fill in the number of hours they would devote to intervention for the case study student mentioned in SQ8. SQ10 asked teachers to identify to what extent each of a list of factors were associated with students' reading difficulty in grades 4 through 6. A four point Likert scale was used, with response options including To a great extent (4), Somewhat (3), Very Little (2), and Not at All (1).

SQ11 and SQ12 were open-ended questions. SQ11 gathered information regarding teachers' opinions regarding which factors impact late emerging reading disability. SQ12 asked teachers to indicate if they had encountered a student who first displayed reading difficulties in the intermediate grades and, if so, to explain how they responded to this student.

Section 3 posed questions related demographics, which were used to identify teachers as belonging to the early elementary or intermediate groups. This section also gathered information about teachers' education, qualifications, and number of years taught. The last question SQ20 in Section 3 was an open ended question which asked teachers if they had heard about Late Emerging Reading Disability and if so, from where.

Pilot Process

As a confirmatory step in the refinement process, a draft of the survey instrument was piloted prior to data collection. The pilot study was conducted with the assistance of an elementary school principal, who randomly selected six teachers in his building teaching grades one through five. All teachers were given the web survey and asked to provide feedback on the clarity and relevance of the items and to recommend improvements. Based on their feedback, modifications were made to the survey instrument. One of the suggestions provided by teachers was regarding using one male and one female student for each case study. The teachers also suggested adding more information about the students in case study to eliminate any confusion among teachers. Also teachers suggested using a female teacher for one case study and a male teacher for the other.

Procedures

For the purpose of this study a non-probability sampling strategy was used for selecting the sample. After getting an approval from the Institutional Review Board (IRB), participants were contacted through their school administrators, who forwarded an email from the researcher. The email explained the purpose of the study and included a link to the online survey. The data were collected in two waves. After the initial responses from teachers in the first wave, the researcher sent school administrators an email requesting that they resend the survey link to the teachers.

Data Analyses

Demographic Information

For demographic information, the survey included questions on certain personal and professional characteristics of teachers including gender, school district, endorsements, teaching position, education completed, and past experience teaching grades 1 through 6. SQ13, which asked teachers to describe their past teaching experience, was used to classify teachers as belonging to the early elementary (grade 1 through 3) or intermediate (grades 4 through 6) groups. Teachers who explicitly stated experiences in only one of the groups (early elementary or intermediate elementary) were considered to belong to group they had marked. For example, if a teacher stated he/she had five years of teaching experience in early elementary grades and none in the intermediate grades, he/she was assigned to the early elementary group. If teachers had experience in both early elementary and intermediate elementary, they were categorized based on a minimum three years of experience as belonging to a specific group. For example, if a teacher had two years experience teaching

early elementary grades and six years teaching in the intermediate grades, he/she was assigned to the intermediate group. If teachers had three or more years of experience in both early elementary or intermediate, then they were considered part of a “mixed” group. For example, if the teacher had three years of experience teaching early elementary and four years teaching in the intermediate grades, he/she was assigned to the mixed group. If teachers had less than three years of experience in both the groups then they were also considered part of the mixed group. All teachers assigned to the mixed group were eliminated from the study. For the purpose of analysis only the early elementary and intermediate groups were included in the sample for data analysis.

Quantitative Data

Data entry, coding, and analysis were conducted using the statistical software STATA 9.0 for Windows, with the significance level for statistical tests set at $p < .05$. To begin with, frequencies were conducted to examine the data and look for discrepancies in the data. Data were cleaned of obvious errors.

Wilcoxon and independent sample *t*-tests were employed to examine significant differences in the responses between the two groups. Due to a smaller sample size, the nonparametric Wilcoxon test was also employed. The assumption that this test is not extremely restrictive to the shape of the population distribution was another factor for choosing this test. To overcome the disadvantages associated with nonparametric tests, independent sample *t*-tests were conducted. For the data from Section 2 of the survey, SQs 2 and 3 were assigned scaled responses from 1 to 5, with 1 representing Never and 5 representing Always. Responses of Don’t Know were excluded from the analysis. For SQs 4,

5, 7, and 8, the scaled item for each response was assigned a number from 1 (Not a priority) through 5 (Essential). For SQ10, the scaled item for each response was assigned a number 1 (Not at all) through 4 (To a great extent).

Qualitative data

SQs 6 and 9 in Section 2 were open ended and asked teachers to indicate the number of hours of intervention per week they felt was appropriate for the student presented in the case study. These questions seemed to have confused the participants, because some teachers responded to this question in hours and others appeared to have responded in minutes. Based on teachers' responses it was difficult to accurately interpret the data and therefore these items were dropped from the analysis. SQs 11 and 12 were open ended questions to which respondents were first asked to indicate yes or no, and then to provide detailed answers. Responses to SQ11 were based on factors teachers believe may be associated with reading difficulties in intermediate grades. The responses were assigned to eight categories, namely, Comprehension, Fluency, Vocabulary, Increased academic demands, Motivation, Inadequate support, Family, peer and environment influence, and Others. Responses to SQ12 were based on the kinds of intervention strategies used by the teachers who have encountered children experiencing reading difficulties in grades 4 through 6. The responses were grouped on the basis of the intervention provided and were categorized into five categories Specific reading intervention programs, Comprehension, Vocabulary, Fluency and Others. SQ 20 identified teacher awareness of the concept of Late Emerging Reading Disabilities. The responses were grouped based on the sources from which teachers gained information.

CHAPTER 4. RESULTS

The purpose of this study was to examine early elementary and intermediate elementary teachers' perceptions about students experiencing reading difficulties identified in the early elementary grades (1-3) compared to students identified with reading difficulties in the intermediate elementary grades (4-6). This study also examined the differences in teachers' recommended interventions in the areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary, and Comprehension) for students identified in early elementary as compared to those identified in intermediate elementary grades. In addition the study also looked at the factors (increase in academic demands, lack of parental support, previous coping strategies no longer successful, lack of appropriate instruction, lack of motivation and late onset of reading disability) that may be associated with children experiencing reading difficulty in the intermediate grades. The data source for this study was an online survey sent to teachers teaching in grades one through six in six elementary schools in Central Iowa districts. The online survey used rating scales and open-ended questions to collect data and address the research questions.

Teachers rated the likelihood and frequency of seven items related to Late Emerging Reading Disabilities. Descriptive statistics (reported below in conjunction with the results to specific research questions) were used to obtain frequencies, means and standard deviations for items on each scale. In addition Wilcoxon's rank-sum tests (normal approximation) and *t*-tests were performed to determine statistical differences between the two groups of respondents.

Research Question 1

Identification of Children with Reading Difficulty

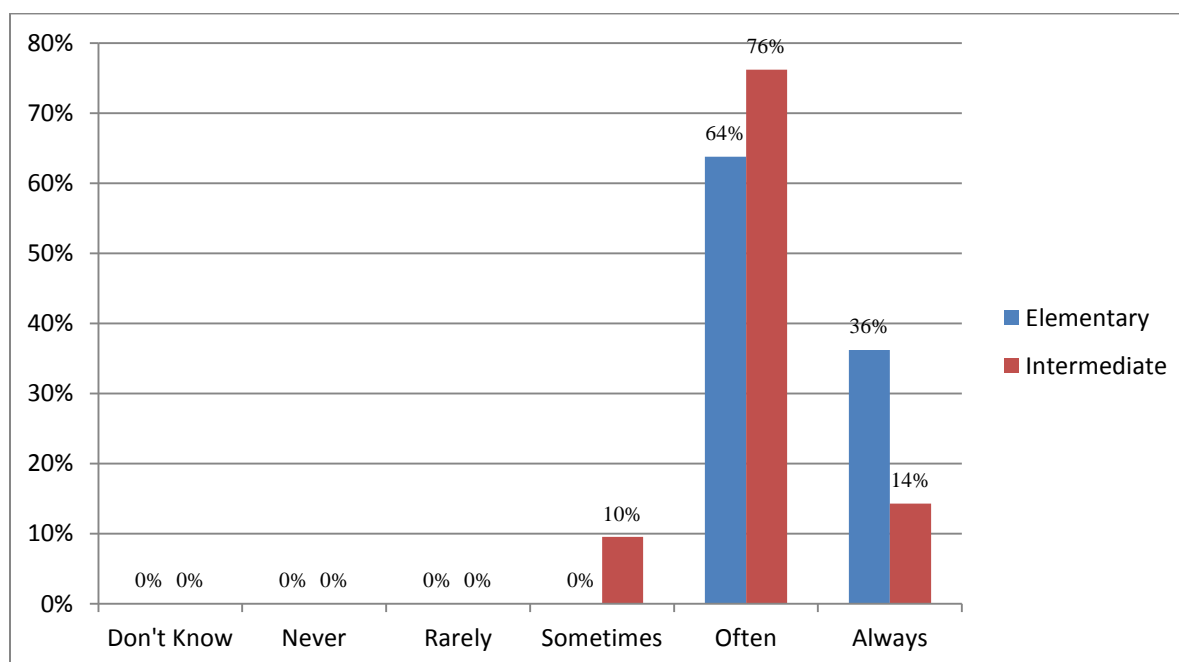
The first research question addressed issues related to the perceptions of early elementary and intermediate elementary grade teachers regarding the identification of reading difficulty in the early elementary versus intermediate elementary grades.

Two survey questions were used to explore this question. The first question (question 2 in the survey) stated, “If a child has difficulties in reading, what is the likelihood that these difficulties will first be identified in primary grades 1 through 3?” Teachers rated the likelihood of occurrence on a five point Likert scale (5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never). The results for this question are presented in Table 2. Both early elementary and intermediate elementary teachers had mean ratings close to “often.” Amongst early elementary teachers 64% responded “often” and the other 36% responded “always” to this question. The majority of intermediate teachers (76%) responded “often” to this question. The Wilcoxon results showed significant differences between the two groups, with early elementary teachers considering it more likely that a child with reading difficulty will be identified in grades 1 through 3; similar results were obtained for the *t*-tests. Results for this question are presented in Table 2 and Figure 1 shows a frequency distribution for the two groups of respondents.

Table 2

Identification in grades 1 through 3

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank- Sum) | <i>t</i> -test |
|-------------------------|----------|------|-----------|-----------|----------------------|----------------|
| Early Elementary | 58 | 4.36 | 0.48 | 2490.50 | $z = 2.311$ | $t = 2.5293$ |
| Intermediate Elementary | 21 | 4.05 | 0.50 | 669.50 | $p = 0.0208^*$ | $p = 0.0135^*$ |

* $p < .05$ *Figure 1.* Frequency distribution for likelihood of identification in grades 1 through 3

The other survey question related to identification (question 3 in the survey) stated, “If a child has difficulties in reading, what is the likelihood that these difficulties will first be identified in grades 4 through 6?” Teachers rated the likelihood of occurrence on a five point Likert scale (5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never). Results are reported in Table 3. Amongst early elementary teachers, 61% responded “rarely” and 30% responded “sometimes” to this question. Amongst intermediate teachers, 43% responded

“rarely” 38% responded “sometimes” and 19% responded “often” to this question. The Wilcoxon’s rank sum test and t -test revealed a significant difference between the two groups, with intermediate teachers considering it more likely that a child with reading difficulty will be identified in grades 4 through 6. Results for this question are presented in Table 3 and Figure 2 shows a frequency distribution for the two groups of respondents.

Table 3

Identification in grades 4 through 6

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank Sum) | <i>t</i> -test |
|-------------------------|----------|------|-----------|-----------|---------------------|----------------|
| Early Elementary | 56 | 2.39 | 0.71 | 2029 | $z = -1.993$ | $t = -1.9958$ |
| Intermediate Elementary | 21 | 2.76 | 0.77 | 974 | $p = 0.0463^*$ | $p = 0.0496^*$ |

* $p < .05$

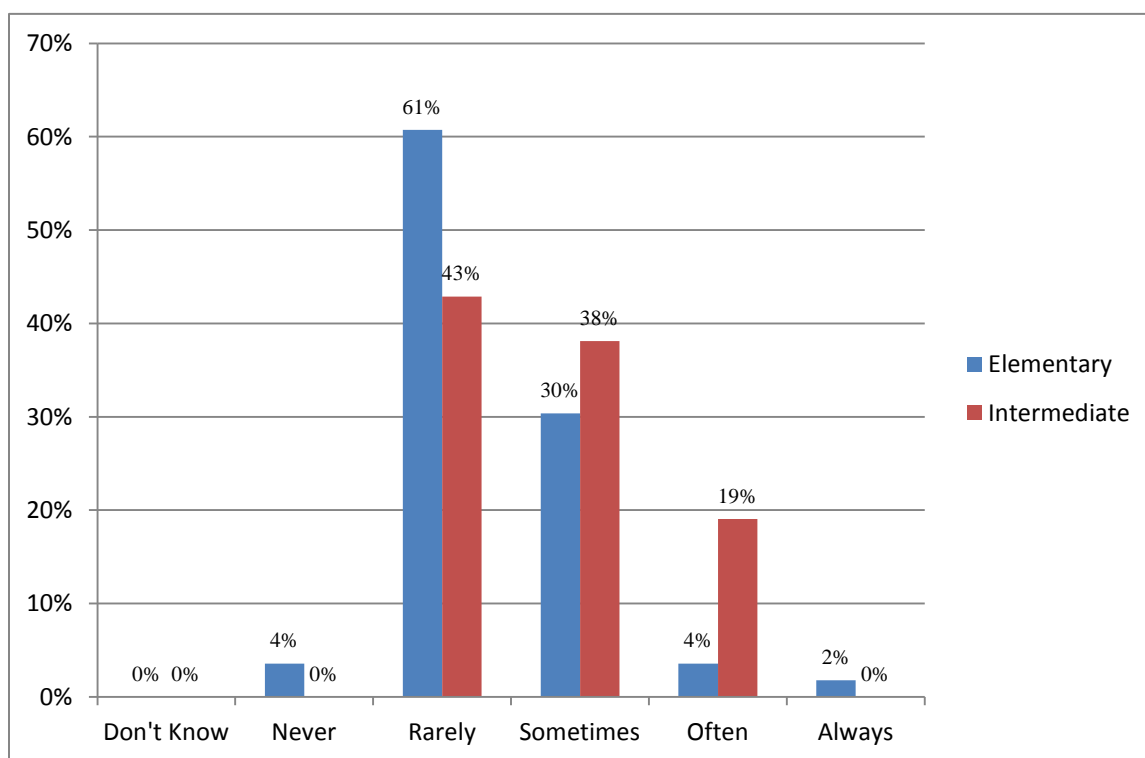


Figure 2. Frequency distribution for likelihood of identification in grades 4 through 6

Research Question 2

Prioritization of Intervention for Reading Difficulties in Early Elementary and Intermediate Grades

To investigate teachers' perceptions regarding intervention priorities for students identified with reading disabilities in the early elementary versus intermediate elementary grades, the survey included four questions that addressed both general recommendations and specific recommendations in response to a case study describing a particular student. Two questions addressed perceptions regarding intervention priorities for students identified in the early elementary grades and two for students in intermediate elementary grades.

Prioritizing Intervention for Early Elementary Students with Reading Difficulties. The first question related to early elementary students (question 4 in the survey) asked, "How would you prioritize supplemental intervention for a student struggling in reading in first or second grade in each of the following areas?" Teachers were asked to prioritize instruction in each of five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary, Comprehension) using a five point Likert scale ranging from (5= Essential, 4= High Priority, 3= Medium Priority, 2= Low Priority, 1= Not a Priority). Results for this question are presented in Table 4 and displayed graphically in Figure 3. Both groups of teachers placed the highest priority on Phonemic awareness and Phonics followed by Comprehension. Fluency was least likely to be rated as a high priority by either group of teachers. Across all five areas of reading, there were no statistically significant differences in the perceptions of the early elementary teachers as compared to the intermediate elementary teachers.

Table 4

Prioritization of intervention in areas of reading for grades 1 through 3

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank- Sum) | <i>t</i> -test |
|----------------------------|----------|------|--------------|--------------|-------------------------|----------------|
| Phonemic awareness | | | | | | |
| Early Elementary | 58 | 4.57 | 0.75 | 2229 | $z = -1.305$ | $t = -0.7505$ |
| Intermediate Elementary | 21 | 4.71 | 0.78 | 931 | $p = 0.1918$ | $p = 0.4552$ |
| Phonics | | | | | | |
| Early Elementary | 58 | 4.45 | 0.71 | 2245 | $z = -0.953$ | $t = -0.9904$ |
| Intermediate Elementary | 21 | 4.62 | 0.59 | 915 | $p = 0.3405$ | $p = 0.3251$ |
| Fluency | | | | | | |
| Early Elementary | 58 | 3.88 | 0.97 | 2408.5 | $z = 1.030$ | $t = 1.1623$ |
| Intermediate Elementary | 21 | 3.57 | 1.21 | 751.5 | $p = 0.3031$ | $p = 0.2487$ |
| Vocabulary | | | | | | |
| Early Elementary | 58 | 3.93 | 0.99 | 2316.5 | $z = -0.041$ | $t = -0.2846$ |
| Intermediate Elementary | 21 | 4.00 | 0.84 | 843.5 | $p = 0.9674$ | $p = 0.7767$ |
| Comprehension | | | | | | |
| Early Elementary | 58 | 4.29 | 0.82 | 2403.5 | $z = 1.003$ | $t = 1.2824$ |
| Intermediate Elementary | 21 | 4.00 | 1.10 | 756.5 | $p = 0.3160$ | $p = 0.2036$ |

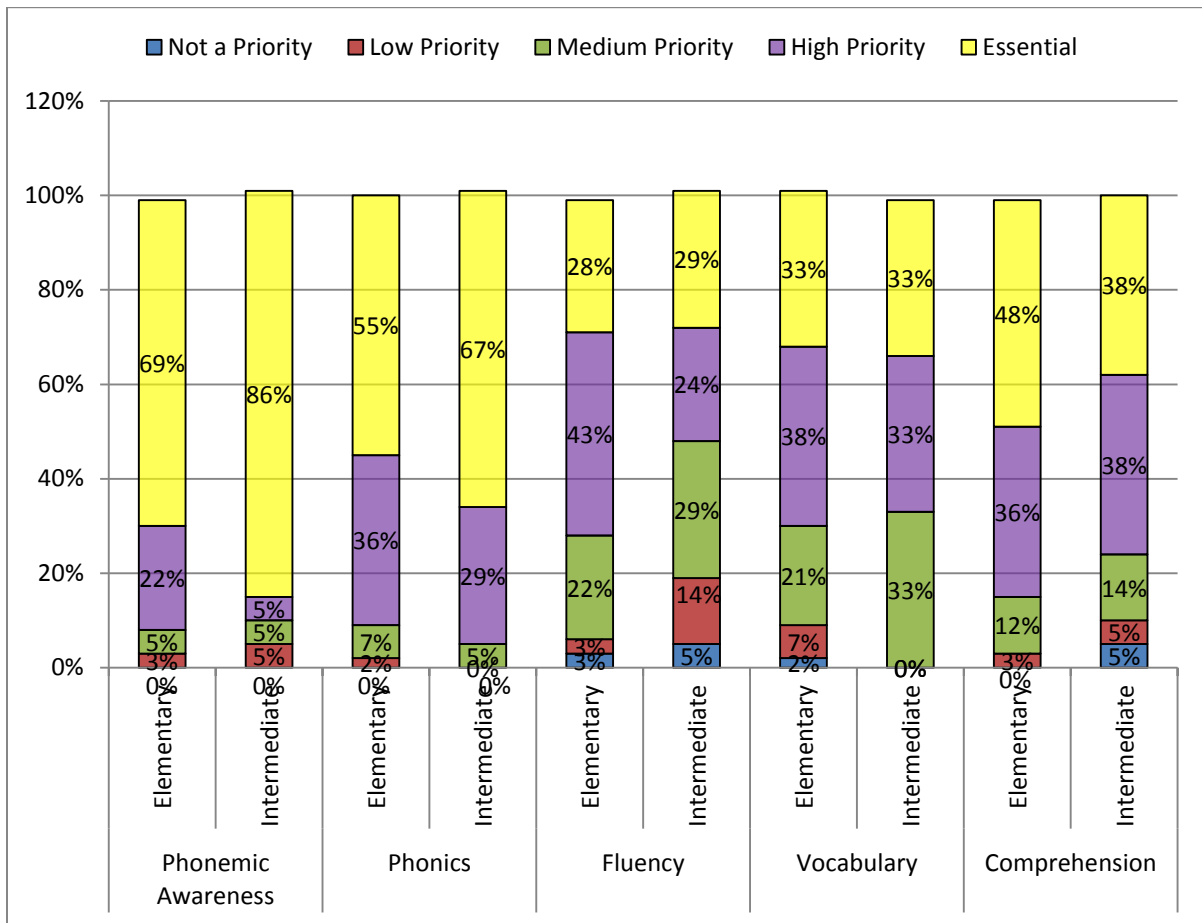


Figure 3. Frequency distribution of prioritization of interventions in grades 1 through 3

The next question (question 5 of the survey) was designed to identify how teachers prioritized interventions based on case-specific information. This question briefly described the characteristics of a student struggling in grade 1 and asked teachers to prioritize intervention on the same areas of reading mentioned above. The Likert scale used for this question was the same as the one used above. Results for this question are presented in Table 5 and displayed graphically in Figure 4. The results for this question were very similar to the previous question. Both groups of teachers placed the highest priority on Phonemic

awareness and Phonics. However Vocabulary, Fluency and Comprehension were given medium priority for this specific case study.

Table 5

Prioritization of intervention in areas of reading for case study 1

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank-Sum) | <i>t</i> -test |
|----------------------------|----------|------|--------------|--------------|------------------------|----------------|
| Phonemic awareness | | | | | | |
| Early Elementary | 58 | 4.69 | 0.65 | 2291.5 | $z = -0.442$ | $t = -0.7854$ |
| Intermediate Elementary | 21 | 4.81 | 0.40 | 868.5 | $p = 0.6585$ | $p = 0.4346$ |
| Phonics | | | | | | |
| Early Elementary | 58 | 4.50 | 0.71 | 2237.5 | $z = -1.080$ | $t = -1.2895$ |
| Intermediate Elementary | 21 | 4.71 | 0.46 | 922.5 | $p = 0.2801$ | $p = 0.2011$ |
| Fluency | | | | | | |
| Early Elementary | 58 | 3.38 | 1.04 | 2392 | $z = 0.839$ | $t = 0.7325$ |
| Intermediate Elementary | 21 | 3.19 | 0.93 | 768 | $p = 0.4015$ | $p = 0.4661$ |
| Vocabulary | | | | | | |
| Early Elementary | 58 | 3.34 | 1.12 | 2306.5 | $z = -0.155$ | $t = -0.2941$ |
| Intermediate Elementary | 21 | 3.43 | 1.12 | 853.5 | $p = 0.8768$ | $p = 0.7695$ |
| Comprehension | | | | | | |
| Early Elementary | 58 | 3.22 | 1.12 | 2294 | $z = -0.299$ | $t = -0.0486$ |
| Intermediate Elementary | 21 | 3.24 | 1.14 | 866 | $p = 0.7647$ | $p = 0.9614$ |

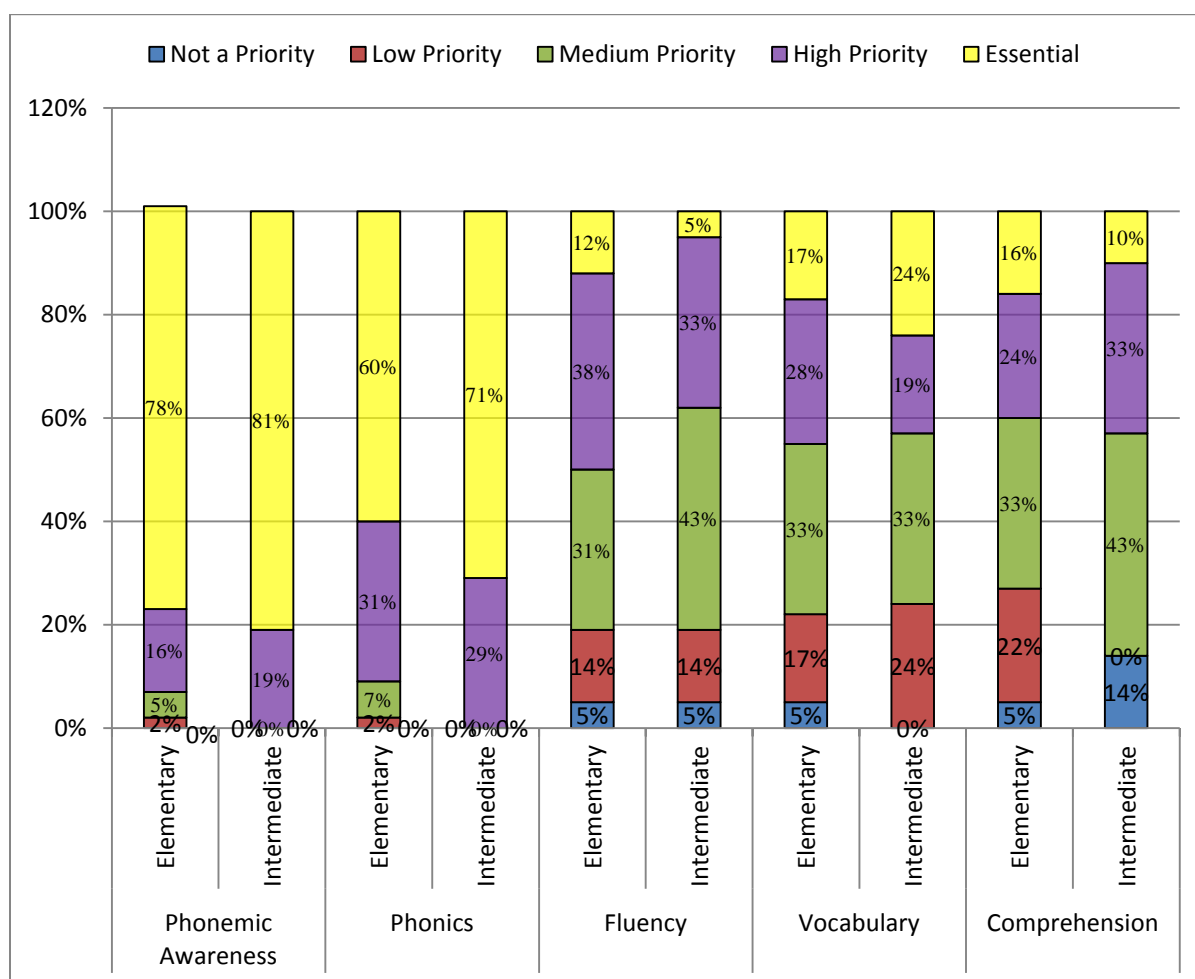


Figure 4. Frequency distribution of prioritization of interventions for case study 1

Prioritizing Intervention for Intermediate Elementary Students with Reading

Difficulties. Following the questions regarding intervention for students with reading difficulty in the early elementary grades, teachers were next asked to consider students whose reading difficulties first became evident in the intermediate elementary grades. Survey question 7 asked, “Now consider a child whose reading development has been similar to peers through third grade. In your opinion if this child begins demonstrating reading difficulties in grade 4, how should the supplemental intervention for student be prioritized for

each of the following areas?” Teachers were asked to prioritize instruction in five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary, Comprehension) through series of survey items using five point Likert scale ranging from (5= Essential, 4= High Priority, 3= Medium Priority, 2= Low Priority, 1= Not a Priority). Results are reported in Table 6 and presented graphically in Figure 5. Both groups of teachers placed the highest priority on Comprehension and Vocabulary followed by Fluency. Phonemic awareness and Phonics were not considered as essential as other areas for students experiencing reading difficulties in grades 4 through 6.

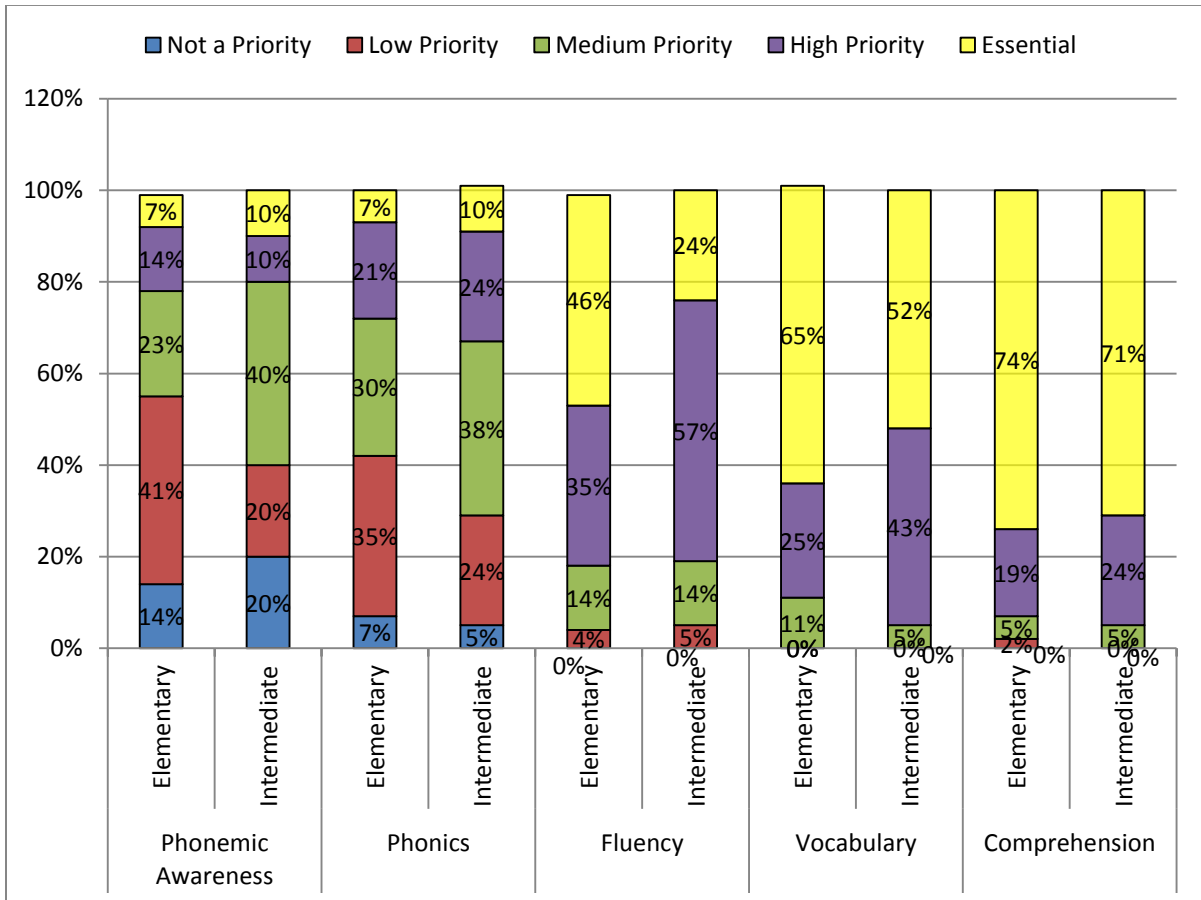


Figure 5. Frequency distribution of prioritization of interventions in grades 4 through 6

Table 6

Prioritization of intervention in areas of reading for grades 4 through 6

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank-Sum) | <i>t</i> -test |
|-------------------------|----------|------|--------------|--------------|------------------------|----------------|
| Phonemic awareness | | | | | | |
| Early Elementary | 56 | 2.59 | 1.12 | 2118 | $z = -0.465$ | $t = -0.3698$ |
| Intermediate Elementary | 20 | 2.7 | 1.22 | 808 | $p = 0.6416$ | $p = 0.7126$ |
| Phonics | | | | | | |
| Early Elementary | 57 | 2.86 | 1.06 | 2173 | $z = -0.920$ | $t = -0.8743$ |
| Intermediate Elementary | 21 | 3.10 | 1.04 | 908 | $p = 0.3574$ | $p = 0.3847$ |
| Fluency | | | | | | |
| Early Elementary | 56 | 4.25 | 0.84 | 2298 | $z = 1.406$ | $t = 1.1906$ |
| Intermediate Elementary | 21 | 4 | 0.77 | 705 | $p = 0.1597$ | $p = 0.2375$ |
| Vocabulary | | | | | | |
| Early Elementary | 57 | 4.54 | 0.68 | 2306.5 | $z = 0.720$ | $t = 0.4000$ |
| Intermediate Elementary | 21 | 4.48 | 0.60 | 774.5 | $p = 0.4716$ | $p = 0.6903$ |
| Comprehension | | | | | | |
| Early Elementary | 57 | 4.65 | 0.67 | 2260 | $z = 0.124$ | $t = -0.1065$ |
| Intermediate Elementary | 21 | 4.67 | 0.58 | 821 | $p = 0.9017$ | $p = 0.9155$ |

Following the pattern used with reading difficulties in the early elementary grades, the next question (question 8 in the survey) addressed how interventions were prioritized based on case-specific information for a student who begins struggling in grade 4. Teachers were asked to prioritize intervention in all areas of reading. The Likert scale used was the

same as used above. Results are presented graphically in Figure 6 and reported in Table 7.

The results for this case-study question were similar to the ones reported for the general scenario in prioritizing instruction for grades 4 through 6. Both groups of teachers again placed the highest priority on Comprehension and Vocabulary followed by Fluency.

Phonemic awareness and Phonics were not considered as essential as other areas for grades 4 through 6.

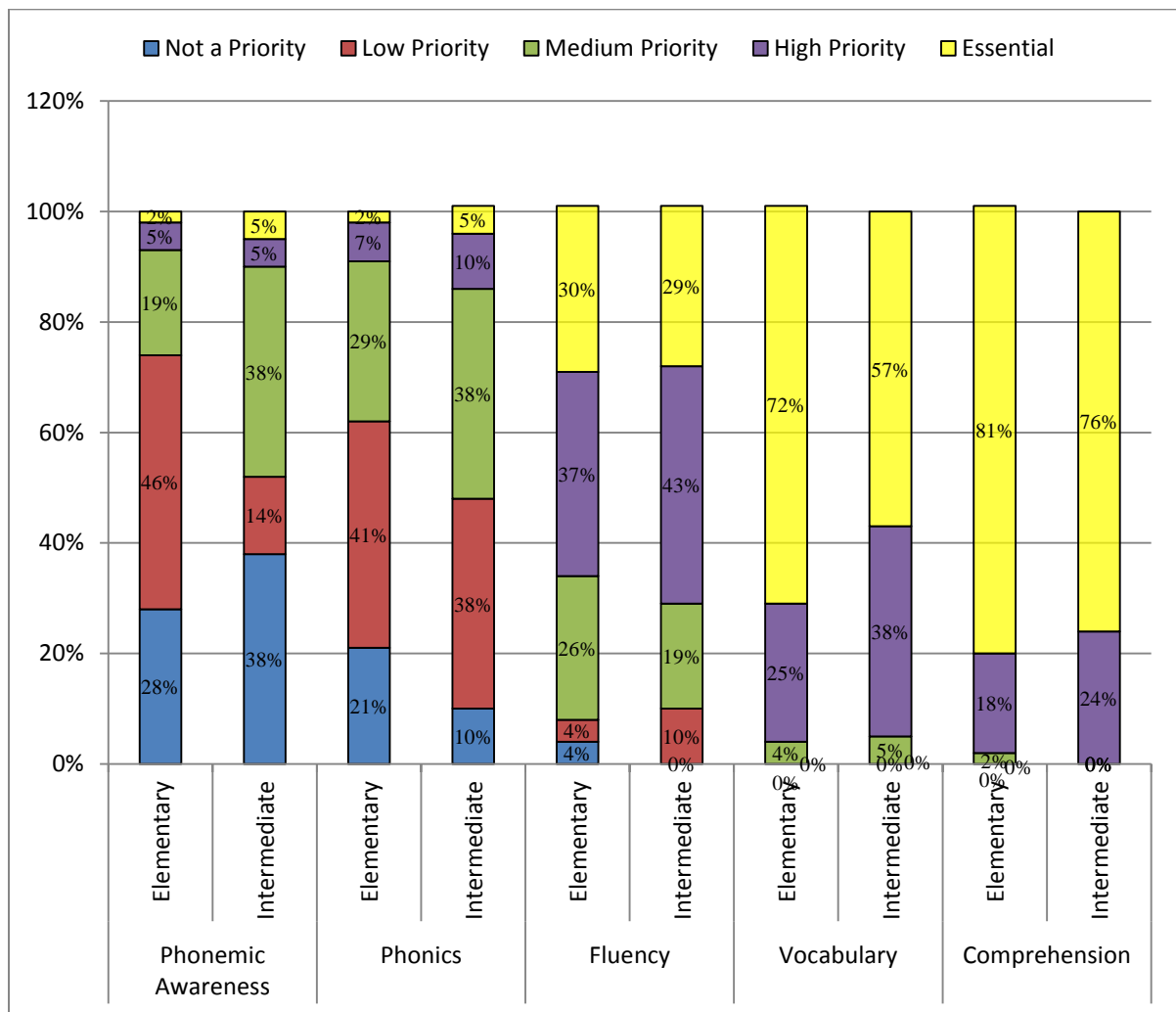


Figure 6. Frequency distribution of prioritization of interventions for case study 2

Table 7

Prioritization of intervention in areas of reading for case study 2

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank -Sum) | <i>t</i> -test |
|-------------------------|----------|------|--------------|--------------|-------------------------|----------------|
| Phonemic awareness | | | | | | |
| Early Elementary | 57 | 2.07 | 0.92 | 2208 | $z = -0.515$ | $t = -0.6599$ |
| Intermediate Elementary | 21 | 2.24 | 1.18 | 873 | $p = 0.6065$ | $P = 0.5113$ |
| Phonics | | | | | | |
| Early Elementary | 56 | 2.27 | 0.94 | 2066.5 | $z = -1.418$ | $t = 1.4421$ |
| Intermediate Elementary | 21 | 2.62 | 0.97 | 936.5 | $p = 0.1562$ | $p = 0.1534$ |
| Fluency | | | | | | |
| Early Elementary | 57 | 3.86 | 1.01 | 2241.5 | $z = 0.119$ | $t = 0.1783$ |
| Intermediate Elementary | 21 | 3.90 | 0.94 | 839.5 | $p = 0.9056$ | $p = 0.859$ |
| Vocabulary | | | | | | |
| Early Elementary | 57 | 4.68 | 0.54 | 2339 | $z = 1.210$ | $t = 1.1287$ |
| Intermediate Elementary | 21 | 4.52 | 0.60 | 742 | $p = 0.2264$ | $p = 0.2626$ |
| Comprehension | | | | | | |
| Early Elementary | 57 | 4.79 | 0.45 | 2276 | $z = 0.394$ | $t = 0.2408$ |
| Intermediate Elementary | 21 | 4.76 | 0.44 | 805 | $p = 0.6936$ | $p = 0.8103$ |

One open-ended survey question (question 12 in the survey) was also included in the survey to gauge what strategies teachers usually use in classrooms for children who begin struggling in reading in the intermediate elementary grades. The question asked, “Have you encountered a child who was progressing at a rate similar to peers with respect to reading in primary grades (1-3) but began experiencing reading difficulty in intermediate grades (4-6)?

If so please describe how the educators involved responded to the situation.” Almost 51% responded “yes” to this question and the responses to this question were coded using five categories: Specific reading intervention programs, Comprehension, Vocabulary, Fluency and Others. Close to 20% of the teachers cited some specific reading interventions used in their school and others talked about increasing reading time for students, thereby exposing them to different genres, which hopefully will improve their Comprehension and Vocabulary.

“Yes, we put them on an intervention plan for comprehension and worked with the parents to increase reading at home” Intermediate teacher (respondent code 172)

“More time to complete assignments and an added 15-20 minutes daily to assist student with reading skills by either the teacher or volunteer” Early elementary teacher (respondent code 71)

“After formative assessments are given, an observation by an outside teacher, staff, or AEA may be needed. Collaborative work with other staff members might help to create an intervention that may get the student back on track with growth for their peers in the area of reading. That may mean multiple readings, help finding material of interest, goal setting with the student.” Intermediate elementary teacher (respondent code 51)

“Again the demands are different in the upper grades. We try to pre-read selections in Science or Social Studies. Also there are many strategies we implement to aid in comprehension. Additional staff to read with students or extra fluency work helps” Intermediate elementary teacher (respondent code 46)

The teachers who did not respond to this question were usually the ones who cited their lack of experience with the intermediate grades or noted that they had not encountered any such case.

Research Question 3

Factors Associated with Late Emerging Reading Disabilities

To evaluate the factors teachers associate with students' development of reading difficulties in the intermediate elementary grades, survey question 10 asked, "Consider a child whose reading development has been similar to peers through third grade. This child begins demonstrating significant and unexpected reading difficulties in grade 4. To what extent is Increase in academic demands, Lack of parental support, Previous coping strategies no longer successful, Lack of appropriate instructions, Lack of motivation and Late onset of reading disability associated with child's reading difficulty? A four point Likert scale was used for this question (4 = To a great extent, 3 = Somewhat, 2 = Very little, 1 = Not at all). Results are reported in Table 8 and the frequency distributions are displayed in Figure 7.

Both the groups of teachers associated an Increase in academic demands, Previous coping strategies no longer successful, and Lack of motivation for students demonstrating significant reading difficulties in grade 4. Statistically significant differences between the early elementary and intermediate teachers were identified for only one of the six factors. Early elementary teachers associated Lack of appropriate instruction with late emerging reading difficulty to a greater degree than did the intermediate elementary teachers.

Table 8

Factors associated with Late Emerging Reading Disability

| | <i>N</i> | Mean | Std. Dev. | Rank Sums | Wilcoxon (Rank- Sum) | <i>t</i> -test |
|---|----------|------|--------------|--------------|-------------------------|----------------|
| Increase in academic demands | | | | | | |
| Early Elementary | 57 | 3.46 | 0.63 | 2153.5 | $z = -1.263$ | $t = -1.3886$ |
| Intermediate Elementary | 21 | 3.67 | 0.48 | 927.5 | $p = 0.2065$ | $p = 0.169$ |
| Lack of parental support | | | | | | |
| Early Elementary | 57 | 2.81 | 0.81 | 2257 | $z = 0.067$ | $t = -0.0121$ |
| Intermediate Elementary | 21 | 2.81 | 0.81 | 824 | $p = 0.9463$ | $p = 0.9904$ |
| Previous coping strategies no longer successful | | | | | | |
| Early Elementary | 57 | 3.33 | 0.74 | 2252.5 | $z = 0.013$ | $t = -0.2651$ |
| Intermediate Elementary | 21 | 3.38 | 0.59 | 828.5 | $p = 0.99$ | $p = 0.7916$ |
| Lack of appropriate instruction | | | | | | |
| Early Elementary | 57 | 2.93 | 0.73 | 2484.5 | $z = 2.865$ | $t = 3.2055$ |
| Intermediate Elementary | 21 | 2.33 | 0.73 | 596.5 | $p = 0.0042^*$ | $p = 0.002^*$ |
| Lack of motivation | | | | | | |
| Early Elementary | 57 | 3.28 | 0.67 | 2328.5 | $z = 0.966$ | $t = 0.8311$ |
| Intermediate Elementary | 21 | 3.14 | 0.57 | 752.5 | $p = 0.3343$ | $p = 0.4085$ |
| Late onset of reading disability | | | | | | |
| Early Elementary | 57 | 2.25 | 0.74 | 2170.5 | $z = -0.997$ | $t = 1.0176$ |
| Intermediate Elementary | 21 | 2.43 | 0.60 | 910.5 | $p = 0.3186$ | $p = 0.3121$ |

* $p < .05$

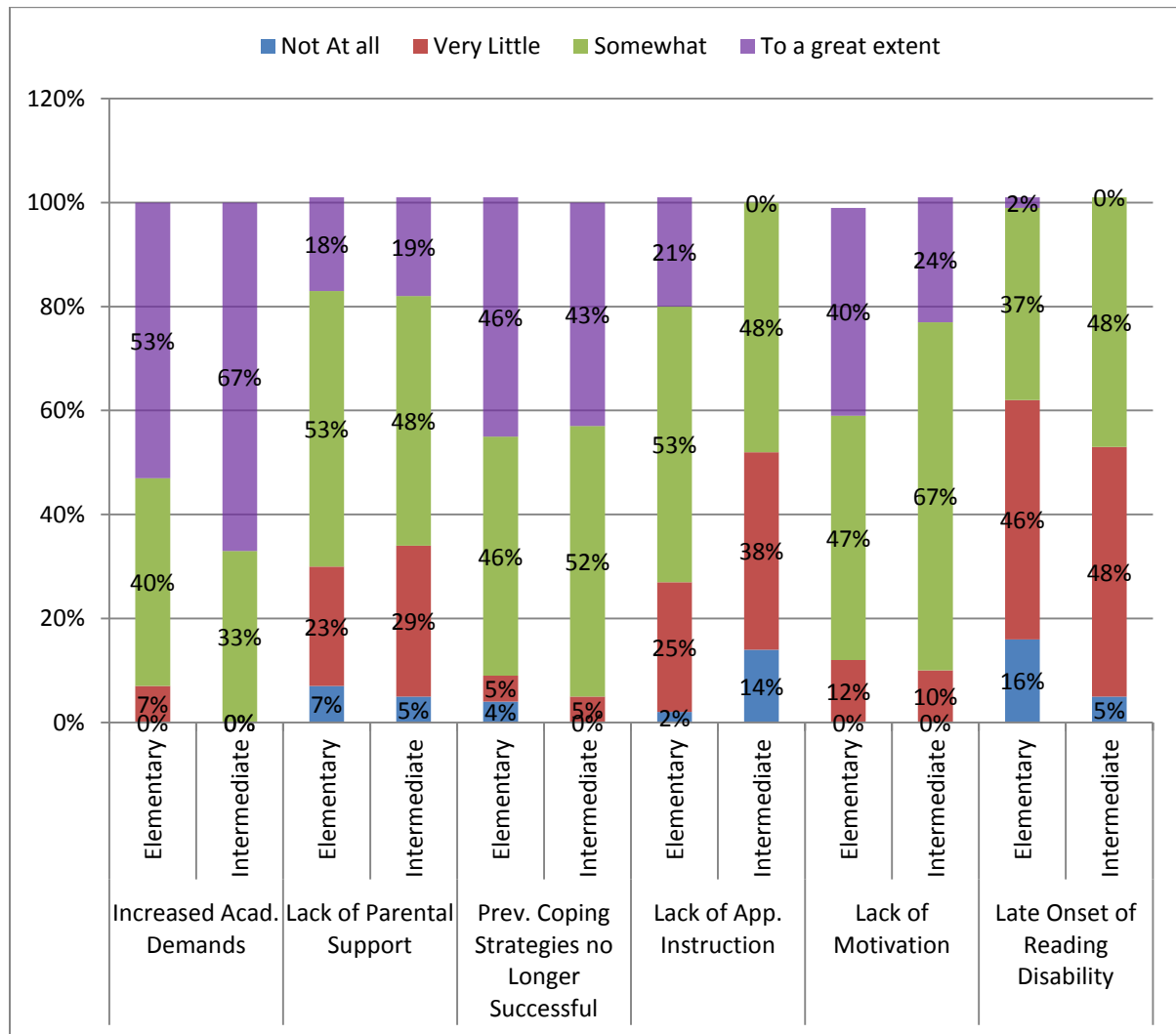


Figure 7. Frequency distribution of factors for Late Emerging Reading Disability

An open-ended question (survey question 11) was also included in the survey to answer the third research question regarding factors associated with children demonstrating reading difficulty in later grades. The survey question asked “Do you believe that a child who demonstrates reading abilities similar to peers during the primary grades (1-3) may experience reading difficulty in the intermediate grades (4-6)? Please explain your response.” The majority of the teachers (96.15%) provided responses that suggested they believed that it

was possible for students to begin displaying reading difficulties following a period of typical reading development in the early grades. Teachers' responses were categorized according to themes, including Comprehension, Fluency, Vocabulary, Increased academic demands, Motivation, Inadequate support, Family, peers and environment influence. Most of the teachers who responded to this question agreed with the concept that children who perform at grade level through third grade can begin demonstrating reading difficulties in grade four. Two of the most commonly reasons cited for children experiencing reading difficulties in the upper grades were Comprehension (51.2%) and Increased academic demands (41.6%). Particular issues teachers raised included an increase in the difficulty of textbooks for the intermediate grades, along with higher expectations involved in drawing inferences and doing independent work.

“The comprehension strategies become more difficult as the reading levels increase. Balancing the 2 can be difficult and interventions using comprehension strategies would be my first thought.” Early elementary teacher (respondent code 70)

“I do believe that low reading comprehension and lack of application of higher order thinking skills can become very apparent as students are expected to become more independent in their learning.” Early elementary teacher (respondent code 45)

“This is often where one might see more emphasis on comprehension, or reading to understand the text of more non fiction works. The child may be fluent and may be able to decode, but not being able to draw conclusions and make inferences” Early elementary teacher (respondent code 110)

“I think that they can experience difficulty, but that it probably isn't a result of a learning disability. The demands are greater in upper grades, and students begin to read to learn rather than learn to read.” Intermediate elementary teacher (respondent code 120)

Vocabulary (16.6%), Motivation (12.82%), Inadequate support (10.25%), Family, peers and environment influence (10.25%) and Fluency (3.84%) were some of the other common reasons associated with reading difficulties.

“The content of the text and the non-fiction vocabulary demands, along with fluency and comprehension rates could be part of the issue. In addition, lack of prior knowledge, lack of motivation, or disinterest in academics could be at play.” Early elementary teacher (respondent code 148)

“It seems that teachers in the early grades are more likely to deliver explicit reading instruction to their students (those excelling and those struggling). Once children reach the mid to upper grades, I think teachers assume the children can read, and the instruction that is delivered is not as explicit and the scaffolding that some children still need falls away. The expectation seems to be they "should know" how to read by now.” Early elementary teacher (respondent code 178)

“Books that children encounter in grades 1-3 often have more supports (pictures, common structures, easier vocabulary). Also, there is more teacher support in the younger grades. Students often encounter more nonfiction in older grades as well.” Early elementary teacher (respondent code 33)

“I do believe that a child can experience difficulties with reading that weren't there in the primary grades. As a child gets older, the material they read becomes more demanding.

The vocabulary increases, the text structure can also become more difficult” Intermediate elementary teacher (respondent code 191)

“Yes, they might as the academic demands increase and their lives are pulled more ways by society, they may experience difficulties. Also don't discount the physical changes and growth that happen in these years. Something as simple as the need for glasses”

Intermediate elementary teacher (respondent code 75)

Thus looking at the above quotes it seems that a combination of the above factors could be associated with reading difficulties experienced by students in the intermediate grades. In the Other category, some less frequently cited examples were poor assessment strategies used in past, child may be from poor background, and school unable to provide appropriate intervention to child.

Some responses indicated skepticism regarding the possibility of late emerging reading difficulties. Some teachers (8.97%) did not believe that a child whose reading development was similar to peers through third grade could begin experiencing reading difficulty later. Some of the responses representing this perspective are presented below.

“A child who has reading abilities in the primary grades usually continues with the reading success throughout their elementary years. . .” Early elementary teacher (respondent code 52)

“Most often children who experience reading difficulties display these difficulties early in their educational career.” Early elementary teacher (respondent code 161)

“No, as long as the teacher increases the demands in an appropriate way.” Early elementary teacher (respondent code 93)

“If a child gets the help that is needed and has the right intervention, they might not have reading difficulties in 4-6. I have found that this is normally not the case. Sometimes it is difficult creating an intervention that is successful and by the time you realize the child is even further behind.” Early elementary teacher (respondent code 100)

Thus it appears that most of the elementary and intermediate teachers considered Comprehension and an Increase in academic demands as the major reasons for reading difficulties emerging in the intermediate elementary grades. Also, teachers associated factors like Motivation, Inadequate support, Vocabulary and Fluency as impacting reading difficulties in children. However, a small percentage (8.97%) of teachers felt that this phenomenon was not possible because reading difficulties are usually identified early in school.

Research Question 4

Teachers’ Awareness of Late Emerging Reading Disabilities

In order to evaluate teachers’ awareness about the phenomenon of Late Emerging Reading Disability, the final survey item (question 20 in the survey) asked, “Have you heard about, read about, or learned about Late Emerging Reading Disability? If so please describe the source of information.” Amongst all 78 responses, only ten teachers (12.8%) responded yes to this question. The responses of these ten teachers indicated that they read about it online or heard about it in a conference or from colleagues.

“Yes, I have read just one short article in a reading publication. I have no real knowledge.” Early elementary teacher (respondent code 130)

“Colleague discussion.” Early elementary teacher (respondent code 173)

“have read a little about it online, but not enough to specifically remember what site I was on” Intermediate elementary teacher (respondent code 119)

These responses suggest that teachers lack information about this phenomenon in schools and may not be able to identify children experiencing reading difficulties in intermediate grades, thereby creating delays in providing such students with adequate intervention.

Summary

In summary, for the early elementary grades, both groups of teachers perceived the likelihood of identification of a child experiencing reading difficulty in the early elementary grades as high. There was a significant difference between the two groups of teachers, with early elementary teachers reporting a higher likelihood of a child being identified in grades 1 through 3. In prioritizing supplemental intervention for grades 1 through 3 there were no significant differences between the two groups. Both groups of teachers placed high priority on Phonemic awareness and Phonics for early elementary grades.

For the intermediate elementary grades, both groups of teachers reported lower likelihood of a child being identified with reading difficulty. There was a significant difference between the two groups of teachers with intermediate elementary teachers reporting a lower likelihood of a child being identified in grades 4 through 6. In prioritizing supplemental intervention for grades 4 through 6 there were no significant differences between the two groups. Both groups of teachers placed high priority on Vocabulary and Comprehension for intermediate elementary grades. Teachers’ narrative responses to the strategies currently used in the schools were in congruence with the areas of reading that

were prioritized in grades 4 through 6. Teachers also discussed increasing reading time along with exposing children to different genres of text as some of the strategies for helping students experiencing difficulties in intermediate grades.

In response to the factors associated with students' development of reading difficulties in the intermediate grades, there were no significant differences for five of the six factors associated with Late Emerging Reading Disabilities. However, the findings indicated a significant difference for "Lack of appropriate instruction" between the two groups of teachers, with early elementary teachers associating "Lack of appropriate instruction" with late emerging reading difficulty to a greater degree than did the intermediate teachers. The narrative responses indicated that teachers associated an increase in comprehension and academic demands as some of the major reasons for children experiencing reading difficulties in intermediate grades. Among the respondent pool of 79 teachers, only 10 teachers indicated their awareness of the concept of Late Emerging Reading Disability.

CHAPTER 5. DISCUSSION AND CONCLUSION

This chapter discusses the results of the study. The first part of the chapter summarizes the study and findings in regards to the research questions. At the conclusion of the chapter, limitations of the study are presented along with implications for practitioners and further research.

Discussion of Results

There is an increasing concern in schools for children who begin to demonstrate reading difficulties as they move to the intermediate grades in elementary school. According to NCES (2004), in academic year 2003 – 2004 close to 30% of fourth graders in the United States were unable to achieve grade level reading proficiency. Usually children who are struggling with reading are identified in grade one or two in elementary school. However Chall (1983) suggested that some students begin struggling in the area of reading in grades four and up. As children move beyond the primary grades, emphasis shifts from word recognition and decoding to comprehending texts. Some children rely on sight memorization, but as they progress to higher grades these strategies often begin to fail and impact their comprehension (Juel, 1991). Thus children with late emerging difficulties may encounter difficulties in areas of comprehension or word level processing or in both the areas.

There exists a plethora of research about reading disability but very little about Late Emerging Reading Disability. Most of the current research about Late Emerging Reading Disability is longitudinal and focuses on characteristics of children. (Leach et al., 2003; Compton et al., 2008; Lipka et al., 2006) However there exists limited research in this field regarding teachers' perceptions of students with Late Emerging Reading Disability and how

they respond to students who begin displaying reading difficulties in grades 4 and up. This study arose out of a need to gather information about awareness of Late Emerging Reading Disabilities among elementary school teachers and intervention strategies currently being used to address students who experience reading difficulties. Four research questions guided this research study:

1. To what extent do the perceptions of early elementary teachers differ from intermediate elementary teachers regarding children identified with reading difficulty in early elementary grades compared to those identified in intermediate elementary grades?
2. How do early elementary and intermediate teachers prioritize intervention in the five areas of reading (Phonemic awareness, Phonics, Fluency, Vocabulary and Comprehension) based on the early or late identification of the student?
3. Which factors along with five areas of reading do early elementary teachers and intermediate elementary teachers perceive to be associated with reading difficulties?
4. How aware are the elementary school teachers about Late Emerging Reading Disabilities?

Survey research methodology was employed in this study. The survey instrument consisted of three sections: Part 1- Informed Consent, Part 2 – Perceptions of Students with Reading Difficulties, Part 3- Demographic Information. Six school districts across central Iowa participated in this research. In each district, the survey instrument was sent by a school administrator via electronic mail to all elementary school teachers teaching grades 1 through 6. Data analyses involved describing and comparing responses based on subscale scores.

Descriptive statistics, *t*-tests, Wilcoxon's rank sum test, and content analysis were employed in data analyses.

Identification of Students with Reading Difficulties

The findings for the first research question show that the perceptions of early elementary teachers and intermediate elementary teachers vary regarding identification of children with reading difficulty in early elementary and intermediate elementary grades. Both the groups rated identification of reading difficulty in early elementary grades more likely than in intermediate elementary grades. In response to the likelihood of identification of reading difficulties for grades 1 through 3, the results show significant differences between the two groups. The early elementary teachers feel more strongly than intermediate elementary teachers that it was likely that a student would be identified with reading difficulties in grades 1 through 3. Also, when teachers were asked to rate the likelihood of identification of students with reading difficulty in grades 4 through 6, both the groups leaned towards low chances of being identified in intermediate elementary grades. Teachers' perceptions here are consistent with most of the research available in the field of reading disability. Scarborough (1990) suggests that students' early success in reading is predictive of later reading progress. The results for both groups of teachers also suggest that they believe reading difficulty would most likely surface in early elementary grades.

Prioritization of Intervention in Areas of Reading

The second research question addressed prioritization of intervention in the five areas of reading for students struggling in reading in early elementary grades and intermediate elementary grades. Teachers first responded to a general question about a student

experiencing reading difficulty in grades 1 through 3. Both groups prioritized intervention in the areas of Phonemic awareness and Phonics. No significant differences were found between the two groups on any of the five areas of reading for early elementary grades. Teachers were next asked to respond to a case study of a first grader who was struggling to read. Again, teachers in both the groups were consistent in their responses and prioritized instruction in area of Phonemic awareness and Phonics. Thus there was no significant difference in teachers' perceptions across five areas of reading for prioritizing intervention in early elementary grades

In response to the general scenario for a student whose reading difficulties first became evident in intermediate grades, teachers in both the groups prioritized intervention in the areas of Vocabulary and Comprehension. However there were no significant differences between the two groups for any of the five areas of reading. When presented with a case study of a struggling fourth grade reader, both groups were consistent in prioritizing instruction in the areas of Vocabulary and Comprehension,

These findings align with Leach et al.'s (2003) assertion about reading instruction shifting from Phonics and Decoding in early elementary grades to Comprehension skills in higher elementary grades. One of the reasons suggested for the shift is increased complexity of reading material, thus making it essential to focus on Comprehension and Vocabulary. Chall's (1983) stages of reading development also focus on Decoding, Fluency and Functional reading in grades 1 through 3. As a student moves to grade 4 the focus shifts towards Comprehension. According to Chall this is the most crucial stage in a child's reading development because the focus shifts from reading for pleasure to reading for learning.

An open-ended question was also used to identify the interventions provided to students experiencing reading difficulties in intermediate elementary grades. Early elementary and intermediate teachers focused on comprehension and specific reading interventions. Increasing reading time along with providing extra reading support were some strategies listed by teachers. Teachers also talked about introducing different genres in reading, thereby exposing students to both expository and narrative texts. These teacher perspectives are consistent with existing literature regarding the potential factors associated with the development of reading difficulty. Best, Floyd, and McNamara (2004) also suggest that introducing children to both narrative and expository text helps in developing deeper understanding of information and can also aid in improving comprehension. Hirsch (2003) notes that disproportionate attention is being devoted to fiction in early elementary grades and this neglect of exposure to narrative text impacts students' comprehension skills. However Hirsch (2003) also points out that spending excessive time on comprehension skills may not help struggling readers. He suggests teachers should devote more time in developing appropriate vocabulary and background knowledge to help students succeed. In order to become effective readers, Allington (2006) emphasizes access to a wide variety of reading material consisting of both narrative and expository texts along with 90 minutes devoted to reading every day. Thus, the strategy of increased reading time identified by teachers in response to the survey has strong support in the literature.

Factors Associated with Reading Disability in Intermediate Grades

In response to factors associated to Late Emerging Reading Disability, teachers were asked to rate the extent to which each factor was associated with late emerging reading

difficulty. Amongst the six factors listed as associated with late emerging reading difficulties there were no differences for five of those between the groups. There was significant difference between both the groups for “Lack of appropriate instruction”. Early elementary teachers associated “Lack of appropriate Instruction” to a greater degree with Late Emerging Reading Disabilities than did intermediate elementary teachers.

There is a common perception among intermediate elementary teachers that inappropriate instruction occurs in early elementary grades but in this study early elementary teachers have associated lack of appropriate instruction to reading difficulties in intermediate grades. According to Sanacore and Palumbo (2009) teachers believe that teaching reading is the responsibility of early elementary teachers. This belief is more common among higher-grade level teachers who deal with teaching more content areas. Most of these teachers believe that their role is limited to focusing on content because most of the students should be strategic readers by the intermediate grade levels. According to Sanacore and Palumbo (2009) this may also be a probable cause of the fourth grade slump. However the findings of the present study are contradictory to the findings of Sanacore and Palumbo (2009).

An open-ended question was also designed to investigate teachers’ perceptions of factors usually associated with reading difficulties displayed by children in intermediate elementary grades. The results yielded some interesting findings and detailed accounts of factors teachers associated with late emerging reading difficulty. The themes that emerged among teachers’ responses were Comprehension, Vocabulary, Fluency, Increased academic demands, Motivation, Inappropriate support, and Family, peer and environment influence. One of the most common factors cited by early elementary and intermediate elementary teachers for the onset of reading difficulties in the intermediate elementary grades was

Comprehension. Most of the teachers reported that increases in reading demands and decreases in contextual support impact comprehension skills in intermediate elementary grades. It was also reported that children in the intermediate elementary grades are expected to possess background knowledge and should read between the lines in order to comprehend text, and deficits in these skill areas lead to difficulty in reading in intermediate grades. This is also consistent with teachers' previous responses, where they identified comprehension and vocabulary as being essential areas for supplemental intervention in the intermediate elementary grades. Similar observations are reported Sanacore (2006), who discussed how primary (narrative) text uses different structures than informational text in the upper grades. According to Gregg and Sekeres (2006), students who lack significant exposure to informational sources and vocabulary are less likely to comprehend expository texts.

Some early elementary teachers however did not believe in the existence of Late Emerging Reading Disabilities and reported that children usually display signs of reading difficulty in early school years. These teachers also suggested that intervention for children may have failed and as a result, they displayed signs of reading difficulties in higher grades. Most of the research in the field also indicates that usually children display deficits early in stages of reading (Lipika et al., 2006). Leach et al. (2003) noted that the concept of supplemental intervention in schools often makes it hard to identify students for reading difficulty in elementary school. Leach et al. (2003) notes that students may perform similar to typical students while grade level expectations are low, however with increases in reading expectations in the intermediate grades reading difficulty often reappears. Thus it may be appropriate to say that interventions may not have failed for children with reading difficulties rather their coping strategies became obsolete.

Teachers' Awareness of Late Emerging Reading Disabilities

In an open-ended question designed to assess teachers' awareness of the concept of Late Emerging Reading Disabilities only ten teachers of seventy-nine reported they were aware of this concept. Most of these teachers who reported awareness about the concept indicated limited knowledge of the subject. Also both groups of teachers reported lower likelihood of being identified with reading difficulties for grades 4 through 6, which suggests their lack of knowledge of the concept.

In summary, the study sought and found teachers' perceptions about children with Late Emerging Reading Disabilities. It is evident from the results that early elementary and upper elementary teachers differed in their perceptions regarding identifying children who display reading deficits in early elementary grades versus those who begin struggling in the later elementary grades. Most of the teachers' responses concurred with the research available in the field of reading disability for children identified in the early grades. Most of the teachers however lacked awareness about the concept of Late Emerging Reading Disability and did not think that struggling with reading in later grades could be associated with the onset of a disability. It is imperative to create awareness among elementary and intermediate teachers so that children with a Late Emerging Reading Disability can receive timely and appropriate intervention.

Limitations

The study has several limitations therefore findings and conclusions should be interpreted in light of those. Due to the small sample size and because the sample only represented six school districts in central Iowa, the results cannot be generalized to a larger

population. Also, a convenience-sampling strategy was used to collect data by sending emails to district administrators who then forwarded the message to their teachers. As a result, it is unknown how many teachers actually received the survey and therefore a response rate cannot be estimated. Another limitation involved the design of the survey items. Two questions on the survey instrument were dropped during analysis because respondents did not interpret them appropriately. The question (which was repeated twice, once for the early elementary case study and once for the intermediate grade case study) asked teachers to specify the number of hours per week of intervention they would recommend for the student in the case study. Some respondents answered this question in minutes and others in hours. In order to avoid any discrepancy in analyzing the responses, this question was eliminated from the analysis. While attempts were made to minimize the effect of researcher bias, the researcher's own interpretation of the qualitative data may have influenced the findings.

Implications

There is increasing concern among school authorities regarding Late Emerging Reading Difficulties. This condition, which can impact children during intermediate elementary grades, can have a debilitating impact on reading skill and can lead to disengagement in school. The results of this study hold implications both for practitioners and for future research.

Implications for Practitioners

Based on the results of the study it is evident that most of the teachers considered the likelihood of a student being identified with reading difficulties in intermediate grades to be low, which implies that students may not be identified in a timely manner. It is suggested that

teachers should constantly be on the lookout for children who begin to display signs of reading difficulty in the intermediate elementary grades. In responding to the open-ended question regarding areas of intervention related to reading difficulties in intermediate grades, most of the teachers focused on Vocabulary and Comprehension. Even though the instructional focus in the intermediate grades shifts to Vocabulary and Comprehension, teachers should consider monitoring whether students have deficits in the area of decoding. Research in the field of Late Emerging Reading Disabilities (Lipka et al., 2006) has documented that children could have deficits in the area of phonological processing, comprehension, or both. However, very few teachers considered deficits in the area of Phonemic awareness and one of the reasons for this may have been that teachers did not see evidence that these students struggled in reading prior to grade four. Therefore, teachers in the intermediate grades should be equipped with the best strategies and techniques to provide students with a good base in the area of literacy and check for deficits in all the areas of reading.

In the current sample of 79 teachers, only ten teachers were aware of the term Late Emerging Reading Disability. Consequently, schools need to conduct professional development from time to time to keep their staff members abreast of research in the area of reading. Most of the ten teachers had superficial knowledge about the subject, having either read a non research based internet website or heard about it in informal discussions. Thus, schools might consider subscribing to leading reading journals as a means of helping teachers more easily access current research in the area of reading or other content areas. Almost 44 teachers in the current sample had a reading endorsement, but only a few of them were aware of reading difficulties encountered in intermediate grades. Therefore, pre-service teacher

education programs and content-specific endorsement programs should also consider including classes regarding current research topics in the field of education (e.g., literacy, math).

Implication for Researchers

Based on the results of this study, it appears that teachers lack awareness about Late Emerging Reading Disabilities. Due to this lack of awareness, a student's late emerging reading difficulty may go undetected. Thus, more research in this area should focus on teachers and the kind of assessment and intervention strategies being used by them in intermediate grade classrooms. Also, there is limited research in this area in general and most of the studies are based on descriptive statistics. Studies with a qualitative component should also be added to this research base in order to get a detailed perspective of students and the strategies used by them to cope with their reading difficulties. There is also very little research on intervention strategies for students who begin demonstrating reading difficulties in intermediate grades. More research focusing on the intervention strategies needs to be conducted. Also, more research is needed in the areas regarding frequency and intensity of intervention strategies to be employed in intermediate grades. Given the results of this study, it is likely that some children with Late Emerging Reading Disabilities may go undetected until they reach middle school; therefore research should focus on appropriate identification strategies to be employed in intermediate elementary grades.

In conclusion, the study revealed that elementary school teachers lack knowledge about Late Emerging Reading Disability. The survey instrument employed helped in identifying differences in perceptions between early elementary and intermediate elementary

teachers regarding the identification of reading difficulties in intermediate grades. The results found a significant difference between the two groups regarding identification of reading difficulties in early elementary and intermediate elementary grades. One of the major concerns looking at the findings of this research was that both groups of teachers considered it less likely for a student to be identified in intermediate grades. This implies that children struggling with reading may not be identified in a timely manner and thereby it becomes difficult for them to cope with increasing academic demands. Thus, it is very essential to improve awareness among teachers in school. Also, future research in area of Late Emerging Reading Disability should continue to explore timely assessment and intervention strategies to prevent students from slipping through the cracks and thus serving them better.

APPENDIX A. IRB APPROVAL LETTER

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review
Office for Responsible
Vice President for Re
1138 Pearson Hall
Ames, Iowa 50011-2
515 294-4566
FAX 515 294-4267

Date: 4/11/2011

To: Sonia Chugh
N131 Lagomarcino

CC: Dr. Anne Foegen
N162D Lagomarcino Hall

From: Office for Responsible Research

Title: Teachers' Perceptions of Students with Reading Difficulties

IRB Num: 11-037

Submission Type: Modification

Exemption Date: 4/8/2011

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) with the contingency that you obtain letters of approval from the schools and send us a copy for the file before beginning research activities at those schools. The IRB determination of exemption means that:

- You do not need to submit an application for annual continuing review.
- You must carry out the research as proposed in the IRB application, including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.
- Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making any changes, to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.

Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

APPENDIX B. SURVEY INSTRUMENT

Teachers' Perceptions of Students with Reading Difficulties

New Page

Informed Consent Document

Title of Study: Teachers' Perceptions of Students with Reading Difficulty

Investigators: Sonia Chugh, Dr. Anne Foegen (Major Professor)

This is a research study. Please take your time in deciding if you would like to participate.

Introduction

The purpose of this study is to gain advance knowledge about teachers' perceptions of students with reading difficulty in the elementary grades (1 through 6). You are being invited to participate in this study because you are a classroom teacher in the elementary grades. (You should not participate if you teach kindergarten, P.E, art, technology, or music.)

Description of Procedures

If you agree to participate in this study you will be asked to complete an online survey about teachers' perceptions of students with reading difficulties in the elementary grades (1 through 6). The first section includes questions about general perceptions of students with reading difficulties followed by more specific questions in response to brief case scenarios. The second section consists of demographic questions. The survey will take no more than 12-15 minutes to complete. You will be contacted just once to complete the online survey.

Risks

There are no foreseen risks to you for your participation in this study.

Benefits

It is unlikely that you will receive any direct benefits from participating in this study. However it will help in advancing knowledge about teachers' perceptions of students with reading difficulty in the elementary grades and thereby better serving students.

Costs and Compensation

There are no costs related to your participation, apart from the time it takes you to complete the survey. You will not be compensated for participating in this study.

Participation Rights

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. Also you can skip any question you do not wish to answer.

Confidentiality

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However auditing departments of Iowa State University and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect or copy records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by the law, the following measures will be taken: All the data obtained in connection with this study will be collected anonymously through Survey Gizmo, a web-based software program used to create and administer surveys. After the obtaining the responses the data will be coded by the College of Human Sciences' Office of Distance Education and Educational Technology staff at Iowa State University. There will be no way to link the responses to the participants because each participant will respond to the survey by clicking the link provided. All the data will be downloaded on to a password protected computer and access to this computer will be limited to the researcher. The data will be retained for a year from the time of data collection until erasure. If the results are published your identity will remain confidential.

Questions or Problems

For further information about the study contact Anne Foegen, major professor (515) 294-8373 or Sonia Chugh (515) 333-2486.

If you have questions about the rights of research subjects, please contact the IRB Administrator, (515)294-4566, IRB@iastate.edu, or Director, (515)294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011

BY SELECTING "YES" BELOW, YOU ARE AGREEING TO PARTICIPATE IN THIS STUDY. IF YOU CHOOSE NOT TO PARTICIPATE, PLEASE SELECT "NO."

1. Do you agree to participate?

- ☐ Yes
- ☐ No
-

Perceptions of Students with Reading Difficulties

This section focuses on identification and intervention for students experiencing reading difficulties. Please mark one response for each of the categories to indicate your perception.

2. If a child has difficulties in reading, what is the likelihood that these difficulties will FIRST be identified in the primary grades 1 through 3? Mark one response.

☐ Always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐ Don't know

3. If a child has a difficulties in reading what is the likelihood that these difficulties will FIRST be identified in grades 4 through 6? Mark one response.

☐ Always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐ Don't know

4. How would you prioritize supplemental intervention for a student struggling in reading in the first or second grade in each of the following areas? Mark one response for each category.

| | Essential | High Priority | Medium Priority | Low Priority | Not a Priority |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Phonemic Awareness | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Phonics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fluency | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vocabulary | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Comprehension | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Please read the case study given below and answer questions 5 and 6 based on it.)

Alex is a 7 year old 1st grader. He has been struggling to read fluently. His teacher has noticed that he usually avoids any activity which involves reading and has difficulty in decoding words. Alex's kindergarten teacher also reported that she had observed him having difficulty in identifying letters. His first grade teacher has noticed that even if the reading activity is repeated with Alex he still struggles in decoding and thereby gets frustrated. Lately his teacher has also noticed that Alex has difficulty identifying rhyming sound patterns. His teacher has been trying several informal strategies in class to help him improve his reading skills, however Alex's mid-year assessments did not reflect much growth in his reading performance. As a result, the teacher is concerned about him and is planning a supplemental intervention for him to provide him with additional instructional time.

5. If you were giving advice to Alex's teacher, how would you suggest she prioritize supplemental instruction for Alex in the areas given below?

Mark one response for each category.

| | Essential | High Priority | Medium Priority | Low Priority | Not a Priority |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Phonemic awareness | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Phonics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fluency | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vocabulary | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Comprehension | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. How much time (hours) per week should be devoted to Alex's intervention?

7. Now consider a child whose reading development has been similar to peers through third grade. In your opinion, if this child begins demonstrating reading difficulties in grade 4, how should the supplemental intervention for the student be prioritized for each of the following areas?

Mark one response for each category.

| | Essential | High Priority | Medium Priority | Low Priority | Not a Priority |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Phonemic awareness | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Phonics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fluency | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vocabulary | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Comprehension | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Please read the case study below and answer questions 8 and 9.)

Megan is a 10 year old 4th grader. Lately her teacher has noticed that Megan's scores for class assessments are declining. He has spoken about this to Megan's parents and they shared the same concern. According to Megan's parents there has been no change in the home environment. Her parents also reported that she was doing well in third grade and Megan's scores were usually in the average range. Megan's teacher has noticed that Megan is losing interest in academics and is also struggling to read and comprehend material in her textbooks. Her teacher thinks that the increasing academic demands may

be overwhelming for Megan and this could be associated with her reading difficulties. He is concerned about her and is planning a supplemental intervention to provide Megan with additional instructional time.

8. If you were giving advice to Megan's teacher, how would you suggest he prioritize supplemental instruction for Megan in the areas given below?

Mark one response for each category.

| | Essential | High Priority | Medium Priority | Low Priority | Not a Priority |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Phonemic awareness | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Phonics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fluency | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vocabulary | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Comprehension | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

9. How much time (hours) per week should be devoted to Megan's intervention?

10. Consider a child whose reading development has been similar to peers through third grade. This child begins demonstrating significant and unexpected reading difficulties in grade 4. To what extent do you believe the following factors are associated with the child's reading difficulty?

Mark one response for each category.

| | To a great extent | Somewhat | Very little | Not at all |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Increase in academic demands | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of parental support | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Previous coping strategies no longer successful | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of appropriate instruction | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of motivation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Late onset of reading disability | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

11. Do you believe that a child who demonstrates reading abilities similar to peers during the primary grades (1-3) may experience reading difficulty in the intermediate grades (4-6)? Please explain your response.

12. Have you encountered a child who was progressing at rate similar to peers with respect to reading in the primary grades (1-3) but began experiencing reading difficulty in intermediate grades (4-6)? If so, please describe how the educators involved responded to this situation.

Demographic Information

Please answer the following questions about yourself.

13. Please describe your past experience by indicating the number of years you have taught each of the levels below. (You can also include long-term substitute positions of 6 months or more.)

Preschool:

Kindergarten:

Grade 1:

Grade 2:

Grade 3:

Grade 4:

Grade 5:

Grade 6:

Special Education:

Others:

14. What teaching endorsements or licenses do you hold? (Mark all that apply.)

☐ Elementary education

- ☐ Early childhood education
 - ☐ Special education endorsement
 - ☐ Reading endorsement
 - ☐ Middle school endorsement
 - ☐ Others
-

15. What is your current teaching position? (Mark all that apply.)

- ☐ General Education
 - ☐ Special Education
 - ☐ Reading Specialist
 - ☐ Others
-

16. Which grade(s) are you teaching this academic year (2010 - 2011)? (Mark all that apply)

- ☐ Grade 1 ☐ Grade 2 ☐ Grade 3 ☐ Grade 4 ☐ Grade 5 ☐ Grade 6
-

17. Highest level of education completed (Select one which applies.)

- ☐ Bachelors
 - ☐ Bachelors with some graduate credits
 - ☐ Masters
 - ☐ Masters with some graduate credits
 - ☐ PhD
 - ☐ Others (please specify)
-

18. School District

19. Gender

☐ Male ☐ Female

20. Have you ever heard about, read about, or learned about Late Emerging Reading Disability? If so please describe the source of this information.

Thank You!

Thank you for taking our survey. Your response is very important to us.

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