

1-1-2009

A Descriptive Analysis of One School District's Approach to Response to Intervention for Kindergarten Literacy

Christine H. Lowell

Eastern Illinois University

This research is a product of the graduate program in [Psychology](#) at Eastern Illinois University. [Find out more](#) about the program.

Recommended Citation

Lowell, Christine H., "A Descriptive Analysis of One School District's Approach to Response to Intervention for Kindergarten Literacy" (2009). *Masters Theses*. 644.
<http://thekeep.eiu.edu/theses/644>

This Thesis is brought to you for free and open access by the Student Theses & Publications at The Keep. It has been accepted for inclusion in Masters Theses by an authorized administrator of The Keep. For more information, please contact tabruns@eiu.edu.

THESIS MAINTENANCE AND REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates (who have written formal theses)

SUBJECT: Permission to Reproduce Theses

The University Library is receiving a number of request from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow these to be copied.

PLEASE SIGN ONE OF THE FOLLOWING STATEMENTS:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

Christina Jewell

11/16/09

Author's Signature

Date

I respectfully request Booth Library of Eastern Illinois University **NOT** allow my thesis to be reproduced because:

Author's Signature

Date

This form must be submitted in duplicate.

**A Descriptive Analysis of One School District's Approach to Response to
Intervention for Kindergarten Literacy**

BY

Christine H. Lowell

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in School Psychology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

2009
YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

Christine McCormick 10/30/09
THESIS COMMITTEE CHAIR DATE

J. H. W. 10/30/09
DEPARTMENT/SCHOOL CHAIR DATE
OR CHAIR'S DESIGNEE

[Signature] 10-30-09
THESIS COMMITTEE MEMBER DATE

[Signature] 10/30/09
THESIS COMMITTEE MEMBER DATE

Abstract

This study provided a descriptive analysis of one school district's approach to Response to Intervention (RTI) for literacy skills in kindergarten which included two screening measures and their accompanying supplemental literacy instruction. Data, collected by the school, were analyzed for the children deemed "at-risk" of reading difficulty during the fall, winter, and spring assessment periods of the 2008-2009 academic school year. The data included performance on two screening measures, the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and the teacher-developed Kindergarten Inventory of Skills, and book-level assessments as a measure of early reading skill development. Results indicated that by the spring assessment period, 93% of the at-risk children who received DIBELS-only supplementary instruction and 58% percent of the children who received the Kindergarten Inventory of Skills supplementary instruction achieved book levels adequate for first grade reading instruction. The complexities of describing and evaluating this school district's approach to RTI are discussed. Multi-year comparison data as well as clearly delineated decision rules and procedures would allow this district to further evaluate their approach to RTI.

Acknowledgements

I would like to first thank my extraordinary thesis chair, Dr. Christine McCormick, for her guidance, support, and dedication with respect to this study. I would also like to thank my thesis committee members, Dr. Michael Havey and Dr. Linda Leal, for their advice and assistance. Finally, I would like to thank my family and friends for their support during the course of my studies.

Table of Contents

Abstract	2
Acknowledgments.....	3
Table of Contents.....	4
List of Tables.....	5
Introduction.....	6
Response to Intervention.....	6
One School District’s Approach to RTI for Kindergarten Literacy.....	10
Dynamic Indicators of Basic Early Literacy Skill	12
Kindergarten Inventory of Skills.....	13
Purpose.....	14
Methods.....	16
Setting and Participants.....	16
Measures	16
Procedures.....	18
Results.....	20
Summary	25
Discussion.....	27
References.....	31
Appendix A.....	34
District Letter of Consent.....	34

List of Tables

Table	Page
1. Fall Screening Outcomes for Risk Categories and Supplemental Instruction.....	21
2. Winter Screening Outcomes for Risk Categories and Supplemental Instruction.....	22
3. Book Level Outcomes.....	24

A Descriptive Analysis of One School District's Approach to Response to Intervention
for Kindergarten Literacy

The purpose of this study was to provide a descriptive analysis of one school district's approach to supplemental literacy instruction in kindergarten, that is, instruction for children at-risk for learning to read which is in addition to whole-class reading instruction. This district, located in a small Midwestern city, has implemented a kindergarten literacy program designed to meet the instructional expectations of the 2001 Federal Act known as No Child Left Behind in which all children receive effective instruction in literacy skills within the regular (non-special education) reading program. In order to provide this effective instruction, all kindergarten classrooms in this district are now using the same reading curriculum and all children identified as at-risk for learning to read are receiving additional instruction via two approaches that both identify students at-risk and provide methods for supplemental instruction. This study examined the progress of literacy skills for children receiving supplemental instruction.

Response to Intervention

The 2004 Individuals with Disabilities Education Improvement Act (IDEIA) has led to a paradigm shift in the understanding and delivery of reading instruction for students at-risk for learning to read. Prior to IDEIA many, if not most, school psychology practitioners and educators relied on a discrepancy model between performance on intelligence and achievement tests as the primary indicator of learning disabilities (LD). Supplemental reading instruction (i.e., instruction beyond that of the whole class in the regular classroom) was then provided in the context of special education services to children with a discrepancy between intelligence and reading skills.

A central problem with the IQ-achievement discrepancy model is that under this approach services are often withheld from many children struggling with learning to read. Disadvantaged “low achievers” and/or “slow learners” often “fall through the cracks,” and do not receive supportive instruction because they do not qualify for special education (i.e., LD) services. The IQ-achievement discrepancy approach represents a wait-to-fail model that “often leaves students with LD unidentified and often floundering academically well into the upper grades of elementary school until the discrepancy (between IQ and achievement) becomes significant enough to warrant services” (Bradley, Danielson, & Doolittle, 2005, p. 485).

IDEIA removed the requirement from the prior Individuals with Disabilities Education Act (IDEA) of a “severe discrepancy” between IQ and achievement in order for a student to be classified as LD, and in the accompanying regulations permitted as criteria for LD classification “the use of data obtained when scientifically based intervention is implemented with a student to make eligibility decisions” (Jimerson, Burns, & VanDerHeyden, 2007, p. 3). This approach to instruction is known as Response to Intervention (RTI) and has now become the first choice alternative to the discrepancy model. Currently, students may be identified as LD when “their response to an effective educational intervention is dramatically inferior to that of peers” (Davis, Lindo, & Compton, 2007, p. 32). This implies that all children should receive effective instruction before being considered for special education (Bradley, et al., 2005).

The RTI approach promotes effective, evidence-based instruction and intervention that is hoped to produce successful instructional outcomes for nearly all children who are having difficulty learning, not just potential special education students.

In their book for teachers on RTI, Bender and Shores (2007) summarize RTI as "...a process of implementing high-quality, scientifically validated instructional practices based on learner need, monitoring student progress, and adjusting instruction based on the student's response" (p. 7).

There are numerous advantages associated with using the RTI approach to reading instruction (Fuchs, Mock, Morgan, & Young, 2003). First, and most relevant to this study, RTI provides services to a greater number of struggling students in a timely fashion. Second, "by providing individualized and intensive instruction to these students, the approach effectively separates students with disabilities from those who perform poorly because of inadequate prior instruction" (Fuchs, et al., 2003, p. 159). Third, this approach attempts to reduce "false positives" (i.e., students who are inappropriately labeled with a disability), which in turn, will lower special education enrollment and the costs associated. Fourth, the providing of services is not dependent upon student performance on IQ and academic achievement tests administered on one occasion.

Because there are variations in how RTI is operationalized, no single model is currently accepted as the "gold standard." However, Bradley et al. (2005) note the core features of RTI: (a) high quality, research-based classroom instruction, (b) universal screening, (c) continuous progress monitoring, (d) research-based secondary or tertiary interventions, and (e) progress monitoring during interventions. Schools can implement RTI through various methods; however, most current models advocate a three-tiered prevention model.

In Tier I, all students participate in the reading instruction program in their regular education classroom. The school is responsible for monitoring each student's rate of

reading growth through a screening measure (i.e., a brief assessment that provides predictive information about a child's development in a specific academic area). Children whose level of performance and rate of improvement are dramatically below that of peers (based on classroom, school, district, state, or national norms) are designated as "at risk" for poor reading outcomes (Davis et al., 2007). Children who are deemed "at risk" receive Tier II instruction.

In Tier II, students usually receive small group interventions where their progress is monitored. Instructional sessions generally occur for 9-12 weeks, about 4 times per week, each session lasting 20 minutes. Sessions can be led by a variety of individuals including: the regular education classroom teacher, a special education teacher, or a school psychologist. The purpose of Tier II interventions is to prevent further reading difficulty by providing more intense and possibly more effective instruction that will expedite reading development. If the child is responsive to this intervention and is performing commensurate to his or her typically performing peers, he or she will return to the regular education classroom and the additional instructional sessions will be discontinued (Bender & Shores, 2007).

If students are not responsive to Tier II interventions, they will move to Tier III. Tier III interventions can be provided on an individual or small group basis. The interventions are intense, frequent, and require continuous progress monitoring. If students do not respond to Tier II and Tier III interventions, they should then be referred for a special education evaluation (Bender & Shores, 2007).

Jimerson, et al. (2007) point out in their overview of RTI that, although RTI models have promise, needed research includes that of evaluating the decision-making

utility of the models in practice. In summary, RTI remains today an evolving science of decision-making, although at this time the lack of consensus includes how the adequacy of RTI implemented in the schools can best be evaluated.

One School District's Approach to RTI for Kindergarten Literacy

The school district, which is the focus of this study, implemented for the first time during the 2008-2009 academic year an approach to RTI, which provided at the Tier I kindergarten classroom level a curriculum described as a balanced approach in which literacy instruction was delivered in the context of reading increasingly complex story books. The following description of procedures for identifying children at-risk for learning to read was provided by school personnel during several meetings with this researcher at the beginning of the 2008-2009 school year. Screening procedures for identifying kindergarten children's need of supplemental instruction include both the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), which identifies specific early literacy skills performance, and portions of the district's teacher-developed Kindergarten Inventory of Skills (KI), which assesses the state's academic standards for kindergarten. Supplemental instruction is provided for children identified as at-risk on the DIBELS and for children identified as at-risk on the KI. This supplemental instruction, which combines characteristics of Tiers 2 and 3, consists of small group specific skill-based practice for DIBELS at-risk children and individual story-based instruction for at-risk children identified via the KI. Children identified as at-risk on both screening measures receive both types of supplemental instruction.

The Tier 1 classroom instruction used the Comprehensive Literacy Model developed by Linda Dorn, Director of the Center for Literacy at the University of

Arkansas at Little Rock (Dorn, French, & Jones, 1998). In this balanced literacy approach, reading skills instruction is embedded in lessons of reading increasingly complex (higher levels) of familiar and novel stories; the model does not emphasize component skill instruction. The Comprehensive Literacy Model evolved as a whole-class approach to literacy instruction adapted from the Reading Recovery intervention program originally developed by Marie Clay (1979) for first graders. Teachers assessed children's level of book reading twice during the academic year to track early literacy progress in this Tier I classroom instruction.

Both the classroom curriculum and the KI supplemental instruction used methods adapted from Reading Recovery. The Reading Recovery program is a short-term individualized intervention for low-achieving first graders who receive 30-minute lessons each day for 12-20 weeks with a specially trained Reading Recovery teacher (Reading Recovery Council of North America). The program was developed by Marie Clay in the mid-1970's in New Zealand and was introduced to the United States in 1984 where it has now been used in more than 15% of the nation's elementary schools. This supplement to classroom teaching develops general reading achievement through guided story reading (Reading Recovery Council of North America) and, as noted above, Linda Dorn has adapted these instructional strategies for the classroom.

In 2007 the What Works Clearinghouse (WWC), a branch of the United States Department of Education and the Institute of Education Sciences, released its review of the experimental research on Reading Recovery. The WWC gave Reading Recovery its highest rating after a review of research studies, which met their standards for causal validity (What Works Clearinghouse). Critics of the Reading Recovery program have

questioned its costliness (i.e., costs of teacher training and extensive individualized instruction) and effectiveness compared to other interventions (Shanahan & Barr, 1995). Grossen, Coulter, & Ruggles (1996) evaluated the benefits and costs of Reading Recovery, concluding that “Retooling a school to use explicit instruction in phonological skills with systematic phonics combined with decodable text is a much more cost-effective alternative” (p. 19). This conclusion by Grossen et al. reflects the view that beginning reading is better taught by emphasizing specific skills of word identification (e.g., letter recognition and letter-sound correspondences) at all Tiers of instruction rather than embedding such instruction in story book reading.

Dynamic Indicators of Basic Early Literacy Skills

“The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) is a set of quick efficient indicators of school children’s progress in early literacy skills” (Rathvon, 2004, p. 206). In the 1990’s Good and Kaminski (1996) identified measures of specific early reading skills to be a direct means of frequently assessing school children’s reading progress and thus provide information to guide appropriate instruction during the early years of reading instruction in school (Hamilton & Shinn, 2003). The DIBELS is now, perhaps, the most widely recognized approach toward screening, progress monitoring, and RTI decision making and is “widely promoted and used by schools to track and facilitate adequate yearly progress in early reading because of its demonstrated link to reading competence and high-stakes testing at the end of Grade 3” (Good, Simmons & Kame’enui, 2001; VanDerHeyden & Snyder, 2007, p. 529).

The DIBELS screening measures, which have now been developed for children in kindergarten through Grade 6, assess core components of reading, which include

phonological awareness and the alphabetic principle (letter name/letter-sound correspondences) during kindergarten. DIBELS measures are brief, usually one-minute probes, designed to frequently monitor the development of prereading and reading skills. For kindergarten, the indicators include: Initial Sound Fluency, Letter Naming Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency.

DIBELS indicators are individually administered to all students three times a year (beginning, middle, and end of an academic year) and scores are reported according to benchmark goals, which “represent minimum levels of performance for all students to reach in order to be considered on track for becoming a good reader” (University of Oregon Center on Teaching and Learning). Benchmark categories indicate the probability of the student achieving successive goals and identify children at-risk for reading failure who need further assistance.

Kindergarten Inventory of Skills

The Kindergarten Inventory of Skills (KI), which was developed by the kindergarten teachers in this district and has been used by them for a number of years, was also used to identify children at-risk and eligible for supplemental reading instruction. The KI screening assesses more traditional kindergarten skills such as color, shape, letter, and number knowledge. The supplemental instruction for children identified as at-risk on the KI is individualized and basically similar to the beginning lessons of the classroom curriculum (and Reading Recovery), only slower-paced. This instruction is delivered in the context of guided story reading and differs from the specific skill practice of the DIBELS supplemental instruction

In summary, the Tier 1 regular classroom reading instruction was characterized as

a balanced approach in which the emphasis was on learning to read in the context of guided storybook reading and does not emphasize specific literacy skill practice. This whole class instruction has been adapted from the model of the Reading Recovery intervention program.

The supplemental instruction provided to the children identified as at-risk on the KI was individualized and similar, but slower paced, than the whole class instruction and also quite similar to the first Reading Recovery lessons.

The other approach to identifying children at-risk used the DIBELS, which identifies children on the basis of specific early literacy skills. The supplemental instruction provided to these children involves developing the specific skills assessed on the DIBELS screening.

The kindergarten school in this study chose to implement both approaches to providing supplemental instruction, and an examination of this dual approach to RTI is the central focus of this study. As pointed out by Jimerson et al., 2007 the literature on evaluating differing approaches to RTI is limited. Thus, an examination of the approach implemented in this school may help teachers and administrators decide whether or not to continue with their dual approach to screening and supplemental reading instruction.

Purpose

This study examined one academic year's early literacy data collected in the kindergarten classrooms during fall, winter, and spring assessments. The study focused on data from the at-risk children who received instruction in addition to that of the regular literacy curriculum and tracked the progress of those children. The data included performance on the DIBELS, the Kindergarten Inventory of Skills, as well as book-level

achievement across the academic year. The descriptive analysis examined the following questions:

1. Were the same children identified as at-risk by their DIBELS scores/categories and their Kindergarten Inventory of Skills scores?
2. Were the same children receiving DIBELS support instruction over the course of the year? That is, did the same children continue to be at-risk on the DIBELS at each assessment period?
3. Were the same children receiving KI support instruction over the course of the year? That is, did the same children continue to be at-risk on the Kindergarten Inventory?
4. Were the children receiving DIBELS and/or KI instruction at the same book levels at the winter and spring assessments?

Methods

Setting and Participants

Participants in this study were kindergarten students in the district's nine kindergarten classrooms, all in one school, located in a small city in east-central Illinois. Consent was given by the school district's administration to use the literacy data collected by the school from the kindergartners (See Appendix A). Data for all 179 children were initially available. The students were predominantly Caucasian (89%); 52 students (29%) were eligible for free or reduced lunch, 31 students (17%) were eligible to receive speech services, and 13 (7%) were special education students with an Individual Education Program.

The number of actual participants at the beginning of the study was 170 children rather than 179. This was because nine of the children in special education since early childhood were not included in the early literacy data collection during the school year; four students in special education did have data throughout the school year and were included.

Measures

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments were given to the students three times during the school year (i.e., fall, winter, and spring). Initial Sound Fluency and Letter Naming Fluency were given during the fall benchmark assessment. Letter Naming Fluency and Phoneme Segmentation Fluency were given during the winter benchmark assessment and Letter Naming Fluency and Nonsense Word Fluency were given during the spring benchmark assessment. Each child's overall score was categorized as "at-risk" (bottom 20% of national data), "some

risk” (20-40% of national data), or meeting benchmark (above 40th percentile of national data) using the criteria provided through the official DIBELS website after each assessment (University of Oregon Center on Teaching and Learning). Children scoring in the at-risk or some-risk categories were considered at-risk.

The Kindergarten Inventory of Skills (KI), an assessment developed by teachers in the district and used to assess typically expected academic skills of kindergarteners, was given to each of the kindergarten students at the beginning of the school year. The KI, developed to match state academic standards for kindergarteners, assessed the following skills: uppercase and lowercase letter recognition, letter/sound association, color and shape identification, same/different recognition, counting proficiency, more/less recognition, recital of full name, knowledge of age and birthday, and knowledge of spatial concepts. Children who scored below 50% correct on the combined measures of letter recognition, letter/sound association, concepts, and colors were considered at-risk.

The *Benchmark Assessment and Evaluation, Kindergarten* (2003) is an assessment tool for teachers to identify the achieved or benchmark book level for each child. This procedure has been developed to accompany balanced classroom reading curricula, such as the Comprehensive Literacy Model. This approach to book level assessment is described as “Rather than sporadically measuring performance in isolation, assessment occurs in context during authentic literacy experiences. It is based on ongoing, multiple indicators of children’s progress over time” (*Benchmark Assessment and Evaluation, Kindergarten*, 2003, p. 3). The kindergarten assessment of book levels considers Book Level 3 as adequate for beginning first grade reading instruction

(Reading Levels Chart). Book levels for all kindergarten students were assessed at the winter and spring assessment periods.

Procedures

Several meetings with the school principal and the teacher who coordinated data management and intervention placement were held at the beginning of the 2008-2009 school year. One focus of these discussions was describing to the researcher the procedures for assessments and interventions. Following these discussions, the researcher expected that children at-risk on both screening measures would receive both types of supplemental instruction and that the Kindergarten Inventory would be given more than once.

DIBELS assessments were given by teachers to every student three times during the 2008-2009 school year (i.e., September, January, and May). Students were determined to be in risk categories for reading failure according to DIBELS scoring criteria. Decisions regarding which children received supplemental DIBELS instruction were determined at each screening period.

The Kindergarten Inventory of Skills screening was given to each student at the beginning of the 2008-2009 school year. Students who scored below 50% correct on the selected measures were considered at-risk and eligible for this school's KI supplemental instruction.

Book level assessments were given at the winter and spring assessment periods by the classroom teachers to all kindergarten students and were used as an indication of overall early literacy skill development.

A wall chart, which included data for all kindergarten children, of the screening

assessment data and participation in supplemental instruction, was completed by the coordinating teacher following each assessment period. The chart provided some of the data used in this study.

Results

After all the data were examined in May, at the conclusion of the spring assessment period, this researcher realized that, although the initial discussions with the school principal and the teacher coordinating the literacy screening and supplemental instruction indicated that participants eligible for both types of supplemental instruction would receive both, the placement into supplemental instructional groups did not provide both types of supplemental instruction when children were at-risk on both the DIBELS and the KI.

The first three questions to be answered by this study asked if the same children were identified as at-risk by the screening measures of DIBELS and the KI and if these children continued to receive supplemental instruction throughout the year. After the fall assessments, a total of 87 children received DIBELS scores in the risk categories and 45 children received KI scores that were considered at-risk. Forty-two of the 45 children (93%) at-risk on the KI had also placed in the risk categories on the DIBELS; only 3 of the 45 children had not also been identified on the DIBELS. Thus, of the 90 children considered at-risk for developing early literacy skills and eligible for Tier 2/3 supplemental instruction at the fall assessment, 45 were identified on DIBELS only, 42 were identified on both DIBELS and the KI, and three were identified on the KI only.

As noted above, placement in supplemental reading instruction did not match the plan expected by the researcher prior to the beginning of this study. Instead, if children were at-risk on the KI, they were placed in the supplemental KI instruction and, with few exceptions, did not also receive DIBELS supplemental instruction. The additional children who were in the risk categories on the DIBELS (but not also in the KI risk

group) were then placed into DIBELS supplemental instruction. Thus, the supplemental instruction was primarily an either/or placement, with only three children receiving both types of supplemental instruction.

Also, the children placed in the supplemental instruction groups did not exactly match the children identified as at-risk by the screening measures. After each assessment period a few children were added or removed from the supplemental instruction groups by teacher decision. In the fall, 42 children received DIBELS supplemental instruction only, three children received both DIBELS and KI instruction, and 45 children received KI instruction. See Table 1 below for a summary.

Table 1

Fall Screening Outcomes for Risk Categories and Supplemental Instruction

Number of children in risk categories	Number of children receiving supplemental instruction
Number of children in DIBELS risk categories 87	Number of children in DIBELS supplemental instruction only 42*
Number of children in KI risk category 45	Number of children in KI supplemental instruction 45
Number of children in DIBELS and KI instruction risk categories 42	Number of children in both DIBELS and KI supplemental 3

* By teacher decisions, four children in the risk categories on DIBELS did not receive supplemental DIBELS instruction and one child was placed in the DIBELS instruction group without being in a DIBELS risk category.

At the winter assessment, the DIBELS screening measure was administered, and a total of 45 children received scores which placed them in risk categories on the DIBELS (Fourteen children from the fall assessment continued to be in the DIBELS-only risk categories, and four children who had previously met benchmark on the DIBELS in the fall were now in risk categories). Eighteen children in the DIBELS risk categories received DIBELS-only supplemental instruction. The KI was not given again, and with minor exceptions, placement in KI instruction continued throughout the academic year. The 46 children now in KI supplemental instruction included 26 children who were also in the DIBELS risk categories, four of whom were also placed in DIBELS supplemental instruction. Thus, a total of 22 children received DIBELS supplemental instruction. Of the children receiving KI supplemental instruction, two from the fall group were moved out into the regular classroom instruction and three were added (one move-in) by teacher decision. See Table 2 below for a summary.

Table 2

Winter Screening Outcomes for Risk Categories and Supplemental Instruction

Number of children in risk categories	Number of children receiving supplemental instruction
Number of children in DIBELS risk categories 45	Number of children in DIBELS supplemental instruction only 18*
	Number of children in KI supplemental instruction 46
	Number of children in both DIBELS and KI supplemental instruction 4**

* This number does not include DIBELS risk children ($n = 26$) receiving supplemental KI instruction and one DIBELS risk child not receiving DIBELS instruction.

** This number includes the three children who continued to receive both DIBELS and KI supplemental instruction and one child who had moved into the school and was placed in KI instruction by teacher decision.

The fourth and last research question concerned the teacher-assessed book levels achieved by children in each of the supplemental instruction groups. Book levels at the winter assessment, which followed the fall supplemental instruction, were indicative of the children's progress in early reading skills. Because Book Level 3 is considered by the kindergarten teachers and the publishers of the assessment measure (*Benchmark Assessment and Evaluation, Kindergarten*, 2003) as indicating adequate progress for first grade reading instruction, the results will be presented in terms of children achieving this book level at the winter and spring assessments.

At the winter assessment period, which followed about two months of supplemental instruction, of the 42 children who received DIBELS-only instruction during fall, two children had a Book Level of 0 (5%), 27 (64%) had a Book Level of 1 or 2, and 13 (31%) had a Book Level of 3 or higher. At the spring book level assessment, data were available for 42 children who had received DIBELS-only instruction during either the fall or the winter or both; 39 (93%) had a Book Level of 3 or higher and three had a Book Level of 1 or 2 (7%).

Regarding the children receiving the KI supplemental instruction, which included the three to four children in both DIBELS and KI instruction, book level assessment data were available for 44 children in the winter and 43 children in the spring. At the winter

assessment, 14 (32%) received a Book Level of 0, 26 (59%) received a Book Level of 1 or 2, and 4 (9%) received a Book Level of 3 or higher. By the spring book level assessment, 25 (58%) scored a Book Level of 3 or higher; 16 (37%) were at Book Level 1 or 2 and 2 (5%) placed at Level 0. See Table 3 below for a summary.

Table 3

Book Level Outcomes

Number and percent of children by book level for those receiving supplemental instruction

	Winter book level			Spring book level		
	0	1-2	3	0	1-2	3
DIBELS supplemental instruction only (<i>n</i> = 42)	2 (5%)	27 (64%)	13 (31%)	0 (0%)	3 (7%)	39 (93%)
KI supplemental instruction* (<i>n</i> = 44, winter; <i>n</i> = 43, spring)	14 (32%)	26 (59%)	4 (9%)	2 (5%)	16 (37%)	25 (58%)

* Children receiving both KI and DIBELS instruction were included in the KI group.

The spring DIBELS assessment, which took place several weeks before the end of the academic year, placed 32 children in the risk categories. Eighteen of these 32 were receiving KI instruction; eight had also been at-risk on the winter DIBELS and six were in the risk categories for the first time. The 18 children continued receiving KI instruction and the other 14 received DIBELS supplemental instruction through the remaining weeks of the school year. Because the KI was not included in the spring assessments, there is no data regarding KI performance near the end of the academic year.

Summary

As a summary of the results, the findings pertinent to each of the specific research questions are stated below:

1. Were the same children identified as at-risk by their DIBELS scores/categories and their Kindergarten Inventory of Skills scores?

Results indicated that at the fall assessment, when both the DIBELS and the KI screening measures were administered, the DIBELS identified nearly twice as many children as the KI, and 93% of the children identified as at-risk on the KI were also identified in the risk categories on DIBELS. Contrary to this researcher's expectations, the KI was not given again and this question applied only to the fall assessment.

2. Were the same children receiving DIBELS support instruction over the course of the year? That is, did the same children continue to be at-risk on the DIBELS at each assessment period?

Only 12 (of the original 42) children continued to be in the DIBELS-only risk categories across the three DIBELS assessments and received DIBELS-only supplemental instruction over the course of the year. Overall, at the DIBELS assessment in winter the number of children in risk categories on the DIBELS had dropped by 52%; 87 children were at-risk in the fall and 45 children were in risk categories in the winter. By spring when 32 children were in DIBELS risk categories, this was 37% of the original number of the children identified as at-risk on the DIBELS fall assessment.

3. Were the same children receiving KI support instruction over the course of the year? That is, did the same children continue to be at-risk on the Kindergarten Inventory?

The 45 children who were at-risk on the Kindergarten Inventory at the fall

assessment period and were placed in the KI supplemental instruction group continued to receive this instruction over the course of the year, with the exception of two children who were placed back in the regular classroom instruction and three children who were added in the supplemental instruction by teacher decision after the winter assessment period. Thus, with a small number of exceptions, children receiving KI supplemental instruction in the fall continued to do so throughout the year. The second part of this research question turned out to be non-applicable as the KI was only given at the fall assessment period.

4. Were the children receiving DIBELS and/or KI instruction at the same book levels at the winter and spring assessments?

No, children in the DIBELS instruction group were more likely to be at Book Level 3 or higher at both the winter and spring assessments. Following the spring assessment which was nearing the end of the academic school year, the data on the book levels were available for 42 of the children who received DIBELS-only instruction during the fall or winter or both, and 39 of these children (93%) achieved the benchmark of Book Level 3. In contrast, the data available for the 43 children in the KI supplemental instruction group indicated that 25 (58%) achieved Book Level 3 by the spring assessment period.

Discussion

The purpose of this study was to provide a descriptive analysis of one school district's approach to RTI by addressing specific questions regarding the effectiveness of two types of screening measures (the DIBELS and the KI) and their accompanying supplemental instruction for children at-risk on early literacy skills. The results, as summarized at the end of the Results section, were expected to offer more insight as to the comparative effectiveness of these two approaches to identifying children at-risk and to providing supplemental instruction. Such information, in turn, would be beneficial to the school district as it seeks to meet the goals of RTI effectively and efficiently. However, insights beyond the specific questions of the descriptive analysis were restricted due to a number of considerations in this district's approach to screening and supplemental instruction.

One consideration to this study was the apparent difference (and lack of comparability) between the risk groups, as the two screening measures assessed different qualities of academic risk. The DIBELS screening measure assessed specific early reading skills for determining children at-risk. The KI screening assessed a broader subset of the state standards for kindergarten skills, which included not only the early literacy skills of uppercase and lowercase letter recognition and letter/sound association, but also color and concept knowledge. Thus, the academic needs of the children in the two risk groups differed. Children who were placed in the DIBELS instruction mainly struggled with early literacy skills, while children who were placed in KI instruction struggled with literacy as well as other kindergarten skills of academic functioning.

A second consideration of this descriptive study was that, placement in supplemental literacy instruction did not match the plan expected by this researcher and as described in meetings with the school principal and coordinating literacy teacher held prior to the study. At the time of developing the research questions, this researcher expected that children deemed at-risk on the both the DIBELS and the KI screening measures would receive both types of supplemental instruction. Instead, decision rules followed an either/or approach, where children who were classified as at-risk on the DIBELS only received DIBELS supplemental instruction and children who were classified as at-risk on the DIBELS and/or the KI received KI supplemental instruction. There were only a few exceptions in that three to four children received both types of supplemental instruction, and the decision rules involved in their placement were unclear to this researcher. Thus, although it was expected that the screening measures and effectiveness of the two approaches to supplemental instruction could be more directly compared, this was not possible.

A third consideration regarded psychometric issues related to the measures. Regarding the DIBELS, although school personnel were trained according to the straightforward guidelines provided by the DIBELS website, the actual performance of the examiners was not monitored regarding the administration and scoring of DIBELS. Similarly, the KI, although it has been in use for a number of years and its face value is clear, has not been analyzed for psychometric properties. Additionally, the book level assessment guidelines (*Benchmark Assessment and Evaluation, Kindergarten, 2003*) are extensive, yet require some judgment on the part of the teacher regarding the child's placement at a given book level following the evaluation. Also, while the Rigby Literacy

website (www.rigby.com) provides a Reading Levels Chart for book level by grade expectations, this researcher was unable to find data supporting the use of Book Level 3 as predictive of grade 1 reading achievement.

Overall, the data from this study regarding the district's approach to RTI and supplemental instruction on early literacy skill development indicated that by spring for the children who received DIBELS-only supplementary instruction, 93% achieved Book Level 3. For the children who received KI supplementary instruction, 58% achieved Book Level 3 by the spring assessment period. Spring book level data for all kindergartners ($N = 163$) indicated that 85% ($n = 139$) had reached at least Book Level 3. However, since this was the first year this school district used the Comprehensive Literacy Model (Dorn, et al., 1998) for classroom instruction, as well as the dual approach to supplemental instruction involving kindergarten literacy, there is no comparative data to evaluate the impact of this year's approach to that of previous years.

This study clearly illustrated the complexities of describing and evaluating the school's approach to RTI in kindergarten. For example, decision rules were not clearly delineated prior to the implementation of screening and supplemental instruction. Such decision rules included placement into supplemental instruction primarily as an either/or decision, as well as decision rules regarding the few children who received both types of instruction or were in DIBELS risk categories but did not receive DIBELS supplemental instruction. This descriptive analysis of the RTI approach would have been better served with a written document for procedures and decision rules regarding supplemental instruction.

These difficulties fit with the Jimerson et al. (2007) concern that further research needs to be conducted concerning the evaluation of the decision-making utility of the RTI models currently in practice. Certainly for this school and district, the descriptive analysis of their approach to RTI needs data collected over a number of years so that comparison data is available for the classroom (Tier 1) and supplemental instruction (Tiers 2/3). Such multi-year data would allow the district to better evaluate their approach to RTI and to meeting the expectations of the No Child Left Behind legislation.

References

- Benchmark Assessment and Evaluation, Kindergarten.* (2003). Barrington, IL: Rigby Literacy.
- Bender, W. N. & Shores, C. (2007). *Response to Intervention: A Practical Guide for Every Teacher.* Thousand Oaks, CA: Corwin Press.
- Bradley, R., Danielson, L., & Doolittle, J. (2005). Response to intervention. *Journal of Learning Disabilities, 38*(6), 485-486.
- Clay, M. (1979). *The Early Detection of Reading Difficulties.* Auckland: Heinemann.
- Davis, G. N., Lindo, E. J., & Compton, D. L. (2007). Children at risk for reading failure: Constructing an early screening measure. *Teaching Exceptional Children, 39*(5), 32-37.
- Dorn, L. J., French, C., & Jones, T. (1998). *Apprenticeship in Literacy.* Portland, ME: Stenhouse.
- Fuchs, D., Mock, D., Morgan, P.L., & Young, C.L. (2003). Responsiveness-to-intervention: Definitions, evidence, and implications for the learning disabilities construct. *Learning Disabilities Research & Practice, 18*(3), 157-171.
- Good, R.H. & Kaminski, R.A. (1996). Assessment for instructional decisions: Toward a proactive model of decision-making for early literacy skills. *School Psychology Quarterly, 11*, 326-336.
- Good, R. H., Simmons, D. C. & Kame'enui, E. J. (2001). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third grade high-stakes outcomes. *Scientific Studies of Reading, 5*, 257-288.

- Grossen, B., Coulter, G., & Ruggles, B. (1996). Reading Recovery: An evaluation of cost and benefits. *Effective School Practices*, 15(3), 6-24.
- Hamilton, C. & Shinn, M.R., (2003). Characteristics of word callers: An investigation of the accuracy of teacher's judgments of reading comprehension and oral reading skills. *School Psychology Review*, 32, 228-240.
- Jimerson, S. R., Burns, M. K., & VanDerHeyden, A. M. (2007). Response to intervention at school: The science and practice of assessment and intervention. In Jimerson, Burns & VanDerHeyden (Eds.) *Handbook of response to intervention*. New York: Springer, 3-9.
- Rathvon, N. (2004). *Early Reading Assessment: A Practitioner's Handbook*. New York: The Guilford Press.
- Reading Levels Chart*. Retrieved September 26, 2009, from www.rigby.com
- Reading Recovery Council of North America*. Retrieved December 5, 2008, from www.readingrecovery.org
- Shanahan, T. & Barr, R. (1995). Reading Recovery: An independent evaluation of the effects of an early instructional intervention for at-risk learners. *Reading Research Quarterly*, 30(4), 958-996.
- University of Oregon Center on Teaching and Learning*. Retrieved November 28, 2008, from <http://dibels.uoregon.edu/dibelsinfo.php>
- VanDerHeyden, A. M. & Snyder, P. (2007). Integrating frameworks from early childhood intervention and school psychology to accelerate growth for all young children. *School Psychology Review*, 35, 519-534.

What Works Clearinghouse: U.S. Department of Education and Institute of Education Sciences. Retrieved December 5, 2008, from http://ies.ed.gov/ncee/wwc/reports/beginning_reading/reading_recovery/

Appendix A

District Letter of Consent



District Administration Office • www.charleston.k12.il.us

Phone: (217) 639-1000 410 West Polk Avenue, Charleston, IL 61920

Fax: (217) 639-1005

October 22, 2008

Christine McCormick
Psychology Department
Eastern Illinois University
Charleston, IL 61920

Dear Dr. McCormick:

This letter is in response to our meeting yesterday and your request for a brief statement from me approving of the release of the following student assessment data: DIBELS risk categories, reading level for class instruction and Title I instruction across the academic year.

Our District may grant access to, or release information from, student records without parental/guardian consent or notification to any person for the purpose of research, statistical reporting, or planning, provided that no student or parent(s)/guardian(s) can be identified from the information released, and the person to whom the information is released signs an affidavit agreeing to comply with all applicable statutes and rules pertaining to school student records.

I will accept the attached memo from you, dated October 21, 2008, as an affidavit. Christine Lowell, graduate student in School Psychology, has permission to use data routinely collected in the kindergarten classrooms of CUSD #1 for her thesis project. This project is tentatively titled, *A Descriptive Analysis on One School's Approach to Response to Intervention in Kindergarten*.

I look forward to continuing an active partnership that promotes excellence for all students to learn and grow.

Yours in Education,

A handwritten signature in black ink, appearing to read "Todd J. Vilardo".

Todd J. Vilardo
Assistant Superintendent

copy: Mr. Jim Littleford, Superintendent, CUSD #1
Mr. Terry Diss, Principal, Mark Twain and Ashmore Elementary Schools
Mrs. Holly Storm, Teacher, CUSD #1