

## University of Mary Washington Eagle Scholar

---

### Student Research Submissions

---

12-12-2017

# Fundations: A Systematic, Research-Based Program to Support Students with Dyslexia through Tier 1 Instruction

Clarie C. Innocenti

*University of Mary Washington*

Follow this and additional works at: [https://scholar.umw.edu/student\\_research](https://scholar.umw.edu/student_research)



Part of the [Education Commons](#)

---

### Recommended Citation

Innocenti, Clarie C., "Fundations: A Systematic, Research-Based Program to Support Students with Dyslexia through Tier 1 Instruction" (2017). *Student Research Submissions*. 222.  
[https://scholar.umw.edu/student\\_research/222](https://scholar.umw.edu/student_research/222)

This Education 590 Project is brought to you for free and open access by Eagle Scholar. It has been accepted for inclusion in Student Research Submissions by an authorized administrator of Eagle Scholar. For more information, please contact [archives@umw.edu](mailto:archives@umw.edu).

**FUNDATIONS: A SYSTEMATIC, RESEARCH-BASED PROGRAM TO SUPPORT  
STUDENTS WITH DYSLEXIA THROUGH TIER 1 INSTRUCTION**

A research paper submitted to the College of Education  
of the University of Mary Washington

Claire C. Innocenti  
December 2017

By signing your name below, you affirm that this work is the complete and final version of your paper submitted in partial fulfillment of a degree from the University of Mary Washington. You affirm the University of Mary Washington honor pledge: "I hereby declare upon my word of honor that I have neither given nor received unauthorized help on this work."

Claire C. Innocenti  
(digital signature)

12/14/17

Running head: *FUNDATIONS*

*FUNdations*: A systematic, research-based program  
to support students with dyslexia through Tier 1 Instruction

Claire C. Innocenti

University of Mary Washington

Literacy Specialization

Dr. Nancy Guth, Advisor

## Abstract

This study explored whether students with dyslexia can be supported through Tier 1 intervention in the general education setting. The school researched in this study chose to purchase a research-based program, *FUNDations*, which can be implemented at Tier 1, 2, or 3, to support students with language-based disabilities, including dyslexia. Students identified with dyslexia require explicit instruction in phonics and decoding skills. As the Dyslexia Center of Utah (2014) reports, dyslexia is a common language-based disability, affecting one in five learners. This study has examined teachers within the general education setting implementing *FUNDations* as a research-based intervention to address the needs of students with dyslexia and other struggling readers with language-based disabilities. A mixed methods approach was utilized through surveys to determine teacher preparedness, comfort, and fidelity of implementation.

*Keywords:* research-based reading program, dyslexia, language-based disabilities, Tier 1 intervention

Table of Contents

Title.....1

Abstract.....2

Table of Contents.....3

Rationale.....4

Literature Review.....6

Methods.....12

Validity and Reliability.....19

Discussion of Limitations.....19

Contents of Project.....21

Implementation Timeline.....22

Findings.....23

Discussion.....31

Implications of Findings.....31

Conclusion and Implications.....32

References.....34

Appendices.....38

## Rationale

When considering dyslexia, the most valuable information to address when planning instruction is that a student has a language-based disability. As the American Speech-Language-Hearing Association (2017) states, language-based learning disabilities can be present in reading, spelling, or writing. The deficits that the individual demonstrates are not a representation of their intelligence, as most have average to above-average intelligence. Language-based disabilities, including dyslexia, make it difficult for individuals because of their phonological processing disorder, which directly connects to their spoken and written language. Teachers must know how to plan and deliver instruction effectively when presented with this type of learner. Most of the instruction can be addressed through direct instruction at Tier 1 or 2. For example, schools may choose to purchase a research-based program such as *FUNdations*, which can be implemented through Response to Intervention at Tier 1, 2, or 3, to support students with language-based disabilities.

Response to Intervention (RTI) is a process some schools use to identify students who are struggling with the general education curriculum and provide targeted teaching to help them catch up. Tiered intervention is classified within the RTI process set out by IDEA 2004 (Individuals with Disabilities Education Improvement Act of 2004). There are 3 Tiers in the RTI model. Information provided by the RTI Action Network (2017) describes Tiers 1 through 3 to help educators and parents better understand what response to intervention means. Tier 1 is identified as core instruction. As the RTI Action Network (2017) states, all students in Tier 1 receive high-quality instruction, differentiated to meet their needs, and are assessed on a regularly scheduled basis to identify struggling learners who require additional intervention. Tier 2 is identified as small group intervention. In Tier 2, students not making

adequate progress in the general education curriculum are provided with targeted interventions based their needs as demonstrated through present levels of performance and rate of progress. Tier 3 is identified as intensive intervention. At this Tier, students receive individualized, research-based interventions that target the students' areas of need for the remediation of existing deficits and the prevention of more severe concerns. Students at Tier 3 who continue to demonstrate a lack of progress can be referred for a comprehensive special education evaluation.

Dyslexia is a buzzword in education, but it has been around for many years. It is not a recent diagnosis or surprising new disability. Regardless, in several states, additional training requirements have been added for all teachers. As the Dyslexia Center of Utah (2014) reports, dyslexia is a common language-based disability, affecting one in five learners. Because dyslexia is a current topic again in education, all teachers are being required to attend various trainings and seminars to better understand and address instructional techniques for children with dyslexia. However, more research is showing that dyslexia does not always mean special education instruction. As an educator at any level, it is difficult to feel confident in these instructional strategies. When teachers are not able to provide a medical diagnosis of dyslexia, we can only determine that our data collection demonstrates traits of a student with dyslexia. However, research has found that early intervention is critical because it can help students to learn and use strategies that will improve their reading progress despite their having dyslexia. The researcher of this study investigated teachers within the general education setting implementing *FUNDations* as a research-based intervention to address the needs of students with dyslexia and other struggling readers with language-based disabilities.

## Significance

Parents and teachers frequently jump to a dyslexia diagnosis when students struggle to read and decode text accurately. Often, this means testing the student for special education and creating an Individualized Education Program, or an IEP. This study addressed how a research-based intervention, *FUNDations*, supported teachers when instructing students with dyslexia and other language-based disabilities in the general education setting (Tier 1). This research followed teachers as they identified readers struggling with dyslexia or a language-based disability, and how they implemented a scripted program (i.e. *FUNDations*) to support these language-based disabilities.

The long-term desired effects were to have fewer students referred to Tier 2 and 3 interventions, as a result of receiving high quality, research-based intervention within the classroom setting from their general education teacher. One of the limitations of this research is that additional longitudinal data would be required to reflect overall student progress from beginning of year to end of year, which would also require student data and student participation. However, to begin, the importance was to understand teacher's comfort and ability levels when working with a new tool in their classroom. In this research, the following questions were explored:

1. What strategies do these teachers utilize for students with dyslexia?
2. Which strategies are these general education teachers already using in guided reading that are effective methods for teaching students with dyslexia?
3. What are these general education teachers' attitudes toward using a research-based program in their classroom to support their learners with dyslexia?



## Literature Review

Research on instruction for students with dyslexia supports explicit phonics instruction in both real and nonsense words. The following literature review defines dyslexia, discusses the immediate and long-term implications of explicit phonics instruction, as well as secondary and tertiary support systems for students with language-based disabilities, including dyslexia. The existing research also supports the theory that early, targeted instruction at Tier 1 can provide skills and strategies to support students with dyslexia, ultimately leading to less referrals to intervention or special education support.

### Defining Dyslexia

Students identified with dyslexia need explicit instruction in phonics and decoding skills. McArthur et al. (2015) were able to show that students made the most clinically significant gains when they received explicit instruction for the first eight weeks of intervention on phonics, and spent the second eight weeks studying irregular sight words. There are programs teachers can use to target these skills that have research-based instruction with evidence-based results to show effectiveness but create no additional planning for the educator. Based on this, a key question is: are general education teachers willing to use a research-based program in their classroom with fidelity to support their learners with dyslexia? This study will follow teachers in the general education setting implementing *FUNDations* as a research-based program to address the needs of students with dyslexia and other struggling readers with language-based disabilities.

Dyslexia is diagnosed by a medical doctor using Functional Magnetic Resonance Imaging, also known as an fMRI. Galaburda (2005) provided research showing that an fMRI will light up to show parts of the brain compensating in an individual diagnosed with dyslexia.

The areas of the brain lighting up, or compensating, for other areas demonstrate the difficulty a reader with dyslexia has when decoding text. When doctors see this through the fMRI, they are able to diagnose a child with dyslexia. Once this diagnosis has been made, teachers are responsible for understanding what type of instruction will be effective to meet their learner's unique set of needs, whether the instruction takes place at Tier 1, 2, or 3. What Works Clearinghouse (2014) provided a study on Process Assessment of the Learner, also known as PAL. This program provided students with lessons in spelling, handwriting, and composition, similar to the *FUNDations* program. The students identified to receive intervention were performing in the bottom 25 percent of their age group. Once students received twelve weeks of explicit instruction in addition to their daily language arts instruction, they showed significant progress in written expression and decoding.

### **Basic Phonics Instruction**

Several researchers (McArthur et al, 2013; Wright, 2011) have used basic phonics instruction in their interventions for students with dyslexia. These interventions were based on the notion that students with dyslexia are not making successful gains in reading due to phonological processing deficits. Research based instruction on phonemic awareness and phonics that is implemented with fidelity showed reading gains in both studies.

McArthur et al. (2013) were able to show that students made the most clinically significant gains when students received instruction for the first eight weeks on phonics, and spent the second eight weeks studying irregular sight words. This study was also able to confirm that students did not regress or lose any ability to decode words after learning irregular sight words.

While Wright's (2011) study only followed one student, it yielded similar results. The student made clinically significant gains in the area of phonological decoding and irregular-word reading, after receiving 30 sessions of explicit instruction in these areas. The limitation in both studies showed that students did not make significant gains in the area of reading comprehension.

### **Computer Based Programs**

The program discussed by *What Works Clearinghouse* (2011) is explicitly designed for dyslexia training. The program is a Tier 3 intervention and provides explicit phonics instruction to primary aged children. It provides 336 lessons, each an hour, led by dyslexia therapists. Unfortunately, this program did not consistently report results, and the results included reflected less than 50% students with learning disabilities, which are the primary makeup of Tier 3 learners. However, districts may wish to purchase this program, as it is created by dyslexia therapists.

Blythe's (2006) research with *Phonics Alive 2: The Sound Blender* provided similar information to the non-computer based phonics instruction. Students made the most significant gains in the areas of nonsense word decoding. This program is more visually appealing than typical word study groups in phonics instruction, as its presentation is similar to a video game. Students were asked to access this program daily at school and at home. A stated limitation was that the students did not consistently participate in their phonics instruction at home.

Polat's (2012) article reflected adaptive testing, something currently occurring in school as a result of standardized testing. Students are often penalized for not being able to complete assignments, when the actual problem may reflect their struggle to read the

directions. Unfortunately, this article did not follow through on any future plans; it only outlined the need for an adaptive-learning program for students with specific learning disabilities in Turkey, as their teachers do not feel qualified to address their areas of need.

### **Written Expression Implications**

The research indicates that developmental dyslexia is closely linked to deficits in written expression. *What Works Clearinghouse* (2014) completed a study on *Process Assessment of the Learner*, also known as *PAL*. This program provided students with lessons in spelling, handwriting, and composition. The students identified to receive intervention were performing in the bottom 25 percent of their age group. After students received twelve weeks of explicit instruction in addition to their daily written language instruction, they showed significant progress in written expression.

Re's (2015) study regarding the comorbidity of dyslexia and ADHD demonstrated that there can be multiple deficits struggling students face. This study not only looked at students with academic needs, but also with behavior needs. Their inability to focus, coupled with the difficulty in reading and written tasks, was reflected in their struggle with spelling errors. The study suggested that copying and dictation, two of the most common forms of instruction, are not effective for students struggling with dyslexia and ADHD. This struggle with written expression ultimately carries into the learner's adult life. However, if the student has had successful instruction in managing their disability, they should be prepared for higher-education.

### **Higher Education Implications**

Price's (2006) study, which followed three college students working through their chosen field of study, provided important insight into how dyslexia persists through a learner's lifetime. These students continue to struggle and to require differentiated accommodations to be

successful. The importance of their accommodations were especially significant in college, as the majority of higher-education assignments require written expression as the main form of task mastery.

Hadley's (2007) research aligned with Price. College freshman felt like they were not always heard by their university, especially in the area of access to writing accommodations. The students had to be self-advocates in order to receive accommodations, as they no longer received services through an IEP. This reinforces the importance of self-advocacy and independent skills training for high school students with IEP's who are planning to pursue higher education.

Nelson's (2015) study was also linked to the work of Price and Hadley in that it looked at how college students with dyslexia responded to testing situations. These students demonstrated higher levels of test anxiety than their non-disabled peers. Unfortunately, the study did not report if this anxiety negatively affected their grades. It is also important to note that students who have dyslexia may be able to demonstrate mastery of concepts, but may fail to do so if unable to understand written directions on an assessment.

### **Learners with Dyslexia Demonstrate Same Level Skills in Other Ways**

Vakil's (2015) study on problem-solving explored the idea of the difference between the ability to read versus the ability to reason. This study provided students with dyslexia and non-disabled readers the chance to manipulate and problem-solve using visual tasks. Students with dyslexia performed the same as their non-disabled peers on these tasks, except when written directions were included. This emphasizes the importance of knowing how students can best access information, and educators providing that differentiated exposure to assignments or assessments.

### **Additional Research and Auditory Deficits**

Galaburda's (2005) article regarding the neurology of learning disabilities brought up some interesting questions in regard to dyslexia. As previously stated, a frontal MRI can light up to show parts of the brain compensating in an individual diagnosed with dyslexia. However, these areas may also be linked to linguistic auditory processing deficits. More research is needed to identify a connection with dyslexic readers who have phonological processing deficits in addition to auditory processing deficits.

Gabay's (2015) work addressed this, as he tested students with dyslexia to see if they also passively experienced speech and non-speech sounds. This study lends itself to the connection between dyslexia and auditory processing deficits being comorbid.

### **Summary**

This research all suggests that students with dyslexia require explicit instruction in phonics, sight-word reading, and accommodations to be successful in written expression. Studies examined everything from school systems who currently have no supports in place, to research-based programs schools can buy at the elementary and middle school level, to implications for higher-education students who are expected to monitor their own disability and manage their accommodations independently. Some limitations, as addressed in the literature review, involved expectations for continued practice at home, single-study research, research conducted in countries without the same federal laws regarding education and RTI, money both for teachers and within their districts, and money that parents were expected to contribute. This study addressed the implementation of a research-based intervention, *FUNDations*, for instruction in the general education classroom at the elementary level and how the instruction supported their learners.

## Methods

### Introduction

The purpose of this study was to identify whether using a research-based reading program could support general education teachers in the ability to provide intervention in the general education setting for students with dyslexia and language-based disabilities. The long-term desired effects would be fewer referrals to Tier 2 and 3 interventions, however this would require more data. This study did not directly review individual student progress, but instead analyzed teacher implementation and comfort level when using the research-based program, *FUNdations*. Correlation data was drawn from teacher open-ended responses, fidelity of implementation, and comfort level with *FUNdations*.

Teachers were provided with a scripted program with evidence based results to support their students with dyslexia and language-based disabilities. As a result, the students received high-quality phonics instruction during the primary grades. This instruction provided support when learning strategies and skills to compensate for deficit areas and maintain appropriate reading progress. The goal of the study was to determine whether teachers implementing this program were effective at Tier 1 for students with language-based disabilities, such as dyslexia. Data was collected through survey responses provided anonymously by the teachers who participated and correlation data will demonstrate how their comfort level is affected by their fidelity of use.

### Research Questions

1. What strategies do these teachers utilize for students with dyslexia?
2. Which strategies are these general education teachers already using in guided reading that are effective methods for teaching students with dyslexia?

3. What are these general education teachers' attitudes toward using a research-based program in their classroom to support their learners with dyslexia?

### **Setting**

The research for this study was conducted at an elementary school in Northern Virginia. During the 2017-2018 school year, there were 922 students enrolled at the elementary school being studied and an average of 90 are referred to the intervention process each year. Of the student population, 14% of students received free/reduced lunch, 14% of students were considered economically disadvantaged, and 13% of students were identified with language-based disabilities. General education classrooms ranged from 22-27 students.

Within the school building, there were 72 students, or 7% of the student population, identified with dyslexia or a language-based reading disability. The 2017 Fall enrollment and PALS data demonstrated that 10% of students in grades K-3 did not demonstrate adequate knowledge to pass the initial PALS assessment. There were 132 students enrolled in Kindergarten, 9 (or 6%) of whom failed their beginning of year PALS assessment. There were 153 students enrolled in first grade, 12 (or 7%) of whom failed their beginning of year PALS assessment. Second grade had 147 students enrolled, 28 (or 19%) of whom failed their beginning of year PALS assessment. Finally, there were 154 students enrolled in third grade, 13 (or 8%) of whom failed their beginning of year PALS assessment. Overall, 62 of the 586 students, or 10%, enrolled in grades K-3 demonstrated the need for research-based phonics instruction.

### **Participants**

The participants in this study were ten female general education teachers who expressed an interest in implementing *FUNDations* as an intervention within their classroom setting. These



teachers expressed frustration or concern regarding their reading instruction or strategies for teaching phonics, and felt that a research-based program would better support their students identified with dyslexia or other language-based disabilities. Initially, as reflected by the surveys, there were only eight participants, but two additional teachers requested to be trained to implement this intervention after the first two surveys had been provided. Of the ten teachers who participated, there was no representation for grades four or five. There was no expressed interest in participating in this study by those general education teachers. The teachers who participated in the study all worked in primary grades, Kindergarten through third grade. This study represents the responses of three kindergarten teachers, three first grade teachers, three second grade teachers, and one third grade teacher who participated in this intervention and research.

### **Procedures**

First, the researcher of this study obtained approval from the University of Mary Washington's Institutional Review Board. The researcher of this study also met with the school-based administration to receive approval to implement this study. Teacher participants volunteered by demonstrating interest in this intervention. To obtain consent, the researcher of this study distributed teacher consent forms by hand to those who requested to participate (Appendix A) and requested the forms be returned within one business week. This plan was implemented during the first quarter and part of the second quarter of the 2017-2018 school year.

For the purposes of this study research was reported from September 2017-December 2017. This study used surveys to learn teacher's views on whether they felt direct instruction using *FUNDations*, a scripted, research-based reading program, in a general education setting supported students with dyslexia in the classroom. Teachers were provided training, materials,

and took surveys incrementally throughout implementation of the *FUNDations* program. The surveys reflected strategies already in place when teaching students with dyslexia or struggling readers, teacher implementation and satisfaction with *FUNDations*, and how they felt about student progress as a result of the direct instruction they received in the general education setting. The researcher of this study created four tables to chart teacher's incremental responses while implementing *FUNDations*. To ensure confidentiality, teacher names were not included and each participant was assigned a two-letter name. This intervention was in addition to the daily guided reading groups student receive as part of a balanced literacy program.

### **Data Sources**

**Pre-Assessment.** At the beginning of the school year, teachers collected Fall 2017 PALs data, Fall 2017 DRA2 assessments, and Fall 2017 letter/sound identification inventories as pre-assessments to identify students in need of targeted intervention in phonics to support dyslexia or other language-based disabilities. These pre-assessments are required within the school building and district of all general education providers. No data from students was reported in this research.

***FUNDations* unit assessments.** At the end of each two-week unit, a unit assessment is provided by *FUNDations* to determine student mastery of skills. Students are asked to isolate sounds, digraphs, and write sentences using their knowledge of phonics and high-frequency sight words. Student mastery determines whether or not to re-teach or progress to the next unit. Teachers did not report student data from *FUNDations* for the purposes of this study, but used their data to determine the effectiveness of their own implementation and fidelity of use with the *FUNDations* program. No data from students was reported in this research.

**Teacher surveys.** Teachers were provided with four different surveys at specified dates throughout the implementation of the *FUNDations* program. These surveys asked teachers to rate their comfort level with *FUNDations* on a scale from one through ten, identify their fidelity of use, and independently review student progress to address growth or additional instructional needs. This information helped to guide the training process for teachers using this program in addition to assessing their own student growth and their own need for additional support when implementing *FUNDations*.

**Post-Assessment.** This assessment was the same assessment given to students in the fall to identify student growth during the intervention. In November, teachers collected post-assessment Mid-Year PALs data, DRA2 post-assessments, and letter/sound identification inventories as post-assessments to identify student progress as a result of targeted intervention using the *FUNDations* program to address deficits in phonics to support dyslexia or other language-based disabilities. These post-assessments are required within the school building and district of all general education providers. No data from students was reported in this research.

### **Data Collection**

Teacher surveys (Appendix B) were distributed four times during the course of this study. The surveys were completed individually and were returned anonymously. Teacher participants answered open-ended questions about their comfort level and implementation of *FUNDations*, in addition to completing rating scales about their interest level and comfort level regarding this classroom intervention. Teacher rating scales reflecting interest level and comfort levels were reported in numerical value from one to ten. A score of one would indicate little interest or comfort, while a score of ten indicated high interest or comfort with *FUNDations* as a Tier 1 intervention. Once the surveys were completed, they were returned anonymously, collected and

viewed only by the researcher of this study. The forms were kept in a locked file cabinet in the researcher's classroom.

### **Data Analysis**

A mixed methods approach was collected through the use of surveys provided to teachers who participated. The researcher of this study was the only individual to access, review, and analyze this data. Teachers were assigned a two-letter name to maintain confidentiality during this research. By analyzing the data provided by teachers through surveys, correlation data with fidelity and comfort, and school-wide reading scores, the researcher was able to triangulate data sources to identify patterns and findings by categorizing responses reported by teachers. The data was entered into a spreadsheet to record survey responses. A frequency table was used to report the instructional practices noted on the surveys. A correlation was drawn once data was collected which analyzed whether teachers felt prepared to utilize *FUNDations* for students with language-based disabilities, and whether the surveys demonstrated that they implemented the program with fidelity, and ultimately, if they felt their intervention was successful.

**Teacher Surveys.** Teachers were provided with four different surveys at specified dates throughout the implementation of the *FUNDations* program (Appendix B). These surveys asked teachers to rate their comfort level with *FUNDations* on a scale from 1-10, identify their fidelity of use, and independently review student progress to address growth or additional instructional needs. This information helped to guide the training process for teachers using this program in addition to assessing their own student growth and their own need for additional support when implementing *FUNDations*. There were four questions on the initial survey, and five questions on each subsequent survey. Many survey responses were similar, with teachers wondering if they were using the intervention correctly, would there be time to fit it into the current schedule,

and how would they know which materials to use and when? Correlations drawn by the researcher regarding fidelity of implementation, teacher comfort, and student progress are discussed in the research findings.

### **Validity and Reliability**

All of the data collection tools used in this study were created by the researcher. As a result, there is no way to determine whether the data collection tools used for the purposes of this study were valid or reliable. To promote validity within this single-study research, four surveys and four rating scales were provided to collect information regarding interest, comfort, and fidelity of *FUNDations* as a classroom intervention.

### **Discussion of Limitations**

There were many limitations noted by the researcher during this study. The first limitation was the amount of time spent implementing the *FUNDations* intervention. It would have been useful to follow teachers through an entire school year to review the consistency and fidelity of their implementation, and how it correlated to their comfort level with a research-based intervention program. Additionally, accessing individual student data would potentially demonstrate claims that growth for students with dyslexia and other language-based disabilities can be provided by this intervention through Tier 1 general education. Access to further reading data comparing same age peers identified with same disabilities who did not receive this intervention would demonstrate the impact of *FUNDations* as a general education, Tier 1 intervention.

In addition to utilizing individual teacher self-reported data to demonstrate the effectiveness of *FUNDations*, observations of teachers within the classroom implementing this

intervention would have provided insight into what teacher's classroom implementation looked like in contrast to what their response said on the survey. The ability to observe general education teachers who did not use *FUNDations* as an intervention for students with dyslexia and language-based disabilities would have provided data to demonstrate whether general education teachers are able to implement effective Tier 1 intervention without a research-based program. Adding more educators and students to this research would have given further data to support findings and implications of *FUNDations* as a successful Tier 1 intervention for students with dyslexia and language-based disabilities.

Data reporting student success post-*FUNDations* in fourth and fifth grade would also provide longitudinal information regarding long-term effects of research-based instruction. One of the limitations of this research is that additional longitudinal data would be required to reflect overall student progress from beginning of year to end of year, which would also require student data and student participation. However, within the scope of this study, the importance was to understand teacher's comfort and ability levels when working with a new tool in their classroom.

### **Importance**

The importance of this study was to identify whether using a research-based reading program could support general education teachers in the ability to provide intervention in the general education setting for students with dyslexia and language-based disabilities. Teachers were provided with a scripted program with evidence based results to support their students with dyslexia and language-based disabilities. As a result, the students received high-quality phonics instruction during the primary grades. This instruction provided support when learning strategies and skills to compensate for deficit areas and maintain appropriate reading progress.

The goal of the study was to determine whether teachers implementing this program were effective at Tier 1 intervention for students with language-based disabilities, such as dyslexia. Data demonstrated that teachers did not feel that they had adequate strategies to utilize for students with dyslexia or language-based disabilities and were often unable to identify such students. The data collected also demonstrated that the teacher comfort, implementation, and fidelity of a research-based intervention in the general education, Tier 1 setting yielded positive results.

### **Contents of Project**

In order to complete this research, ten *FUNdations* kits were purchased for teacher use. Otherwise, there were no additional contents required for this research.

### Implementation Timeline

This plan was implemented over one and a half quarters, beginning in September 2017, and ending in December 2017. The implementation plan at the elementary school level was as follows:

Date	Action	Staff
September 2017	Teachers implementing <i>FUNDations</i> for the SY 2017-2018 will be given training course on the scripted, research-based reading program. Materials and manuals will be distributed.	General Education Teachers, Researcher
September 2017	Teachers implementing <i>FUNDations</i> will review their new class list and identify “at risk” students who will receive research-based instruction. Principal will attend to help guide discussion of “at risk” students and implementation of <i>FUNDations</i> as a classroom intervention.	General Education Teachers, Principal, Researcher
October 2017	After four weeks of direct instruction, <i>FUNDations</i> teachers will meet to identify concerns or regroup students as needed. A satisfaction survey will be provided to teachers regarding their first four weeks of direct instruction, fidelity of implementation, and how they feel students are progressing.	General Education Teachers, Researcher
November 2017	After four weeks of direct instruction, <i>FUNDations</i> teachers will meet again to identify comments, concerns, or regroup students as needed. A survey will be provided regarding their second four weeks of direct instruction, fidelity of implementation, comfort level, and how they feel students are progressing.	General Education Teachers, Researcher
November/December 2017	<i>FUNDations</i> teachers will meet with Principal to discuss success of research-based reading intervention within the general education setting. A survey will be provided to teachers to identify whether they felt comfortable with the training provided to implement the program, and whether it was implemented with fidelity.	General Education Teachers, Principal, Researcher



**Findings**

**Survey 1: Teacher Initial Survey**

<b>Teacher</b>	<b>Interest Level</b>	<b>Current Instructional Practices</b>	<b>Grade Level</b>	<b>Comfort Level with Research-Based Intervention</b>
Teacher Cr	10	Sound boxes, stretching sound on arm, counting sounds on fingers	K	Looking forward to seeing how it works. Hoping it will support all students
Teacher Mu	10	Visual reminders, pictures along with letter to support working memory and recall	K	Comfortable but concerned it will overshadow guided reading/balanced literacy program
Teacher Ly	10	Tapping sounds, writing in sand, using play-doh, tracing letters in sand	1	Hoping to make instruction more effective as the intervention is research-based
Teacher Lu	10	Provide students an alphabet chart as visual when writing and reading	1	Intervention will be very effective since it is presented daily and sequentially
Teacher Wi	10	Preferential seating, trace letters in sand while saying word, follow finger when reading, review directions, attention to left to right progression	1	Very excited, feel that it could be an excellent support for all students to reach potential
Teacher Sc	10	Notecard to aid tracking, chunking assignments for less visual stimulation	2	Excited to use a research-based program for quality assurance
Teacher Fo	10	Elkonin boxes, stretch and squish sounds, left to right progression	2	Happy to have research to better support needs of all learners
Teacher Ab	10	Stop, think, paraphrase, graphic organizers, discussion, strategy practice in guided reading	3	Unsure which students have dyslexia but many read significantly below grade level, hoping to provide some re-teaching to catch them

				up to where they need to be.
--	--	--	--	------------------------------

The initial survey provided anonymously to each teacher yielded surprising results. All eight teachers who expressed interest in participating rated their interest level as a ten, which was a positive result. However, almost every teacher surveyed reported that they knew very few strategies to identify learners and support who have language-based disabilities, like dyslexia. Teachers surveyed also reported excitement to utilize a research-based intervention in their classroom to support all below grade-level learners.

**Survey 2: Post Teacher Material Training Survey**

Teacher	Comfort Level	Implementation Plan	Questions	Grade Level
Teacher Cr	4	Not sure yet	Is there time? How will it look in the classroom? Is it too many programs?	K
Teacher Mu	7	Using all components whole class and small group 3x weekly	Is it ok to use whole class in addition to small group?	K
Teacher Ly	8	Using all components whole class and small group 2-3x weekly	Should I use the program with all my small groups or just the lower students since it will also be presented whole group?	1
Teacher Lu	8	Using all components whole class and small group 2-3x weekly	N/A	1
Teacher Wi	3	Using all components with whole class and small group 2-3x weekly	N/A	1
Teacher Sc	2	Using all components in small group but there is a lot of “stuff” in the kit to	Can I use this with my whole class in	2

		manage. Also, it is taking a long time to get through each lesson so sometimes <i>FUNDations</i> is skipped, complete lessons 2x weekly	addition to low readers?	
Teacher Fo	8	FUNDations 3x weekly in addition to guided reading groups for students identified through DRA and PALs	How long is each session and how many days a week should the intervention be implemented?	2
Teacher Ab	5	MAPs, DRA, and PALs data to identify students requiring <i>FUNDations</i> intervention, plan to use at least 2x weekly but not currently being utilized	What supplies are required? What does the teacher need to have read? How long is each lesson? Which kids is this best for?	3

After teachers rated their initial interest in a research-based program and discussed current instructional practices, training was provided in September. Materials and manuals were distributed, and each teacher participated in observing the researcher model a lesson while the teachers acted as the students. After modeling, each teacher was given the opportunity to implement a lesson from their individual grade-level *FUNDations* kit while the researcher and other teachers acted as students. This hands-on training demonstrated inconsistent comfort levels with the beginning stages of implementing *FUNDations* as a general education, Tier 1 intervention. Teachers reported a range of comfort levels from two through eight, while survey data demonstrated that the same teachers who felt uncomfortable with the intervention had also not begun instruction or consistently implemented their instruction.

**Survey 3: Post Teacher Implementation Survey**

<b>Teacher</b>	<b>Comfort Level</b>	<b>Fidelity</b>	<b>Whole Class or Small Group</b>	<b>Grade Level</b>
Teacher Cr	7	2x week	Whole group	K
Teacher Mu	8	3x week	Whole group and small group (lowest readers)	K
Teacher Pa	6	2x week	Whole group and small group (lowest readers)	K
Teacher Ly	8	3-4x week	Whole group and small group (lowest readers)	1
Teacher Lu	8	3-4x week	Whole group and small group (lowest readers)	1
Teacher Wi	10	4x week	Whole group and small group (lowest readers)	1
Teacher Sc	7	2x week	Small group (lowest readers)	2
Teacher Jo	7	2x week	Small group (lowest readers)	2
Teacher Fo	10	2x week	Small group (lowest readers)	2
Teacher Ab	8	3-4x week	Whole group and small group (lowest readers)	3

The third survey administered demonstrated much more positive results than the first and second surveys. Teacher comfort ratings were between six and ten. This survey reflected the addition of two new teachers, Teacher Pa and Teacher Jo. Both teachers rated their comfort levels as a six or seven, which contributed to an overall mean score demonstrating lower comfort levels, directly correlating to lower implementation fidelity. However, all teachers reported consistent use of *FUNDations* as a Tier 1 intervention program between two and four days a week with their whole class or small groups.

**Survey 4: Second Post Teacher Implementation Survey**

<b>Teacher</b>	<b>Comfort Level</b>	<b>Fidelity</b>	<b>Progress Identified</b>	<b>Less RTI Referrals</b>	<b>Whole Class or Small Group</b>	<b>Grade Level</b>	<b>Use Intervention Again</b>
Teacher Cr	10	3x week	Yes	No-behavioral reasons	Whole group	K	Yes
Teacher Mu	10	4x week	Yes	Usually do not refer in K	Whole group and small group (lowest readers)	K	Yes
Teacher Pa	8	3x week	Yes	No, progress noted but not significant enough	Whole group and small group (lowest readers)	K	Yes
Teacher Ly	10	4x week	Yes	Yes- progress noted in spelling and decoding	Whole group and small group (lowest readers)	1	Yes
Teacher Lu	10	4x week	Yes	Yes- noted progress in sight words and decoding	Whole group and small group (lowest readers)	1	Yes
Teacher Wi	10	4x week	Yes	Yes- all students are benefitting	Whole group and small group (lowest readers)	1	Yes

Teacher Sc	9	3x week	Yes	No-behavioral reasons	Small group (lowest readers)	2	Yes
Teacher Jo	8	3x week	Yes	Yes- growth showed once bumped from 2x week to 3x week intervention	Small group (lowest readers)	2	Yes
Teacher Fo	10	3x week	Yes	Yes- groups receiving instruction demonstrate better understanding of decoding	Small group (lowest readers)	2	Yes
Teacher Ab	8	4x week	Yes	No- students missed so many basic skills, require Tier 2 or Tier 3 to catch up	Whole group and small group (lowest readers)	3	Yes

The final survey administered to the ten teachers participating in this survey demonstrated comfort level ratings between eight and ten. Teachers also reported higher levels of implementation, utilizing *FUNDations* as a Tier 1, general education classroom intervention between three and four days a week. All teachers surveyed reported that if given the opportunity, they would use this intervention again.

**Correlation Data: Survey 2**

<b>Teacher</b>	<b>Comfort Level</b>	<b>Fidelity of Use (Weekly)</b>
Teacher Cr	6	0
Teacher Mu	7	3
Teacher Ly	8	3
Teacher Lu	8	2
Teacher Wi	3	2
Teacher Sc	2	2
Teacher Fo	8	3
Teacher Ab	5	0
Mean Comfort	5.875	
Mean Fidelity		1.875

Eight of ten teacher’s responses were reflected in this correlation data, as two teachers had not yet expressed interest in participating yet. However, the comfort level was an average of 5.875 and the average weekly implementation of *FUNDations* as a general education classroom intervention was a 1.875. These numbers and teacher open-ended responses on this survey demonstrate a level of discomfort and continued questions regarding *FUNDations*. Individual teachers were addressed and provided support to begin implementing *FUNDations* or increase their weekly use of the intervention program.

**Correlation Data: Survey 4**

<b>Teacher</b>	<b>Comfort Level</b>	<b>Fidelity of Use (Weekly)</b>
Teacher Cr	10	3
Teacher Mu	10	4
Teacher Pa	8	3
Teacher Ly	10	4
Teacher Lu	10	4
Teacher Wi	10	4
Teacher Sc	9	3
Teacher Jo	8	3
Teacher Fo	10	3
Teacher Ab	8	4
Mean Comfort	9.3	
Mean Fidelity		3.5

Ten of ten teachers rated higher levels of comfort and weekly implementation by the fourth survey administered. The average level of comfort reported went up from 5.875 to 9.3 and the average weekly implementation of *FUNDations* increased from 1.875 to 3.5. Each teacher reported that they felt students were making adequate progress demonstrated by *FUNDations* unit assessments, mid-year PALS data, and DRA2 data. Teachers also provided a 100 percent response rate of yes when asked whether they would consider using this research-based program as a classroom intervention again.



## Discussion

Teachers reported their increasing comfort level with implementation of *FUNdations* as a research-based intervention to support students with dyslexia and language-based disabilities at Tier 1 in the general education setting. Through each survey provided, teachers were able to receive additional training and one-on-one support as needed. The researcher of this study was able to draw a direct correlation between teacher comfort and teacher implementation of this research-based program.

## Implications of Findings

The final implications of these findings support the research reviewed in the literature review. There is further demonstration that best practices, such as implementing a Tier 1 research-based intervention, like *FUNdations*, can support students with dyslexia and language-based disabilities in primary grades. After teachers became comfortable with the materials and routine of utilizing this intervention, the data reported that they felt at ease knowing they were implementing a research-based intervention for struggling learners. Teachers' ability to prepare, become comfortable, and adapt to new instructional programs can ultimately lead to successful instruction and intervention. When teachers are provided enough time and support to adopt a new tool in their classroom, the research demonstrated that comfort and fidelity directly correlated with one another. This not only benefits students, but also teachers, as they are able to adapt and change their instruction to incorporate new skills they have acquired by using a research-based intervention, like *FUNdations*.

The importance of providing research-based intervention early on cannot be denied, but it is also important to note that this instruction can occur within the general education setting, at

Tier 1. Students with dyslexia and language-based disabilities do not necessarily require Tier 2 or 3 interventions or special education support to make adequate progress.

There were many limitations noted by the researcher during this study. Student data, additional staff and student participants, longitudinal data, and classroom observations were a few of the noted limitations. Further research through a follow-up study to see how students who received this intervention are doing in fourth and fifth grade would also provide information regarding effectiveness of *FUNDations* as Tier 1 intervention. Despite limitations and future opportunities for additional research, the importance of this study was to understand teacher's comfort and ability levels when working with a new tool in their classroom. The final *FUNDations* survey results directly demonstrated a correlation between teacher comfort and fidelity of use, reinforcing the claim that students with dyslexia and language-based disabilities can be supported through high-quality research-based instruction in general education setting, or Tier 1 intervention.

### **Conclusion and Implications**

This study demonstrated that students with dyslexia and language-based disabilities can be supported by general education teachers who effectively provide a Tier 1 intervention in the general education setting. By using a research-based intervention like *FUNDations* beginning in the primary grades, students with dyslexia and language-based disabilities may not require additional specialized instruction from Tier 2 or Tier 3 intervention programs. The findings in this research support the findings reported in the literature review. Best practices and successful implementation of a research-based program within the general education, or Tier 1 setting, can support learners with dyslexia or language-based disabilities and provide learning opportunities in an inclusive setting with same-age peers.

As discussed in the literature review, the pervasive affect dyslexia can have on a learner's life and their success in education can be vast, and it requires constant monitoring. Based on the findings of this research, the data collected would suggest that all students with dyslexia or language-based disabilities can benefit from research-based intervention, like *FUNdations*. As *FUNdations* is a research-based phonics intervention, when used with fidelity it is a critical support for primary students. Research has found that early intervention is imperative because it helps students to learn and use strategies that will improve their reading and writing progress despite their having dyslexia or a language-based disability. This study supports the claim that teachers are willing and able to provide high-quality, research-based intervention in phonics for students with dyslexia or language-based disabilities in the general education setting when given the appropriate training, tools, and implementation timeline.

### References

- American Speech-Language-Hearing Association. Spoken Language Disorders. (2017). Retrieved March 31, 2017, from <http://www.asha.org/public/speech/disorders/LBLD.htm>
- Blythe, J. M. (2006). Computer-based phonological skills training for primary students with mild to moderate dyslexia--a pilot study. *Australian Journal of Educational & Developmental Psychology*, 639-49.
- Dyslexia. (n.d.). Retrieved April 11, 2016, from <http://www.lexiaforhome.com/content/dyslexia>
- Dyslexia Center of Utah. Dyslexia Statistics. (2014). Retrieved February 19, 2017, from <http://www.dyslexiacenterofutah.org/>
- Dyslexia Training Program. What Works Clearinghouse Intervention Report.* (2011). Retrieved February 28, 2016, from <http://web.a.ebscohost.com.ezproxy.umw.edu/ehost/search/advanced?sid=88185379-b9af-49b5-8da5-00327f1354db@sessionmgr4001&vid=0&hid=4106&preview=false>
- Flanagan Knapp, N. & Schwanenflugel, P. J. (2015). *The psychology of reading: Theory and applications*. New York, NY: Guilford Press.
- G. (2010). Dyslexia explained: What's it like being dyslexic? Retrieved April 11, 2016, from <https://www.youtube.com/watch?v=IEpBujdee8M>
- Gabay, Y., Thiessen, E. D., & Holt, L. L. (2015). Impaired statistical learning in developmental dyslexia. *Journal Of Speech, Language, And Hearing Research*, 58(3), 934-945.

- Galaburda, A. M. (2005). Neurology of learning disabilities: What will the future bring? The answer comes from the successes of the recent past. *Learning Disability Quarterly*, 28(2), 107.
- H. (2011). Dyslexia: A Hidden Disability. Retrieved April 11, 2016, from <https://www.youtube.com/watch?v=8m1fCz3ohMw>
- Hadley, W. M. (2007). The necessity of academic accommodations for first-year college students with learning disabilities. *Journal of College Admission*, 195, 9-13.
- McArthur, G., Castles, A., Kohnen, S., Larsen, L., Jones, K., Anandakumar, T., & Banales, E. (2015). Sight word and phonics training in children with dyslexia. *Journal of Learning Disabilities*, 48(4), 391-407.
- Nelson, J. M., Lindstrom, W., & Foels, P. A. (2015). Test anxiety among college students with specific reading disability (dyslexia): Nonverbal ability and working memory as predictors. *Journal of Learning Disabilities*, 48(4), 422-432.
- Pavlidou, E. V., Kelly, M. L., & Williams, J. M. (2010). *Do Children with Developmental Dyslexia Have Impairments in Implicit Learning?*. *Dyslexia*, 16(2), 143-161.
- Polat, E., Adiguzel, T., & Akgun, O. E. (2012). Adaptive web-assisted learning system for students with specific learning disabilities: A needs analysis study. *Educational Sciences: Theory and Practice*, 12(4), 3243-3258.
- Price, G. A. (2006). Creative solutions to making the technology work: Three case studies of dyslexic writers in higher education. *ALT-J: Research in Learning Technology*, 14(1), 21-38.

Re, A. M., & Cornoldi, C. (2015). Spelling errors in text copying by children with dyslexia and ADHD symptoms. *Journal of Learning Disabilities, 48*(1), 73-82.

RTI Action Network: A Program of the National Learning Disabilities Center. (2017). Retrieved April 11, 2016 from <http://www.rtinetwork.org/essential/tieredinstruction>

H. (2011). Dyslexia: A Hidden Disability. Retrieved April 11, 2016, from <https://www.youtube.com/watch?v=8m1fCz3ohMw>

Understanding Dyslexia. (2014). Retrieved April 11, 2016, from <https://www.understood.org/en/learning-attention-issues/child-learning-disabilities/dyslexia/understanding-dyslexia>

U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2014, February). WWC review of the report: A written language intervention for at-risk second grade students: A randomized controlled trial of the process assessment of the learner lesson plans in a tier 2 response-to-intervention (RtI) model. Retrieved from <http://whatworks.ed.gov>

Vakil, E., Lowe, M., & Goldfus, C. (2015). Performance of children with developmental dyslexia on two skill learning tasks--serial reaction time and tower of Hanoi puzzle. *Journal of Learning Disabilities, 48*(5), 471-481.

What Is Dyslexia? \* The Yale Center for Dyslexia & Creativity. (n.d.). Retrieved April 11, 2016, from <http://dyslexia.yale.edu/whatisdyslexia.html>

Why Public Schools Struggle to Help Kids with Dyslexia - Lexercise. (2014). Retrieved April 11, 2016, from <http://www.lexercise.com/blog/public-schools-struggle-to-help-kids-with-dyslexia>

Wright, C., Conlon, E., Wright, M., & Dyck, M. (2011). Sub-lexical reading intervention in a student with dyslexia and Asperger's disorder. *Australian Journal of Educational & Developmental Psychology*, 1111-25.

*"I hereby declare upon my word of honor that I have neither given nor received unauthorized help on this work." – Claire C. Innocenti*

## Appendices

### Appendix A

#### Teacher Written Consent Statement

**Name of Investigator:** Claire C. Innocenti

**Name of Organization:** University of Mary Washington

**Name of Advisor:** Dr. Nancy Guth

**Title of Research Project:** *FUNdations*: A systematic, research-based program to support students with dyslexia through Tier 1 Instruction

#### Part 1. Information Sheet

##### Introduction

My name is Claire C. Innocenti, and I am conducting research as a requirement for my Master of Education degree at the University of Mary Washington. The goal of my research is to gain insight about the experience and effectiveness general education providers have when implementing a Tier 1 program within their classroom setting for students identified with dyslexia or language-based disabilities. The purpose of this form is to gain your consent to participate in a series of four written surveys about your experiences and thoughts relating to utilizing *FUNdations* within your classroom setting. Your participation is entirely voluntary. The information below is to inform you of what your participation would entail and to give details about how I will use your survey data in my study. You may ask questions at any time about the project. I have been given permission by our school administration to conduct the interviews for the purpose of this research.

##### Purpose of the Research

This research explores the possibility that students with dyslexia can be supported through Tier 1 intervention in the general education setting. Students identified with dyslexia need explicit instruction in phonics and decoding skills. As the Dyslexia Center of Utah (2014) reports, dyslexia is a common language-based disability, affecting 1 in 5 learners. This research will investigate teachers within the general education setting implementing *FUNdations* as a research-based program to address the needs of students with dyslexia and other struggling readers with language-based disabilities.

Through this study of your teaching practice, I will be working to determine the following research questions:

4. What strategies do we know work for students with dyslexia?



5. Which strategies are general education teachers already using in guided reading that are effective methods for teaching students with dyslexia?
6. What are general education teachers' attitudes toward using a research-based program in their classroom to support their learners with dyslexia?

This study will use surveys to learn teachers' views on whether direct instruction using *FUNDations*, a scripted, research-based reading program, in a general education setting will support students with dyslexia and other language-based disabilities in the classroom, and potentially lead to fewer referrals for Tier 2 and 3 interventions. This intervention will be in addition to the daily guided reading groups students receive as part of a balanced literacy program. Teachers will be provided training, materials, and take surveys incrementally throughout implementation of the *FUNDations* program. The surveys will reflect strategies already in place when teaching students with dyslexia or struggling readers, teacher implementation and satisfaction with *FUNDations*, and student progress as a result of the direct instruction they are receiving in the general education setting. All information provided by educators is confidential.

### **Participant Selection**

You are being invited to participate in this research because you expressed an interest in utilizing *FUNDations* as an intervention within your classroom setting. Your experience providing Tier 2 intervention within the general education setting can contribute much to our understanding and knowledge of what factors account for effective instruction for students with dyslexia or language-based disabilities, and how we can support them through general education instruction within the general education setting.

### **Voluntary Participation**

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Even if you decide now to participate, you may withdraw at any time later and none of your data will be used in the study.

### **Extent of Your Participation**

Each survey should take less than 30 minutes to complete. The questions will ask your opinion of the benefits and challenges relating to implementing *FUNDations* and any other relevant information that you wish to discuss.

### **Confidentiality**

I will keep all data relating to your participation in this research on my secure computer or in a locked file cabinet to keep it confidential. Surveys will be taken anonymously. In any reports I make about this research, I will use pseudonyms for all participating teachers, and no identifying descriptions will be used. No student information or data will be reported in this study.

### **Risks**

The risks to participants in this study are minimal. A long term effect may be that teachers do not feel their instruction was as effective in previous school years. However, you do not have to answer any questions that make you feel uncomfortable.

### **Benefits**

Your participation is likely to help you and other educators find out more about the effectiveness of the utilizing research-based interventions within the general education classroom, like *FUNdations*, and its impact on your instruction and student progress.

### **Whom to Contact**

If you have any questions, you may ask them now or later. If you wish to ask them later, you may contact me, Claire C. Innocenti, at 703-594-3990 or CInnocen@umw.mail.edu. This research has been approved by the University of Mary Washington IRB which is a committee responsible for ensuring that research is being conducted safely and that risks to participants are minimized. For information about the review of this research, contact the IRB chair, Dr. Jo Tyler, at jtyler@umw.edu.

## **Part II. Certificate of Consent**

### **To be completed by the participant in the research described above:**

*I have read the preceding information describing the research I have been asked to participate in. I have had the opportunity to ask questions about it, and all questions I have asked have been answered to my satisfaction. I declare that I am at least 18 years of age. I consent voluntarily to be a participant in this study.*

Print Name of Participant \_\_\_\_\_

Signature of the Participant \_\_\_\_\_

Date \_\_\_\_\_ (Month/Day/Year)

\*\*\*\*\*

**To be completed by the researcher:**

*I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability.*

*A copy of this Informed Consent Form has been provided to the participant.*

Print Name of the Researcher \_\_\_\_\_

Signature of the Researcher \_\_\_\_\_

Date \_\_\_\_\_ (Month/Day/Year)

**Appendix B*****FUNDations: Teacher Initial Survey (Survey 1)***

*Please answer these questions to the best of your ability, the survey is anonymous so please be honest about your current instructional strategies or concerns regarding teaching students with dyslexia.*

1. What strategies do you currently utilize for students with dyslexia?
  
2. Can you identify any strategies that you are using in guided reading that are effective methods for teaching students with dyslexia?
  
3. How do you feel about using a research-based program in your classroom to support learners with dyslexia?
  
4. What grade level do you currently work with?

On a scale of 1-10, 1 being least interested and 10 being most interested, how interested are you in implementing this program?

1      2      3      4      5      6      7      8      9      10

***FUNDations: Post Teacher Material Training Survey (Survey 2)***

*Please answer these questions to the best of your ability, the survey is anonymous so please be honest about your current comfort level post-training or concerns regarding implementation of FUNDations.*

1. Do you feel that you were adequately trained in how to use *FUNDations*?
  
2. What questions do you still have about implementing this intervention in your classroom?
  
3. How will you identify the students you plan to use this program with?
  
4. Do you plan to use *FUNDations* whole class, with guided reading groups, or both?
  
5. What grade level do you currently work with?

On a scale of 1-10, 1 being least comfortable and 10 being most comfortable, how comfortable are you with implementing this intervention?

1      2      3      4      5      6      7      8      9      10

***FUNDations: Post Teacher Implementation Survey (Survey 3)***

*Please answer these questions to the best of your ability, the survey is anonymous so please be honest about your current implementation of FUNDations, concerns regarding teaching students with dyslexia, or utilizing the program and the related materials.*

1. Have you begun implementing *FUNDations* whole class, with guided reading groups, or both?
2. Do you feel you were adequately trained in using *FUNDations*?
3. How many days a week have you been utilizing *FUNDations* with your students?
4. Would you like additional support within the whole group or small group setting to continue practice and learning to use *FUNDations*?
5. What grade level do you currently work with?

On a scale of 1-10, 1 being least comfortable and 10 being most comfortable, how comfortable are you with implementing this intervention?

1    2    3    4    5    6    7    8    9    10

***FUNdations: Second Post Teacher Implementation Survey (Survey 4)***

*Please answer these questions to the best of your ability, the survey is anonymous so please be honest about your current implementation of FUNdations, concerns regarding teaching students with dyslexia, or utilizing the program and the related materials.*

1. How has your fidelity been with the continued use of *FUNdations* within your classroom setting?
2. How have you identified progress or lack of progress with students receiving research-based instruction through the *FUNdations* program?
3. Have you referred less students to Tier 2 and 3 intervention supports as a result of this research-based instruction?
4. What grade level did you teach this year and would you use this program again next year with students?
5. Do you feel better prepared to teach students with dyslexia or language-based disabilities when implementing a research-based program, like *FUNdations*?

On a scale of 1-10, 1 being least comfortable and 10 being most comfortable, how comfortable are you with implementing this intervention?

1    2    3    4    5    6    7    8    9    10

## Appendix C

Researchers Note: This is an example of the first unit assessment in *FUNDations*. The letters and words have been changed to protect copyright laws.

### Unit Test 1

1. Have the students write the lowercase letters of the alphabet:
2. Dictate the following sounds, have students write the letter independently.

/z/    /qu/    /r/    /s/    /p/

/f/    /n/    /a/    /t/    /b/

If the student does not score at least 80% on both skills, this student may need additional assistance with the assessed skills. Meet with struggling students individually to discuss errors and explain areas that need to be further practiced.



## Appendix D

### Implementing *FUNdations*

*FUNdations* can be implemented in one of three ways, depending upon a school district's comprehensive language-arts program.

#### **1. Whole Class General Education Instructed with Targeted Instruction for Children with Difficulties**

*FUNdations* provides all students with a foundation for reading a spelling. It is part of the CORE language arts instruction, delivered in the general education classroom 30-35 minutes per day as a supplemental program. *FUNdations* emphasizes phonemic awareness, phonics-word study, high-frequency sight words study, fluency, vocabulary, handwriting, and spelling. Although it includes comprehension strategies, it must be combined with a core/literature-based language-arts program for an integrated and very comprehensive approach to reading and spelling.

#### **2. Students in the Lowest 30<sup>th</sup> Percentile**

In schools where *FUNdations* is not used in the general education classroom, it is appropriate to select *FUNdations* as an intervention program for students in the lowest 30<sup>th</sup> percentile. Students should have the *FUNdations* standard lesson (30 minutes daily) **plus** intervention lessons for an additional 30 minutes 3-5 times per week.

#### **3. Students with a Language-Based Learning Disability**

Students with a language-based learning disability require explicit, cumulative, and multisensory instruction. For kindergarten and first-grade students, *FUNdations* can be

combined with a literature-based program to provide this type of required instruction as an alternative to the district's core language-arts program. Lessons should be scheduled daily and the students should receive:

- a. *FUNdations* standard lessons in small-group settings (30 minutes daily)
- b. *FUNdations* targeted, intervention lessons in small group or 1:1 setting (30 minutes daily)
- c. Literature-based comprehension instruction and other decodable text instruction (30 minutes- 1 hour daily).

## Appendix E

## FUNdations Parent Letter

ORIENT-  
TATION

Dear Family:

A new school year has been launched! This year, I will be using a program called Foundations® to teach some important basics of reading and spelling. However, I am going to **need your help**.

We know that when a child has a “**Coach**” in addition to a classroom teacher, the child makes significant progress. We will work together as a “**team**” – I shall be the teacher, and you the coach.

I will do my best to provide you with the necessary tools to take on that role. I shall keep you informed of “what is happening” in the classroom and provide suggestions and a guide as to “what can be happening” at home.

I look forward to a very successful year as we work together with your child in **Foundations**. We will have fun teaching and helping your child build a strong foundation for literacy!

In the next letter, I shall share with you Unit 1 and its related activities.

Once again **thank you** for your interest and cooperation.

Sincerely,





## You are likely wondering, “What is Foundations®?”

Research indicates that **systematic** and **explicit phonics instruction** is effective for all children. Foundations provides a systematic and explicit approach to reading and spelling with phonics. We will combine this instruction with the **reading of good literature**, which is just as important for your child’s development.

### **Foundations is systematic**

because it follows a very definite sequence for teaching and it follows a very definite procedure to teach those concepts.

### **Foundations is explicit**

because this program does not leave room for guessing. It teaches all concepts directly. The children will review letters and how to form these letters. They will learn sounds using keywords to help them remember. They will soon move on to blend the sounds into words.

As the year progresses, Foundations introduces many aspects of word structure and sentence structure. I shall be sending home guides and activities for all of this.

*You are also probably wondering, “How can I become a successful “Coach” in this reading program?”*

### **As a “Coach” you can:**

- 1.** Read the Foundations letters that I send home. These letters will contain up-dates, program information, and activity suggestions.
- 2.** Set aside time to do the “home activities” with your child.
- 3.** Monitor your child’s progress and share successes as well as concerns with me.

I feel certain that you will find working with your child in Foundations very rewarding. Your child will treasure your involvement!



## Help Develop Oral Expression And Vocabulary

You can help your child develop **oral language** (the spoken word) with the following ideas. Do these anytime you are with your child:

**1. Encourage your child to answer “wonder” statements.**

Say such things as “I wonder why a dog barks.” Or say, “I wonder if Grandpa likes spinach.”

**2. Help your child expand his/her vocabulary by rephrasing.**

When your child says something such as, “He’s scared,” you could say, “Yes, the dog barks because he is frightened, you are correct!”

**3. Ask open-ended questions.**

Do not ask, “Are you raking leaves?” (The child would simply answer, “yes.”) Instead, ask, “What are you doing with your rake?” The child will answer you and then you can rephrase the answer to further develop vocabulary (see # 2).

**4. Limit the amount of TV**

However, if your child watches a children’s program, talk about it (see #’s 1, 2, 3).

**5. Provide household props that encourage pretend play.**

Use spoons/pans in the bathtub; cups/teapots/dolls; small rakes/shovels. While playing, be sure to talk through your actions (see #’s 1, 2, 3).

Verbally interacting with your child simply means taking every opportunity to talk with your child. With our busy lives, interactions between adults and children are often directive (“do this,” “do that,”) or negative (“stop hitting,” “don’t run.”) Try to break this pattern whenever possible. Both you and the child will have pleasant experiences and you will be helping to develop oral expression and vocabulary.