

2015

What's the Sense in Nonsense Word Fluency Probes?

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WHAT'S THE SENSE IN NONSENSE WORD FLUENCY PROBES?
AN EXPLORATION OF TEACHER
EXPERIENCES
AND
PERCEPTIONS

By

Maggie M. Habershaw

An Honors Project Submitted in Partial Fulfillment

of the Requirements for Honors

in

The Department of Special Education

The Feinstein School of Education & Human Development

Rhode Island College

2015

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Acknowledgements

There are many people to thank for helping me to complete this honors thesis over the last year. First, I would like to thank my advisor, Dr. Cara McDermott-Fasy, for her guidance, patience, and encouragement as I completed this project. Thank you so much for all of the hard work and dedication that you have given me each day since we started this journey. I would also like to thank the participants in my study for their honesty and excitement about my research. Without you all this study would not have been nearly as fruitful! Lastly, I would like to thank my family. Mom and Dad, thank you for your unwavering support. The past four years at Rhode Island College, and every year before that, would not have been possible without you. Everything that I have done and will do has been for you. To Tommy, Pam, Emma, Liz, Rolly, Ryan, and Lincoln: thank you for keeping me laughing even during the most stressful of times!

Abstract

A major focus of education in the United States has been for “optimal” literacy instruction for all students. To accomplish this goal, major initiatives have centered upon the early identification and prevention of reading difficulties. To this end, professionals in the field are using numerous literacy programs and assessments to promote optimal literacy instruction. One of these assessment programs is the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Across the United States, over 2,000,000 students are administered the DIBELS Nonsense Word Fluency probe each year. The purpose of this study is to reflect on teacher perceptions and experiences with this commonly utilized yet often-misunderstood assessment.

This study hopes to shed light on whether or not teachers who utilize the NWF probe believe it helps to promote optimal literacy instruction for students in their classrooms. By talking to educators who have experience with this assessment in a semi-structured interview style, I will gain more information and insight on this topic.

Introduction

In the United States today, at least 17% of school-aged children struggle with a significant reading disability. Since the publication of the National Reading Panel's groundbreaking report entitled *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (2000), a major focus of education in the United States has been for "optimal" literacy instruction for all students. To accomplish this goal, major initiatives have centered upon the early identification and prevention of reading difficulties. In the above-mentioned report, the National Reading Panel synthesized research on how children learn to read and outlined the best approach to reading instruction, including suggestions on assessments and instructional strategies aimed at identifying at-risk students and providing them with the evidence based interventions needed to become successful readers. Because there are so many different assessments and instructional strategies in use today, it is crucial to provide educators with ongoing, useful information on which tools are likely promote optimal literacy instruction for students with various learner profiles.

Purpose of Study

The purpose of this study is to reflect on teacher perceptions of the usefulness of one commonly utilized (University of Oregon, 2015), although often misunderstood (Vanalst, 2013), form of assessment known as the Nonsense Word Fluency (NWF) probe. This study hopes to shed light on teacher experiences with and perceptions of the Nonsense Word Fluency probe as a means of promoting optimal literacy instruction in their classrooms. Based on a review of the literature, there is little information from the front lines on this topic.

Research Questions

Given the current level of use of DIBELS measures in elementary school classrooms throughout the country, I wondered how teachers experience one commonly misunderstood measure. In her blog titled “Make-Take-Teach,” Julie Vanalst shares that there are “misunderstandings of the assessment” from many of her fellow teachers (2013). After considering this perspective and my own experiences, I had many questions about this measurement. Do teachers understand the purpose of the NWF probe? Do they feel comfortable administering it to their students? Does the data gleaned from the probes inform their instruction? If yes, how? In light of these thoughts, the following research questions guided this investigation:

1. Do teachers who utilize the NWF probe believe it helps to promote optimal literacy instruction for students in their classrooms?
2. If yes, how and for whom?
3. If no, why do they use it?

Significance of Study

One of the major literacy assessments in use today is the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The DIBELS measurements are a set of assessment probes intended to assist teachers in identifying and monitoring students’ strengths and needs in the area of early literacy skills ranging from phonological awareness to reading comprehension. The Nonsense Word Fluency (NWF) probe is one of nine measures in the DIBELS battery. The NWF probe serves to identify early elementary aged students who may have difficulty with the alphabetic principle. According to the Center on Teaching and Learning, it is a test of: 1) letter-sound correspondence in which letters represent their most common sounds and 2) the ability to blend letters into words in which letters represent their most common sounds (Kaminski & Good, 1996). This standardized measure is individually administered to elementary school students beginning in the middle of Kindergarten and continuing through the beginning of second grade. Rather than using high frequency or commonly used words, this probe uses non-

words such as “pov” or “eb.” Students have one minute to look at these nonsense or pseudo-words, apply their knowledge of the alphabetic principle and letter-sound correspondence, and read as many of them as possible. According to the DIBELS website, “The intent of this measure is that students are able to read unfamiliar words as whole words, not just name letter sounds as fast as they can” (www.dibels.org).

When first developed, the DIBELS assessments were only available for use to a few elementary schools near the University of Oregon. They were first used in what is called the “Little Red School House” adjacent to the university. Today, this little schoolhouse has expanded to the over 15,000 schools that make use of the DIBELS assessment. According to the DIBELS website, the battery of assessments is currently being used in schools throughout each of the 50 states and with over 2,000,000 students. Teachers from around the country are administering this assessment and reporting their students’ scores both to their own schools and to the University of Oregon. Due to the vast number of students that are being assessed with this probe, it is critical that it is both effective and useful to the educators administering it.

The Purpose of Assessment

Garfield (1994) noted that, “The primary purpose of any student assessment should be to improve student learning” (p. 2). In essence, no matter the content or form of assessment, the end goal is to utilize the data to improve instruction and support students on their journeys towards academic growth and development. To this end, Spear-Swerling (2015) noted that when deciding to select an assessment for use in the classroom, it is critical to ensure that the balance between “the time requirements and expenses as well as the educational value of the information they provide beyond other assessments that are already available” (p. 30) stays central to the conversation. In the area of literacy, the International Literacy Association (ILS) is an example of an organization focused on highlighting these issues. For example, ILS developed standards for the assessment in the areas of reading and writing. Of particular interest to me was Standard Seven, which requires that, “Any assessment procedure that does not contribute positively to teaching and learning should not be used” (ILS, p. X, 2015). Thus, it is necessary to continually

reflect on each assessment and determine if it is truly fulfilling its purpose of positively influencing change on instruction.

History of the Nonsense Word Fluency Probe

Throughout the 1970s and into the 1980s, researchers from the Institute for Research and Learning Disabilities at the University of Minnesota were developing a type of assessment which became known as Curriculum Based Measurements (CBM). Stanley Deno, Phyllis Mirkin, and Lynn Fuchs (Deno, 1985) created CBM as a way to measure the academic growth of students (particularly students with learning disabilities) as individuals, rather than as a whole class. The goal of this approach was to provide teachers with formative data necessary to monitor instruction for the purpose of providing information needed to adjust instruction while it is still happening. Or, as Deno (1985) argued, “The essential purpose of CBM has always been to aide teachers in evaluating the effectiveness of the instruction they are providing to individual students” (p. 3). In this way, data garnered from administering an assessment was expected to be utilized to assist teachers in reflecting on the effectiveness of instruction and in planning for future lessons.

According to the Dynamic Indicators of Beginning Early Literacy Skills (DIBELS) website:

DIBELS were developed based on the measurement procedures for Curriculum-Based Measurement (CBM), which were created by Deno and his colleagues though the Institute for Research and Learning Disabilities... Like CBM, DIBELS were developed to be economical and efficient indicators of a student’s progress toward achieving a general outcome. (www.dibels.org)

As such, each part of the DIBELS battery, including the Nonsense Word Fluency probe, was developed to be used as a formative assessment. According to Kaminski and Good (1996), DIBELS was originally developed to be linked to local curriculum and to be an efficient indicator of student growth and progress. They argued that the main goal of any literacy

assessment should be to “prevent reading difficulties and to ensure that all children are readers early in their educational careers” (2001). As one probe within a set of procedures and measures, the NWF probe was designed to assist teachers in identifying students who have difficulty with the alphabetic principle and letter-sound correspondence.

Staying true to its roots, the DIBELS system is currently touted as an economical option for school districts interested in acquiring a “set of procedures and measures for assessing the acquisition of early literacy skills from kindergarten through sixth grade” from a “not-for-profit domain organized around successful student evaluation” (www.dibels.org). Some recent changes to the system include the following: the set of assessments now spans from kindergarten to grade 6; the data system offers easy data entry for teachers (i.e. hand-held devices) as well as a greater variety of reports to assist teachers in evaluating their instruction; and, a Spanish version of DIBELS, which caters to English Language Learners and students who come from Spanish speaking countries, is now available.

Clearly, the DIBELS system and the Nonsense Word Fluency probe are being used throughout the United States in many different schools. Teachers from around the country are administering this assessment and reporting their students’ scores both to their own schools and to the University of Oregon. Due to the vast number of students that are being assessed with this probe, it is critical that it is both effective and useful to the educators administering it.

Theoretical Framework

Research on the importance of teacher self-efficacy informed the design of this study and will inform the interpretation of results. According to Fives (2003), “Teacher efficacy can be defined as teachers’ beliefs in their abilities to organize and execute courses of action necessary to bring about desired results” (p. 2). Applied to this study, the idea of self-efficacy come into play when thinking about the following: Do the teachers interviewed believe that their use of NWF probes and the resulting data helps to promote optimal literacy instruction in their classrooms?

Positioning of Researcher

Throughout the fourteen years that the Nonsense Word Fluency probe has been in use, it has received criticism from researchers and scholars alike (Goodman, 2006, Pearson, 2006, Manzo, 2005). For example, in a book entitled “DIBELS: What it is, What it does,” Pearson (2006) admits to having “decided to join that group of scholars, teachers and parents who are convinced that DIBELS is the worst thing to happen to the teaching of reading since the development of flash cards” (p. v). Pearson vehemently argues that DIBELS, and all of its individual assessments, only serve to become “blueprints” (p. ix) for educators to follow in order to teach to the test. Pearson is not alone in his criticism. Another critic, Reidel (2007), published a study on DIBELS and also argued that the collection of assessments has many faults. His study purported that the use of the DIBELS measures lead to teachers targeting specific needs such as letter segmentation in their instruction and makes it difficult to focus on more general skills for literacy improvement such as word blending. In reference to the NWF probe, he noted that, “Dialect or articulation differences across teachers and students may make it difficult to consistently administer and score the NWF probe” (p. 549). In doing so, he suggested English Language Learners are even more affected by the subjectivity of such articulation errors.

I bring these criticisms to light because they reflect some of the biases I bring to this study. In my teacher preparation coursework, I have been introduced to the set of procedures and measures known as DIBELS. They are short, easy to administer probes, and I have been taught about their usefulness as universal screening and progress monitoring tools within the Response to Intervention framework. Prior to this study, the NWF probe remained a bit of a mystery to me, especially in terms of the link between assessment and instruction. To illustrate where I was coming from, I share the following experiences.

In the fall of 2014, I was tasked with evaluating a first grade student struggling in the area of early literacy skills. This assignment was a requirement for one of my special education courses and was carried out in a practicum setting. The student, who I will refer to as Omar, was struggling in reading and had difficulty segmenting and blending grade level words. The comprehensive evaluation included administering the DIBELS Nonsense Word Fluency probe. I recollect explaining the standardized directions to Omar, and him seeming very confused about the idea of “nonsense” words. As a part of the directions, I explained that the words were not real words, and he was to try his best at sounding them out. He looked up at me and said, "Why am I doing this if they're not even real words?" I had no answer for him because this was an aspect of the assessment that I myself had questioned. This student clearly wanted some answers, and by this point, I did as well.

After leaving the school that day, I asked my fellow teacher candidates what their experiences were with the assessment; they shared similar experiences of confusion. Next, I asked my professor who had extensive experience administering this assessment, and she also voiced encountering similar experiences with students. She added that it was one of her "least favorite assessments to administer." If each of these pre-service teacher candidates/teachers were confused and/or frustrated, I knew there had to be more. As a next step, I turned to the Internet to research other teacher perceptions and experience with the Nonsense Word Fluency assessment and found little to nothing. While there were many studies and statistics on scores and performances on this probe, I was unable to find any qualitative information from teachers about their own experiences in administering it and using the data in their classrooms. This lack of available information was frustrating and surprising.

These are some of the experiences and thoughts I bring to this study. They will impact my work in some form or fashion. By conducting this study with real teachers who are currently administering NWF probes to their students, I hope to add to the knowledge base on this particular assessment. Since I strive to become a teacher, I want to know more about the experiences of these teachers as well as the ways in which they utilize this assessment to inform

their instruction. It is my hope that by listening to the experiences and stories of these educators, I will better understand the purpose of the NWF probe, and its use in the classroom. In short, I truly hope to learn what the 'sense' is in the Nonsense Word Fluency probe.

Literature Review

In 1998, the National Research Council was tasked with investigating the difficulties that students face with early literacy skills. Together, the members of this council produced a collective work entitled *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998). According to its introduction, the final report, “Provide[s] an integrated picture of how reading develops and how reading instruction should proceed” (p. vi). The report took into account the perspective of the classroom teacher as well as the literacy curriculum analysts. While revolutionary for its time, another seminal report produced a few years later entitled *Teaching Children to Read* (National Reading Panel, 2000) asserted that the NRC report left holes in the knowledge base on early literacy skills and interventions. According to the NRP, *Preventing Reading Difficulties in Young Children* (Snow et al., 1998) did not provide enough specific information on how to effectively teach early reading skills, nor did it include an analysis of instructional methods and approaches for students who struggle with reading. The purpose of the report by the National Reading Panel (2000) was to address these gaps by determining whether currently used instructional methods and approaches in reading were effective. Beginning where the National Research Council report left off, the authors of *Teaching Children to Read* (National Reading Panel, 2000) investigated topics ranging from early phonemic awareness to computer technology to reading instruction. According to Torgesen (2002), “Both documents were written by committees of professionals who were asked to identify the findings about reading and reading instruction that were most consistently supported in recent research” (p. 7).

Considering research on nonsense word fluency probes within the broader context of research on early literacy instruction may enhance our understanding of the current topic. This chapter begins by undertaking this task, utilizing the National Research Council (1998) and National Reading Panel (2000) reports on starting points. Then, a review of the literature on Nonsense Word Fluency probes is presented. The goal of this mini-literature review is to shed light on the research conversation that has taken place on early literacy instruction in general and

Nonsense Word Fluency probes in particular. In doing so, it is my hope to highlight aspects of the conversation that have thus far been left unexplored. This will enable me to situate this study and contribute to the knowledge base in this area in a meaningful way.

Parameters of the Review

As mentioned, I was interested in reviewing literature from 2000 to 2015 that focused on early literacy instruction in general and Nonsense Word Fluency probes in particular. To begin my review, I searched databases such as the Council for Exceptional Children's Journal Gateway and Google Scholar using terms such as the following: early literacy instruction, Nonsense Word Fluency, Nonsense Words, and Pseudo-Words. Once applicable journal articles were located and read, their reference lists were also reviewed as a way of identifying any other resources that might fit within my search parameters. In total, I reviewed fifteen articles as part of this mini literature review.

After reviewing the literature garnered from my search, I organized the current research conversation related to early literacy instruction in general and Nonsense Word Fluency probes in particular in the following way: The Importance of the Alphabetic Principle and Letter Sound Correspondence in Early Reading; Use of Pseudo-words in Literacy Instruction; Comparisons Between the Nonsense Word Fluency Probe and Other Literacy Assessments; and Relationships Between Nonsense Word Fluency and Beginning Reading Outcomes. These are the topics that researchers have shed a lot of light on since the publication of the seminal reports mentioned above.

Early Literacy Instruction

The clear assumption underlying research on early literacy instruction is that a balanced approach is the way to go (Snow, Burns, & Griffin, 1998; NRP, 2000). This means that for most children effective instruction in the area of reading will address the five critical components of reading: phonemic awareness, phonics, fluency, comprehension, and vocabulary (Torgeson, 2002).

The Importance of the Alphabetic Principle and Letter Sound Correspondence

As articulated in the report from the National Reading Panel (2000), researchers determined that phonemic awareness instruction had a significant effect on a student's ability to read. Studies cited demonstrated that, "Phonemic awareness instruction produced positive effects on both word reading and pseudo word reading" (p. 2-5). Researchers supported the assertion that phonemic awareness is a critical component of early literacy instruction when they cited that "teaching children to manipulate phonemes in words was highly effective across all literacy domains and outcomes" (p. 2-3).

Furthermore, research from the National Reading Panel (2000) reported that phonics instruction is also a critical component of early literacy instruction. Studies demonstrated that "findings provided strong evidence substantiating the impact of systematic phonics instruction on learning to read" (2-92). In regards to at-risk students, research showed that "Phonics instruction produced substantial reading growth among younger children at risk of developing future reading problems" (2-94). Clearly, researchers from the National Reading Panel support the assertion that both phonemic awareness and phonics instruction are critical components of early literacy instruction. The report (2000) also added that fluency, reading comprehension, and vocabulary are important components of "skilled reading" (3-1), and should become focuses of literacy instruction from the third grade on.

Building on the work of the National Reading Panel (2000), Woods and McLemore (2001) asserted that two components must be in place in our early childhood classrooms in order for students to succeed in reading: a focus on letters of the alphabet and systematic phonics instruction. In their paper entitled *Critical Components in Early Literacy – Knowledge of the Letters of the Alphabet and Phonics Instruction*, they further claimed that, "Children who are not phonemically aware often fail to learn to read in first grade and will have difficulty becoming successful readers throughout school" (p. 3). Woods and McLemore highlighted the importance of understanding the alphabetic principle in early literacy when they claimed that, "Phonics involves an understanding of the alphabetic principle on which the English language is based"

(p. 2, 3). They also explained that letter-sound correspondence “help[s] learners understand how letters are linked to sounds to form words” and claimed that this understanding “is the preliminary step toward fluent reading” (p. 7). These claims further support the assertion that the understanding of the alphabetic principle and letter-sound correspondence are both critical early literacy skills.

In a well-cited article entitled *The Prevention of Reading Difficulties*, Joseph Torgesen (2002) claimed that, “Difficulties learning to read words accurately are manifest from the very earliest stages of reading instruction” (p. 10). To this end, he cited phonological awareness as one of the more important stages that children face when learning to read. In his words, “Children who enter first grade low in knowledge about the phonological features of words or who have difficulties processing the phonological features of words are at high risk for difficulties responding to early reading instruction” (p. 12). Finally, Torgesen agreed with his predecessors when he asserted that, “Children . . . with weaknesses in knowledge about letters, letter-sound correspondences, and phonological awareness require explicit and systematic instruction” (p. 15). It is clear that Torgesen’s research aligns with the claim that letter-sound correspondence is critical in early literacy programs.

Later work by Rebecca Felton (2013) entitled *Teaching Letter Sound Associations* also supports the claim that understanding of the alphabetic principle and letter sound correspondence are critical skills in early literacy. Felton found that, “In order to become proficient readers, students must learn to recognize and name the letters of the English alphabet” (p. 1). Starting from this point on, she built an argument that knowledge of these letters and their corresponding sounds is critical when learning to read. She stated that, “Research clearly demonstrates that good readers process each individual letter of words even though this is done very quickly and often without conscious attention to the process” (p. 1). To this end, Felton found that knowledge of the alphabetic principle and the ability to correspond letters with their sounds are critical components of early reading.

In sum, research suggests that the five critical components in a balanced reading program, with particular attention to phonemic awareness and phonics for early readers, lead to preventing reading difficulties and supporting student outcomes. In 2000, the National Reading Panel reported that phonemic awareness and phonics instruction had a significant effect on a student's ability to read. With several researchers claiming that these components are critical to preventing reading difficulties as students progress (Woods & McLemore, 2001; Torgesen, 2002; Felton, 2013), it is clear that an understanding of the alphabetic principle and letter sound correspondence are crucial early literacy skills. Now that I have presented an abbreviated overview of the conversation around early literacy instruction in general, the next step is to investigate the current research available regarding the Nonsense Word Fluency probes in particular.

Nonsense Word Fluency Probe

The Nonsense Word Fluency probe assesses progress in one of the five critical areas of reading instruction, phonics. In particular, it measures the acquisition of two important subskills in the area of decoding: the alphabetic principle and letter sound correspondence. According to the DIBELS website:

The DIBELS Nonsense Word Fluency (NWF) measure is a standardized, individually administered test of the alphabetic principle including letter sound correspondence in which letters represent their most common sounds and of the ability to blend letters into words in which letters represent their most common sounds. www.dibels.org

Relationship between the Use of Nonsense Words and Beginning Reading Outcomes

Pseudo words, commonly referred to as nonsense words, are used to assess whether or not a student can generalize his/her knowledge in the area of decoding to unknown words. Many public schools utilize literacy assessments that include nonsense words as part of their comprehensive assessment and instruction system. For example, nonsense words are used in the

Wilson Reading Program and Foundations (Wilson Training Corporation, 2012) on which 20,000 teachers across the country have obtained Level 1 Certification. Several other reading programs incorporate the use of nonsense words into their curriculum, such as: Orton-Gillingham, The Barton Reading and Spelling Program, and The Lindamood Bell Phoneme Sequencing Program for Reading, Spelling and Speech

Though nonsense words are prevalent in widely utilized programs such as the Wilson Reading System, research examining the role of nonsense words in decoding skill development is limited (Madsen, 2014). In one study conducted in this area, Cardenas (2009) investigated the use of pseudo words in literacy instruction by assessing 30 kindergarteners at four different points after they were instructed in decoding using pseudo words. One classroom of students was instructed using a phonics program that incorporated pseudo words, while the other classroom was instructed using a phonics program that only utilized real words. After analyzing the results from all four assessments, Cardenas found that students who were in the pseudo word group achieved higher scores on each assessment and more growth than students in the real word group. As such, Cardenas concluded that this study indicated that phonics instruction that includes pseudo words appears to promote the development of decoding skills.

In another study conducted in this area, Farrell, Osenga, and Hunter (2010) researched the true value of nonsense words and focused on the use of nonsense words in reading instruction. When putting the use of nonsense words into the context of reading instruction, these authors found that, “Reading nonsense words may uncover decoding deficits that are not evident when students read grade-level word lists” (p. 1). Due to the nature of nonsense words, they concluded that they were unfamiliar to students and therefore not in their working vocabularies. In this way, teachers got the opportunity to see if their students could generalize the phonics and reading instruction to decoding unfamiliar words. Overall, Farrell, Osenga, and Hunter (2010) concluded that in regard to the Nonsense Word Fluency probe, “This diagnostic assessment allows for focused instruction that will move students toward accurate, effective, and efficient reading” (p. 4).

Finally, in another study conducted in this area, Keri Marie Madsen (2014) reviewed literature in this area and found that “Students who were provided pseudo word phonics in place of real-word phonics made greater gains . . . than students who received only real-word phonics” (p. 49). Madsen’s study examined the use of pseudo words in literacy instruction using three different kindergarten classrooms to determine if there was an effect on gains made after instruction. In her study, one class received no instruction from the researcher, another received a combination of pseudo words and real words in their instruction, and the third received instruction that only used real words. Madsen determined that after reviewing her student’s scores on pre and post instruction assessments, “There is preliminary evidence for the use of pseudo words during decoding instruction with beginning readers” (p. 57). She also argued that due to the minimal research done on pseudo words and their place in literacy instruction, it is necessary for more studies and research to be done on this topic.

Relationship between the Use of Nonsense Word Fluency Probes and Reading Outcomes

A major study done on the relationship between the use of Nonsense Word Fluency (NWF) probes to predict reading outcomes was done by a team of researchers from the University of Oregon. In this study, Fien, Park, Baker, Smith, Mercier, Stoolmiller, and Kame’enui (2010) administered the NWF probe to 3,506 first grade students in the fall, winter, and spring. The researchers investigated the initial scores of the students compared to the scores from the entire year to calculate growth. They also compared these scores and growth rates with the students’ end of year oral reading fluency and reading comprehension scores. Based on their analysis of the data over the three administration periods, these researchers concluded that the students’ initial performance and rate of growth on the NWF probes correlated with their end-of-year reading outcomes. As such, these researchers concluded that the relationship between students’ baseline NWF scores and growth over time compared to their ability to read and comprehend at the end of the year was strong.

In another study conducted by Jennifer Wells (2013), the relationship between the use of nonsense words in instruction and reading outcomes was examined to determine if teaching

nonsense words is an effective use of time. To conduct the research, Wells collected student scores for the fall and winter NWF benchmarks as well as the winter Reading Curriculum Benchmark Measures (RCBM) scores. After analyzing the data, Wells found that “students who meet the nonsense word fluency benchmark are likely to meet the oral reading fluency benchmark” (p. 16).

Using Nonsense Words in Progress Monitoring to Support Reading Outcomes versus Other Types of Reading Assessments

Since its first use in elementary school classrooms, the Nonsense Word Fluency probe has been compared to other early literacy assessments in order to determine the most effective route for beginning readers. The researchers behind these comparisons set out to research factors and questions behind the NWF that had previously been left unanswered.

Fuchs, Fuchs, and Compton (2004) collaborated to produce a comparison of the Nonsense Word Fluency probe and the Word Identification Fluency probe. Their main goal was to determine which probe was superior in “identifying children in need of intensive instruction and for monitoring children’s progress” (p. 7). To reach this goal, the team studied 151 at risk children and assessed them over the course of a year. They assessed them with criterion measures in both the fall and spring, as well as progress monitoring measures once a week for seven weeks and then twice a week for 13 weeks.

After analyzing the results, these researchers determined that the Word Identification Fluency probe was better than the NWF probe at assessing early reading development in the first grade. They specifically named two problems that they found with the NWF probe that led to their final decision. The first problem had to do with the scoring of the NWF probe, as they found that students who each performed differently on the assessment could receive the same credit. For example, students who read the pseudo word in three separate sounds earned the same three points as a student who blended the sounds into the entire word. The second problem that the researchers found with the NWF probe was that it was restricted to only assess consonant-vowel-consonant or vowel-consonant words. Thus, the assessment did not give

information on whether or not students could decode different phonetic patterns such as silent e words, r-controlled words, or multi syllable words. In their opinion, this limitation posed a problem, particularly when given during the first grade when students are learning how to decode different syllable types. As such, a general outcome measure that more comprehensively assess the ability to automatically decode the full range of syllable types might be more useful for instructional planning.

Another comparison study was conducted between the Nonsense Word Fluency (NWF) probe and the Letter Sound Fluency (LSF) probe. Spearheaded by Kristen D. Ritchey (2008) from the University of Delaware, this study was meant to compare and contrast the effectiveness of the two probes to identify children who are at risk in reading. In the study, Ritchey administered both the LSF and NWF probes to 91 kindergarten students five times during the second half of the year. After analyzing the students' scores versus the score benchmarks, Ritchey concluded that both probes were good indicators of students who are at risk in the areas that they assess. She did, however, observe an interesting pattern in how students approached the NWF probe as time went on. While some students were beginning to blend and read the entire word, others were continuing to segment each part. As the scores came in, she discovered that students who continued to segment were not being flagged as at risk even though they should be doing more blending at this time of the school year. Due to this, Ritchey suggests that over time these scores become less valid indicators of student growth in the area of early literacy.

Summary of Research on Early Literacy Instruction in General and Nonsense Word Fluency Probes in Particular

Much of the research available about early literacy instruction cites phonics, or decoding skills, as highly important skills for beginning readers (National Reading Panel, 2000; Torgeson, 2002; Felton, 2013). Research reviewed in this chapter about the use of nonsense words in instruction and assessment practices suggests that there is evidence that phonics instruction that includes nonsense words appears to promote the development of decoding skills (Cardenas, 2009; Fien et. al, 2010; Wells, 2013). In addition, there is evidence of predictive validity

between baseline scores on Nonsense Word Fluency (NWF) probes end of the year reading outcomes in first grade (Fuchs, Fuchs, & Compton, 2004). On the other hand, there is evidence of significant limitations. For example, there appears to be subjectivity in the scoring procedures (Fuchs, Fuchs, & Compton, 2004) as well as the belief that the NWF probe resembles a mastery measurement versus a general outcome measure.

Limitations of Research Base

Based on the abbreviated literature review presented in this section, one limitation of the research base in this area are studies investigating the experiences and perceptions of teachers who are asked to utilize nonsense words in their instruction and/or assessment practice. I hope to add to the research base by interviewing teachers who utilize NWF probes in their classroom about their experiences with and perceptions of this assessment tool. By listening to their stories, I hope to collect real-world knowledge of how this assessment is being used in today's classrooms and shine some light on this area of the research base.

Methodology

This chapter presents the qualitative design used to examine the experiences and perceptions of teachers who utilize the Nonsense Word Fluency (NWF) probe in their classrooms. The primary research questions guiding this study follow:

- Do teachers who utilize the NWF probe believe it is effective in promoting optimal literacy instruction for students in their classrooms?
- If yes, how and for whom?
- If not, why do they use it?

Addressing these questions required a research methodology that allowed participants the time and space to discuss their experiences with and perceptions of the NWF probe. Semi-structured interviews were a useful methodology for this purpose. Clandinin and Connelly (2000) noted that, “Experience happens narratively . . . Therefore, educational experience should be studied narratively” (p. 19). This means that the narratives, or stories, of those involved in the educational process can help us better understand the effectiveness of the NWF probe in promoting optimal literacy instruction. My study utilized semi-structured interviews to explore the stories of teachers engaged in the work of assessment and instruction using, in some form or fashion, NWF probes. This chapter begins with a brief overview of semi-structured interview methodology. Then, methods for my study are described, including description of the sample, data collection procedures, and data analysis procedures.

Semi-Structured Interviewing

In the semi-structured interviewing, the interviewer attempts to collect answers and information from the participant through the form of a conversation (Clifford, French, and

Valentine, 2010). The interviewer may prepare prompts beforehand, but the conversation-style format provides the participant with the freedom to explore different topics of their choosing. This type of interviewing generally makes for a more comfortable experience for the participant. Rather than a strict, scripted interview process, the semi-structured interview allows the participant to fully express his/her own experiences while also allowing the researcher to guide the conversation towards the research questions (Lewis-Beck, Bryman, Liao, and Mason, 2004). A benefit of semi-structured interviewing is that more specific questions can be brought up during the conversation and fully explored during the discussion of topics related to the study (Pathak & Intrat, 2012). For these reasons, the semi-structured interview was a method most suited to the needs of my research.

Identification and Selection of Participants

The first step in determining possible participants for this study was to identify characteristics that I felt were important for them to have based on my research questions. I decided to include general educators, special educators, and reading specialists in my search because these types of educators are generally responsible for administering the NWF probe. Furthermore, I decided that these types of educators would also serve students in the early elementary stage – kindergarten through grade 2 – because the NWF is only administered to students in this range. Of course, it was necessary to interview teachers with experience giving the NWF probe, and it was ideal to have participants from Rhode Island because that is where I am training to become a teacher.

To identify participants for this study, I first compiled a list of possible candidates in consultation with my thesis advisor, Dr. McDermott-Fasy. Together, we created a list of local educators who fit my parameters and who might be interested in participating in the study. This original list included all three types of educators listed above as well as principals who could pass the information on to teachers or their staff. As such, a type of snowball sampling was utilized. I also created a Recruitment Letter (see Appendix A) to send to possible participants

via email. The letter requested interested parties to contact me if interested in participating in the study.

The Institutional Review Board Process

Before I began to recruit and interview participants, the Institutional Review Board (IRB) at Rhode Island College reviewed and approved my study. My first step in gaining approval was to complete the CITI online training regarding research ethics when working with human participants. Once my training was complete, I was able to create a proposal containing all of the letters, data collection forms, and interview protocols to be used in my study. Next, I submitted the proposal to the IRB. Upon review, the IRB had a few small changes that needed to be made to my proposal and approved it upon resubmittal. After my proposal was approved, I set out to search for participants in my study.

Description of Sample

The sample for this study consisted of four participants. The participants consisted of two general educators, a special educator, and a reading specialist/principal. All four participants were females with extensive experience with administering the NWF probe. The level of education among the participants ranged from a bachelor's degree to multiple master's degrees. Demographic details follow.

Table 1: Participants

	Role	Age of Students	Number of Years of Teaching	Number of Years Administering NWF probe	Advanced Degree
Ms. W	Special Education Teacher	5-11	7	6	Yes Masters in Literacy
Ms. X	General Education	5-6	23	7	No

	Teacher				
Ms. Y	Reading Specialist	5-7	22	2	Yes Masters in Education: Reading, Language and LD
Ms. Z	General Educator	6-7	13	9	No

Data Collection Procedures

After contacting potential participants, I began to receive interest in the study. An expression of interest was immediately followed up with an email clarifying any questions and providing the Consent Form for the study (see Appendix B). Next, an interview was scheduled with the participant at a time and place of her choosing. Three of the interviews took place at the participant's school, while one took place over the phone. At the interview, I took time to answer any questions about the study. Then, I asked them to sign the Consent Form before moving forward. Next, I asked them to complete a Demographic Data Form (see Appendix C). Finally, we were able to start the interview (see Appendix D).

To begin each interview, I started off by reading the following opening statement / question:

“As a part of the DIBELS assessment, the Nonsense Word Fluency (NWF) probe is used to diagnose a student's strengths and needs in the area of phonics. Due to its use of pseudo-words, there has been discussion of whether or not the NWF assessment is truly effective. Based on your experience, what is your opinion of the Nonsense Word Fluency assessment?”

Then the teachers began to tell me about their perceptions and experiences with the NWF probe. As they spoke, I had additional prompts to ask them if needed. The entire interview process lasted approximately 35-40 minutes. The participants were not compensated with any money or gifts for their time.

Data Analysis

With the consent of the participants, the interviews were audio-taped using a digital recording device. In order to analyze the interviews, I chose to use a method known as Thematic Analysis. As such, the first step in the process was to transcribe each interview. To do so, I listened to each interview session and typed out the conversation. Then, I went over the transcripts multiple times, searching for reoccurring themes. As themes began to emerge, I highlighted the texts in various colors and recorded quotes from the participants that supported the themes. An overview of themes follow.

Table 2:

The End All be All	The Double-Edged Sword	Knowing Where the Point of Entry Is	The Big Picture	Letting the Students in on the Secret
<p>Mrs. W's quote:</p> <p>"You can see whether they can look at a word and read it quickly, but I don't think it's the end all be all."</p>	<p>Mrs. Y's quote:</p> <p>"It does give us a lot of good diagnostic information about what they truly know, so that's great but I feel like that piece of it is a struggle for them. So I'm on the fence about it I guess."</p>	<p>Mrs. Y's quote:</p> <p>"NWF helps us because we are teaching a very structured and systematic phonics program, our children are learning how to read nonsense words as part of that program, and I think it's a way to reflect back to us on whether what we are doing is working for kids."</p>	<p>Mrs. X's quote:</p> <p>"The big picture . . .the blending of the word or segmenting of the word, isn't that why we're doing this?"</p>	<p>Mrs. Z's quote</p> <p>"I think it's all in the preparation and how you prepare the students."</p>
<p>Mrs. X's quote:</p> <p>"You have to be very careful with these tests, it's not the end all be all in my opinion."</p>		<p>Ms. X's quote:</p> <p>"It's definitely used in this school, for first and foremost, classroom instruction."</p>	<p>Mrs. Z's quote:</p> <p>"When we see them generalizing that knowledge it is amazing to see."</p>	

	<p>Mrs. W's quote:</p> <p>"...they just become so fixated on it that they only get through one or two because it's just like they're looking at it keep going down and down...a lot of them like melt down or start screaming."</p>			
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This process was repeated several times until I identified all possible themes (see Appendix E). Finally, as appropriate, similar sub-themes were combined into 3-5 major themes.

Limitations

Limitations to my study exist. For example, one limitation is clearly the small sample size. With a larger sample size, I could have collected more stories from teachers about their experiences with and perceptions of NWF probes. In doing so, I could have identified more patterns of experiences, or themes, which might have further added to the knowledge base on the use of Nonsense Word Fluency (NWF) probes to promote reading outcomes. Another limitation of this study is that the majority of participants (N=4) came from the same school district. If I were able to interview participants from a variety of school districts with different requirements related to assessment and instructional practices as well as different demographics, my results would be more generalizable to a greater number of individuals in the field.

Results, Conclusions and Implications

This section presents the thematic analysis, interpretation and implications of data collected by me from four teachers regarding their perceptions of and experiences with the Nonsense Word Fluency (NWF) probe. Following the first level of analysis when patterns were uncovered across cases, I identified four major themes: (1) The End All be All, (2) The Double Edged Sword, (3) Knowing Where the Point of Entry Is, (4) and The Big Picture. In addition, I will share a special “How To” from one participant entitled: Letting Students in on the Secret. These themes and special “How To” are presented, described, and interpreted in this chapter.

The End All Be All

The first theme is entitled, “The End All, Be All.” Throughout the interviewing process, participants in the study stated that the NWF probe is not “the end all be all” in relation to early literacy assessments. For example, in reference to how NWF scores influence academic intervention, Ms. W explained that, “We don’t just use that one specific test. We take a look at a number of things.” She further elaborated on this when talking about the usefulness of the NWF probe by stating, “You can see whether they can look at a word and read it quickly, but I don’t think it’s the end all be all.” Ms. X shared a similar sentiment when she stated that, “It’s not the end all be all, in my opinion. I find it to be a positive test. I find that it gives good information. I find that most of the time it validates exactly what I’m thinking of where the child is.” She went on to say that although there are benefits to using the NWF probe, it’s still important “to keep the big picture in mind.” Along the same lines, Ms. Y stated that “I do not think it’s the end all be all” but added that “it’s a true indicator of children knowing word patterns or not.” Finally, Ms. Z also shared her “mixed feelings” about the assessment, adding, “I’m one of those middle of the road people. I find value in it but I do not think it is the end all be all.”

In sum, all four participants felt that the NWF probe was not the “end all be all.” As teachers, they talked about utilizing early literacy assessments to gain a fuller picture of where their students are and how their students are progressing. Every participant spoke about the

usefulness of information gathered from NWF probes; however, they all cautioned that, on its own, this data did not provide a complete learner profile. As such, as a group, they recommended combining the NWF probe with other early literacy assessments. Overall, it seemed that all four participants shared the belief this assessment has benefits, but it is not the pinnacle of early literacy assessments.

The Double Edged Sword/On the Fence

The second theme is entitled, “The Double-Edge Sword/On the Fence.” Throughout the interviewing process, participants talked about common perceptions and experiences related to the timing and scoring of the NWF probe. The NWF – like most of the DIBELS assessments – has a 60 second time limit for students to read as many nonsense words as possible. Some of the teachers explained that the time limit can be distracting and upsetting for some of their students. For example, on the topic of timing, Ms. W noted that, “The students just become so fixated on it (the time limit) that they only get through one or two nonsense words because it’s just like they’re looking at it (the timer) keep going down and down.” She further added that some students have negative reactions to the time ending and “...a lot of them melt down or start screaming.” Similarly, Ms. Y shared that she herself often battles internally with the time limit, stating that:

My objective, logical reading specialist self knows that fluency is important; the ability to blend quickly is important. All of this leads to connect children’s ability to read accurately...we need the timing. But the early childhood developmental part of me [says that] it doesn’t really tell us what they already know because they either get spooked by the timing or freaked out.

Ultimately, however, this teacher concluded that she realizes the importance of the timing, saying, “I know it causes a problem for some kids but as a whole I wouldn’t want to see it go away.”

In regards to the scoring of the NWF probe, three teachers shared experiences of struggling with giving students points for just segmenting instead of blending the entire word. Ms. Y felt that the score(s) can “give[s] some conflicting information” because some students score well when only segmenting and not ever blending or reading the whole word. This causes problems as the student progresses and gets to the point where blending is critical in being able to read fluently. Along the same lines, Ms. X shared this same concern when she stated, “You have to be careful because you’ll find that they’re not really getting the big picture” – the actual blending the entire word. These teachers argued that by allowing students to score points for segmenting - when they are at a point in their literacy instruction where they should be blending - the NWF allows for misinterpretation of student ability. Additionally, Ms. Z shared a different frustration when she stated, “We teach them in reader’s workshop to segment and then go back and recode, but on the DIBELS it gives them less points if they do that.” In this way, the NWF scoring procedure faults students for following the process that they learn in their literacy instruction. Overall, the participating teachers seemed to be *on the fence* about the benefits of using the NWF probe compared to the cost of timing and scoring issues.

Knowing Where the Point of Entry Is

The third theme is entitled “Knowing Where the Point of Entry Is.” Throughout the interview process many teachers discussed that the NWF probe provides good data and information on student performance and is helpful in making instructional decisions. For example, Ms. X stated, “It’s definitely used in this school for, first and foremost, classroom instruction.” Along the same lines, Ms. Y reflected on her use of the NWF within the phonics system that she uses in her classroom, stating:

NWF helps us because we are teaching a very structured and systematic phonics program. Our children are learning how to read nonsense words as part of that program, and I think it’s a way to reflect back to us on whether what we are doing is working for kids.

Ms. Y went on to describe an environment where the students' scores are used to reflect on teaching and learning in the classroom, and they are used to find *a point of entry* for future intervention or instruction.

Other teachers explained that NWF continues to be a good indicator of their students' early literacy skills. For example, Ms. W stated, "It really does show whether kids know how to identify letter sounds, segment, blend . . . it shows whether they know the rules and how the rules work." Similarly, Ms. Z noted that she finds the NWF data especially helpful because teachers can "break it down by components and what prioritize needs to be worked on." As such, a common perception among teachers was that data collected from the NWF probe enabled them to better pinpoint their point of entry for future phonics instruction in their classrooms.

The Big Picture

The fourth theme is entitled "The Big Picture." While all of the teachers stated that the NWF probe is not the end all be all of early literacy assessments, each of them also made reference to the fact that it is critical to look at *the big picture* when it comes to this assessment. For example, Ms. X summed up the overall sentiment of participants when she stated, "The big picture is that we want our children reading and writing." In her opinion, the NWF probe had a place in this quest, especially in the early literacy context. Along the same lines, Ms. Y made reference to *the big picture* when she noted, "Fluency is a huge issue for kids moving up through the grades, so that ability to blend a word together and to do it quickly and accurately is pretty important and very critical." In sum, these teachers did not think of the NWF probe as an assessment given in isolation. In their opinion, when giving any assessments, it is so important to understand what the end goal is – reading! Ms. X put it nicely when she said, "I like to look at it like a roadmap . . . I believe you have to keep the big picture in mind."

Many teachers also mentioned the importance of connecting NWF to reading that the students do from books. One teacher explained, "I think this is the utmost importance – the

realistic feature of this - is showing them and giving them a sentence or showing them in their book that this is why we're doing this." For example, she explains to her students that when they are reading they sometimes come to an unknown real word. That is just like a nonsense word until they figure it out. She tells her students that by practicing using phonics, or decoding skills, on nonsense words, we are just practicing what we will do when we come to an unknown real word when we are reading a book. She argued that by showing them how this sort of testing is directly linked to their own reading, she is able to give her student a purpose for this work. Similarly, Ms. Z added that it is rewarding to see the students using knowledge learned from practice with unknown words, or NWF, when reading. She noted, "When we see them generalizing that knowledge it is amazing to see."

How To: Letting the Students in on the Secret

Connecting the dots, or knowing how the NWF probe fits into the bigger early literacy picture, is currently a missing link for many teachers *and* students. During the interview process, there was one teacher whose story truly inspired me and provided me with an exceptional example of how the NWF probe can be successfully used in the classroom. I want to take a moment to share her important "How To" with readers.

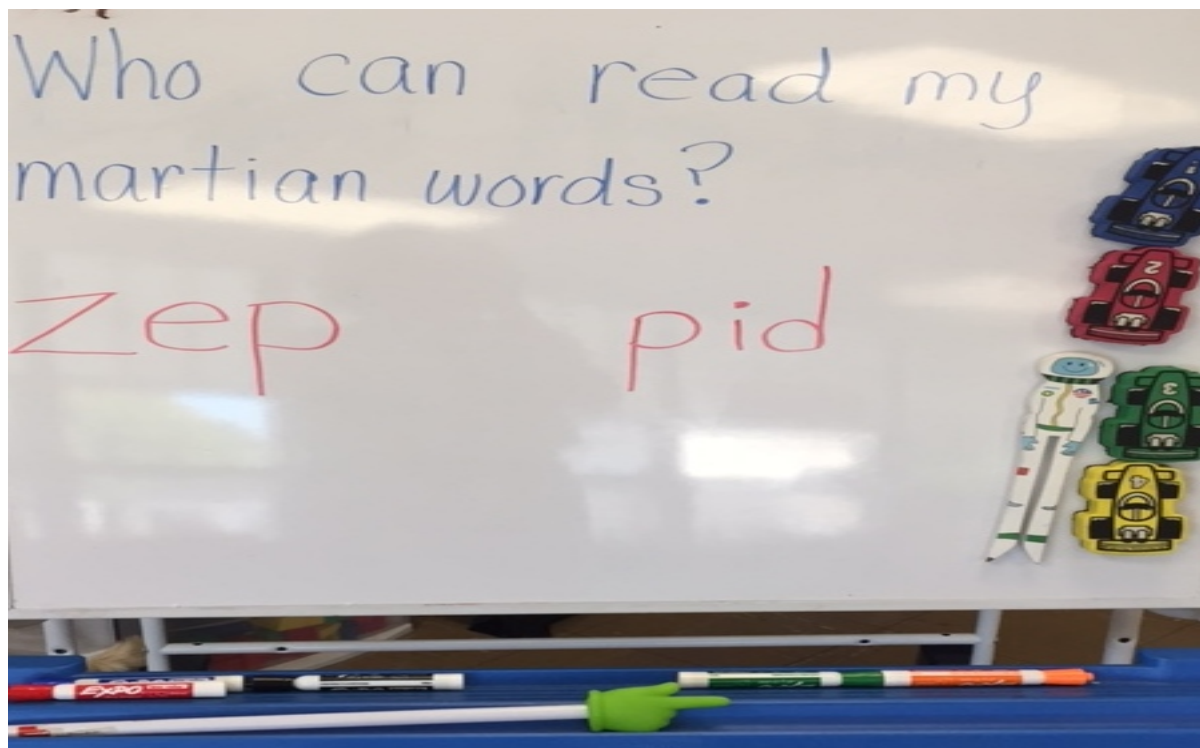
The participant, Ms. X, is a kindergarten teacher who uses the NWF assessment as a part of the DIBELS battery to assess her students' early literacy skills. In addition, Ms. X's school district uses the Wilson Reading Program called Foundations to teach students to read and write. From preparing a relaxing classroom environment to providing reading intervention, Ms. X expertly guides her students through the stages of reading development. When using the NWF probe as part of this journey, she is able to connect the time students spend practicing decoding unknown words to the NWF probe in particular and the big picture of reading in general.

Ms. X begins each school year by creating a safe and relaxing environment where her students can become readers. She helps them understand that there are many skills they must master to become good readers. One skill, she explains, is figuring out unknown words when

reading. After you figure out such words and see them a few times in print, Ms. X reassures her students that they will start to remember them and reading them will become easier, or more fluent. She further explains that sometimes during Reader's Workshop, she will give them a short test to see how they are doing figuring out unknown words. Sometimes, she tells them, she will call these nonsense words if they are not real words. In Ms. X's experience, she finds that "we do so much assessment that it's almost become a culture that the kids just take it in stride," so this preparation becomes even more important. As a result of really contextualizing the NWF probe, her students become comfortable with task. She even shared that by the end of the school year, "at play time, they'll often go off and get a clipboard and they'll test each other."

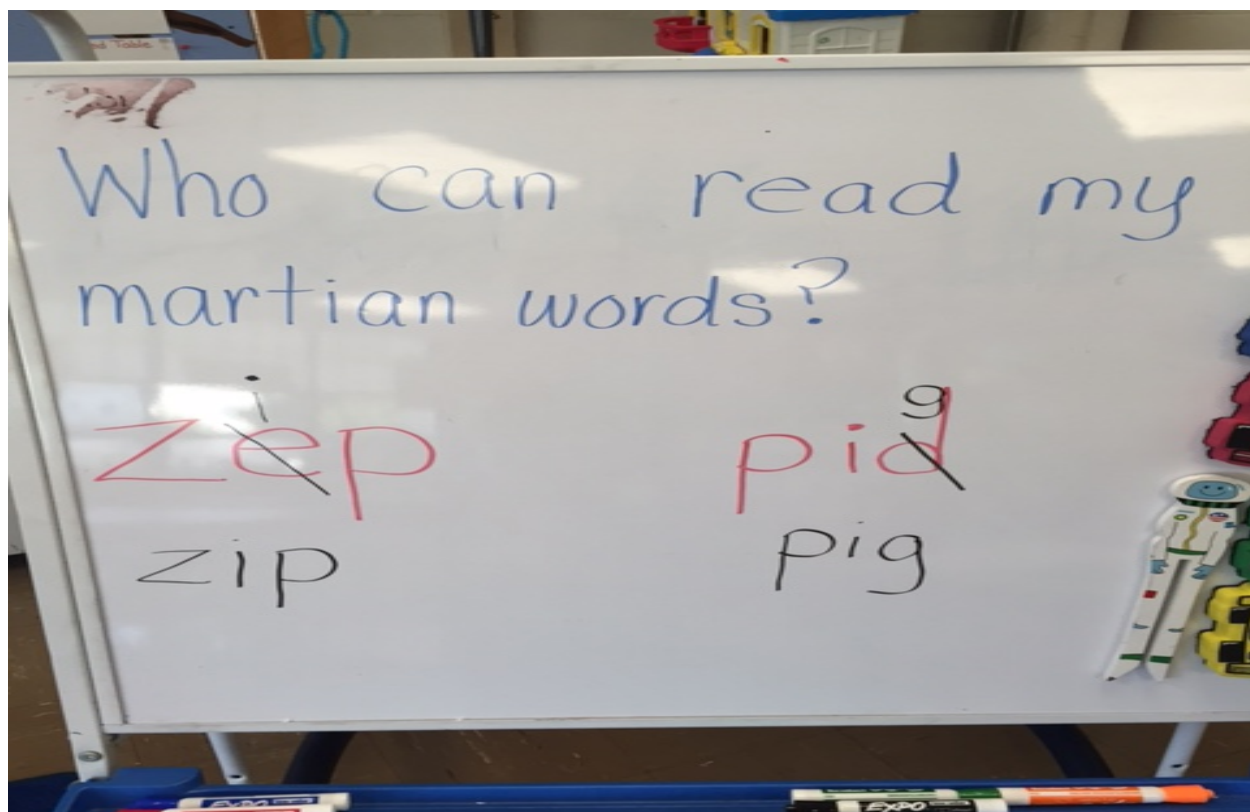
Not only does Ms. X ensure her that her students understand the importance of being able to decode unknown words and are comfortable being assessed in this area, she also works hard to make this learning fun and interesting. She starts by defining a nonsense word for her students and renames them *Martian Words*. Image 1 is a snapshot from Ms. X's classroom demonstrating this task.

Image 1: Martian Words in Kindergarten



This child-friendly term is used often in her classroom as students are constantly working with these nonsense words and learning the best ways to segment and blend them. Even before they take the NWF probe for the first time, the students are familiar with the concept and purpose of nonsense words. Ms. X explains, “I take the time to set up this environment at the beginning of the year...so it’s kind of not a secret what I’m doing; we let them in on the purpose.” She finds it critical that her students understand the purpose of practicing “reading” nonsense words NWF and taking the NWF probe as a measure of how far they have come. The children understand that getting better at this skill, decoding unknown words, will make them better readers in the long run. After students get better at decoding the unknown words, the next step is to connect the skill to known words. Image 2 is a snapshot from Ms. X’s classroom demonstrating this task.

Image 2. Converting Martian Words to Real Words in Kindergarten



After screening her students, Ms. X immediately uses the data from the NWF probes in her classroom. First, she investigates each student's performance and analyzes his or her score. Then, she creates groups based on need: students who need work with segmenting, students who need more work with letter sounds, and students who would benefit from more blending instruction. Next, Ms. X works sets up centers and activities for her students to practices the applicable skills. Often time, her mini lessons will focus on practicing Martian Words prior to the students going off and doing their centers as part of Reader's Workshop. As the students get better at decoding unknown words, they do better on their NWF probes. Ms. X makes sure to connect the dots for her students by telling them that all of their hard work is paying off as they are becoming better readers. From the very beginning to the very end, however, she ensures that her students know the purpose of NWF probe:

I think that the biggest thing is letting the kids in on the secret...we learn this because we want to be able to come across a word and be able to tap and sweep it out and stretch it so we can say its sounds and be able to solve words. That's why we're learning this (decoding nonsense – or Martian – words).

Summary

In sum, the four teachers that participated in this study were able to conclude that the NWF assessment is not the “end all be all.” While it is one of the assessments that they use to diagnose their students' early literacy abilities, it is not the only one. The teachers agreed that in order to get a more comprehensive picture of the students' abilities, it is necessary to use a combination of literacy assessments. The teachers found issues with the 60-second time limit and the probe's scoring procedures. However, through their experience with administering the NWF probe, most of teachers interviewed found that it was a valid assessment and was a good indicator of student performance. Finally, it was clear that how the teachers contextualized practicing unknown words within the bigger picture of become good readers was critical.

Implications

Higher Education

This study's implications for higher education revolve around the teacher candidate's understanding of early literacy skills and assessment at each stage of the child's reading instruction. Through research and discussions with the participants, it is clear that the understanding of typical reading development is critical when preparing any literacy instruction. Even more so, it is important that teacher candidates understand the types of assessments that make sense at each stage of a student's literacy education. Knowing when to use an assessment like the NWF probe can make a difference in the probe's usefulness.

Another implication for higher education that arose from this study is that teacher candidates must understand that having students practice discreet skills such as decoding unknown words has a purpose in the classroom. However, this purpose is contingent upon students being able to contextualize the practice with becoming better readers. Without this contextualization, students may experience unnecessary anxiety and frustration when working with unknown words. For example, we practice the following discrete skills when learning how to play basketball: dribbling, passing, shooting. We practice these skills in isolation, and then we scrimmage – or play the game. Why? To have fun and compete. Similarly, we practice the following discrete skills when learning to read: word recognition, decoding, and fluency. We practice these skills in isolation, and then we read – or practice them within connected text. Why? To read for enjoyment or new knowledge.

Districts/Schools

This study's implications on districts and schools are also important to note. Research reviewed suggests that districts and schools should use NWF probes as a part of a comprehensive assessment system that align with the five critical areas of reading instruction. Rather than giving this assessment in isolation, districts and schools are strongly encouraged to consider a battery of literacy assessments that connect discrete skills to connected text at each grade level,

including benchmark assessments such as Running Records to gain a more complete learner profile in the early elementary years.

In addition, it is also critical for districts and schools to understand that the DIBELS NWF probe resembles a mastery measurement of VC and CVC syllables. It might be more beneficial to use a general outcome measure that assesses generalization of all six syllable types as well as single and multi-syllable words such as the Test of Word Reading Efficiency. This way, all six syllable types will be assessed rather than just two.

A final implication for districts and schools that developed from this study is that teachers understand the usefulness of the NWF probes to assess whether or not students can generalize their knowledge of decoding skills (the rules) to “unknown” words (be them “nonsense” or unknown words encountered in connected text). This generalization creates a bridge between having the decoding skills and using them to become a better reader.

Teachers

Finally, this study suggests implications for teachers. By talking about the ‘Big Picture’ – learning to read – teachers can contextualize practicing unknown words to the ultimate point of reading instruction – comprehension. By teaching students decoding skills and having them practice these with unknown words, teachers will be able to show students exactly where their hard work will pay off when they read. Telling students that they have the skills to decode unknown words when they encounter them in texts will empower them to read with confidence and conviction. They will know they are equipped with the skills to decode. In addition, teachers can make these unknown words fun by adding a spin to it like Ms. X did with her “Martian Words.” When teacher make the practicing of these unknown words fun and meaningful, students truly are able to become better readers.

Conclusions

When I first began to prepare this project, I established a set of research questions. The following research questions were developed to guide me throughout my investigation:

- What are the teacher's experiences with and perceptions of the Nonsense Word Fluency probe?
- Do teachers who utilize the NWF probe believe it helps to promote optimal literacy instruction for students in their classrooms?

After analyzing the interview data, I realize that while I cannot let my findings speak for every teacher, I have learned a great deal about teachers' experiences with and perceptions of the NWF probe. The most prevalent lessons that I learned are included in this section.

All of the teachers expressed the importance of using more than one type of assessment when determining a student's learner profile in the area of early literacy skills. For example, Ms. W explained that in her school, "We don't just use that one specific test. . . we take a look at a number of things" and added that she finds this variety to be critical. By including a variety of assessment tools, the teachers found that they were able to get a more comprehensive look at their students' early reading abilities. Ms. X added the importance of looking at the whole child and determining their current skill set. Three out of the four teachers that I interviewed also expressed the importance of making good use of the NWF scores in the classroom. For example, Ms. Y explained that reflecting on the scores is all about "letting the test tell us where we need to make our teaching better." She added, "I think it's a way to reflect back to us on whether what we are doing is working for [our] kids." Finally, Three out of four teachers stressed the importance of looking at the bigger picture – no matter what assessment is being used. Ms. X believes that "the big picture is that we want our children reading and writing." From an elementary perspective, Ms. Y added that, "Fluency is a huge issue for kids moving up through the grades, so that ability to blend a word together and to do it quickly and accurately is very critical." By looking at the bigger picture, these teachers found it possible to connect the content and context of the NWF probe with the end goal for their students.

Last, but not least, these teachers taught me the importance of taking the time to contextualize each assessment for students, including the NWF probe. Three out of four teachers explained that they spend a great deal of time creating an environment where students understand

the importance of practicing the discrete skill and felt comfortable being assessed to see if they were getting better. Ms. X even created the term “Martian Words” for nonsense words to make practicing the skill of decoding of unknown words fun. In doing so, her students familiar with the concept of nonsense words and the reason being able to read them fluently was an important skill in their journey to become good readers. As such, the NWF probe was not confusing or anxiety producing for them. They had been let in on the secret, and they could connect their work in this area to the big picture of reading success. As such, they more were comfortable and confident when taking the NWF probe.

Future Research

Following the completion of my research and interviews, I was left with many questions that could direct future research on this topic. Future research could investigate the combined use of the NWF probe with a systematic and explicit program that includes nonsense words such as Wilson’s Foundations to determine any correlation between this partnership and increased student performance. Researchers conducting studies in this area might interview teachers who combine the NWF with this sort of reading program as well as teachers who use NWF probes and programs without nonsense words. By doing this, researchers might add to the knowledge base on the effectiveness of including nonsense words in a child’s reading instruction.

Future research could also include a look into the students’ perceptions and experiences with the NWF probe. Straight from the source, this type of research could interview students and ask them what the purpose of the NWF is and if they find it to be a “good” test or not. This research could benefit teachers as well because it would provide them with a solid idea of their students’ grasp on the purpose of this particular assessment. Ms. U. believed that this was a very integral part of giving her students the NWF probe.

Final Thoughts

From the interview data, I was able to determine that most teachers found the NWF probe to be a useful and effective assessment in their classroom. Most of the teachers had positive experiences with the assessment and found it to be indicative of students' early reading skills such as their letter-sound correspondence and their segmenting/blending skills. Furthermore, I found that teachers who utilize the NWF probe believed it helps to promote optimal literacy instruction for students in their classroom.

As a future educator, this research has taught me to look closely at any assessments that I use in my classroom. It has taught me to be critical of the effectiveness and purpose of each assessment that I give and to use the students' performance to enhance my classroom instruction. The teachers that I interviewed taught me to always look at the big picture whenever I consider the effectiveness of an assessment and, from this point on, I always will.

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Appendix A

Study Recruitment Letter

May 11, 2015

To Whom It May Concern:

My name is Maggie Habershaw. I am an undergraduate student at Rhode Island College's Feinstein School of Education and Human Development, majoring in elementary education and special education. Over the course of my studies I have had the opportunity to learn about different forms of assessment and have had the experience of administering them to real students. This has led to my interest in completing an honors thesis regarding the DIBELS Nonsense Word Fluency assessment. I am currently conducting research for my thesis and am interested in interviewing general educators, special educators, and reading specialists about their experiences administering the Nonsense Word Fluency assessment.

To participate in this study you must currently be a general educator, special educator, or reading specialist employed in a Rhode Island elementary school. Also, you must have experience administering the Nonsense Word Fluency assessment. I am hoping to interview anywhere from 8 to 12 educators over the next three months.

If you decide to participate in this study I will interview you at a time and place of your choosing. The interview will be recorded and will last approximately one hour. Interview questions will ask about your experiences administering the Nonsense Word Fluency assessment, your observations of students during this assessment, and your use of the student's scores in planning for instruction. All information obtained in this interview will remain confidential, and all reports of this research will use pseudonyms to guarantee participant anonymity. Audiotapes, transcripts, and all other collected information will be kept in a locked file and destroyed after the completion of this study.

I truly believe that this study will contribute to the knowledge base on the Nonsense Word Fluency assessment and its overall effectiveness in assessing students strengths and weaknesses in the area of phonics. If you have any questions or are interested in participating in this study, please contact me at (401) 473-9598, or mhabershaw_9672@email.ric.edu. In addition, my faculty advisor, Dr. Cara McDermott-Fasy, can be contacted at (401) 456-8603. Thank you for your time and consideration.

Sincerely,

Maggie Habershaw
Undergraduate, Rhode Island College

Feinstein School of Education

Appendix B

CONSENT DOCUMENT

Rhode Island College

What's the Sense in Nonsense Word Fluency?

You are being asked to be in a research study about the effectiveness of the Nonsense Word Fluency assessment. You were selected as a possible participant because you are a general educator, special educator, or reading specialist who has experience administering the Nonsense Word Fluency assessment. Please read this form and ask any questions that you have before choosing whether to be in the study.

Person Conducting Study

Maggie Habershaw, a student at Rhode Island College, is conducting this study for her Undergraduate Departmental Honors Project.

Why this Study is Being Done (Purpose)

This study is being conducted to learn more about the experiences of educators who administer the Nonsense Word Fluency probe with their students. Information gained from this study will contribute to the field by sharing teacher perceptions about the effectiveness of this test in diagnosing their students' strengths and needs in the area of phonics.

What You Will Have to Do (Procedures)

If you choose to be in the study, I will conduct an interview with you lasting approximately 45 minutes. The interview will be tape-recorded and later transcribed. The interview will take place at a time and place of your choosing.

You Will Be Paid (Compensation)

There will be no compensation for participating in this study.

Risks or Discomforts

The risks to this study are minimal, meaning that they are about the same as you would experience in your daily activities. You will only be expected to answer interview questions to your comfort level.

Benefits of Being in the Study

Being in this study will not benefit you directly; however, information from the study will contribute to the knowledge base on the experiences and perceptions of teachers who administer the Nonsense Word Fluency probe with their students.

Deciding Whether to Be in the Study

Being in the study is your choice to make. Nobody can force you to be in the study. You can choose not to be in the study, and nobody will hold it against you. You can change your mind and discontinue the study at any time. If you decide to discontinue, you do not need to give a reason, and it will not be held against you in any way.

How Your Information will be Protected

I will take several steps to protect the information you give us so that you cannot be identified. Instead of using your name, I will use a pseudonym. The information will be kept in a locked office file and seen only by me and other researchers who work with me. The only time I would have to share information from the study is if it is subpoenaed by a court, or if you are suspected of harming yourself or others. Then I would have to report it to the appropriate authorities. Also, if there are problems with the study, the records may be viewed by the Rhode Island College review board responsible for protecting the rights and safety of people who participate in research. The information will be kept for a minimum of three years after the study is over, after which it will be destroyed. In the future, I may publish or present information from this study; however, no identifying information about participants will be used in any way.

Who to Contact

You can ask any questions you have now. If you have any questions later, you can contact Maggie Habershaw at mhabershaw_9672@email.ric.edu, or (401) 473-9598. You can also contact my faculty advisor, Dr. Cara McDermott-Fasy by email cmcdermott@ric.edu or by phone at (401) 456-8603.

If you think you were treated badly in this study, have complaints, or would like to talk to someone other than the researcher about your rights or safety as a research participant, please contact Christine Marco at IRB@ric.edu, by phone at 401-456-8598.

You will be given a copy of this form to keep.

Statement of Consent

I have read and understand the information above. I am choosing to be in the study "What's the Sense in Nonsense Word Fluency?" I know that I can change my mind and discontinue participation at any time. If I discontinue participation, I know that I do not have to give a reason. I have been given answers any questions I have at this point in time. If I have any further questions, I will contact the researcher or above-mentioned individuals. I am at least 18 years of age.

I agree _____ or do not agree _____ to be audio recorded during my interview.

Print Name of Participant: _____

Signature of Participant: _____ Date: _____

Name of Researcher Obtaining Consent:

Appendix C

Demographic Data Form

1. General Educator _____

Special Educator _____

Reading Specialist _____

2. School District _____

3. Age of Students _____

4. Experience Administering the Assessment (# of years) _____

5. Number of Years Teaching _____

6. Does the Participant have an advanced degree? If yes, what is it?

Yes _____ No _____

Degree in: _____

Appendix D

“What’s the Sense in Nonsense Word Fluency?” Interview Protocol

Opening Statement / Question:

As a part of the DIBELS assessment, the Nonsense Word Fluency (NWF) probe is used to diagnose a student’s strengths and needs in the area of phonics. Due to its use of pseudo-words, there has been discussion of whether or not the NWF assessment is truly effective. Based on your experience, what is your opinion of the Nonsense Word Fluency assessment?

Prompts:

Topic Area
Experiences with Administering the
Assessment

- Examples of Prompts
- “How many times have you administered the NWF assessment?”
 - “Tell me about some of your experiences administering the NWF.”

Student Behaviors During the Assessment

- “Did you find it easy to administer this assessment?”
- “How did you prepare to administer this assessment?”

Use of Student’s Assessment Scores

- “Tell me about your student’s experiences with taking the NWF assessment.”
- “Did any of your students ever ask you about the pseudo-words?”
- “Tell me of any commonly occurring behaviors that you saw in your students after administering the test.”
- “Tell me about your student’s confidence level after taking the NWF.”
- “Tell me about how you use these scores to influence your instruction.”
- “Do you find that these scores are good indicators of your student’s performance?”

Final Question: In your experience, what is the sense in the NWF assessment?