

## **Content knowledge reading assessment: A policy change impacting elementary education candidates' preparation**

Angela Rutherford  
University of Mississippi

LeAnn Carter  
Blue Mountain

Monica Riley  
Mississippi University for Women

Sara Platt  
University of Mississippi

### **ABSTRACT**

This article examines data from three educator preparation programs in one southern state prior to a new licensure policy requirement for elementary education teachers. Previously, the state required educator preparation programs to offer two 3-hour courses focused on early literacy and a total of fifteen hours in reading and/or language arts methods courses. With a state statute, elementary teachers are required to pass a reading-specific assessment aligned to scientifically-based reading research. The purpose of this study was to examine how preservice candidates perceive their own preparation, as well as to examine these candidates' content knowledge, related to early reading instructional components. This study was conducted prior to the policy change to gather and analyze baseline data. Findings suggest that preservice teachers' perceptions are very different from their knowledge base.

**Keywords:** elementary teacher education, early reading preparation, preservice teacher perceptions, preservice teacher knowledge, reading instruction

## INTRODUCTION

With the adoption of more rigorous state standards, the need for more fully prepared teachers is a moral imperative, particularly in reading instruction. Young students need to be proficient in the foundational skills necessary to access text, such as the awareness of individual phonemes in words and the ability to fluently decode words. When students receive direct instruction in these skills, they are better able to access texts so that they can comprehend at the high levels required within the more rigorous next-generation state standards. Teacher preparation in reading instruction should address the five components of reading as identified by the National Reading Panel (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000) to help students master those early reading foundational skills. Unfortunately, many programs do not adequately prepare teacher candidates to provide effective instruction in those components (Bos, Mathers, Dickson, Podhajski & Chard, 2001; Moats, 1999; Walsh, Glaser, & Wilcox, 2006). As a result, many state leaders have enacted policies to ensure that educator preparation programs address those five components of reading as defined by the science of reading (International Literacy Association, 2015; Rickenbrode & Walsh, 2013; Spear-Swerling & Coyne, 2010).

### Brief History of State Reading Instruction Policies

The state department of education in one specific southern state enacted a policy in 2004 requiring all elementary education majors to complete fifteen hours in reading or language arts methods coursework. Within those fifteen hours, six hours were specifically mandated to address early literacy. The department collaborated with a non-profit entity in the state, as well as representatives from each educator preparation program (fifteen) in the state, to develop a course title, description, and goals for the mandated six hours of early literacy instruction courses that focused on all five components of reading identified by the National Reading Panel. As a result, preparation programs are required to use the approved course titles, descriptions, and goals. While the requirement served to strengthen the focus on reading instruction in some preparation programs, the results were not as effective as hoped. During an informal review of the syllabi five years later, it was determined that elementary education candidates were not being taught about the five components of reading in many of the state's preparation programs.

In 2013, the state legislature with the governor's support took a bold stance on the importance of third grade reading. State politicians determined that the vast number of students performing below proficient in this state was simply unacceptable—the children in this state deserved better! Understanding the research related to the importance of third grade reading and children's life trajectories, the legislature passed and the governor signed into law a statute related to third grade promotion. As a result of this statute and the informal syllabi review, the legislature also determined that the state must better prepare elementary education teachers to help the state's young learners meet the third grade promotion requirement. Beginning September 1, 2016, all elementary education candidates must pass the *Foundation of Reading*© assessment with a passing score of 229 in order to obtain the K-6 elementary license.

### RELATED LITERATURE

## **Coursework**

In 2000, the National Reading Panel (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000) meta-analysis identified the five essential components for early reading success: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Effective instruction in all five components is critical to long-term student success (International Literacy Association, 2015). It stands to reason that if students are to receive effective instruction in these areas, their teachers must be adequately prepared. In order to be prepared, coursework should include the five components. Unfortunately, many states do not include a specified number of hours for reading or literacy instruction required for elementary licensure. The International Literacy Association Task Force on Teacher Preparation for Literacy Instruction (2015) found that “the majority of states did not have a requirement related to a specific number of hours in literacy or reading instruction coursework” with less than 40 percent of states requiring literacy-related hours for elementary education licensure (p. 4).

Even if the state requires a specific number of hours in reading or literacy coursework, there is no guarantee that preparation programs will include the five components of reading instruction. Joshi, Binks, Graham, Ocker-Dean, Smith, Boulware-Gooden (2009) determined that one reason preservice teachers do not know enough about these essential components is that the textbooks used in their courses do not present or incorrectly present the five components. In an evaluation of 609 institutions of higher education across the United States, only 18 percent of teacher preparation programs were found to address all five of the essential reading components identified by the National Reading Panel (Rickenbrode & Walsh, 2013). In fact, “roughly one-third of the programs provided no instruction on the five essential components” (Rickenbrode & Walsh, 2013, p. 34).

## **Feelings of Preparedness or Self-Efficacy**

It appears that regardless of a candidate’s coursework emphasis or lack of emphasis on the five components, preservice teachers feel prepared to teach reading. Fedora (2014) stated that teacher preparation programs are tasked with creating knowledgeable, skilled reading teachers who are able to utilize the evidence base and who feel prepared to tackle a spectrum of ability among readers in their classrooms. According to Bandura (1993), teachers who have the self-efficacy to teach can create learning environments that lead to student achievement; thus, when preservice teachers feel prepared, they should have a higher self-efficacy to teach that subject matter. Leader-Janssen and Rankin-Erickson (2013) stated “higher self-efficacy tends to lead to greater effort and persistence, which leads to better performance and teaching ability, which in turn leads to higher self-efficacy” (p. 207). Some researchers discovered that preservice teachers actually hold the belief that they are prepared to teach reading despite their lack of experience (Clark, Jones, Reutzler, & Andreasen, 2013; Haverback, 2009; Leader-Janssen & Rankin-Erickson, 2013).

## **Content Knowledge**

Preservice elementary education candidates need to know a great deal about teaching

reading. Snow, Griffin, and Burns (2005) divided teacher knowledge into five different levels that develop along a continuum as teachers gain more experience. These levels of knowledge are declarative, situated procedural, stable procedural, expert, and reflective. According to Snow et al. (2005), preservice teachers are “primarily engaged in acquiring declarative knowledge...this stage of knowledge development is when a solid foundation of disciplinary knowledge relevant to success as a teacher will typically be acquired” (p. 7). As a result, the knowledge to which these candidates are exposed within their preparation programs is critical for ensuring that they are ready on day one to meet the instructional needs of children learning to read. Novice teacher will surely develop along the knowledge continuum described by Snow et al. (2005), but the declarative knowledge within the field of reading instruction that builds that firm foundation is imperative for teacher education programs to address.

Within the field of reading instruction, the research base or the science behind what teachers need to know in order to teach reading is quite extensive and clear. Researchers (Fedora, 2014; Moats, 1994; Moats, 2009; Moats, 2014; National Research Council, 2010; Snow, et al., 2005) have documented the content that teachers need to know and understand to teach reading well, especially to students in those foundational years of learning to read. Reading failure is preventable when teachers, even novice teachers, have the requisite content knowledge to address the five essential components (Moats, 1994; Snow, et al, 2005; Taylor, Pearson, Clark, & Walpole, 1999; Wong-Fillmore & Snow, 2000).

## **PURPOSE OF THE STUDY**

Research supports the notion that beginning teachers lack the knowledge and skills to teach children to read (Moats, 1999; Bos, Mather, Dickson, Podhajski, & Chard, 2001). There is substantial evidence that shows educator preparation programs are not translating reading research into teacher preparation (Rickenbrode & Walsh, 2013). A third grade promotion statute, in one southern state, attempted to address this lack of knowledge by requiring elementary education teachers to pass an assessment focusing on researched-based reading instruction to receive an initial license in elementary education. In light of the current legislation and Rickenbrode and Walsh’s (2013) call to action, the purpose of this research is to determine current elementary education student teachers’ knowledge of early reading content, these teachers’ feelings of preparedness to teach reading, and their perceptions related to how much certain reading instruction content was emphasized during coursework. The following research questions guided this study:

1. What emphasis does preservice teachers report is given to the five components of reading instruction in educator preparation programs?
2. How prepared do preservice teachers feel to teach reading upon completion of an educator preparation program?
3. How knowledgeable about the five components of reading instruction are pre-service teacher upon completion of an educator preparation program?

A descriptive survey design was utilized to gather data about student teachers’ knowledge and perceptions related to the five components of reading instruction.

Descriptive research design supported the need to “generate an accurate description of an educational phenomenon as it exists” (Gall, Gall, & Borg, 2007, p. 290). By describing the current state of student teachers’ knowledge, a platform for explaining and/or changing the current climate in teacher preparation programs in the southern state was provided.

## **METHOD**

### **Participants**

Data was collected from student teachers attending three different teacher preparation programs from the same southern state during the spring semester of 2015. One large, public institution (23,838 students enrolled), one small, public institution (2,586 students enrolled), and one small, private institution (544 students enrolled) were represented in this study. The sample for this study was 182 elementary education student teachers, 154 from the large public institution, 16 from the small public institution, and 12 from the small private institution.

### **Survey Development**

The *Stern Center Language and Learning TIME for Teachers* survey developed by the Stern Center (Bos, Mather, Dickson, Podhajski, & Chard, 2001) and the *Pre-Service Teacher Preparation Program and Knowledge Survey* by Salinger, Mueller, Song, Jin, Zmach, and Toplitz (2010) were modified and combined to meet the needs of the current study. The modified survey, referred to as *Student Teacher Survey* for the current study, contained three sections: Coursework, Feelings of Preparedness, and Survey of Teacher Knowledge. The Coursework section contained 17 items where participants rated the degree of program emphasis for the particular topic of reading instruction. The Feelings of Preparedness section contained 13 items for participants to rate their feelings of preparedness related to particular topics in reading instruction. The first two sections of the survey were drawn from the work of Salinger, et al. (2010). The final section, Survey of Teacher Knowledge, contained 20 multiple-choice questions on topics related to reading content knowledge with emphasis on phonological awareness and phonics. In addition, participants were provided the opportunity to address three open-ended questions related to strengths and weaknesses of coursework they experienced in their preparation programs.

### **Procedure**

Upon finalization of the *Student Teacher Survey*, research approval was granted by each of the three institutions where the teacher preparation programs existed. The instrument was then administered at the end of the spring semester in 2015 to 182 elementary education student teachers by corresponding education faculty from each institution. Participants were in the final stage of their teacher preparation program, and participation was voluntary. Data collected from the three teacher preparation programs was then tabulated and analyzed using descriptive statistics.

## **RESULTS**

Survey responses were received from 182 respondents. Eight (4%) of participants were male and 169 (93%) of participants were female. Five (3%) of participants did not indicate a gender. The survey completed by participants contained three sections— coursework, feelings of preparedness, and teacher knowledge.

### **Coursework Section of the Survey**

The coursework portion of the survey focused on the degree of emphasis within coursework that candidates encountered during their programs of study. Specifically, the survey contained items related to the five components of reading instruction. Respondents were asked to rate the amount of emphasis the item received in their coursework with the designations of “considerable,” “moderate,” “little,” “none,” or “N/A.”

As seen in Table 1 (Appendix), the results varied between the different items contained on the survey. Table 1 provides specific results for the coursework portion of the survey.

Specifically, the emphasis on the five components of reading instruction (phonemic awareness, phonics, vocabulary, fluency, and comprehension) during coursework was analyzed. Phonemic awareness was included in item 1 on the survey; 52% respondents rated this component as being emphasized a “considerable” amount and 42% of respondents rated this as being emphasized a “moderate” amount. Phonics was included on items 2, 8, and 9 of the survey; across those 3 items, 53% of respondents rated phonics as being emphasized a “considerable” amount while 38% of respondents rated it as being emphasized a “moderate” amount. The third component identified by the National Reading Panel included on the survey was fluency. Fluency was included on items 6 and 10; when reviewing these two items, 53% of respondents reported that this received “considerable” attention during coursework and 33% reported that fluency received “moderate” attention during coursework. Vocabulary was addressed in items 4 and 5. For this component, 53% of respondents reported this received “considerable” attention and 35% reported that vocabulary received “moderate” attention. The final component, comprehension, was addressed in items 3 and 7. For comprehension, 60.5% of respondents determined that comprehension received “considerable” attention with 29% of reporting that this component received “moderate” attention.

### **Feelings of Preparedness Section of the Survey**

The feelings of preparedness portion of the survey focused on the candidates’ feelings of preparedness relevant to certain areas of reading instruction. Specifically, the survey contained items related to the five components of reading instruction. Respondents were asked to rate the items with the designations of “not at all prepared” “somewhat prepared,” “mostly prepared,” “definitely prepared.” Table 2 (Appendix) provides full details on the STERN Center Feeling of Preparedness Survey.

Specifically, the emphasis on the five components of reading instruction was analyzed as related to the candidates’ feelings of preparedness. Phonemic awareness was included in item 1 on the survey; 36% of respondents felt they were “definitely prepared” while 46% of respondents felt that they were “mostly prepared,” 42% of respondents felt that they were “somewhat prepared,” and 2% of respondents felt that they were “not at all prepared.” Phonics was included on items 2, 8, and 9 of the survey. Across those 3 items, 43% of respondents felt they were “definitely prepared,” 40% of respondents felt they were “mostly prepared,” 14% felt they were “somewhat prepared,” 3% felt they were “not at all prepared,” and 1.5% of respondents did not reply to some of those items. Items 6 and 10 on the survey related to fluency instruction. When reviewing these two items, 50% of respondents reported that they felt “definitely prepared,” 39% reported that they felt “mostly prepared to address fluency, 9% of respondents felt that they were “somewhat prepared,” 1.5% felt they were

“not at all prepared,” and .5% did not reply to one of those questions. Vocabulary was addressed in items 4 and 5. For this component, 51% of respondents reported they were “definitely prepared,” 36% reported that they were “mostly prepared” to address vocabulary, 10% felt they were “somewhat prepared,” 2.5% responded they were “not at all prepared,” and .5% did not answer one of the questions addressing vocabulary. The final component, comprehension, was addressed in items 3 and 7. For comprehension, 49% of respondents determined that they were “definitely prepared,” 38% reported they were “mostly prepared,” 10% felt that they were “somewhat prepared,” 2% responded that they were “not at all prepared,” and .5% did not reply to one of the questions.

In this particular section of the survey, one item addressed the respondents’ overall feelings of preparedness to teach kindergarten and first grade students. Respondents were not confident in their feelings of preparedness with 34% of the respondents reporting they felt “definitely prepared,” 38% felt “mostly prepared,” 20% felt “somewhat prepared,” and 8% felt “not at all prepared.” The other question related to overall feelings of preparedness to teach second and third grade. Respondents were also not confident in their feelings of preparedness with 40% of the respondents reporting they felt “definitely prepared,” 47% felt “mostly prepared,” 11% felt “somewhat prepared,” and 3% felt “not at all prepared.”

### **Teacher Knowledge Section of the Survey**

The teacher knowledge portion of the survey focused on content knowledge that the respondents possess related to early literacy instruction. In this section of the survey, items primarily focused on phonological awareness with strong emphasis on phoneme awareness, as well as phonics. These items were analyzed based on the respondents’ correct or incorrect answers; the results for these items are contained in Table 3 (Appendix). Only three items were answered correctly by more than 50% of the respondents. These items include item #3 (76%), item #8 (77%), and item #14 (80%).

Specifically, the answers were analyzed to determine the percentage of respondents that answered the phonological/phoneme awareness items correctly versus the percentage answering those questions incorrectly. These items included items 3, 9, 10, 11, 14, 15, 19, and 20. Taking these items together, 40.5% respondents correctly answered these items with 58.3% of respondents answering these items incorrectly. For these items, 2% of the respondents did not reply to one or more of the items. A similar process was used to determine the percentage of respondents answering the phonics items correctly versus incorrectly. Items 1, 2, 4, 5, 6, 7, 8, 12, 13, 16, 17, and 18 related to phonics knowledge. On average, 36.16% of respondents answered these items correctly with 63.25% answering these items incorrectly. For these items, 1.5% of respondents did not answer one or more of the items.

## **DISCUSSION**

This study focused on the degree of emphasis that preservice teacher candidates believe the five components of reading instruction received within reading coursework and those candidates’ feelings of preparedness to teach the five components, as well as on the candidates’ content knowledge of the five components. In this study, the researchers surveyed preservice teachers at completion of their teacher preparation program at three universities in one southern

state. The results of the Student Teacher Survey, adapted from the *Stern Center Language and Learning Time for Teachers* survey and the *Preservice Teacher Preparation Program and Knowledge Survey* indicate that students overwhelmingly think a moderate to considerable amount of time was spent on the five components of reading during the literacy courses required at each university. While Rickenbrode and Walsh (2013) found that “roughly one-third of the programs provide no instruction in the essential components...half of the remaining programs we reviewed cover one to four of the components” (p.34), at the three universities involved in this study all five of the components were covered at some point in their teacher preparation program, at least according to the candidates surveyed.

Candidates also responded that they felt quite prepared to teach the five components of reading. Even though candidates participating in this study felt prepared, they may not be as prepared as they perceive themselves to be. While 82% of respondents felt “definitely or mostly prepared” in the area of phonological/phonemic awareness, only 40.5% of respondents were able to answer the phonological/phonemic awareness content knowledge questions correctly. The same holds true for the phonics portion of the survey as well as the vocabulary portion. While 83% of the participants felt that they were “definitely or mostly prepared” to teach phonics, only 36.16% of respondents answered correctly the phonics questions within the content knowledge section of the survey. For vocabulary, 97% of students felt “considerably or moderately” prepared, but only 22% answered the teacher knowledge question correctly. Perhaps these candidates align with the assertion made by Cunningham, Perry, Stanovich, and Stanovich (2004) that “teachers do not always know what they do not know” (p. 162). That is, these candidates do believe that they are prepared because they really don’t understand the content knowledge required to teach children to learn to read. While, with experience, teachers will develop and deepen their knowledge of teaching reading, teacher candidates need to develop within their preservice coursework that declarative knowledge base so requisite for teaching children to learn to read. With this knowledge, even novice teachers can prevent reading failure in young children. (Snow, et al., 2005)

While the survey given to the preservice teachers did not include content knowledge questions about fluency or comprehension, candidates were asked about their feelings of preparedness in these areas. For fluency, 89% of respondents felt “definitely or mostly” prepared to teach this important component of reading instruction, and 82% felt the same for comprehension.

Investigation of preservice teachers’ knowledge in the area of reading is receiving a stronger focus (Bos, et al., 2001; Snow, Griffin, Burns, 2005; Moats, 2009; Greenberg, McKee, & Walsh, 2013; Rickenborde & Walsh, 2013). It is imperative that educator preparation programs align instruction with the research base for teaching reading. Without adequate knowledge for teaching reading, teachers are not able to address the instructional needs of students that are requisite for their success in reading (International Literacy Association, 2015). Rickenbrode and Walsh (2013) assert that the “preventable harm” of lack of reading ability in the K-12 educational system can only be eliminated by the training that teacher candidates receive from the colleges of education responsible for the dissemination of this knowledge.

## **IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS**

### **Implications**



While candidates in this study responded that a considerable amount of coursework was spent on the five components of reading and that they felt prepared to teach the components, the results of the teacher knowledge section imply otherwise. This lack of preparedness indicates that preparation programs may need to review curriculum and opportunities for application of learning so that candidates retain this content knowledge. Helfrich & Bean (2011) assert that programs with a field experience component is an effective way to help candidates immediately apply the knowledge present in their coursework. Tying fieldwork and coursework together may allow for transfer and retention of knowledge gained while sitting in a university classroom. Further, having opportunities to receive feedback from university instructors during a field-based component may also have a positive impact on future teacher practices (Fine, Robbins, Miller, & Yribarren, 2005).

In addition, universities need to ensure that candidates retain the knowledge needed to teach early reading skills. It is clear that participants in this study received instruction during coursework; however, they did not continuously apply the knowledge or they did not revisit the knowledge in subsequent coursework in a manner to retain the knowledge through the end of their program of study in the student teaching semester.

Further, the selection of textbooks for coursework in literacy instruction should contain information about these essential components and the information presented should be based in current research. According to Joshi, et al. (2013) this is not always the case.

### **Limitations**

The study is limited by the fact that content knowledge questions were not included for all five components of reading. Another limitation is that the study was only conducted at three institutions in the state where the researchers were employed. Since the surveys were completed in the university classroom, candidates could have responded more favorably than they might have in a different location. Self-reporting of data may also be considered a limitation. Finally, experiences of candidates varied across course sections for literacy courses.

### **Recommendations**

Due to the lack of teacher knowledge in the five components of reading the following recommendations are made concerning coursework, assessment of teacher knowledge, and continued research. Coursework in reading instruction content should include opportunities for application within field and clinical experiences to ensure that candidates retain this critical knowledge base to address students' reading instructional needs. Further, candidates must be appropriate formative assessments within the university classroom must be utilized so that candidates can meet the demands of state licensure summative assessments. In addition, the survey utilized in this research should be redesigned to align with all five components of reading rather than the three currently emphasized on the survey so that in future studies comparisons of preservice teacher perceptions and teacher knowledge can be compared within all five components. It is also recommended that this study, or a similar one, be conducted in all programs across the state to determine areas where educator preparation programs can improve. Finally, future research should be conducted in order to make comparisons between this baseline data collected prior to the licensure requirement and data collected after the

implementation of the summative assessment required for licensure.

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## APPENDIX

**Table 1**

Coursework					
Item	Considerable	Moderate	Little	None	N/A
1. Teaching children how to isolate, identify, separate, and blend sounds in spoken words.	94/52%	77/42%	11/6%	0/0%	0/0%
2. Teaching children to use phonics skills to figure out how to pronounce unfamiliar words.	100/55%	67/37%	15/8%	0/0%	0/0%
3. Teaching children to monitor how well they understand what they read and to correct problems as they occur.	76/42%	75/41%	29/16%	1/.5%	1/.5%

4. Using a variety of methods to teach children the meaning of words, including direct and indirect (conversational) instruction, and multiple exposures and repetition.	95/52%	63/35%	20/11%	3/2%	1/.5%
5. Identifying the words in a text that your children do not know and using their background knowledge to help them figure out the words' meaning.	102/56%	66/36%	13/7%	0/0%	1/.5%
6. Making instructional decisions based on evaluations of children's oral reading fluency.	106/58%	57/31%	15/8%	2/1%	2/1%
7. Teaching children a variety of strategies for understanding the text they read, such as using graphic organizers, making predictions, asking questions, and identifying the main ideas.	143/79%	31/17%	8/4%	0/0%	0/0%
8. Teaching phonics to children in a systematic way, with a series of skills and activities.	86/47%	75/41%	20/10%	1/.5%	0/0%
9. Teaching children to recognize and name letters.	102/56%	66/36%	13/7%	0/0%	1/.5%
10. Having children repeatedly read the same text aloud to improve their speed, accuracy, and expression.	88/48%	63/35%	27/15%	4/2%	0/0%
11. Teaching reading with both fiction and nonfiction reading materials.	85/47%	69/38%	23/13%	4/2%	1/.5%
12. Relationships between elements of reading and oral language.	76/42%	80/44%	21/12%	2/1%	1/.5%
13. Relationships among elements of reading or different types of reading skills.	68/37%	84/46%	24/13%	3/2%	3/2%
14. Examined materials and/or participated in class discussions about using core reading programs (or basals), such as Harcourt Brace, Houghton Mifflin, McGraw Hill, Open Court, Scott Foresman, or SRA Reading Mastery.	55/30%	50/27%	64/35%	13/7%	0/0%
15. Examined materials and/or participated in class discussions about using literature-based programs, such as Fountas' and Pinnell's Guided Reading, Rigby materials, Scholastic Guided Reading, or the Wright Group materials.	50/27%	47/26%	57/31%	27/14%	1/.5%
16. Examined materials and/or participated in class discussions about using supplemental programs, such as Corrective Reading, Great Leaps, LIPS, Saxon Phonics, or Voyager.	38/21%	56/31%	64/35%	24/13%	0/0%
17. Examined materials and/or participated in class discussions about using school-wide literacy models, such as First Steps,	35/19%	52/29%	70/38%	25/14%	0/0%

**Table 2**

## Feelings of Preparedness

Item	Definite-ly	Mostly	Some-what	Not at All	No Reply
1. Teaching children how to isolate, identify, separate, and blend sounds in spoken words.	63/36%	83/46%	30/16%	3/2%	0/0%
2. Teaching children to use phonics skills to figure out how to pronounce unfamiliar words.	74/35%	79/47%	25/17%	4/2%	0/0%
3. Teaching children to monitor how well they understand what they read and to correct problems as they occur.	63/35%	85/46%	31/17%	3/2%	0/0%
4. Using a variety of methods to teach children the meaning of words, including direct and indirect (conversational) instruction, and multiple exposures and repetition.	84/46%	70/38%	21/12%	6/3%	1/.5%
5. Identifying the words in a text that your children do not know and using their background knowledge to help them figure out the words' meaning.	102/56%	61/34%	15/8%	4/2%	0/0%
6. Making instructional decisions based on evaluations of children's oral reading fluency.	73/40%	86/47%	19/10%	4/2%	0/0%
7. Teaching children a variety of strategies for understanding the text they read, such as using graphic organizers, making predictions, asking questions, and identifying the main ideas.	116/64%	55/30%	7/4%	3/2%	1/.5%
8. Teaching phonics to children in a systematic way, with a series of skills and activities.	67/37%	85/47%	20/11%	8/4%	2/1%
9. Teaching children to recognize and name letters.	103/57%	50/27%	23/13%	3/2%	3/2%
10. Having children repeatedly read the same text aloud to improve their speed, accuracy, and expression.	109/60%	56/31%	14/8%	2/1%	1/.5%
11. Teaching reading with both fiction and nonfiction reading materials.	117/64%	46/25%	16/9%	3/2%	0/0%
12. How prepared do you feel to teach kindergarten and 1 <sup>st</sup> graders the essential skills of reading?	62/34%	70/38%	36/20%	14/8%	0/0%
13. How prepared do you feel to teach 2 <sup>nd</sup>	72/40%	85/47%	20/11%	5/3%	0/0%

and 3<sup>rd</sup> graders the essential skills of reading?

**Table 3**

## Survey of Teacher Knowledge

Item	Correct	Incorrect	Not Available
1. Which word contains a consonant digraph?	20/11%	162/89%	0/0%
2. How many morphemes are in the word <i>unhappiness</i> ?	40/22%	142/78%	0/0%
3. A phoneme refers to?	139/76%	42/23%	1/.5%
4. A pronounceable group of letters containing a vowel sound is	77/42%	104/57%	1/.5%
5. A combination of two or three consonants pronounced so that each letter keeps its own identify is called	89/49%	92/51%	1/.5%
6. An example of a voiced and unvoiced consonant pair would be	16/9%	166/91%	0/0%
7. Two combined letters that represent one single speech sound are	51/28%	130/71%	1/.5%
8. If <i>tife</i> were a word, the letter “i” would probably sound like the “i” in	140/77%	41/23%	1/.5%
9. How many speech sounds are in the word <i>box</i> ?	14/8%	166/91%	2/1%
10. What is the second sound in the word <i>queen</i> ?	36/20%	144/79%	2/1%
11. Mark the statement that is false. (phonological awareness related)	53/29%	127/70%	2/1%
12. A reading method that focuses on teaching the application of speech sounds to letters is called	95/52%	83/46%	3/2%
13. According to the rules of syllable division, which one of these words is incorrectly divided?	80/44%	100/55%	2/1%
14. Identify the pair of words that begins with the same sound.	145/80%	34/19%	3/2%
15. If you say a word and then reverse the order of the sound, <i>ice</i> would be	86/47%	94/52%	2/1%
16. Which of the following words does not contain an open syllable?	36/20%	144/79%	2/1%
17. The part of the syllable that precedes the vowel is known as	90/50%	90/50%	2/1%
18. A diphthong is	54/30%	125/69%	3/2%
19. Which of the following demonstrations phoneme segmentation?	43/24%	136/75%	3/2%
20. Which of the following words contains the short <i>a</i> sound?	73/40%	105/58%	4/2%