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Special Educator Teacher Candidate Preparation in Reading: A Statewide Examination

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A majority of students recommended for special education services struggle with reading. It is therefore imperative that teachers are prepared to address the needs of these students. The purpose of this study was to examine special education teacher candidates' beliefs, feelings of self-efficacy, and knowledge surrounding reading. Researchers surveyed teacher candidates across several pre-service special education preparation programs in a northeastern state. Findings suggest that teacher candidates believe they need additional training in reading. Implications for teacher education and future research are also provided.

Keywords: *pre-service, teacher preparation, special education, reading*

Seventy-five percent of all students who are recommended for special education services are recommended because of poor reading skills (National Center for Education Statistics, 2011). In addition, over 50% of students with disabilities score at or below the 20th percentile on assessments of reading (U.S. Department of Education, 2016). This has resulted in special educators spending a large portion of the school day devoted to remediating students in various areas of reading (Pearson, 2001; Damber, Samuelsson, & Taube, 2012). Students with learning disabilities in reading need instructional supports that are targeted, systematic, and explicit (Gersten et al., 2008), and instruction should be delivered by teachers who are highly trained to execute effective teaching practices that meet their unique needs (Moats, 2014; Zeichner, 2010).

Researchers have found that beliefs about the importance of reading and self-efficacy to execute reading instruction can impact the willingness of teachers enrolled in teacher preparation programs to learn and implement strategies in their future classroom settings (Bandura, 1977; Shulman, 1987; Wheatley, 2005). A teacher's self-efficacy affects his or her attitude toward teaching, ability to teach, and teaching skill, which can impact teaching success (Bandura, 1977; Wheatley, 2005). Relatedly, components of pre-service teacher preparation, such as course assignments and clinically rich field experiences have had a significant impact on new teachers' beliefs, feelings of self-efficacy, and practice related to reading. Specifically, when teacher candidates are trained to engage in reading strategy instruction and then expected to implement course content in the field, they experience increased understanding about how to incorporate reading instruction and report an increased likelihood of implementing reading strategies in their future classrooms (Daisey, 2012; Fritz, Cooner, & Stevenson, 2009).

Although, the research surrounding teacher preparation and reading has primarily focused on general education teachers, there have been a few studies that have focused on the impact of special education teacher preparation on variables such as teacher knowledge and student outcomes. This research suggests a strong positive correlation between special educators with more credit hours in teacher education programs and student reading achievement outcomes (Moats & Foorman, 2003; Spear-Swerling & Brucker, 2004). However, special educators have also reported feeling ill-prepared and limited in their knowledge to effectively work with students with learning disabilities in reading (Nougaret, Scruggs, & Mastropieri, 2004). Little research has focused on the impact of special education teacher preparation on variables such as beliefs and feelings of self-efficacy. Given the important impact beliefs, feelings of self-efficacy, and knowledge can have on teacher practice and subsequent student outcomes, more research is needed surrounding how teacher education

programs prepare special education teacher candidates in reading and how these programs contribute to teacher beliefs, feelings of self-efficacy, and knowledge (Leko & Brownell, 2011).

The purpose of this study was to engage in a statewide examination of special education teacher candidates' beliefs, feelings of self-efficacy, and knowledge surrounding reading as a result of experiences in their teacher preparation programs.

Previous Literature

The current study focuses on how teacher preparation programs impact special education teacher beliefs, feelings of self-efficacy, and knowledge surrounding reading. The research included in this review provides a context for the study by limiting the scope of the previous literature presented to studies examining pre-service preparation programs, reading, and pre-service teacher beliefs, feelings of self-efficacy, and knowledge.

Washburn, Joshi, and Binks-Cantrell (2011) examined 91 pre-service elementary teachers toward the end of their preparation program to determine their knowledge of three key areas of reading (i.e., phonemic awareness, phonics, and vocabulary). Researchers also compared participants' perceived ability to teach reading with their actual knowledge about reading. Participants completed a multiple choice and short answer survey. Researchers found that participants performed well on items related to phonemic awareness such as syllable counting but struggled with items related to phonics. Researchers also found that participants who held a positive perception about their reading knowledge did not consistently score well on the knowledge survey.

Helfrich and Bean (2011) examined 103 pre-service elementary teachers across two preparation programs. Participants in this study also completed knowledge survey items surrounding phonics and vocabulary. Like Washburn et al., (2011), participants in this study also struggled with phonics related questions. In addition, researchers also focused on participants' perceptions of the impact of preparation components such as coursework and fieldwork on their reading knowledge. Participants reported feeling that field experiences were an integral part of learning to teach reading. They also reported that coursework helped increase feelings of self-efficacy related to administering assessments and differentiating instruction.

Bos, Mather, Dickson, Podhajski, and Chard (2001) examined 252 pre-service general and special education teachers toward the end of their preparation program. McCombes-Tolis and Feinn (2008) examined 65 pre-service elementary and special education teachers. Participants in both studies were asked to rate their level of preparedness to teach students struggling with reading. In both studies, many pre-service teachers reported needing more preparation to teach and assess students struggling with reading. Both sets of researchers also examined participants' knowledge of key reading components such as phonological awareness and phonics. Similar to previous research, Bos et al. (2001) found that participants primarily struggled with items related to phonics. Bos et al. (2001) also examined the relationship between knowledge survey scores and perceptions of preparedness. Unlike Washburn et al. (2011), Bos et al. (2001) found a positive correlation between knowledge survey scores and perception of preparedness to teach students struggling with reading. This discrepancy may have occurred for a variety of reasons including differences in program preparation requirements and participant characteristics.

Overall, the studies summarized either focused on reading preparation for teacher candidates in general education programs or on comparing general education and special education teacher candidates. Many of the studies surveyed teacher knowledge surrounding phonological awareness, phonics, and vocabulary. Findings overall suggest that participants primarily struggled with phonics knowledge items. In addition, there were mixed findings surrounding whether feelings of self-efficacy correlated with teacher candidate's knowledge. Finally, previous studies suggest that coursework connected to field experiences are an important contributor to teacher candidate beliefs, feelings of self-efficacy, and knowledge.

The Current Study

The current study seeks to extend the work of some of the studies summarized in the previous literature. Like Washburn et al. (2011), this study surveyed teacher candidates at the end of their preparation programs to determine their knowledge of three key areas of reading. Washburn et al. (2011) focused their research on elementary teachers and on phonemic awareness, phonics, and vocabulary. This study builds on that previous study by examining special educators in early childhood through adolescence preparation programs in the areas of reading fluency, vocabulary, and comprehension. In addition, Helfrich and Bean (2011) surveyed elementary teacher candidates from one university to determine the impact of preparation (coursework and fieldwork) on reading knowledge and feelings of self-efficacy. In their discussion, the researchers identify a need for additional research across multiple university settings (Helfrich & Bean, 2011). The current study builds on the aforementioned study through a focus on the impact of teacher preparation on special educators' knowledge, beliefs, and feelings of self-efficacy across multiple university preparation programs.

The research questions guiding this study include the following: (1) What are special education teacher candidates' beliefs and feelings of self-efficacy surrounding reading? (2) What do special education teacher candidates' report about how reading is represented in their preparation programs? (3) What do special education teacher candidates' know about reading?

Method

Data Sources and Collection Procedures

Data was collected for this study using a multi-part survey conducted with teacher candidates nearing the end of their special education teacher preparation programs. Teacher candidates attended public universities located in a northeastern state.

Teacher candidates and survey. Teacher candidates were in graduate early childhood, childhood, or adolescence special education traditional programs. None of the programs were online. Participants in their student teaching (final) semester were recruited to participate in this study. Candidates' student teaching settings varied based on their previous classroom experiences. For example, if a teacher candidate had only previously spent time in inclusive settings, then the student teaching experience was in a self-contained classroom. Participants reported applying for positions in a variety of settings including self-contained and inclusive settings.

Online university course schedules and program coordinators were used to identify names of instructors who taught special education student teaching seminars. An email was then sent to each course instructor explaining the study and asking if they would be willing to distribute the surveys in their courses for students to complete on their own time. Instructors who agreed were mailed hard copies of the survey, an informed consent letter, and a self-addressed stamped return envelope for each teacher candidate in their course. Approximately 200 surveys across 10 universities were mailed to course instructors and 78 teacher candidates across six universities responded. The majority (93.6%) of teacher candidates were female and 91% were Caucasian. Also, a small majority (58.9%) of teacher candidates were enrolled in birth through grade six (early childhood and childhood) programs. Approximately 94% of the participants reported that they would graduate at the end of the current semester or in the subsequent semester. Additional teacher candidate demographic information is presented in Table 1.

A five-part survey was created specifically for this study following an extensive review of the literature on teacher preparation in reading. Parts of the survey (i.e., Likert scale items, program component items, and knowledge items) were modeled after surveys used in previous studies and are cited when applicable throughout. The survey was designed to determine how reading is represented in special education teacher preparation as well as to assess pre-service teacher knowledge, beliefs, and feelings of self-efficacy about preparation to teach reading.

The first part of the survey gathered demographic information from the respondents including gender, race, program focus, and certification exam completion. In the second part of the survey, respondents rated their feelings about their preparedness to assess and teach reading and their opportunities to practice reading instruction and assessment during their program preparation on a 5-point Likert scale (Helfrich & Bean, 2011; McCombes-Tolis & Feinn, 2008). The third part of the survey included questions about the ways reading was incorporated into coursework, including a list of reading topics and the

Table 1
Teacher Candidate Demographic Information (N=78)

Demographic	*N*	Percent
Gender		
Female	73	93.6
Male	5	6.4
Race		
Asian	2	2.6
Caucasian	71	91.0
Black/African American	1	1.3
Hispanic/Latino	2	2.6
Other	2	2.6
Program Focus		
Special Ed. (B-2)	5	6.4
Special Ed. (B-6)	46	58.9
Special Ed. (1-6)	25	32.0
Special Ed. (7-12)	9	11.5

number of required and elective reading courses included across the programs (Bishop, Brownell, Klinger, Leko, & Galman, 2010). This portion of the survey also focused on how reading was represented in certain special education-specific courses such as instructional methods courses. In the fourth part of the survey, there were open-ended short responses to assess teacher candidates' knowledge of three key components of reading (i.e., reading fluency, vocabulary, and comprehension) as identified by the National Reading Panel (2000) (Speer-Swerling, Brucker, & Alfano, 2005; Speer-Swerling & Cheesman, 2012). These three components of reading were chosen because they were most likely to be relevant across programs. In addition, researchers wanted to minimize the number of open-ended questions on the survey so that participants were not deterred from responding. The final part of the survey was open ended and asked participants to identify components of their preparation programs that were exceptional and areas in need of improvement. The purpose of this portion of the survey was to collect any additional information participants wanted to share about reading that was not covered in other areas of the survey.

Data Analysis

Survey Analysis

Descriptive statistics were used to analyze the results of the teacher candidate surveys. Demographic and Likert scale data were entered into a spreadsheet organized in sections mirroring the survey and converted from counts to percentages. Responses to the reading knowledge questions were scored based on the accuracy of the responses. The possible scores included: no response or incorrect response (0 points), vague response (1/2 point), somewhat specific and correct response (1 point), and specific and correct response (2 points). Researchers read through and recorded each participant response. Official definitions as described by the National Reading Panel (2000) were used to guide the scoring of each response. Some key words that researchers looked for when evaluating the question surrounding reading fluency include the following: automaticity, quickly, accurately, expression, and comprehension. Some key words that researchers looked for when evaluating the question surrounding vocabulary include the following: language, communication, and comprehension. Some key words that researchers looked for when evaluating the question surrounding comprehension include the following: vocabulary, understanding, and meaning. Researchers scored the responses independently according to the aforementioned scoring rubric. Researchers then came together to discuss and revise the scores for each participant's response. Knowledge questions were also analyzed to determine whether there were differences in participant understanding across the key components of reading fluency, vocabulary, and comprehension. Additional analysis was also conducted to determine whether correlations existed between participant knowledge scores and other survey items such as the number of reading courses taken as well as participants' self rated ability to teach students struggling with reading. Finally, open-ended responses were analyzed to identify any themes surrounding components of teacher preparation programs that were exceptional or in need of improvement.

Results

Teacher Candidate Surveys

Part two of the survey included Likert scale items to examine beliefs and feelings of self-efficacy about teacher candidate preparedness in the area of reading. A majority (72%) of teacher candidates responded that they strongly agreed with the statement, "I feel it is important to incorporate reading in special education teacher preparation programs." In addition, a large majority (87%) of teacher candidates either strongly agreed or agreed with the statement, "I feel confident that I will be able to incorporate reading instruction in my future classroom." However, most (73%) teacher candidates also strongly agreed or agreed with the statement, "I feel education majors enrolled in my program are in need of additional training in reading." Additional salient components of the Likert scale items are summarized in Table 2.

Part three of the survey required that teacher candidates rate their program preparation experiences. A majority (73.1%) of teacher candidates reported that reading was included in some way in courses specific to their major, particularly special education instructional methods courses. A large portion (over 80%) of participants reported that their instructional methods courses included topics such as phonemic awareness, decoding, fluency, and comprehension. The majority of teacher candidates (80%) also stated that courses specific to their major, particularly instructional methods courses, provided opportunities to plan lessons that included reading. However, few (37.2%) teacher candidates reported being provided with opportunities to implement instructional strategies in the field with students with disabilities in reading. Consistent with this fact, a majority (70.5%) of teacher candidates reported feeling only moderately prepared to work with students with disabilities in reading. The mean for the teacher candidates' self-rating for ability to teach students with disabilities in reading (minimal=1, moderate=2, very good=3, expert=4) was 2.09 (*SD* = .52). Finally, about 80%

Table 2
Select Likert Ratings: Teacher Candidate Survey

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I feel my teacher preparation program thoroughly incorporates reading.	14	42	12	7	2
I have been provided with opportunities to practice reading instructional strategies in my field experiences.	15	44	14	5	
I feel confident that I will be able to incorporate reading instruction in my future classroom.	18	43	15	2	
I feel special education majors enrolled in my program are well prepared to teach reading.	7	36	28	7	
I feel special education majors enrolled in my program are in need of additional training in reading.	14	43	18	2	1

of teacher candidates reported being required to take one or two reading specific courses. It is important to note that these reading courses were not typically tailored to special education majors and were often also taken by general education majors. The majority of respondents did not take any elective reading courses during their preparation program. Teacher candidates reported taking zero or one elective during their preparation program (M = .36, SD = .63). Many noted a lack of room in their preparation program for electives. The mean for the number of overall reading courses (required and elective) teacher candidates took during their program was 1.86 (SD = .94). Table 3 summarizes the mean ratings for teacher candidate program preparation experiences.

Part four of the survey required that teacher candidates respond to three open ended questions about key components of reading. Participants were asked to provide a rationale for the importance of reading fluency, vocabulary, and comprehension. Each question was worth a total of two points and all three items totaled six points. The overall mean for the teacher candidates' knowledge (fluency, vocabulary, and comprehension) score total was 3.11 (SD = 1.89). The mean for the scores on the question surrounding vocabulary was 1.02 (SD = .78). The mean for the scores on the question surrounding fluency was 1.10 (SD = .91). The mean for the teacher candidates' comprehension score was 1 (SD = .73). Some examples of the kinds of responses that received full credit on the reading fluency question included the following: "when students read with expression they show comprehension" and "reading fluency means you can decode quickly and you will understand text." Some examples of the kinds responses that received full credit on the vocabulary question included the following: "students will become more fluent readers and if they know the meaning of vocabulary they will increase comprehension of the text" and "students with a large vocabulary understand subject matter in all areas and also are able to converse with peers and adults using mature language." Some examples of the kinds responses that received full credit on the comprehension question included the following: "without comprehension students won't get what they are

Table 3
Mean Ratings for Teacher Candidate Program Preparation Experiences

Area	*M*	*SD*
Self rating (ability to teach struggling readers)	2.09	.52
Mean number of course taken (required + elective)	1.86	.94

* minimal = 1, moderate = 2, very good = 3, expert = 4

reading. They won't be able to make connections or find the key ideas" and "you need to be able to decode the text and understand important vocabulary to understand the text." Table 4 summarizes mean ratings for the knowledge survey items.

Correlations were computed to assess the relationships between (a) teacher candidates' knowledge scores and their self-rating of their ability to teach students with learning disabilities in reading and (b) the number of reading courses taken (required and elective) and their overall knowledge scores. While the correlations were not significant relative to the standard alpha level of .05, the *p*-values were less than .10. When comparing teacher candidates' knowledge scores and their self-rating of their ability to teach students with learning disabilities in reading, there was a non significant weak correlation, $r(78)=.20$, p=n.s. There was a weak correlation ($r = .22$) between the number of reading courses taken and teacher candidates' overall knowledge score that was also not significant, but it was approaching significance with $p = .05$.

Table 4
Mean Ratings for Teacher Candidate Knowledge Survey Items

Area	*M*	*SD*
Decoding	1	.73
Vocabulary	1.10	.78
Fluency	1.02	.91
Overall	3.11	1.89

Part five of the survey included two open-ended questions asking respondents to identify something exceptional about their preparation program and something in need of improvement. Participants were not specifically asked to address reading. Notably, the majority of respondents did not identify reading in response to the question about exceptional program components, participants mentioned other parts of their program such as field work (e.g., opportunities to practice, apply, or implement information acquired through courses in classroom settings), support from professors (e.g., professors were amazing, dedicated, and helpful), and other course content (e.g., differentiation, accommodations, and assessment strategies). In response to the question about areas in need of improvement, participants did repeatedly mention reading (e.g., more focus on comprehension, more required reading courses, and more field work in reading). Interestingly, comprehension was specifically identified as an area in need of improvement and participants scored slightly lower on the comprehension knowledge item in part four of the survey.

Discussion

The purpose of the current study was to examine pre-service special education teacher beliefs, feelings of self-efficacy, and knowledge surrounding reading. Previous studies have either focused primarily on elementary pre-service teachers (Washburn et al., 2011) or on comparing elementary and special education pre-service teachers (McCombes-Tolis & Feinn, 2008). This study differs from the previous literature because of a sole focus on the preparation of special education teacher candidates in the area of reading.

Although the teacher candidates in this study expressed positive beliefs and feelings of self-efficacy regarding incorporating reading instruction, they also reported a lack of knowledge and a need for additional training in reading. Teacher candidates reported receiving reading content in courses specific to their major such as instructional methods courses. They also reported receiving opportunities to plan for reading instruction. However, when given an open opportunity to identify exemplary aspects of their teacher preparation programs and areas in need of improvement, teacher candidates focused on reading as an area of in need of improvement. Many reported that additional opportunities to implement reading instructional strategies in the field could positively

impact their feelings of self-efficacy and knowledge surrounding reading. This is consistent with the study conducted by Helfrich and Bean (2011) where participants reported that field experiences were an important part of learning to teach reading. Minimal experience in the field may have contributed to the fact a majority of teacher candidates reported feeling only moderately prepared to teach students with disabilities in reading. This finding is consistent with findings from Bos et al. (2001) and McCombes-Tolis and Feinn (2008), who also found that teacher candidates felt ill prepared to work with students struggling with reading.

Finally, no significant correlations were found between knowledge scores and teacher candidates' self-rating or number of courses taken. This suggests a more complicated relationship between teacher candidate knowledge and feelings of self-efficacy. This finding is similar to the study conducted by Washburn et al., (2011) who found that participants with positive self-perceptions about their ability to teach reading didn't always score well on knowledge survey items. It is possible that limited experiences in the field may have also hindered pre-service teacher understanding about what they know about teaching reading.

Limitations

The number of participants may have been a limitation of the study and contributed to the questions that still remain surrounding whether correlations exist between participant knowledge scores and other variables such as participant feelings of self-efficacy (self-rating) and components of teacher preparation (the number of courses taken). A lack of diversity among participants was also a limitation of the study. For example, only 2.6% of participants in this study identified as African American, however, 10% of teacher candidates in the United States identify as African American (2016 Report of the State of Racial Diversity in the Educator Workforce, USDOE). A more diverse set of participants may have helped to support our understanding of correlations across variables. The wide-ranging nature of the survey was also a limitation. Specifically, the knowledge portion of the survey was truncated to prevent participant fatigue while completing the survey and to make room for other survey items such the Likert scale. This prevented the ability to collect more data surrounding teacher candidate knowledge on a wider array of reading components. Finally, the inclusion of interviews may have helped to bolster the study. Semi-structured interviews would have allowed researchers to engage in follow-up conversations surrounding topics such as self-ratings and reading knowledge.

Implications for Teacher Preparation

There are several implications for teacher preparation. First, teacher candidates suggested that additional reading course requirements and electives in reading are needed to help bolster their feelings of self-efficacy and knowledge surrounding reading. The results of this study specifically suggest a need for more reading courses that focus on instructional strategies and remediation techniques that support students with or at risk for disabilities. For many of the candidates' preparation programs, this would require changes to requirements to include additional coursework, coursework tailored to reading and special education, or more creative inclusion of reading in pre-existing coursework. Also, the teacher candidates from this study and some of the previous literature such as Helfrich and Bean (2011) suggest that more field experience opportunities are needed that allow teacher candidates to practice strategies and skills and implement lessons with students with learning disabilities in reading. This would increase the likelihood that teacher candidates put into practice the strategies they learn during their preparation programs (Daisey, 2012; Fritz, Cooner, & Stevenson, 2009). Creating more opportunities for experiences in the field may be challenging for some teacher preparation programs and could require solutions that involve more comprehensive university school partnerships. Finally, survey results from teacher candidates suggest that more collaboration is needed between special education and reading teacher educators to reinforce and build on experiences across courses and boost exposure to reading course content (Spear-Swerling & Cheesman, 2012). This could be beneficial in supporting teacher candidate's knowledge surrounding reading. These collaborative efforts could also be a model for the kinds of partnerships teacher candidates are expected to engage in once they enter the field.

Implications for Future Research

The results of this study suggest that more comprehensive studies are needed that examine additional components of teacher preparation. For example, additional studies are needed that examine teacher educators (i.e., special education, reading, and assessment) beliefs about teacher preparation in reading. Studies should focus on determining how special education teacher educators are specifically incorporating reading in their courses. Additional small and large-scale studies surrounding collaboration among special education and reading teacher educators are also needed. Studies should examine the extent to which teacher educators collaborate to increase teacher candidates' access to reading preparation. Studies should also examine the impact of collaboration between

teacher educators on teacher candidate beliefs, feelings of self-efficacy, knowledge, and practice.

Additional research is also needed that involves in-depth examination of special education teacher candidate knowledge of reading. Research should involve in-depth multi-component surveys that include multiple choice and short answer items (Washburn et al., 2011). In addition, interviews with teacher candidates would help to bolster our understanding of special education teacher candidate knowledge of reading as well as other aspects of reading such as beliefs and feelings of self-efficacy. Interviews with teacher candidates would also allow researchers to determine a rationale for self-ratings surrounding teaching students with learning disabilities in reading. Interviews would also help researchers to gather more details about the kinds of reading courses teacher candidates are required and choose to take during the course of their preparation programs.

References

Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavior change. *Psychological Review, 84*, 191–215.

Bishop, A. G., Brownell, M. T., Klinger, J. K., Leko, M. M., & Galman, S. A. (2010). Differences in beginning special education teachers: The influence of personal attributes, preparation, and school environment on classroom reading practices. *Learning Disability Quarterly, 33*(2), 75–92.

Bos, C., Mather, N., Dickson, S., Podhajski, B., & Chard, D. (2001). Perceptions and knowledge of preservice and inservice educators about early reading instruction. *Annals of Dyslexia, 51*, 97–120.

Daisey, P. (2012). The promise of secondary content area reading field experiences. *Reading Research and Instruction, 51*(3), 214–232.

Damber, U., Samuelsson, S., & Taube, K. (2012). Difference between overachieving and underachieving classes in reading: Teacher classroom and student characteristics. *Journal of Early Childhood Reading, 12*(4), 339-366.

Fritz, A. E., Cooner, D., & Stevenson, C. (2009). Training new content area secondary teachers to teach reading: The university/public school partnership. *Reading Improvement, 46*(1), 19-28.

Gersten, R., Chard, D.J., Jayanthi, M., Baker, S. K., Morphy, P., Flojo, J. (2008). Mathematics instruction for students with learning disabilities: A meta-analysis of instructional components. *Review of Educational Research, 79*(3), 1202–1242.

Helfrich, S. R., & Bean, R. M. (2011). What matters: Preparing teachers of reading. *Reading Horizons, 50*(4), 241–262.

Leko, M. M., & Brownell, M. T. (2011). Special education preservice teachers' appreciation of pedagogical tools for teaching reading. *Exceptional Children, 77*(2), 229–251.

McCombes-Tolis, J., & Feinn, R. (2008). Comparing teachers' reading-related knowledge to their state's standards for reading. *Reading Psychology, 29*(3), 236–265.

Moats, L. (2014). What teachers don't know and why they aren't learning it: Addressing the need for content and pedagogy in teacher education. *Australian Journal of Learning Difficulties, 19*(2), 75–91.

Moats, L. C., & Foorman, B. R. (2003). Measuring teachers' content knowledge of language and reading. *Annals of Dyslexia, 53*(1), 23–45.

National Center for Education Statistics. (2011). The Nation's Report Card Reading 2011 (NCES 2012-458). Washington, DC: Institute of Education Science, U.S. Department of Education.

Nougaret, A. A., Scruggs, T. E., & Mastropieri, M. A. (2004). The effect of teacher licensure on teachers' pedagogical competence: Implications for elementary and secondary teachers of students with learning disabilities and behavioral disabilities. In T. E. Scruggs & M. A. Matropieri (Eds.), *Research in secondary schools: Advances in learning and behavioral disabilities* (Vol. 1, pp. 301–318). St Louis, MO: JAI Press.

Pearson, P. D. (2001). Learning to teach reading: The status of the knowledge base. In C. M. Roller (Ed.), *Learning to teach reading: Setting the research agenda* (pp. 4–19). Newark, DE: International Reading Association.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(7), 1–21.

Spear-Swerling, L., & Brucker, P. (2004). Preparing novice teachers to develop basic reading and spelling skills in children. *Annals of Dyslexia, 54*, 332–364.

Spear-Swerling, L., Brucker, P., & Alfano, M. (2005). Teachers' reading-related knowledge and self-perceptions in relation to preparation and experience. *Annals of Dyslexia, 55*, 266–293.

Spear-Swerling, L., & Cheesman, E. (2012). Teachers' knowledge base for implementing response-to-intervention models in reading. *Reading & Writing, 25*, 1691–1723.

U.S. Department of Education. (2016). National Center for Educational Statistics. Children and Youth with Disabilities. Washington, D.C: Author.

Washburn, E. K., Joshi, R. M., & Binks-Cantrell, E. (2011). Are preservice teachers prepared to teach struggling readers? *Annals of Dyslexia, 61*(1), 21–43.

Wheatley, K. F. (2005). The case of reconceptualizing teacher efficacy research. *Teaching and Teacher Education, 21*(7), 747–766.

Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college and university-based teacher education. *Journal of Teacher Education, 89*(11), 89–99.

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