An Exploration of Teacher Preparation Practices with Foundational Knowledge of Literacy

Abstract

The newly released *Standards for the Preparation of Literacy Professionals 2017* published by the International Literacy Association provide the basis for high-quality teacher preparation with literacy. This study was part of a larger study that was conducted to explore preparation practices that teacher educators use to promote understandings among preservice teachers for each grade-level band (i.e., Pre-K/Primary, Elementary/Intermediate, Middle/High School). The larger study was a national endeavor that used a researcher-created survey to ascertain viewpoints from teacher educators affiliated with teacher preparation programs located in the United States. For this study, the researchers retrieved qualitative survey responses related to Standard 1: Foundational Knowledge from 132 survey respondents who were mostly seasoned teaching professionals with doctoral degrees. The researchers used conceptualizations of teacher knowledge as a theoretical lens to better understand reported preparation practices. Data were analyzed systematically with three coding cycles from which three themes emerged: Teacher Educator Pedagogy, Course Content, Student and Program Expectations. The researchers also compared data collected to the components of literacy associated with Standard 1: Foundational Knowledge and learned that teacher educators do not use preparation practices that evenly focus on all components of literacy. Based upon these findings, the researchers contended that teacher educators must examine their respective preparation program curricula to ensure that all components of literacy associated with foundational knowledge are addressed sufficiently.

Keywords: foundational knowledge, literacy, preparation practices, preservice teachers, teacher education

Introduction

Teacher preparation programs in the United States seem to perennially be under review from various stakeholders at the national, state, and local levels (Drake & Walsh, 2020; Howell et al., 2016). These stakeholders pay particular attention to how preservice teachers are prepared for reading and math, as these two subjects are traditionally tested on a yearly basis at various grade levels in PreK-12 schools. One such stakeholder, the National Council on Teacher Quality (NCTQ), has reviewed teacher preparation programs and reported on essential elements for teacher preparation since 2006 (NCTQ, 2020). Most recently, the NCTQ established a methodology with which to review how 1,000 teacher preparation programs prepare preservice elementary teachers to teach the five foundational components of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension (Drake & Walsh, 2020). Two major findings from this analysis were reported: (1) half of the teacher preparation programs did not address foundational components of reading, and (2) teacher preparation programs did not provide preservice elementary teachers with tools to teach foundational components of reading. While the NCTQ reports have encountered a great deal of criticism from professional associations (Pearson & Goatley, 2013) and well-respected scholars in the field (Fuller, 2014; Zhao, 2018), the overarching research goal is worthy of further investigation. As such, this study was conducted to examine teacher preparation more broadly using a different research approach. Specifically, this study sought to ascertain feedback from those who prepare preservice teachers—literacy teacher educators—regarding their preparation practices for foundational components of literacy.

This study is important as there has been a renewed focus in the field on the science of reading, as evidenced in the release of the Spring 2020 issue of *Educational Leadership* entitled

"Rooted in Reading" and the Fall 2020 special issue of *Reading Research Quarterly* entitled "The Science of Reading: Supports, Critiques, and Questions." The science of reading refers to the large body of empirical research that focuses upon the development of a wide range of skills that contribute to learning to read. These skills encompass phonemic awareness and phonics (Ehri, 2020; Kearns, 2020), comprehension (Cabell & Hwang, 2020), academic language (Galloway et al., 2020) and writing (Graham, 2020). Since literacy teacher preparation programs develop curricula with current research in mind, the recent focus on the science of reading should be reflected in reading and literacy courses required among preservice teachers (Hindman et al., 2020).

To address the need for strong literacy teacher preparation, the International Literacy Association (ILA, 2018) released the *Standards for the Preparation of Literacy Professionals 2017* [here in referred to as *Standards 2017*]. *Standards 2017* was an updated version of previously released standards (International Reading Association [IRA], 2010; IRA & National Council of Teachers of English [NCTE], 1996) that set forth evidence-based criteria for the preparation of teaching professionals. *Standards 2017* meets the needs of a rapidly changing world by acknowledging that thinking about how:

> . . . reading performance is enhanced when teachers take into consideration the ways that the literacy components (reading, writing, listening, speaking, and viewing) are related and how each builds on the others has led to changes in thinking about how students develop literacy skills and how literacy is taught in schools from the early grades through high school. (Bean & Kern, 2017, p. 616)

Standards 2017 has raised expectations for literacy teacher preparation by recognizing the existing knowledge base for curriculum, instruction, assessment, and leadership, while also

noting that "the shared content of the literacy field [is] subject to change over time as new knowledge and understandings evolve" (ILA, 2018, p. 11). In its current form, *Standards 2017* delineates behaviors, knowledge, and skills necessary for effective literacy teaching in all grade-level bands (i.e., Pre-K/Primary, Elementary/Intermediate, Middle/High School).

The purpose of this study was to explore how literacy teacher educators viewed the preparation of preservice teachers with Standard 1: Foundational Knowledge in *Standards 2017* (ILA, 2018). Standard 1 emphasizes components of literacy for each grade-level band (i.e., Pre-K/Primary, Elementary/Intermediate, Middle/High School) that draw upon major conceptual, evidence-based, and theoretical foundations (see Appendix A). To achieve the purpose of this study, the term literacy was operationalized to include the cognitive and social processes of language, listening, reading, speaking, viewing, visually representing, and writing.

Review of Relevant Literature

Teaching foundational knowledge of literacy should be a key piece of every comprehensive teacher preparation program (ILA, 2018; ILA & NCTE, 2017). Developing understandings related to foundational knowledge of literacy among preservice teachers should be a part of both coursework and field-based experiences, as research has suggested a connection between preservice teacher preparation and future student literacy achievement (Goldhaber et al., 2013). Unfortunately, research has highlighted deficiencies in the professional knowledge base of in-service teachers that may influence student academic performance (Brindle et al., 2016; Spear-Swerling & Cheesman, 2012). With this in mind, it is imperative that teacher preparation programs prepare preservice teachers to sufficiently address foundational knowledge of literacy during instruction within their respective grade-level bands (Bean & Dunkerly, 2012; Duke & Block, 2012; Pomerantz & Condi, 2017). As noted in *Standards 2017*, foundational knowledge

includes components of literacy—language, listening, reading, speaking, viewing, visually representing, and writing—and focus upon any interdisciplinary and discipline-specific literacy processes appropriate for each grade-level band (ILA, 2018).

Foundational Knowledge in Literacy

Preservice teachers who strive to teach young children must learn how to teach early reading skills, such as concepts of print, phonological awareness, phonics, fluency, vocabulary, and comprehension (Ehri & Roberts, 2005). Learning early reading skills in the Pre-K/Primary grade-level band is an important first step for young children before learning to read in the Elementary/Intermediate grade-level band (National Early Literacy Panel, 2008; National Institute of Child Health and Human Development, 2000). Preservice teachers who strive to teach older children must learn how to refine and extend early literacy understandings associated with word study, fluency, vocabulary, and comprehension to support content area learning in the Elementary/Intermediate and Middle/High School grade-level bands (Shanahan & Shanahan, 2008).

Preservice teachers who strive to teach young children must also learn how to scaffold their writing development (Ehri & Roberts, 2005; Graham, Harris, & Santangelo, 2015). Young children typically advance from the emergent to the transitional stage of writing in the Pre-K/Primary grade-level band before advancing to the fluent stage of writing in the Elementary/Intermediate grade-level band (Byington & Kim, 2017). Preservice teachers who strive to teach older children must also learn how to support their writing development in the various content areas (Shanahan & Shanahan, 2008). Older children in the Elementary/Intermediate and Middle/High School grade-level bands begin crafting their writing

for specific purposes and audiences, while also engaging in activities that use writing as a mechanism for learning and thinking (Langer & Applebee, 2007).

Foundational Knowledge in Interdisciplinary and Discipline-Specific Literacy Processes

Within the different content areas, students must be able to read written material, comprehend information from different text types, and apply ideas from text to different situations (Fisher & Frey, 2020; Lupo et al., 2019; Lupo et al., 2017). Thus, preservice teachers in all grade-level bands must learn how to support student learning in the content areas with interdisciplinary literacy processes. To do so, preservice teachers should develop a repertoire of general literacy strategies that may be adapted or extended to fit the literacy needs during instruction in the content areas (Gabriel & Wenz, 2017). For example, students should have access to supplemental sources that represent the same information presented in textbooks and know how to use general literacy strategies (e.g., annotate, summarize, visualize) to make complex texts comprehensible.

Preservice teachers in all grade-level bands must also learn how to support student learning in the content areas with discipline-specific literacy processes (Shanahan & Shanahan, 2008). Discipline-specific literacy processes comprise the unique ways in which literacy occurs in different disciplines (Moje, 2008). Thus, preservice teachers in all grade-level bands should plan instructional tasks that provide students with opportunities to develop and use highly specialized literacy processes that are specific to each discipline (Gabriel & Wenz, 2017; Siffrinn & Lew, 2018). For example, student learning within the disciplines should be supported with academic word lists that develop vocabulary (Picot, 2017), published texts that illustrate characteristics of writing (Håland, 2017), and verbal discussions that construct collaborative understandings (Alston & Monte-Sano, 2020).

Theoretical Framework

This study used conceptualizations of teacher knowledge as a theoretical lens to examine the preparation practices that literacy teacher educators use to develop preservice teachers' understandings with foundational knowledge. According to Evens et al. (2018), teacher knowledge is characterized by three distinct domains: content knowledge, pedagogical knowledge, and content pedagogical knowledge. Of these, Shulman (1987) considered content pedagogical knowledge the most important domain and defined it as a "special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding" (p. 8).

Content pedagogical knowledge synthesizes how a teaching professional uses their pedagogical knowledge to develop student understandings with content knowledge (Shulman, 1986). Risko and Reid (2019) recognized this as an important feature of high-quality literacy teacher preparation and noted that the application of content pedagogical knowledge requires high levels of analytical thinking, problem solving, and decision making. With this in mind, literacy teacher educators must ensure their preparation programs offer coursework and field-based experiences that sufficiently develop foundational knowledge among preservice teachers (Clark et al., 2017; ILA & NCTE, 2017; Jordan et al., 2018; Lim & Guerra, 2013; Mesci et al., 2020).

Methods

Context

This study was part of a larger study (AUTHORS, 2019) that was conducted to learn more about how literacy teacher educators view the preparedness of preservice teachers enrolled in their preparation programs. Specifically, the larger study ascertained viewpoints from the

"internal experts" (Lacina & Collins Block, 2011, p. 326) regarding the preparation practices they use in alignment to the standards delineated in *Standards 2017* (ILA, 2018). To collect data for the larger study, an online questionnaire was built in the Qualtrics© cloud-based platform and designed with survey research design principles in mind (Sue & Ritter, 2012). The questionnaire included closed-ended items to gather demographic data for respondents and open-ended items where respondents described preparation practices they use to promote preservice teachers' understandings with associated behaviors, knowledge, and skills for each standard.

Data Collection and Analysis

For this study, qualitative responses from respondents who shared information regarding Standard 1: Foundational Knowledge were isolated and retrieved for each grade-level band (Merriam & Tisdell, 2016). Next, data were analyzed systematically in three coding cycles (Saldana, 2009). In the initial coding cycle, codes were assigned to data excerpts with a single word or phrase. In the second coding cycle, pattern coding techniques were employed to collapse similar codes together and begin the creation of a codebook (see Appendix B for excerpts from the codebook). In the final coding cycle, codes were grouped into themes. Throughout each coding cycle, each researcher performed analysis tasks individually and made analytic notes to document ideas, questions, and reflective thoughts. After each coding cycle was completed, the researchers held debriefing meetings to ensure trustworthiness (Lincoln & Guba, 1985; Nowell et al., 2017). During debriefing meetings, the researchers discussed insights and scrutinized analysis techniques until a consensus was reached for data representations. Once the coding cycles concluded, the researchers compared qualitative data collected for this study to the components of literacy associated with Standard 1: Foundational Knowledge in *Standards 2017* to identify similarities and differences.

Demographic Data

In this study, 132 respondents provided responses to the items related to Standard 1: Foundational Knowledge. As shown in Table 1, respondents were mostly female ($n = 112$, 85%) and between the ages of 40 and 69 ($n = 110$, 83%). The majority of respondents also had four or more years of PreK-12 classroom teaching experiences ($n = 118$, 89%) and four or more years of experiences as a literacy teacher educator ($n = 123$, 93%). Additionally, most respondents were full-time literacy teacher educators ($n = 121$, 92%) who hold doctoral degrees ($n = 115$, 87%).

[INSERT TABLE 1 HERE]

Respondents for this study also taught in a variety of teacher preparation programs. As shown in Table 2, most respondents were involved with teacher preparation among both undergraduate and graduate students ($n = 102$, 77%). Of the 132 respondents, most were involved with teacher preparation for multiple grade-level bands ($n = 106$, 80%). Additionally, respondents were affiliated with teacher preparation programs throughout each region of the United States, with the majority located in the Northeast and Southeast Regions ($n = 81$, 61%).

[INSERT TABLE 2 HERE]

Qualitative Data Analysis

Qualitative data analyses produced three themes regarding how literacy teacher educators promote understandings with foundational knowledge among preservice teachers. These three themes were: teacher educator pedagogy, course content, and student and program expectations. A summary for each theme was presented below and included supportive verbatim quotations. Following the presentation of themes, a summary of how data were aligned with the components of literacy for foundational knowledge in *Standards 2017* was provided.

Theme 1: Teacher Educator Pedagogy

Within this theme, 95 respondents described instructional delivery methods and learning tasks they use to prepare preservice teachers. With respect to instructional delivery methods, respondents mentioned a wide range of instructional delivery methods they use to deliver content within the university-based classroom, such as "guest speakers," "lectures," "readings," "simulations," and "videos." Respondents reported that they use "balanced approaches" in the classroom and various "combinations of learning theories" to relay information to preservice teachers. Respondents also emphasized their use of "gradual release of responsibility" approaches and "modeling" to support preservice teachers' understandings. Additionally, respondents noted that they "engage [preservice teachers] in discussions," and incorporate "hands-on learning for various center-based activities" regularly so that preservice teachers have frequent opportunities to "apply what they learned." Beyond the university-based classroom, respondents reported that they plan for preservice teachers to visit authentic PreK-12 settings and "observe children in different environments and educational settings." Respondents asserted that visits to authentic PreK-12 settings were ideal ways for them to link concepts under study to specific teaching contexts for preservice teachers.

With respect to learning tasks, respondents referenced specific assignments and field-based experiences they use to deepen preservice teachers' understandings with topics under study. Respondents recognized that "projects," "papers," and "lesson plans" were ideal learning tasks for preservice teachers to show mastery of knowledge and skills. Respondents also noted that completing "reflections" promoted higher levels of thinking about teaching. Additionally, respondents acknowledged that "case studies" were valuable learning tasks because provide contexts for preservice teachers to see how "[educational] theories apply to development and

schooling." Respondents also emphasized the importance of preservice teachers "creating lessons and games to use in the [PreK-12] classroom," as well as their involvement with "authentic teaching opportunities, family engagements, and tutoring activities."

Theme 2: Course Content

Within this theme, 52 respondents reported general or specific content they teach in their courses. Respondents named specific courses they teach that address foundational knowledge, such as "Foundations of Literacy," "Linguistics and Language Acquisition for the Literacy Specialist," and "Teaching Beginning Readers." Respondents also used descriptive and general terms to describe course content they teach in relation to foundational knowledge, such as "language;" "oral language development and learning theories;" "seminal reading research and foundations;" and "theories, research, and best practices that share a consensus of acceptance in the reading field." Additionally, respondents shared more specific descriptions for their course content, which included "automaticity," "comprehension," "decoding," "fluency," "phonemic awareness," " phonological awareness," "phonics," "vocabulary development," and "integrated reading/writing/listening/speaking units" of instruction. Respondents specified that the specific descriptions of course content were taught across several courses in their respective teacher preparation programs.

Theme 3: Student and Program Expectations

Within this theme, respondents identified student and program expectations. Along with the completion of learning tasks (e.g., assessments. assignments, projects) and field-based experiences, 45 respondents expected preservice teachers to demonstrate teacher thinking for foundational knowledge. To do so, respondents provided frequent opportunities for preservice teachers to "apply evidence-based research strategies, reflect upon theory in practice, and

consider the literacy development of [PreK-12] learners." Respondents also encouraged preservice teachers to "make connections" between learned concepts in the university-based classroom to teaching practices they observe during field-based experiences. When preservice teachers transition into being in-service teachers, respondents expressed a strong desire for their teacher preparation program graduates to "use foundational knowledge" while designing and implementing "a comprehensive, integrated, and balanced curriculum," and creating "a literate environment that fosters reading and writing."

Within this theme, 40 respondents also defined program expectations from which teacher preparation programs may address foundational knowledge effectively. To illustrate, some respondents pointed out that while their respective teacher preparation program offered only one foundational knowledge course, it was essential to provide multiple opportunities for preservice teachers to encounter components related to foundational knowledge in multiple courses. Accordingly, respondents felt there was a great need for teacher preparation programs to focus on foundational knowledge across several courses and field-based experiences. To measure preservice teacher competency with foundational knowledge, respondents current methods included administering "pre- and post-instructional assessments," learning about performance on "licensure exams required by the state," observing "demonstrations of knowledge," and viewing "teacher instruction via video."

Alignment with the Components for Foundational Knowledge in *Standards 2017*

The final phase of data analysis involved comparing qualitative data for this study to the components of literacy associated with Standard 1: Foundational Knowledge in *Standards 2017* to identify similarities and differences. Within this standard, the components of literacy include language, listening, reading, speaking, viewing, visually representing, and writing, as well as

interdisciplinary and discipline-specific literacy processes (ILA, 2018). Of the 52 respondents who mentioned course content, 27 explicit references were made to reading, 15 explicit references were made to language, and 12 explicit references were made to writing. Only one explicit reference was made to listening and to speaking, and no explicit references were made to either viewing or visually representing. Likewise, no explicit references were made to either interdisciplinary learning or discipline-specific literacy processes.

Discussion and Implications

Teacher educators must focus on providing opportunities for preservice teachers to learn the components of literacy associated with foundational knowledge in all grade-level bands (ILA & NCTE, 2017). In their work, teacher educators must employ preparation practices intended to develop preservice teachers' pedagogical content knowledge (Shulman, 1987) through both university-based classroom experiences and field-based experiences within actual PreK-12 classrooms. These are considerations of foremost importance for stakeholders who plan curriculum and other programmatic requirements within their respective teacher preparation programs.

This study uncovered three themes surrounding reported preparation practices that teacher educators use to develop preservice teachers' understandings for components of literacy associated with foundational knowledge. These themes encompassed instructional delivery methods and learning tasks used to prepare preservice teachers, general or specific content taught in courses, and student and program expectations. These findings revealed information concerning the preparation practices that teacher educators employ, as well as how concepts are addressed so that preservice teachers are supported in developing deep insights for concepts under study. Additionally, these findings showed that teacher educators make concerted efforts

to offer frequent opportunities for preservice teachers to connect theoretical learning to praxis through field-based experiences. Although findings in this study highlighted sound preparation practices, they also pointed to areas needing improvement, specifically with the components of literacy in Standard 1: Foundational Knowledge. To illustrate, findings showed that the majority of the respondents emphasized components of reading and reading instruction during teacher preparation and did not attend to components of writing and language to the same extent. Furthermore, there was no evidence that respondents addressed interdisciplinary or discipline-specific literacy processes in their teacher preparation programs. These findings have suggested that the field of teacher preparation has not yet reworked their programs to incorporate broader notions of literacy delineated in *Standards 2017*. Rather, it seems that teacher educators continue to emphasize reading while preparing future teachers for all grade-level bands.

Findings in this study aligned with previous literature that acknowledges a lack of attention to preparing preservice teachers for writing (e.g., AUTHORS, 2019; Grisham & Woolsey, 2011; National Commission on Writing in American Schools and Colleges, 2003), which is one of the components of literacy for foundation knowledge in *Standards 2017* (ILA, 2018). Few respondents in this study referenced how they promote understandings with writing among preservice teachers and how to teach underpinning concepts for writing in their future classrooms. Likewise, findings in this study also aligned with previous literature that acknowledges a lack of attention to preparing preservice teachers for language (AUTHORS, 2019; Henn-Reinke & Chesner, 2007). Few respondents in this study referenced how they promote understandings with language among preservice teachers and how to teach underpinning concepts of language in their future classrooms. Although some respondents did make references to preparation practices they use that incorporate aspects of language, such as

class discussions (Cazden, 2001), it was evident that the goals of these activities were not focused on the underpinning concepts of language themselves. Of greatest concern, respondents in this study made no references to preparation practices that address interdisciplinary literacy and discipline-specific literacy processes. It is possible that teacher educators have not yet incorporated this newer focus of literacy into their preparation practices.

Based on the findings, it is recommended that teacher educators conduct a thorough review of their teacher preparation programs using *Standards 2017* as a guide to identify strengths and weaknesses in how components of literacy—language, listening, reading, speaking, viewing, visually representing, and writing— are addressed for each grade-level band. During this programmatic review, teacher educators must also ensure that their preparation programs offer regular opportunities for preservice teachers to develop understandings for interdisciplinary and discipline-specific literacy processes.

Limitations and Areas for Future Research

As with any research endeavor, there were limitations with this study. One limitation involves the collection of data. In the larger study, data were collected solely from the administration of an electronic survey, which may have affected participation. Prospective respondents may have not viewed themselves as a teacher educator who is responsible for literacy, or they may have been leery to respond to an electronic questionnaire. A second limitation was the size of the research sample. At the time the larger study was conducted, a listing of teacher educators was unavailable. Therefore, the researchers had to search websites for teacher preparation programs to identify teacher educators who taught literacy courses. A third limitation involves the type of data collected. This study explored the viewpoints of teacher educators, which was self-reported data. As such, these data are narrow in scope and may not

offer an unbiased view of teacher preparation practices. This is also self-reported data, so this limits the scope of the analysis.

With these limitations in mind, researchers might explore how teacher educators promote understandings with foundational knowledge for literacy among preservice teachers more effectively in a future study. A future study should employ qualitative methods that allow for a more thorough examination of preparation practices. For example, future researchers may design a more detailed questionnaire to get at the nuances of preparation practices that teacher educators use more closely. Additionally, future researchers may also consider including supportive artifacts in their analysis, such course syllabi, copies of required readings, assignment criteria and guidelines. Furthermore, future researchers may consider conducting individual interviews or focus group interviews to gain as much detail as possible concerning their preparation practices.

Conclusion

In an ever-changing educational environment, comprehensive, research-based standards like the *Standards 2017* help inform teacher preparation programs about the behaviors, knowledge, and skills necessary for effective literacy teaching (ILA, 2018). Essentially, *Standards 2017* delineates effective educational practices that classroom teachers in all grade-level bands need to support literacy learning in an increasingly complex world. As determined by the findings of this study, teacher preparation programs must thoroughly evaluate their coursework, field experiences, and other requirements to ensure that preservice teachers transitions into their roles as in-service teachers who are confident and well-prepared professionals.

References

AUTHORS. (2019).

Alston, C. L., & Monte, S. C. (2020). Expanding conceptions of modeling writing to leverage student voices. *Journal of Adolescent & Adult Literacy, 64*(1), 89–93. doi:10.1002/jaal.1072

Bean, T., & Dunkerly, J. (2012). Adolescent literacy: Looking back and moving forward in the global flow. *Journal of Adolescent & Adult Literacy, 55*(8), 669-670.

Bean, R. B., & Kern, D. (2017). Multiple roles of specialized literacy professionals: The ILA 2017 standards. *The Reading Teacher, 71*(5), 615-621.

Brindle, M., Graham, S., Harris, D., & Hebert, M. (2016). Third and fourth grade teacher's classroom practices in writing; A national survey. *Reading & Writing, 29*(5), 929-954.

Byington, T. A., & Kim, Y. (2017). Promoting preschoolers' emergent writing. *Young Children, 72*(5), 74-82.

Cabell, S. Q., & Hwang, H. (2020). Building content knowledge to boost comprehension in the primary grades. *Reading Research Quarterly, 55*(1), 99-107. doi:10.1002/rrq.338

Cazden, C. (2001). *Classroom discourse: The language of teaching and learning.* Portsmouth, NH: Heinemann.

Clark, S. K., Jones, C. D., Reutzel, D. R., & Andreasen, L. (2013). An examination of the influences of a teacher preparation program on beginning teachers' reading instruction. *Literacy Research and Instruction, 52*(2), 87-105. doi:10.1080/19388071.2012.754520

Drake, G., & Walsh, K. (2020). *2020 Teacher prep review: Program performance in early reading instruction.* Washington, D.C.: National Council on Teacher Quality.

Duke, N. K., & Block, M. K. (2012). Improving reading in the primary grades. *The Future of Children, 22*(2), 55-72.

Ehri, L. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly, 55*(1), 45-60. doi:10.1002/rrq.334

Ehri, L., & Roberts, T. (2005). The roots of learning to read and write: Acquisition of letters and phonemic awareness. In D. Dickson & S. Neuman (Eds.), *Handbook of early literacy research* (Vol. 2, pp. 113-131). New York, NY: Guildford.

Evens, M., Elen, J., Larmuseau, C., & Depaepe, F. (2018). Promoting the development of teacher professional knowledge: Integrating content and pedagogy in teacher education. *Teaching and Teacher Education, 75*, 244-258. doi:10.1016/j.tate.2018.07.001

Fisher, D., & Frey, N. (2020). The skill, will, and thrill of comprehending content area texts. *The Reading Teacher, 73*(6), 819-824. doi:10.1002/trtr.1897

Fuller, E. J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality's review of teacher preparation programs. *Journal of Teacher Education, 65*(1), 63-77.

Gabriel, R., & Wenz, C. (2017). Three directions for disciplinary literacy. *Educational Leadership, 74*(5), 8-14.

Galloway, E. P., McClain, J. B., & Uccelli, P. (2020). Broadening the lens on the science of reading: A multifaceted perspective on the role of academic language in text understanding. *Reading Research Quarterly, 55*(1), 331-345. doi:10.1002/rrq.359

Goldhaber, D., Liddle, S., & Theobald, R. (2013). The gateway to the profession: Assessing teacher preparation programs based on student achievement. *Economics of Education Review, 34*, 29-44.

Graham, S. (2020). The sciences of reading and writing must become more fully integrated.

    *Reading Research Quarterly, 55(*S1), S35-S44. https://doi.org/10.1002/rrq.332

Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the

    Common Core: Meta-analysis and meta-synthesis. *The Elementary School Journal,*

    115(4), 498-522.

Grisham, D. L., & Wolsey, T. D. (2011). Writing instruction for teacher candidates:

    Strengthening a weak curricular area. *Literacy Research and Instruction, 50(*4), 348-364.

Håland, A. (2017). Disciplinary literacy in elementary school: How a struggling student

    positions herself as a writer. *The Reading Teacher, 70*(4), 457–468. doi:10.1002/trtr.1541

Henn-Reinke, K., & Chesner, G. A. (2006). *Developing voice through the language arts.*

    Thousand Oaks, CA: Sage Publications.

Hindman, A. H., Morrison, F. J., Connor, C. M., & Connor, J. A. (2020). Bringing the science of

    reading to preservice elementary teachers: Tools that bridge research and practice.

    Reading Research Quarterly, 55(1), 197-206. doi:10.1002/rrq.345

Howell, P. B., Faulkner, S. A., Cook, C. M., Miller, N. C., & Thompson, N. L. (2016).

    Specialized preparation for middle level teachers: A national review of teacher

    preparation programs. *Research in Middle Level Education Online*, 39(1). 1-12.

International Literacy Association. (2018). *Standards for the preparation of literacy*

    professionals 2017. Newark, DE: Author.

International Literacy Association & National Council of Teachers of English. (2017). *Literacy*

    teacher preparation [Research advisory]. Newark, DE: Urbana, IL: Authors.

International Reading Association. (2010). *Standards for reading professionals: Revised 2010.*

    Newark, DE: International Reading Association.

International Reading Association & National Council of Teachers of English. (1996). *Standards for the English language arts.* Retrieved from the National Council of Teachers of English website: https://ncte.org/resources/standards/ncte-ira-standards-for-the-english-language-arts/

Jordan, R. L. P., Bratsch-Hines, M., & Vernon-Feagans, L. (2018). Kindergarten and first teachers' content and pedagogical content knowledge of reading and associations with teacher characteristics at rural low-wealth schools. *Teaching and Teacher Education, 74*, 190-204. doi:10.1016/j.tate.2018.05.002

Kearns, D. M. (2020). Does English have useful syllable division patterns? *Reading Research Quarterly, 55*(1), 145-160. doi:10.1002/rrq.342

Lacina, J., & Collins Block, C. (2011). What matters most in distinguished literacy teacher education programs? *Journal of Literacy Research, 43*(4), 319-351. doi:10.1177/1086296X11422033

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Newbury Park, CA: SAGE Publications, Inc.

Lim, W., & Guerra, P. (2013). Using a pedagogical content knowledge assessment to inform a middle grades mathematics teacher preparation program. *Georgia Educational Researcher, 10*(2), 1-15. doi:10.20429/ger.2013.100201

Lupo, S. M., Berry, A., Thacker, E., Sawyer, A., & Merritt, J. (2019). Rethinking text sets to support knowledge building and interdisciplinary learning. *The Reading Teacher, 73*(4), 513-524. doi:10.1002/trtr.1869

Lupo, S. M., Strong, J. Z., Lewis, W., Walpole, S., & McKenna, M. (2017). Building

>background knowledge through reading: rethinking text sets. *Journal of Adolescent &*

>*Adult Literacy, 61*(4), 433-444. Doi:10.1002/jaal.701

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and*

>*implementation.* San Francisco, CA: Jossey-Bass.

Mesci, G., Schwartz, R. S., & Pleasants, B. A. (2020). Enabling factors of preservice science

>teachers' pedagogical content knowledge for nature of science and nature of scientific

>inquiry. *Science & Education, 29*(2), 263–297. doi:10.1007/s11191-019-00090-w

Moje, E. B. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A

>call for change. *Journal of Adolescent & Adult Literacy, 52*(2), 96– 107.

>doi:10.1598/JAAL.52.2.1

National Commission on Writing. (2003). *The neglected "R": The need for a writing revolution.*

>New York, NY: College Entrance Examination Board.

National Council on Teacher Quality. (2020). *Teacher prep review*. https://www.nctq.org/review

National Early Literacy Panel. (2008). *Developing early literacy: Report of the National Early*

>*Literacy Panel.* Washington D.C.: National Institute for Literacy.

National Institute of Child Health and Human Development. (2000). *Report of the National*

>*Reading Panel – Teaching children to read: An evidence-based assessment of the*

>*scientific research literature on reading and its implications for reading instruction.*

>Washington D.C.: National Institute of child Health and Human Development.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to

>meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*, 1-13.

>doi:10.1177/1609406917733847

Pearson, P. D., & Goatley, V. (2013, July 2). Response to the NCTQ teacher education report [weblog post]. https://www.literacyworldwide.org/blog/literacy-now/2013/07/02/response-to-the-nctq-teacher-education-report

Picot, C. J. (2017). Using academic word lists to support disciplinary literacy development. *The Reading Teacher, 71*(2), 215–220. doi:10.1002/trtr.1593

Pomerantz, F., & Condi, C. (2017). Building bridges from pre-service experiences to elementary classroom literacy teaching: Challenges and opportunities. *Teaching and Teacher Education, 64*, 211-221.

Risko, V. J., & Reid, L. (2019). What really matters for literacy teacher preparation? *The Reading Teacher, 72*(4), 423-429. doi:10.1002/trtr.1769

Saldana, J. (2009). *The coding manual for qualitative researchers.* Thousand Oaks, CA: SAGE Publications Inc.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Re-thinking content area literacy. *Harvard Educational Review, 78*(1), 40-59.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14. doi:10.3102/0013189X015002004

Shulman, L. S. (1987). Knowledge and teaching. Foundations of the new reform. *Harvard Educational Review, 57(*1), 1-23.

Siffrinn, N. E., & Lew, S. (2018). Building disciplinary language and literacy in elementary teacher training. *The Reading Teacher, 72*(3), 325-341. doi:10.1002/trtr.1723

Spear-Swerling, L., & Cheesman, E. (2012). Teachers' knowledge base for implementing response-to-intervention models in reading. *Reading and Writing, 25*(7), 1691-1723.

Sue, V. M., & Ritter, L. A. (2012). *Conducting online surveys* (2nd ed.). Thousand Oaks, CA:

    SAGE Publications, Inc.

Zhao, Y. (2018). The changing context of teaching and implications for teacher education,

    Peabody Journal of Education, 93(3), 295-308. doi:10.1080/0161956X.2018.1449896

Table 1

Demographic Data for Respondents

Characteristics	*n*
Gender	
Female	112 (85%)
Male	20 (15%)
Age Range	
30-39 years old	16 (12%)
40-49 years old	53 (40%)
50-59 years old	23 (17%)
60-69 years old	34 (26%)
Over 70 years old	6 (5%)
Years as PreK-12 Classroom Teacher	
Less than 1 year	2 (1%)
1-3 years	12 (9%)
4-6 years	35 (27%)
7-9 years	18 (14%)
More than 10 years	65 (49%)
Years as Literacy Teacher Educator	
Less than 1 year	—
1-3 years	9 (7%)
4-6 years	30 (23%)
7-9 years	24 (18%)
More than 10 years	69 (52%)
Employment Status	
Part-time faculty member	11 (8%)
Full-time, non-tenure track faculty member	34 (26%)
Full-time, tenure-track faculty member	29 (22%)
Full-time, tenured faculty member	58 (44%)
Highest Degree Earned30	
Master's degree	11 (8%)
Doctorate degree	115 (87%)
Other	6 (5%)

Note. In the Other option, respondents reported current pursuits towards educational degrees.

Table 2

Demographic Data for Teacher Preparation Programs

Characteristic	*n*
Teacher Preparation Program Type	
Undergraduate Only	30 (23%)
Graduate Only	21 (16%)
Undergraduate & Graduate	51 (39%)
Graduate & Alternative	3 (2%)
Undergraduate & Alternative	2 (1%)
Undergraduate, Graduate, & Other	2 (1%)
Graduate & Other	6 (5%)
Undergraduate, Graduate, & Alternative	15 (12%)
Undergraduate, Graduate, & Other	2 (1%)
Grade-Band Levels	
Pre-K/Primary Only	2 (1%)
Elementary/Intermediate Only	18 (14%)
Middle/High School Only	6 (5%)
Pre-K/Primary & Elementary/Intermediate	29 (22%)
Elementary/Intermediate & Middle/High School	18 (14%)
All Three Grade-Level Bands	59 (45%)
Location of Preparation Program by Region	
Pacific[a]	7 (5%)
Rocky Mountains[b]	10 (8%)
Southwest[c]	5 (4%)
Midwest[d]	29 (22%)
Northeast[e]	40 (30%)
Southeast[f]	41 (31%)

[a] The Pacific Region included California and Oregon.

[b] The Rocky Mountains Region included Idaho, Montana, Nevada, and Utah.

[c] The Southwest Region included Arizona, New Mexico, Oklahoma, and Texas.

[d] The Midwest Region included Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin.

[e] The Northeast Region included Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, and Vermont.

[f] The Southeast Region included Arkansas, Delaware, District of Columbia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Appendix A

Standard 1: Foundational Knowledge Classroom Teachers (ILA, 2018)

	Pre-K/Primary Grade-Level Band (ages 4-7)	Elementary/Intermediate Grade-Level Band (ages 7-11)	Middle/High School Grade-Level Band (ages 11-18)
1.1	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based components of pre-K/primary reading development (i.e., concepts of print, phonological awareness, phonics, word recognition, fluency, vocabulary, comprehension) and evidence-based instructional approaches that support that development (p. 67)	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based components of elementary/intermediate reading development (i.e. concepts of print, phonological awareness, phonics, word recognition, fluency, vocabulary, comprehension) and evidence-based instructional approaches that support that development (p. 76).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based components of academic vocabulary, reading comprehension, and critical thinking, with specific emphasis on content area and disciplinary-specific literacy instruction (p. 85).
1.2	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based foundations of pre-k/primary writing development and the writing process, and evidence-based instructional approaches that support writing of specific types of text and producing writing appropriate to task (p. 68).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based foundations of elementary/intermediate writing development and the writing process and evidence-based instructional approaches that support writing of specific types of text and producing writing appropriate to task (p. 77).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based foundations of adolescent writing development, processes, and instruction in their specific discipline (p. 86).
1.3	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based frameworks that describe the centrality of language to literacy learning and evidence-based instructional approaches that support the development of listening, speaking, viewing, and visually representing (p. 68).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based frameworks that describe the centrality of language to literacy learning and evidence-based instructional approaches that support the development of listening, speaking, viewing, and visually representing (p. 77).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based foundations and instruction of language, listening, speaking, viewing, and visually representing in their specific discipline (p. 86).

1.4	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based frameworks that describe the interrelated components of literacy and interdisciplinary learning (p. 69).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based frameworks that describe the interrelated components of general literacy and discipline-specific literacy processes that serve as a foundation for all learning (p. 78).	Candidates demonstrate knowledge of major theoretical, conceptual, and evidence-based frameworks that describe the interrelated components of general literacy and discipline-specific literacy processes that serve as a foundation for all learning (p. 86).

Appendix B

Excerpt from Codebook

Themes	Description	Sub Themes	Example Quotes from Respondents
Course Content	What they teach	Types of courses General content Specific content	-Theoretical Foundations of Literacy -Multiple learning theories -Structure of language; phonics
Teacher Educator Pedagogy	How they teach it	Delivery methods Style or theory of teaching Specific assignments as teaching Link course(s) & field-based experience(s)	-Read and discuss -Modeled pedagogy; balanced approach -Integrated units: "strategies record" -Connect field-based experiences to class
Student and Program Expectations	What students are expected to do	Assignments, projects, tests Level of thinking or ways of thinking	-Case study; write lesson plans -Make connections; apply; demonstrate
	When in the program students learn these things	Number of courses Across courses Across courses and field-based experiences Outside of coursework	-1 course on foundations -Integrated in 4 methods courses -Site-based classroom; school intervention -Luncheons
	How students are assessed	Tests State tests	-Pre- and post-instructional assess -Take state exams on foundations