RMC RESEARCH

NEW HAMPSHIRE

PREPARING EXCELLENT READING TEACHERS

STATE SUMMARY REPORT

September 2024

New Hampshire | LIVE FREE AND LEARN
Department of Education

BU Wheelock College of Education & Human Development

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EXECUTIVE SUMMARY

The goal of the **Best Practices: Preparing Excellent Reading Teachers** research project is to present a deep analysis of New Hampshire (NH) teacher endorsement standards that relate to the teaching of reading and report on the application of existing standards and evidence-based strategies[1] for teaching structured literacy[2] in relevant preservice programs at NH Educator Preparation Programs (EPPs)[3]. Consequently, the project's findings are intended for formative purposes to inform and monitor EPPs' continuous improvement of "curriculum, clinical practice and partnerships, and resources for the institution's PEPP [postsecondary educator preparation program] that enable the oversight and coordination for the preparation of effective educators." (NH Standard Ed602.02). This report serves as the state summary report for the participating NH EPPs, presenting findings and recommendations from analyses of (a) relevant course content materials, (b) administrative, interview, and/or survey data, and (c) a sample of student New Hampshire Teacher Candidate Assessment of Performance (NHTCAP) projects for alignment to state program standards and quality instruction for structured literacy.

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[1]Evidence-based strategies are instructional practices, activities, or programs that have been independently evaluated and resulted in demonstrated statistical improvements to student outcomes. These standards aim to ensure that every student receives comprehensive, evidence-based instruction, as mandated by the state's minimum standards for public elementary education (New Hampshire Department of Education, 2024).

[2]Evidence-based reading instruction practices that prioritize the acquisition of language, including phonological and phonemic awareness, phonics and spelling, fluency, vocabulary, oral language, and comprehension, that can be differentiated to meet the needs of individual students including:

- Evidence-based reading and writing instructional practice recommendations from the Institute for Education Sciences, What Works Clearinghouse™ publication *Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade* (Foorman et al., 2016) and other supporting evidence.
- Instructional practices that rely on brain-based research and thus espouse instruction that explicitly builds neural networks in the teaching of reading.
- Instruction that explicitly and systematically entwines and scaffolds language comprehension (background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge) and word recognition (phonological/phonemic awareness, decoding, and sight recognition).

[3]RMC defines an educator preparation program as a school of education, or related school, residing within an institute of higher education (not the institute of higher education itself).

Research questions addressed in this report:

- **How are NH EPPs applying the Ed 600 standards for teaching reading in practice?**
- **Where are the gaps in preparation and what changes are recommended to strengthen NH EPPs?**
- **Which best practices do NH EPPs employ that could be shared with others?**
- **What are the factors at the preservice level that influence becoming an effective reading teacher?**
- **What can NH EPPs do to identify and support preservice teachers who require remediation and additional supports so they become effective teachers of reading?**

Key Findings

Based on results of the course content, NHTCAP reviews, interviews, and surveys, it appears that participating NH EPPs are currently within a range from Installation[4] to Initial implementation of evidence-based reading strategies and structured literacy in their preparation programs.

Application of ED 600 Standards for Teaching Reading

- There were varying degrees of understanding and familiarity with the NH ED 600 standards relevant to teaching literacy among faculty interviewees, ranging from unfamiliar to familiar.
- The courses in both participating NH ECE EPPs for early childhood certification addressed all NH ED 600 program standards relevant to reading and the corresponding NH ED 500 endorsement standards, and courses in 4 out of 5 participating NH Elementary Education EPPs did so for elementary education certification.
- Most of the participating NH EPPs are in the installation stage of implementing evidence-based reading strategies and therefore transitioning to evidence-based reading course content, particularly in foundational literacy courses; however, one EPP

[4]RMC has adopted the National Implementation Research Network's (NIRN, 2015) 4 stages of implementation for identifying where EPPs are in the change process: exploration, installation, initial implementation, and full implementation. See p. 12 for definitions of the implementation stages.

appears to be in the initial implementation stage (see Exhibit 2). Moreover, the EPPs are largely providing academic learning sessions, materials, and practical experiences that encompass a broad spectrum of instructional approaches in preparation for instructional contexts preservice service are likely to encounter at field placement sites, some of which are misaligned to evidence-based reading strategies.

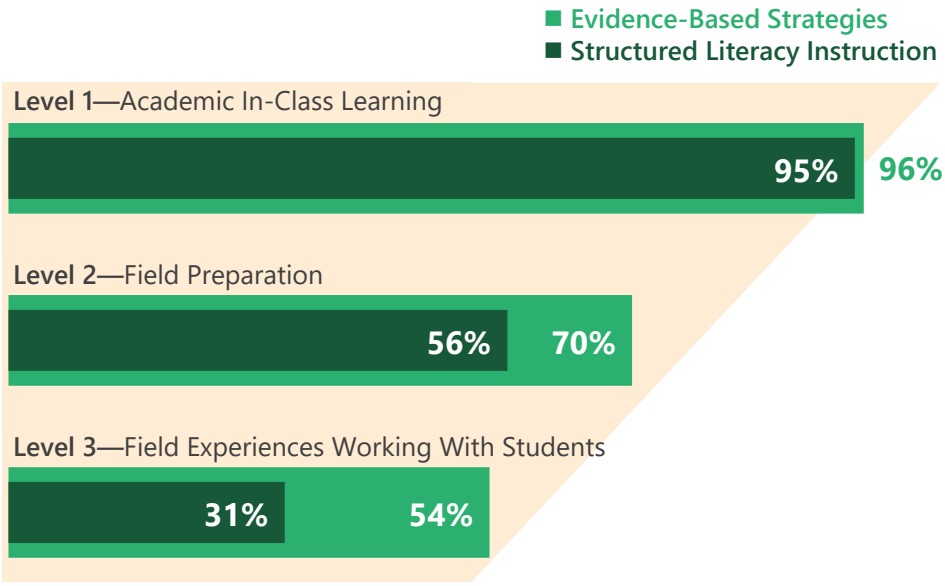
- Both participating NH ECE EPPs align with most (12 out of 16) of the variables identified in the National Early Literacy Panel (NELP) report (see p. 21).
- Though 6 out of 6 participating NH EPPs address all 10 essential components specific to reading within academic in-class settings, there is variability among the EPPs in the amount and type of field preparation and clinical practice opportunities aligned to evidence-based reading strategies available to preservice candidates (see graphic p. 4).
- Analysis of student NHTCAP projects suggest some preservice candidates' application of instructional approaches and assessment practices are misaligned to evidence-based reading strategies despite what may have been covered in prior coursework, indicating a need for more support in selecting high quality instructional materials for evidence-based reading instruction and clarifying which reading practices are aligned to research evidence, and would benefit from more targeted practice-based learning opportunities and feedback related to structured literacy.

Application of Structured Literacy

- Most of the participating NH EPPs are in the installation stage of structured literacy implementation and therefore transitioning to evidence-based reading course content, particularly in foundational literacy courses; however, one EPP appears to be in the initial implementation stage.
- Collectively, preservice candidates generally suggest that their EPPs are providing coursework to support their use of structured literacy and to be effective reading teachers, while program graduates reflect a mixed set of experiences, with large proportions of them having limited coursework to support structured literacy.

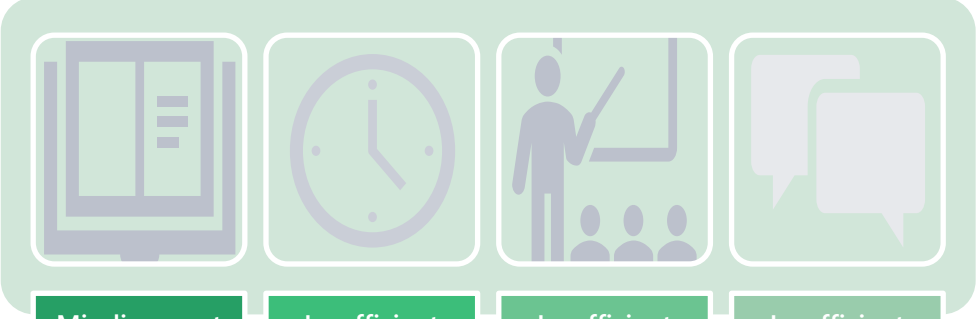
- Among preservice candidates and program graduates, there are differing perceptions of program quality, but agreement on the importance of feedback from professionals (but limited access to it).
- Though all participating NH EPPs provide foundational language-based content in the context of academic learning for all 8 key structured literacy content areas, there is variability among the EPPs in the amount of field preparation and clinical practice opportunities in structured literacy available to preservice candidates. Moreover, our findings showed available practice opportunities minimally align with and incorporate language-based structured literacy content knowledge (see graphic below).

NH EPPs offering opportunities to implement essential reading components



Gaps in Preparation

The content review, interview, and survey findings reveal the following gaps in preparation:



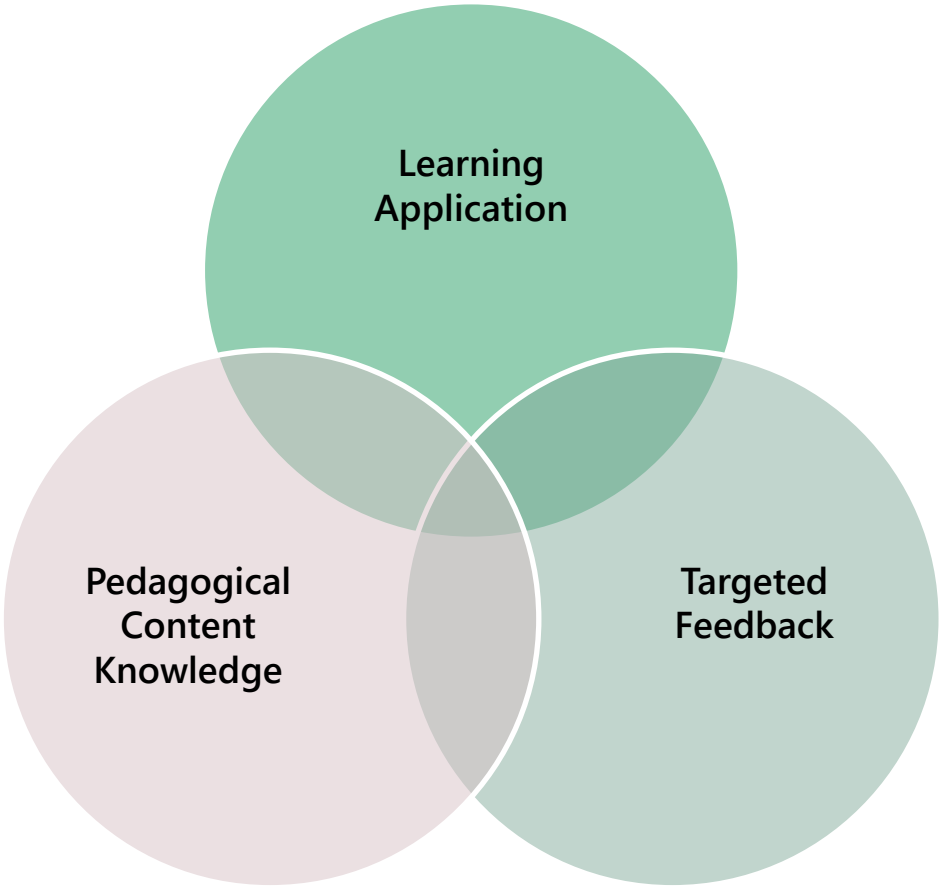
- Misalignment of course materials & learning activities to evidence-based reading strategies
- Insufficient course time on literacy and reading to build knowledge and skill in all major reading components
- Insufficient number of practice opportunities across reading components, including planning & delivering structured literacy
- Insufficient field-based reading experiences with feedback before field placement

Best Practices

- While the participating NH EPPs collectively engage in a range of general, campus-based, and field-based best practices, each utilizes a different combination of best practices reflecting their infrastructure and type and design of reading course(s) offered.
- Five pedagogical best practices were common to all participating NH EPPs: analyzing and reflecting, coaching and feedback, varied learning, spaced learning, and coursework aligned. One best practice, simulations and lab-like experiences, which give preservice candidates practice teaching in virtual, or more controlled, environments before they begin teaching students in the classroom, is not utilized by any of the participating NH EPPs.

Perceived Preservice Level Factors

Perceived preservice level factors influencing becoming an effective teacher of reading by interviewees and survey respondents were:



Identifying and Supporting Preservice Teachers

For preservice candidates who require remediation and additional support to become effective teachers of reading, interviewees suggest:

Aligning & Balancing Coursework & Field Placement Experiences

Having Regular Communication & Coordination

Engaging in Comprehensive Learning Opportunities in Structured Literacy

Key EPP Content and Pedagogy Recommendations

- Ensure educator preparation faculty and supervisor field placements have current expertise in reading, including Structured Literacy instruction.
- Select comprehensive course text materials aligned to evidence-eased reading.
- Increase practice-based learning opportunities across all major reading components.
- Provide preservice candidate access to evidence-base instructional materials for instructional skill practice to increase field preparation in operationalizing classroom reading instruction.
- Provide sufficient opportunities for preservice candidates to learn all 8 key Structured Literacy content areas and the progression of each.

- Increase Structured Literacy application and practice.
- Expand scope of EPP best pedagogical practices to include strategic options that support evidence-based instructional skill development and refinement.
- Provide preservice candidate access to evidence-based instructional materials for instructional skill practice to increase field preparation.

Key EPP Program Implementation Recommendations

- Provide reading courses earlier within EPP course of study and minimize the autonomy that ECE preservice candidates have in selecting courses and content-area topics for required course assignments to increase exposure to evidence-based literacy content and structured literacy practices.
- Map academic reading content and practice-based learning opportunities across literacy courses to increase program coherence.
- Align course resources, time, and field-based implementations to evidence-based reading instructional strategies.
- Identify criteria to select field sites using evidence-based strategies.
- Partner with districts to establish clear, rigorous criteria for mentor teacher selection for reading to appropriately identify and recruit effective mentors.
- Partner with districts to schedule a continuum of reading course-aligned field experiences at placement sites that accommodate the comprehensive demands of Structured Literacy instructional preparation.

Key State Recommendations

- Increase rigor and measurability of the corresponding NH ED 500 and 600 standards by adding specific content elements.
- Collect and share with NH EPPs best pedagogical practices that target instructional skill development to promote increased EPP provision of practice-based learning opportunities.

- Partner with Credentials Unlimited to expand the Science of Reading microcredential offerings to educators who have enrolled in NHED's Leaning Into Literacy LETRS professional development.
- Incentivize the Leaning into Literacy I and II Resource Grantees, Bridging the Gap in the 603: Pathways to Literacy Proficiency Pilotees, and NH EPPs to form field placement partnerships for preservice candidates.
- Increase rigor of the corresponding NH ED 500 and 600 standards by adding specificity.
- Identify a minimum duration threshold for both the early and culminating field experiences.
- Support EPP mapping of literacy course of study across all 3 levels of implementation by providing literacy-specific guidance & resources that serve as an EPP self-audit to help them prepare for NH's EPP program approval process.
- Provide guidance on instructional delivery to support EPP and district implementation of evidence-based reading strategies and Structured Literacy instruction in coursework assignments and classrooms.
- Promote early and frequent practice-based learning opportunities that are embedded within a series of campus-based reading courses.
- Develop early literacy program approval criteria that sets expectations for all relevant endorsement area programs.

Key District Recommendations

- Leverage educators trained through the New Hampshire LETRS Science of Reading Professional Learning Courses to serve as local champions and leaders to promote and scale the use of high-quality instructional materials.
- Engage in a shared district and EPP partnership that includes collaborative field-based professional development of both preservice candidates and school faculty.
- Intentionally recruit and incentivize effective teachers to serve as mentors to improve preservice candidates' preparedness to teach reading.
- Provide in-person coaching sessions or professional development with mentor teachers.
- Allow student teachers a variety of opportunities to observe literacy reading teachers, various grades and support in the setting.

- Partner with EPPs to place preservice candidates in schools with collaborative environments, effective faculty, and low turnover.

INTRODUCTION

Project Purpose and Research Questions

The New Hampshire Department of Education (NHED) through the Division of Learner Support in collaboration with the Division of Educator Support and Higher Education, contracted with RMC Research Corporation (RMC) and its partner, Boston University's BU Wheelock College of Education and Human Development (BU), for the **Best Practices: Preparing Excellent Reading Teachers** research project. The purpose of this descriptive and exploratory research project is to ensure that NHED requires evidence-based high quality content standards[5] for the teaching of reading, to identify and disseminate Educator Preparation Program (EPP)[6] best practices in meeting standards, and to analyze related outcomes impacting New Hampshire's teacher workforce and students. Consequently, the project's findings are intended for formative purposes to inform and monitor the institution's continuous improvement of "curriculum, clinical practice and partnerships, and resources for the institution's PEPP [postsecondary educator preparation program] that enable the oversight and coordination for the preparation of effective educators" (NH Standard Ed 602.02).

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[5]Standards that are measurable, rigorous, and unambiguous. Quality standards clearly describe the specific content that should be taught and learned.
[6] RMC defines an educator preparation program as a school of education, or related school, residing within an institute of higher education (not the institute of higher education itself).

The goal is to present a deep analysis of NH teacher endorsement standards that relate to the teaching of reading and a report on the application of existing standards and evidence-based strategies[7] for teaching structured literacy[8] in relevant preservice programs at NH EPPs.

Research questions addressed in this report:

- **How are participating NH EPPs applying the Ed 600 standards for teaching reading in practice?**
- **Where are the gaps in preparation and what changes are recommended to strengthen NH EPPs?**
- **Which best practices do participating NH EPPs employ that could be shared with others?**
- **What are the factors at the preservice level that influence becoming an effective reading teacher?**
- **What can NH EPPs do to identify and support preservice teachers who require remediation and additional supports so they become effective teachers of reading?**

Nationwide, many EPPs are in the process of modifying or refining their programs to better align with evidence-based reading strategies for teaching structured literacy. To prepare excellent teachers of reading, it is often necessary for EPPs to engage in continuous program improvement. Since organizational change is complex and takes time, RMC recognizes that EPPs will implement program changes in different stages and rates,

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[7]Evidence-based strategies are instructional practices, activities, or programs that have been independently evaluated and resulted in demonstrated statistical improvements to student outcomes. These standards aim to ensure that every student receives comprehensive, evidence-based instruction, as mandated by the state's minimum standards for public elementary education (New Hampshire Department of Education, 2024).

[8]Evidence-based reading instruction practices that prioritize the acquisition of language, including phonological and phonemic awareness, phonics and spelling, fluency, vocabulary, oral language, and comprehension, that can be differentiated to meet the needs of individual students including:

- Evidence-based reading and writing instructional practice recommendations from the Institute for Education Sciences, What Works Clearinghouse™ publication *Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade* (Foorman et al., 2016) and other supporting evidence.
- Instructional practices that rely on brain-based research and thus espouse instruction that explicitly builds neural networks in the teaching of reading.
- Instruction that explicitly and systematically entwines and scaffolds language comprehension (background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge) and word recognition (phonological/phonemic awareness, decoding, and sight recognition).

reflecting how implementation is a process and not an event. Therefore, RMC has adopted the National Implementation Research Network's (NIRN, 2015) 4 stages of implementation for identifying where EPPs are in transitioning to evidence-based reading strategies for teaching structured literacy:

Exploration	**Installation**	**Initial Implementation**	**Full Implementation**
Involves an assessment of assets and needs of the focus population, fit of the program or practice with those needs and assets and feasibility of implementation.	Involves consuming resources and building the infrastructure necessary to implement the program or practice.	Includes the initial efforts of staff to use the program or practice, with attention to using data for continuous improvement.	Occurs as staff use the program or practice successfully, and population-level outcomes are achieved (NIRN, 2015).

Overview of Research Design

From 2022 to 2024, RMC conducted a mixed-method, descriptive, exploratory study to analyze EPP course requirements associated with applied practice for teaching children to read and determine program alignment to the NH 500 teacher endorsement standards for reading and quality instruction for structured literacy. A panel of 3 experts working in the field of educator preparation provided input on the evaluation process, preliminary findings, and recommendations over 8 meetings across the project period, informing the development of the individual EPP and state summary reports.

Data collected and source:

Starting in winter 2023:

- Participating NH EPPs electronically submitted artifacts, including fall 2022 and spring 2023 reading/literacy course syllabi, program

Appendix A provides more detail on the overall study sample, methods, data collection, data analysis, and project limitations.

of study guidelines/handbooks, and a sample of student NHTCAP projects (as applicable).

- Participating NH EPPs electronically submitted aggregate administrative data, including EPP preservice candidate completion and retention rates, Foundations of Reading Test pass rates, and program graduate placement rates (as applicable).
- RMC reviewed electronically submitted course content artifacts, including course syllabi and associated materials.

Starting in spring of 2024, RMC:

- Reviewed electronically submitted name-redacted student NHTCAP projects and aggregate administrative data from the participating NH EPPs.
- Interviewed faculty, field supervisors, mentor teachers, preservice candidates, and program graduates from the participating NH EPPs.
- Surveyed preservice candidates and individuals who graduated from participating NH EPPs within the past 3 years.

How data were analyzed:

- For the course content review, an innovation configuration (IC) matrix for Evidence-Based Reading Instruction in Grades K–5 (Lane, 2014) was used for analyzing syllabi, along with artifact matrices drawing from a U.S. Department of Education-funded brief and research evidence from the Institute of Education Sciences (IES) and National Institutes of Health (NIH).
- Qualitative data was inductively coded[9] and triangulated for themes according to each research question.
- Descriptive statistics, such as counts and percentages, were calculated from survey responses, when applicable.

[9] Involves interpreting data to develop codes based on patterns in the data.

6 NH EPPs elected to participate in the research project[10]. Details about participating NH EPP participation are outlined below (see also Exhibit 1).

16 course syllabi reviewed

Participating NH EPPs submitted 20 course syllabi for the course content review based on RMC guidelines. RMC determined 16 courses were appropriate for course content review based on established criteria. RMC specifically looked for literacy content in each of the submitted courses.

2 Endorsement Areas Included

The participating NH EPPs included 2 endorsement areas: 5 total in elementary education and 2 total in early childhood education.

9 Student NHTCAP Project and 4 Scored Rubrics Reviewed

4 out of the 6 participating NH EPPs partake in NHTCAP and submitted 9 total scored and name-redacted NHTCAP projects and 4 scored rubrics. These artifacts were incorporated into the course content review to determine evidence of application of coursework and evidence-based reading strategies.

8 Faculty Members, 2 Field Supervisors, 2 Mentor Teachers, and 3 Preservice Candidates Interviewed

RMC interviewed 8 EPP-identified faculty members teaching literacy courses associated with the course content review. RMC made multiple requests and used several strategies over time to interview up to 3 EPP-identified faculty, field supervisors, and mentor teachers and up to 10 preservice candidates and program graduates per EPP. These efforts yielded 15 total interviews.

3 Preservice Candidates and 14 Program Graduates Responded to the Survey

RMC administered a preservice candidate and program graduate survey to an identified EPP sample (47 and 676 individuals, respectively), which included 2 reminders to

[10] This research was made possible, in part, by the support of participating NH EPPs. Opinions contained in this report reflect those of the author and do not necessarily reflect those of the participating EPPs.

complete the survey. These efforts yielded 17 total survey respondents: 3 from preservice candidates and 14 from program graduates.

Exhibit 1
Participating NH EPP-Specific Project Information

EPP	Syllabi Reviewed	Endorsement Area	Interviewed	Survey Respondents
EPP #1	3	2: EE, ECE	3 Faculty Members 1 Field Supervisor	7 Program Graduates
EPP #2	2	1: EE	2 Faculty Members 1 Field Supervisor 1 Preservice Candidate	1 Preservice Candidate 3 Program Graduates
EPP #3	2	1: EE	1 Faculty Member/ Field Supervisor	1 Preservice Candidate 1 Program Graduate
EPP #4	3	1: EE	2 Mentor Teachers	1 Preservice Candidate 2 Program Graduates
EPP #5	4	1: ECE	1 Faculty Member	0
EPP #6	2	1: EE	1 Faculty Member 2 Preservice Candidates	0

Note. EE = Early Education. ECE = Early Childhood Education.

SUMMARY OF FINDINGS

This section summarizes the findings across relevant data sources for each research question. Detailed information related to these findings are in the appendices.

NH EPP implementation of evidence-based reading content and instructional strategies is collectively at the Installation Stage. With one exception, EPP #3 is most closely aligned with evidence-based reading strategies and provides the most course-aligned field experiences; therefore, EPP #3 is in the Initial Implementation Stage.

Currently, participating NH EPPs are largely:

- Transitioning to evidence-based reading course content, particularly in foundational literacy courses. While most NH EPPs utilize misaligned materials, a few EPPs have begun the process of replacing (or adding) a course text(s) with a resource(s) containing reading research and evidence-based information. Evidence also indicates some EPPs are endeavoring to install evidence-based reading instructional strategies by redesigning course offerings or through collaborative professional development opportunities. Such efforts are incremental as each change requires systemic coordination and resources over time. Also, the extent of this transition differs across institutions. (See Exhibit 2)

- Providing academic learning sessions, materials, and practical experiences that encompass a broad spectrum of instructional approaches in preparation for instructional contexts preservice service are likely to encounter at field placement sites, some of which are misaligned to evidence-based reading strategies. The instructional approaches range from reading workshop, balanced literacy framework, and literacy-content area integration to evidence-based reading strategies. The extent of coverage per instructional approach varies across EPPs as well as within EPPs (for those offering more than one reading-specific course):

- **EPP #1** focuses on evidence-based reading with minimal to moderate opportunities for practical application.
- **EPP #2** foundational course focus is evidence-based reading content with some balanced literacy information. In contrast, the methods course focus is guided reading and miscue analysis with some embedded evidence-based reading. The EPP is currently engaged in methods course modifications.

- **EPP #3** prioritized coursework and field experiences to align with evidence-based reading instructional strategies and includes a focus on literacy-integrated content-area instruction.
- **EPP #4** offers courses emphasizing balanced literacy and miscue analysis in academic learning, course assignments, and field-based tutoring sessions; however, the foundational reading course concentrates on evidence-based reading strategies during academic learning, followed by minimal practical experience opportunities.
- **EPP #5** and **EPP #6** include both evidence-based reading and balanced literacy content and provides balanced literacy application opportunities.

Exhibit 2
Evidence of NH EPP Transitioning to Evidence-Based Reading

EPP	Evidence of EPP Transitioning to Evidence-Based Learning
Installation Stage of Implementation	
EPP #1	▪ Supplements textbook w/national and online evidence-based reading resources. ▪ Course assignment: Develop literacy handbook w/evidence-based reading content. ▪ At field placement sites, preservice candidates experience curricular shifts from balanced literacy to evidence-based high-quality instructional materials.
EPP #2	▪ Redesigned foundational reading courses: Content adjusted based on Foundations of Reading Test data, Added course textbook containing evidence-based reading content. ▪ Replacing methods course. ▪ Engaging in collaborative structured literacy professional development at placement sites.
EPP #4	▪ Supplements textbook w/national resources containing evidence-based reading content. ▪ Course assignment: Conduct classroom observation of lesson using high-quality instructional materials.
EPP #5	▪ Imported course with evidence-based reading content. ▪ Supplements textbook with faculty developed materials with evidence-based reading content.
EPP #6	▪ Replaced textbooks with textbooks containing evidence-based reading content. ▪ Uses online resource with evidence-based reading content.
Initial Implementation	
EPP #3	▪ Uses comprehensive textbook containing evidence-based reading content. ▪ Provides practice-based learning opportunities using evidence-based high-quality instructional materials. ▪ Plans and delivers small group work using the evidence-based high-quality instructional materials.

To what extent and how are participating NH EPPs applying the NH Ed 600 standards for teaching reading in practice?

RMC analyzed participating NH EPPs alignment to the NH 600 EPP standards relevant to reading and the corresponding NH ED 500 endorsement standards—drawing evidence from course content and student NHTCAP projects—as well as considered EPP best practices to determine NH EPPs' application of NH ED 600 standards in preparing preservice candidates for the teaching of reading. The course content review also focused on identifying course alignment to and opportunities for preservice candidates to apply:

- Evidence-based reading strategies for teaching structured literacy (International Dyslexia Association, 2018).
- Best practices in reading as identified by research findings and recommendations of the Report of the National Early Literacy Panel (NELP) (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2010), the Institute for Education Science's (IES) Foundational Skills to Support Reading for Understanding practice guide (Foorman et al., 2016) and other NICHD and IES reports (Connor et al., 2014; Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000; Shanahan et al., 2010).
- Best EPP pedagogical practice noted in Learning to Teach: Practice-Based Preparation in Teacher Education (Center on Great Teachers and Leaders, 2016).

The NELP report identified the extent that instructional practices, interventions, and parenting activities promote early literacy skill development and later achievement in reading, writing, and spelling. Report findings distinguish the contributing variables from those variables with highly predictive and moderately predictive relationships that go beyond readiness and emerging skill to later literacy achievement. There are a total of 16 variables:

- Six consistent, highly predictive variables: Alphabetic knowledge, Phonological awareness, Rapid Automatic Naming (RAN) of a sequence of letters or digits, RAN of a sequence of objects or colors, Writing one's name, and Phonological memory.

- Five moderately predictive variables: Concept of Print, Print knowledge, Reading readiness, Oral language, and Visual processing.
- Five contributing variables: Code-focused intervention, Book sharing, Home/Parent programs, Preschool and Kindergarten programs, and Language enhancements.

Recommendations of the IES Foundational Skills practice guide further clarify for educators what practices are needed to improve student development in reading:

- **Recommendation 1:** Teach students academic language skills, including the use of inferential and narrative language, and vocabulary knowledge.
- **Recommendation 2:** Develops awareness of the segments of sounds in speech and how they link to letters.
- **Recommendation 3:** Teach students to decode words, analyze word parts, and write and recognize words.
- **Recommendation 4:** Ensure that each student reads connected text every day to support reading accuracy, fluency, and comprehension.

Exhibit 3 shows the course content review results for the relevant NH ED 600 EPP standards relevant to reading in the early childhood education (ECE; birth through age 8) and elementary education (EE) certification areas. Both participating NH EPPs for early childhood certification addressed all NH ED 600 standards and the corresponding NH ED 500 endorsement standards relevant to reading, and 4 out of 5 participating NH EPPs did so for elementary education certification. The NH ED 600 elementary education standard that was not detected in EPP #1 was NH-EE V1b: Text complexity. While most of the participating NH EPPs are well aligned with the NH ED 600 standards relevant to reading, the standards themselves are generally less rigorous and comprehensive than comparative state and national standards.[11]

[11]Based on RMC's analysis of the corresponding NH Ed 500 and Ed 600 standards and comparison of these standards to select states and nations, the NH standards appear to be less rigorous in the areas of teacher candidate academic requirements and teacher selection standards, have shorter or unspecified preservice candidates' clinical experiences, have a lower degree of alignment between the programs and the school curriculum, and have less emphasis on pedagogical content knowledge across endorsement areas.

While most of the participating NH EPPs are well-aligned with the NH ED 600 standards and corresponding NH ED 500 endorsement standards relevant to reading, the standards themselves are generally less rigorous and comprehensive than comparative state and national standards.

Exhibit 3
Course Content Review Results Alignment to NH ED 600 Standards Relevant to Reading

EPP	Early Childhood Education (ECE)	Elementary Education (EE)
EPP #1	ALL	NEARLY ALL
EPP #2		ALL
EPP #3		ALL
EPP #4		ALL
EPP #5	ALL	
EPP #6		ALL

Exhibit 4 shows which of the 16 NELP predictive and contributing variables were detected across the ECE literacy courses and associated materials for participating NH ECE EPPs. Based on course content review findings, both participating NH ECE EPPs (*n* = 2) align with most (12 out of 16) of the variables identified in the NELP report. The largest proportion of variables detected was among the contributing variables while the participating NH ECE EPPs are least aligned to the highly predictive variables. The participating NH ECE EPPs address:

- 3/6 of the highly predictive NELP-identified predictive variables;
- 4/5 of the moderately predictive variables; and
- 5/5 of the NELP-identified contributing variables.

In both NH ECE EPPs, the highly predictive variables of rapid automatized naming (RAN) letter or digests, RAN objects or colors, and phonological memory were not detected, and the moderately predictive variable of visual processing was not detected.

EPP #1 and EPP #5

Highly Predictive Variables	HALF
Moderately Predictive Variables	MOST
Contributing Variables	ALL

The largest proportion of NELP variables detected was among the contributing variables while the participating NH ECE EPPs are least aligned to the highly predictive variables.

Exhibit 4
National Early Literacy Panel: Early Childhood Education
NH EPP Alignment

NELP Findings	EPP #1	EPP #5
HIGHLY PREDICTIVE Variables		
NH ECE V3a1 Alphabet knowledge	✔	✔
NH ECE V3a2 Phonological awareness	✔	✔
NH ECE V3a3 RAN[a]: Letters or Digits	✘	✘
NH ECE V3a4 RAN[a]: Objects or Colors	✘	✘
NH ECE V3a5 Writing or writing name	✔	✔
NH ECE V3a6 Phonological Memory	✘	✘
MODERATELY PREDICTIVE Variables		
NH ECE V3b1 Concept of Print	✔	✔
NH ECE V3b2 Print knowledge	✔	✔
NH ECE V3b3 Reading Readiness	✔	✔
NH ECE V3b4 Oral language	✔	✔
NH ECE V3b5 Visual processing	✘	✘
CONTRIBUTING Variables		
NH ECE V3c1 Code-focused interventions	✔	✔
NH ECE V3c2 Book-sharing interventions	✔	✔
NH ECE V3c3 Home and parent programs	✔	✔
NH ECE V3c4 Preschool and K programs	✔	✔
NH ECE V3c5 Language-enhancement interventions	✔	✔

✔ = Yes, variable detected in content review
✘ = No, variable not detected
[a]Rapid Automatized Naming: Introduced to EPP #1 ECE preservice candidates in one course but not presented in the other course.

To further examine the extent and how participating NH EPPs apply the ED 600 standards relative to reading, RMC used the innovation configuration (IC) matrix for Evidence-Based Reading Instruction Grades K–5 (Lane, 2014) to identify which of the 10 components essential to

The participating NH EPPs address all 10 essential components specific to reading within academic in-class settings, however, there is variability among the EPPs in the amount and type of field preparation and clinical practice opportunities aligned to evidence-based reading strategies available to preservice candidates.

reading and evidence-based reading instruction are addressed in the submitted courses and their extent of implementation across a learning continuum from Levels 1 to 3. (See Key to Implementation Levels). The IC matrix also mirrors the recommendations for the teaching of evidence-based reading identified in the IES practice guides.

Key to Implementation Levels	
Level 1	Contains ≥1 Academic In-Class Item (e.g., Demonstration, Lecture, Reading, Discussion, Quiz, Test)
Level 2	Contains >1 Level 2 Field Preparation Item In and/or Out of Class (e.g., Observation, Follow-Up Activity, Project, Case Study, Lesson Planning) AND >1 Level 1 Academic In-Class Item
Level 3	Contains >1 Field Experience Item Working with Students (e.g., Tutoring, Small Group Teaching, Whole Group Instruction) AND >1 Level 1 Academic In-Class Item AND >1 Level 2 Field Preparation Item

Exhibit 5 details the aggregate degree of implementation for the 10 components of the IC matrix essential to reading and evidence-based reading instruction represented in the participating NH EPPs syllabi and associated materials. The implementation levels span from Level 1: academic in-class learning (lowest), to Level 2: field preparation, to Level 3: clinical activities with students (highest).

While 6 out of 6 participating NH EPPs address all 10 essential components specific to reading within academic in-class settings (Level 1), there is variability among the EPPs in the amount and type of field preparation and clinical practice opportunities aligned to evidence-based reading strategies available to preservice candidates (Levels 2 and 3). Across the participating NH EPPs, there are 96% total Level 1 learning opportunities specific to reading within academic in-class settings for preservice candidates, 70% total Level 2 practice opportunities for preservice candidates to deliver evidence-based reading strategies with students, and 54% total Level 3 practice opportunities for preservice candidates to deliver evidence-based reading strategies in field placement. This suggests a decrease in opportunities for preservice candidates to practice and implement evidence-based reading strategies as these opportunities shift from academic learning to more practical application experiences within realistic contexts.

Exhibit 5
Implementation Levels of the IC Matrix Essential Reading Components by Participating NH EPPs

Major Reading Components: Content and Practice	EPP #1	EPP #2	EPP #3	EPP #4	EPP #5	EPP #6
Influences on Reading Policy and Practice in the United States	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 1/2 L2 =1/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 1/3 L3 = ✘	✔ L1 = 4/4 L2 = 1/4 L3 = ✘	✔ L1 = 1/1 L2 = ✘ L3 = ✘
Foundation Concepts About Oral and Written Language	✔ L1 = 3/3 L2 = 3/3 L3 = 1/3	✔ L1 = 2/2 L2 = 1/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 3/3 L2 = 2/3 L3 = 1/2	✔ L1 = 4/4 L2 = 1/4 L3 = ✘	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Phonemic Awareness	✔ L1 = 3/3 L2 = 3/3 L3 = ✘	✔ L1 = 1/2 L2 = 1/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 3/3 L2 = 3/3 L3 = ✘	✔ L1 = 3/4 L2 = 1/4 L3 = ✘	✔ L1 = 1/1 L2 = ✘ L3 = ✘
Decoding (Instruction and Principles)	✔ L1 = 3/3 L2 = 3/3 L3 = 1/3	✔ L1 = 2/2 L2 = 2/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 3/3 L3 = 2/2	✔ L1 = 3/4 L2 = 1/4 L3 = 1/4	✔ L1 = 1/1 L2 = ✘ L3 = ✘
Fluency (Role, Instruction, and Assessment)	✔ L1 = 2/2 L2 = 1/2 L3 = ½	✔ L1 = 2/2 L2 = 2/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 2/3 L3 = 2/3	✔ L1 = 4/4 L2 = ✘ L3 = ✘	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Vocabulary (Types, Role, and Instruction)	✔ L1 = 3/3 L2 = 3/3 L3 = 2/3	✔ L1 = 2/2 L2 = 2/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 2/3 L3 = ✘	✔ L1 = 4/4 L2 = ✘ L3 = ✘	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Comprehension (Instruction and Strategies)	✔ L1 = 3/3 L2 = 3/3 L3 = 2/3	✔ L1 = 2/2 L2 = 2/2 L3 = 1/1	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 3/3 L3 = 2/3	✔ L1 = 4/4 L2 = 1/4 L3 = 1/4	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1

Major Reading Components: Content and Practice	EPP #1	EPP #2	EPP #3	EPP #4	EPP #5	EPP #6
Explicit and Systematic Instruction	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 1/2 L2 = 1/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 1/3 L3 = ✘	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Organization for Instruction	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 2/2 L2 = 1/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 2/3 L3 = 1/2	✔ L1 = 3/3 L2 = 1/3 L3 = ✘	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Literacy Assessment	✔ L1 = 2/2 L2 = 2/2 L3 = 2/2	✔ L1 = 2/2 L2 = 2/2 L3 = ✘	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 3/3 L3 = 3/3	✔ L1 = 4/4 L2 = 2/4 L3 = 2/4	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Total Levels	L1=25/25 L2=24/25 L3=15/25	L1=17/20 L2=15/20 L3=1/10	L1=20/20 L2=20/20 L3=12/20	L1=29/29 L2=23/29 L3=12/23	L1=36/38 L2=9/38 L3=4/26	L1=10/10 L2=7/10 L3=7/10
Total Practice-Based Learning Opportunities[a,b]	L2 + L3 = 39/50 78%	L2 + L3 = 16/30 53%	L2 + L3 = 32/40 80%	L2 + L3 = 35/52 67%	L2 + L3 = 13/64 20%	L2 + L3 = 14/20 70%

✔ = Detected
✘ = Not detected

[a]Total Practice-Based Learning Opportunities include Implementation Level 2 (L2) and Implementation Level 3 (L3).
[b]Variability across and within EPPs (e.g., assessment vs linguistics course) can impact the total number of learning opportunities across Implementation Levels 2 and 3.

Though some student NHTCAP projects include instructional approaches not aligned to evidence-based reading strategies, RMC detected indications that the participating NH EPPs are transitioning to evidence-based reading strategies.

Student NHTCAP Projects

Review of student NHTCAP projects and scored rubrics provide additional insight on preservice candidates' understanding and application of many of the IC matrix reading components, including planning and delivering evidence-based instruction of foundational skills during student teaching.

Results suggest some preservice candidates:

- Application of instructional approaches and assessment practices are misaligned to evidence-based reading strategies despite what may have been covered in prior coursework.
- Need more support in selecting high-quality instructional materials for evidence-based reading instruction and clarifying which reading practices are aligned to research evidence (e.g., alphabetic reading levels).
- Would benefit from more targeted practice-based learning opportunities and feedback related to structured literacy content, specifically differentiation and tiered supports and may need conceptual understanding clarified related to evidence-based grouping and assessment practices, especially for foundational reading skills.

Though some student NHTCAP projects include instructional approaches not aligned to evidence-based reading strategies, RMC detected indications that the participating NH EPPs are transitioning to evidence-based reading strategies.

Interview Findings

Across interviewees, there was variation in familiarity with the NH ED 600 standards, ranging from unfamiliar to familiar. Despite, the variation in familiarity with the standards among interviewees, they were all able to accurately explain how the EPPs' coursework reflected the standards when prompted.

Analysis of EPP #1 interviewee responses (n = 4) indicate that the 5 components of reading[12] are taught with intention in at least 2 of the 3 courses. One of these courses uses a literacy handbook as a method to strengthen preservice candidates' application of the 5 components in practice. Beyond the literacy handbook, it is not clear how application of

[12] Phonemic awareness, phonics, fluency, vocabulary, and comprehension.

the content is supported in the field application. Two thirds of faculty interviewed knew the ED 600 standards.

Analysis of EPP #2 interviewees (n = 3) indicate one third were familiar with the ED 600 standards (faculty member). While the other faculty member and field supervisor were unfamiliar with them, the faculty member teaches the "pillars of reading instruction and assessment methods to drive instruction" and the field supervisor "knows the EPP is working to emphasize the science of reading."

Analysis of EPP #3 faculty interviewee responses (n = 1) indicate that the faculty interviewee perceived that the literacy courses are designed specifically to teach the 5 components of reading and their application to build preservice candidates' conceptual knowledge of the reading components what they look like in practice. The faculty interviewee provided examples of how coursework and field placement experience focus more deeply on specific reading skill areas and how preservice candidates apply their learning by conducting meeting with parents about their children's literacy learning and determining how to strengthen children's literacy informed by assessment data.

Analysis of EPP #4 interviewee responses indicate that both mentor teachers noted a shift toward incorporating "the science of reading" in EPP #4's coursework over the past 2 to 3 years. However, one mentor teacher stated that this shift is insufficient, noting gaps in pre-service candidates' knowledge. Both mentor teachers also mentioned the degree to which the practices and resources in their schools (i.e., preservice candidates' field placement sites) are aligned to evidence-based reading strategies. One mentor teacher noted that their "school is shifting to science of reading. We were all Lucy Caulkins. We realize the need to go back to basics of sound letter correspondence." Another said that the school still has "all our Lucy Caulkins units and candidates need to know that it's not appropriate for kids who still have sound-letter difficulties."

The faculty interviewee from EPP #5 reviewed each component from the 600 standards and discussed where in the program preservice candidates receive instruction in that area (e.g., expressive and receptive language and their role in literacy development, vocabulary development, grapheme awareness, print concepts, writing conventions, and major indicators and accommodations for common literacy difficulties).

Analysis of EPP #6 faculty interviewee responses (n = 1) indicate that the individual is unfamiliar with the ED 600 standards yet reviewed them and explained how the reading components are addressed in the course. The

Across interviewees, there was variation in familiarity with the NH ED 600 standards, ranging from unfamiliar to familiar.

"

Our school is shifting to science of reading. We were all Lucy Caulkins. We realize the need to go back to basics of sound letter correspondence.

Mentor Teacher

faculty interviewee perceived that EPP #6 has shifted significantly to evidence-based reading strategies.

Most of the participating NH EPPs are in the installation stage of implementing structured literacy in their preparation programs.

EPP Preparation in Key Content of Structured Literacy Instruction

Preservice candidate preparation for the teaching of reading entails a continuum of content knowledge-building, application, and instructional skill development. Consequently, the process of EPPs transitioning to course requirements associated with knowledge and applied practices for teaching children to read based on structured literacy is complex due to:

- The nature of structured literacy instruction. The body of key structured literacy content knowledge is comprehensive, and high-leverage practices (i.e., explicit, systematic) that are part of structured literacy lessons require a more methodical process with precise delivery in comparison to other instructional approaches. The nature of structured literacy instruction elicits need for strategic and sustained educator preparation practices to sufficiently develop preservice candidate instructional skills and readiness for the field.
- Multiple factors at the system level. This includes program and course of study implications as well as shifts in structures, processes, course materials, time, and personnel at the institutional level.

Content review findings indicate that most of the participating NH EPPs are in the installation stage[13] of implementing structured literacy in their preparation programs.

Literacy courses across participating NH EPPs:

- **Provide foundational language-based content in the context of academic learning (implementation Level 1) for all 8 key structured literacy content areas.**
- **Incorporate practice opportunities with potential[14] of preparing preservice candidates to deliver structured literacy instruction (46% Total NH EPP practice opportunities).**

[13]There are 4 functional Implementation Stages: Exploration, Installation, Initial Implementation, Full Implementation. Stages of implementation do not cleanly end as another begins (NIRN, 2015).
[14]The courses present potential opportunities to implement structured literacy instruction as the alignment of course activities to structured literacy instruction is unclear.

Exhibit 6 shows the participating NH EPPs course content review findings for learning the 8 key language-based content areas essential to structured literacy instruction, including the number of key structured literacy content areas presented in Implementation Level 1 and applied across Implementation Levels 2 and 3 per participating NH EPP. Content elements were identified through review of course syllabi and associated text readings, activities, projects, materials, and application assignments, including field-based work (i.e., small-group lesson). Also, RMC considered essential principles of structured literacy (as defined by NHED), including application opportunities regarding the "how" of structured literacy instructional practice such as explicit delivery, systematic and cumulative progression of skills and concepts, and targeted prompt feedback.

Results show that 6 of the 6 participating NH EPPs provide foundational language-based content *in the context of academic learning* (Implementation Level 1) for all (8/8) key structured literacy content items. Exhibit 6 indicates a spectrum of instructional practices for structured literacy across the participating NH EPPs. Collectively, the NH EPP text materials contain an assortment of structured literacy content elements with different types and degrees of follow-up learning opportunities. In general, course planning, practicing (Implementation Level 2), or implementation of structured literacy lessons with students (Implementation Level 3) were not explicitly detected in the content review across the EPPs. Therefore, most of the participating NH EPPs provide preservice candidates with field experiences and clinical opportunities that minimally align with and incorporate language-based structured literacy content knowledge. Across the participating NH EPPs, **there are 95% total Level 1 learning opportunities specific to reading within academic in-class settings for preservice candidates, 56% total Level 2 practice opportunities for preservice candidates to engage in preliminary structured literacy field preparation activities, and 31% total Level 3 practice opportunities for preservice candidates to deliver structured literacy instruction to students in field placement.** This suggests a decrease in opportunities for preservice candidates to both practice and implement structured literacy as these opportunities shift from academic learning to more practical application experiences within realistic contexts.

Overall, Exhibit 6 course review findings indicate that most of the participating NH EPPs are in the installation stage of structured literacy implementation; however, one EPP appears to be in the initial implementation stage. EPP #3 has aligned the language-based content

knowledge and explicit, systematic application opportunities to plan and practice the delivery of structured literacy instruction in classroom settings with students.

Exhibit 6
Implementation Levels of Structured Literacy Content Areas by Participating NH EPP

Structured Literacy Key Content Area	EPP #1	EPP #2	EPP #3	EPP #4	EPP #5	EPP #6
Phonology/ Phonemes	✔ L1 = 2/2 L2 =0/2 L3 = 0/2	✔ L1 = 1/2 L2 =1/2 L3 = 0/1	✔ L1 =2/2 L2 =2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 1/3 L3 = 0/3	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1
Graphemes	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 1/2 L2 =1/2 L3 = 0/1	✔ L1 = 2/2 L2 = 2/2 L3 =1/2	✔ L1 = 3/3 L2 = 3/3 L3 = 3/3	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1
Syllable Patterns	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 1/2 L2 = 1/2 L3 = 0/1	✔ L1 = 2/2 L2 =2/2 L3 = 1/2	✔ L1 = 3/3 L2 = 3/3 L3 = 1/3	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1
Orthography	✔ L1 = 2/2 L2 = 1/2 L3 = 1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/1	✔ L1 = 2/2 L2 = 2/2 L3 =1/2	✔ L1 = 3/3 L2 = 1/3 L3 = 0/3	✔ L1 =1/1 L2 = 1/1 L3 = 1/1	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1
Decoding Automaticity/ Fluency	✔ L1 = 2/2 L2 = 1/2 L3 =1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/1	✔ L1 = 2/2 L2 = 1/2 L3 = 1/2	✔ L1 = 3/3 L2 = 1/3 L3 =2/3	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Morphology/ Morphemes	✔ L1 = 2/2 L2 = 1/2 L3 = 1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/1	✔ L1 = 2/2 L2 =2/2 L3 = 1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/2	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Sentence Structure/Grammar	✔ L1 = 2/2 L2 = 1/2 L3 = 0/2	✔ L1 = 1/2 L2 = 0/2 L3 = 0/1	✔ L1 = 2/2 L2 = 0/2 L3 = 0/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/2	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1
Text Structure	✔ L1 = 2/2 L2 = 1/2 L3 = 1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/1	✔ L1 = 2/2 L2 = 2/2 L3 = 1/2	✔ L1 = 2/2 L2 = 1/2 L3 = 0/2	✔ L1 = 1/1 L2 = 0/1 L3 = 0/1	✔ L1 = 1/1 L2 = 1/1 L3 = 1/1

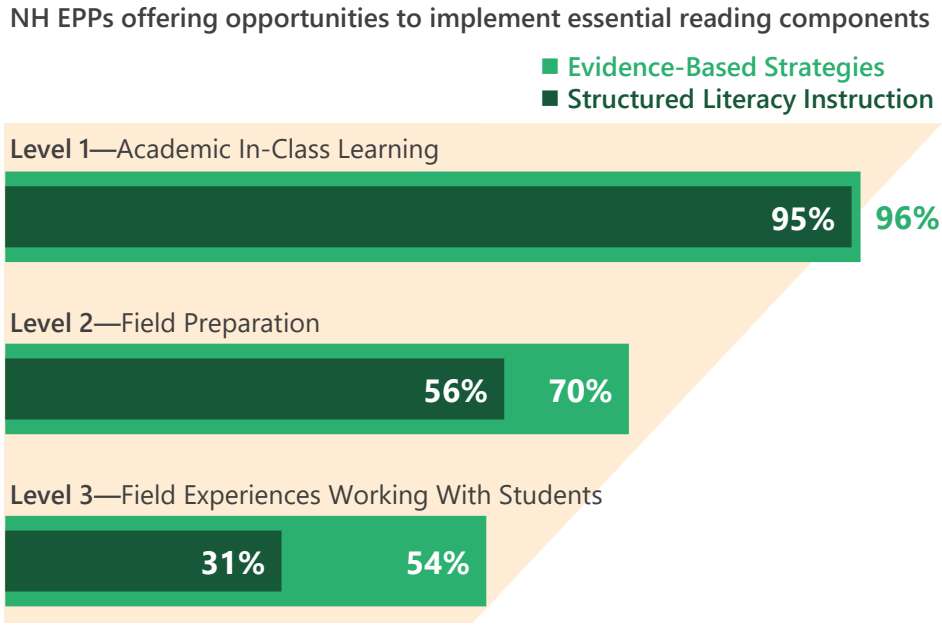
Structured Literacy Key Content Area	EPP #1	EPP #2	EPP #3	EPP #4	EPP #5	EPP #6
Total Levels	✔ L1 = 16/16 L2 = 9/16 L3 = 6/16	✔ L1 = 12/16 L2 = 7/16 L3 = 0/8	✔ L1 = 16/16 L2 = 13/16 L3 = 7/16	✔ L1 = 21/21 L2 = 12/21 L3 = 6/21	✔ L1 = 8/8 L2 = 3/8 L3 = 3/8	✔ L1 = 8/8 L2 = 4/8 L3 = 4/8
Total Practice-Based Learning Opportunities[a,b]	L2 + L3 = 15/32 47%	L2 + L3 = 7/24 29%	L2 + L3 = 20/32 63%	L2 + L3 = 18/42 43%	L2 + L3 = 6/16 38%	L2 + L3 = 8/16 50%

[a]Total practice-based learning opportunities include all Implementation Levels 2 and 3 practical experiences across key content areas of structured literacy. [b]Variability across and within EPPs (e.g., assessment vs linguistics course) can impact the total number of learning opportunities across Implementation Levels 2 and 3.

As Exhibit 7 shows, EPPs offer increasingly fewer opportunities for practical application of essential reading component knowledge in both field preparation activities (Level 2) and field experiences delivering reading lessons to students (Level 3) compared to academic learning opportunities (Level 1).

The IC matrix essential reading components are a broad category encompassing a variety of evidence-based reading instructional strategies. The tapered effect is even more pronounced for Structured Literacy, a specific type of comprehensive evidence-based reading strategy that requires more systematic and precise teaching over time. This finding suggests that EPPs are not sufficiently prioritizing real-world implementation of evidence-based reading instruction in each of the essential reading components. It also suggests that Structured Literacy preparation will require more intentional EPP planning and coordination to ensure Structured Literacy instructional skill development and field readiness.

Exhibit 7
The Tapered Effect of IC Matrix Essential Reading Component Implementation



Based on content review results of the participating NH EPPs, the following themes on the implementation of structured literacy emerged:

Variability Among EPPs in Addressing Structured Literacy. RMC detected notable variations across participating NH EPPs in effort to address structured literacy practices. Some EPPs focused on a range of language-based components of structured literacy, and to differing degrees, while others also addressed some of the instructional elements of structured literacy. Patterns of variability include:

- **External Resource Use—**A few EPPs are currently drawing from external sources (e.g., Reading Rockets, free or paid online modules or reading course) as a means of providing preservice candidates with text resources and information on structured literacy and best practices in teaching reading. Based on preliminary findings, it is unclear how and to what extent the EPP course learning activities and application opportunities are connected to or integrated with these outsourced resources.
- **Course Alignment—**Several EPPs address "Science of Reading" as a class topic, however, they use reading material, class activities, and/or assignments that do not align to evidence-based reading strategies and structured literacy. This misalignment appears within a single course and across 2 EPP courses.
- **Focus on Dyslexia—**EPP coursework focusing on the characteristics and instructional needs of students with dyslexia largely do not include an explicit reference to structured literacy as an effective evidence-based practice for students with dyslexia.

Differences in EPP Course Design Affects Access to Literacy Content. The variability across participating NH EPPs is greatest between early childhood education (ECE) that spans birth through age 8 (or Grade 2) for NH ECE certification and the elementary education preparation programs (K–8/K–8 NH certification). In general, the design of several ECE courses include shared time and focus among literacy, science, math, social studies, limiting learning opportunities for preservice candidates to acquire knowledge of the major reading components and instructional skill in reading. Also, the autonomy that ECE preservice candidates have in selecting courses and content-area topics for required course assignments affects their exposure to evidence-based literacy content and structured literacy practices.

This contrasts with the course design in participating NH EE EPPs. These courses with in-class academic learning are dedicated to the topic of

literacy and the teaching of reading. The elementary education internship course syllabi contain content-area information such as math, science, and social studies; however, this information is not presented as a competing option from which elementary literacy preservice candidates must chose for engaging in practicum activities. These differences in the course designs of ECE and elementary education courses, and their associated internship placements, would impact the breadth and depth of preservice candidates' knowledge and skill in preparation for the teaching of reading, particularly reading instruction in Grades K–2 classrooms.

A Spectrum of Instructional Practices for Learning the Key Language-Based Content of Structured Literacy. The findings illuminate the spectrum of EPP instructional practices addressing key language-based content that is essential to structured literacy. Key language-based content includes specific elements (e.g., phonemes, morphemes) of the language domain that serve as building blocks of the major reading components (e.g., phonemic awareness, vocabulary) for the teaching of reading. Taken together, the participating NH EPPs have provided text materials containing various aspects of language-based structured literacy content with different types and degrees of follow-up learning opportunities.

Preservice Candidate Survey Findings

The preservice candidate survey was sent to 47 preservice candidates total (10 from EPP #4, 8 from EPP #1, 9 from EPP #3, 10 from EPP #2, and 10 from EPP #6). A total of 3 surveys were returned (6.4% response rate; an additional one accessed the survey but did not complete any items). The 3 respondents to the preservice candidate survey reported that they attended EPP #2, EPP #3, and EPP #4.

The overall low response rate, and limited representation across participating NH EPPs limits the depth of analysis and inference from these data and comparisons across NH EPPs. However, even with a limited number of responses from across 3 EPPs, it is interesting to consider those characteristics of programs that all respondents identified as being present to a great or considerable extent, as well as those characteristics of programs for which the preservice candidates' responses differed from each other.

Exhibit 8 presents closed-ended survey findings from NH EPP preservice candidates about preparation in Structured Literacy instruction (n = 3). The number in each cell represents the number of respondents who selected that response option. The level of agreement reported by preservice candidate varied among and within survey questions. However,

2 preservice candidates agreed to a considerable extent that they receive feedback in teaching reading in their field-based experiences and that their program prepares them to be a teacher of structured literacy, while 3 preservice candidates agreed to a considerable extent that their coursework in teaching reading reflects their field-based experiences. Also, 2 preservice candidates greatly agreed that they receive feedback from their mentor teachers on their implementation of structured literacy practices.

Structured literacy is defined as evidence-based reading instruction practices that prioritizes the acquisition of language, including phonological and phonemic awareness, phonics and spelling, fluency, vocabulary, oral language, and comprehension that can be differentiated to meet the needs of individual students.

Exhibit 8
Preservice Candidate Survey Findings of Participating NH EPP Preparation in Structured Literacy Instruction

To what extent did you . . .	None	Some	Moderate	Considerable	Great
Have opportunities to apply knowledge in teaching reading to practice?			1	1	1
Receive feedback in teaching reading in your coursework?		1		1	1
Receive feedback in teaching reading in your field-based experiences?				2	1
[Your] coursework in teaching reading reflect your field-based experiences?				3	
[Your] coursework include instructional modeling and practice for structured literacy?		1		1	1
Receive feedback from your professors on your implementation of structured literacy practices?		1		1	1
Receive feedback from your supervising teacher on your implementation of structured literacy practices?		1		1	1
Receive feedback from your mentor teacher on your implementation of structured literacy practices?				1	2
[Your] program prepare you to be a teacher in structured literacy?				2	1

Respondents = 3

Program Graduate Survey Findings

The program graduate survey was sent to 676 graduates total (122 from EPP #4, 249 from EPP #1, 132 from EPP #3, 163 from EPP #2, and 10 from EPP #6). A total of 14 surveys were returned (2% response rate; an additional 19 started the survey but did not complete any items). One respondent did not specify the EPP associated with their responses (i.e., "several"). Exhibit 9 shows that responses were received from program graduates of several EPPs. Overall half of the responses came from program graduates from EPP #1 and more than one third from EPP #2. This set of survey responses is not sufficiently large to generate inferences or draw conclusions about specific participating NH EPPs. Because it is also very small compared to the total pool of program graduates, any conclusions drawn from this sample should be made cautiously and further data collection for deeper exploration is needed.

Exhibit 9
EPPs Attended by Recent Graduate Survey Respondents

EPP	EPPs Attended	
EPP #1	7	■■■■■■■
EPP #2	3	■■■
EPP #3	1	■
EPP #4	2	■■
Other	1	■

Note. 2 respondents indicated more than one institution, including one that reported "several."

Exhibits 10–12 present closed-ended survey findings from participating NH EPP program graduates about preparation in Structured Literacy instruction (n = 14).

Program Characteristics: Coursework

Program graduates were asked to rate the extent to which coursework in their EPPs provided them with opportunities to learn and apply knowledge and received feedback about reading and receive feedback through their coursework (see Exhibit 10). Overall, items about coursework completed by program graduates reflects a mixed set of experiences, with large proportions of program graduates having limited coursework-based experiences (not at all or only somewhat) to support structured literacy. Further, very few program graduate respondents indicated that their coursework provided these opportunities to a great extent. Overall, this suggests program graduates' exposure through coursework to important opportunities to learn about and practice applying structured literacy are limited.

Exhibit 10
Program Graduate Ratings of Key Program Characteristics Involving Coursework

Students . . .	None	Some	Moderate	Considerable	Great
Had opportunities to apply knowledge in teaching reading to practice.	7%	21%	**36%**	21%	14%
Received feedback in teaching reading in their coursework.	0%	**29%**	**29%**	21%	21%
Had coursework in teaching reading that reflect their field-based experiences.	7%	**36%**	29%	21%	7%
Coursework included instructional modeling and practice for structured literacy.	**36%**	29%	14%	14%	7%

Respondents = 14.

Program Characteristics: Feedback

Program graduates also rated the extent to which their EPPs provided them with feedback—from faculty, field supervisors, and mentor teachers (see Exhibit 11). Overall, most program graduate respondents reported no or only some presences of feedback loops in their EPPs. This pattern repeated for each of the feedback loops program graduates were asked about but was especially stark when it came to feedback from their faculty on their implementation of structured literacy practices. This mirrored their experiences getting feedback from their field supervisors with just over half reporting this was present not at all or only somewhat. Program graduates' reports about feedback from mentor teachers, however, was somewhat more positive, with half indicating this was present to a considerable or great extent. Nearly 2 in 5 program graduates reported this was the case only to some extent or not at all.

Exhibit 11
Program Graduates' Ratings of Key Program Characteristics Involving Feedback

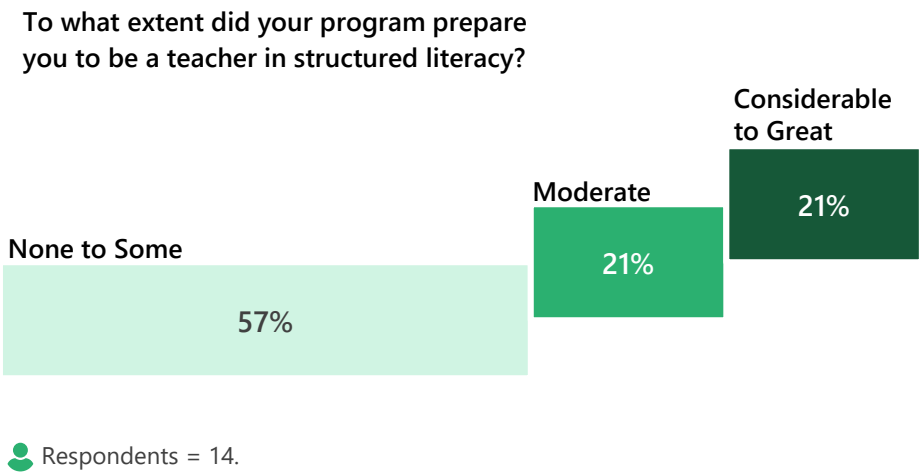
Students received feedback . . .	None	Some	Moderate	Considerable	Great
On teaching reading in their field-based experiences.	0%	**43%**	29%	21%	7%
From professors on their implementation of structured literacy practices.	**36%**	21%	29%	7%	7%
From their supervising teacher on their implementation of structured literacy practices.	**36%**	14%	21%	21%	7%
From their mentor teacher on their implementation of structured literacy practices.	21%	21%	7%	**29%**	21%

Respondents = 14.

Program Characteristics: Overall

Lastly, program graduates rated the extent to which their EPPs prepared them to be a teacher in structured literacy. Overall, Exhibit 12 shows program graduates thought their EPPs did not prepare them to be a teacher in structured literacy. More than half indicated that their EPP provided them with some to no preparation to teach through structured literacy while one in 5 reported that their EPP prepared them to a considerable or great extent.

Exhibit 12
Program Graduates' Ratings of Preparation to Teach Structured Literacy



Program graduates indicated that foundational reading knowledge, observation and in-class experience, and coaching and feedback are important for high-quality preparation as teachers of reading.

Among preservice candidates and program graduates, there are differing perceptions of program quality, but agreement on the importance of feedback from professionals (but limited access to it).

Survey Themes

Preservice candidates' survey responses vary and reveal a few themes regarding high-quality preparation as teachers of reading: the importance of experience and feedback. Collectively, this modest set of preservice candidate survey responses generally suggest that their EPPs are providing coursework to support their use of structured literacy and to be effective reading teachers. In both ratings and in more general questions, one respondent highlighted the importance of feedback even though it was not rated as consistently present across the 3 EPPs.

Likewise, program graduates' survey responses revealed some themes regarding high-quality preparation as teachers of reading:

- **Foundational knowledge**—Respondents highlighted the need for course content and opportunities to observe lessons that focus on foundational reading skills. At the same time, several comments indicated that this knowledge may not be as present in EPPs, and there was some concern about whether faculty and field supervisors had this knowledge themselves. Several times respondents mentioned specific training (LETRS) that they had to supplement their preparation.
- **Observation and in-class experience**—Respondents wrote about the importance of observing reading specialists and classroom teachers providing high quality reading instruction from which they could learn. They further specified not just the instruction, but also planning the lesson(s), and connecting to the curriculum and testing.
- **Feedback and coaching**—Respondents also noted the value in receiving feedback on their own instruction, typically through field observation, as well as working with mentors and receiving coaching.

Together these respondent comments provide some clear guidance on the structure and content of EPPs. These are largely consistent with the New Hampshire guidelines that include foundational knowledge and classroom experience with feedback.

Overall, the total number of survey responses was low so any conclusions should be viewed with some caution. In addition, although the data reflect many NH EPPs, there are not enough responses from any single EPP to allow comparisons across participating NH EPPs. Within these limits, however, there are themes that arose across the responses sets that are worth noting for their consistency.

Differing Perceptions of Program Quality. Overall, the majority of program graduates reported that their EPPs prepared them to teacher structured literacy to some or no extent, while all the preservice candidates reported their programs were preparing them to a considerable or great extent. These responses closely parallelled responses about the coursework, with preservice candidates more positive with regards to opportunities to learn and apply knowledge and receive feedback about reading and through their coursework. Because the data do not support linking responses across surveys to specific participating NH EPPs, it is possible this reflects real differences in experiences, as the responses may refer to different EPPs as well as different time periods. But at face value this suggests a general difference in perception between preservice candidates and program graduates who now have deeper experience in classrooms. Program graduates may think they are prepared, but once in the classroom realize that they are not as prepared as they thought.

Importance of Feedback but Limited Access to It. Both sets of surveys showed somewhat mixed experiences with feedback from faculty, field supervisors, and mentor teachers. When asked to rate these aspects of their EPPs, and when asked to provide broad feedback through open-ended responses, both preservice candidates and program graduates saw the value in receiving feedback throughout their coursework and field experiences in helping them be more effective teachers. Given the importance of in-class experience suggested above, ensuring high quality feedback along with that experience would seem to be critical to reducing the inconsistencies across these survey respondents' EPPs.

These 2 surveys provide some insight into the participating NH EPPs. While the low response rate limits the degree to which these data can and should be analyzed, they are suggestive in their consistency. Similar data could be collected at the EPP level, which would likely yield a modest number of responses, but these could be used as part of a continuous improvement process. Surveys of program graduates reflecting on their preparation experiences through the lens of early career teachers, can likewise provide insights into areas that participating NH EPPs may improve. Importantly, the likely response pool of program graduates would be larger (as it is here) if taken in total potentially allowing for deeper analysis of relationships among the data. In both instances, ongoing collection of data like those reported here, can contribute to ongoing program improvement.

Where are the gaps in preparation and what changes are recommended[15] to strengthen NH EPPs?

Following are the aggregate themes from the participating NH EPPs on the gaps in preparation and implementing reading pedagogy and content, including structured literacy. The identified gaps in Exhibit 13 reflect each participating NH EPP's stage of evidence-based reading implementation.

Participating NH EPPs at the Installation Stage include course materials with approaches to instruction and assessment that are misaligned with evidence-based reading instructional strategies; therefore, they also include application activities that do not support instructional skill development for delivering evidence-based reading instructional strategies and structured literacy instruction in the field. Findings show evidence-based-aligned materials referenced in syllabi are underutilized in course assignments.

The participating NH EPP at the Initial Implementation Stage is aligned with evidence-based reading instructional strategies across major reading components; however, continuous improvement efforts focus on refining learning opportunities that increase preservice candidate knowledge, instructional skill, and readiness for the field.

[15]Recommendations to strengthen NH EPPs are addressed in the recommendation section of the report.

Exhibit 13
Gaps in Participating NH EPP Preparation in Reading

Identified Gap	EPP #1	#2	#3	#4	#5	#6	Total
Insufficient Time to Build Knowledge/Skill in Literacy/Reading					✔		1
Misaligned Course Materials, Activities, and Field Implementations	✔	✔		✔	✔	✔	5
Underutilized Evidence-Based Materials				✔			1
Insufficient Practice-Based Scaffolding	✔	✔		✔		✔	4
Little/No Structured Literacy Practice	✔	✔		✔	✔	✔	5
Limited Contexts Working w/Diverse Students	✔						1
Insufficient Observations of Different Class Models			✔[a]				1
Insufficient Small Group Guidance			✔[a]				1
Insufficient Review and Evaluation of HQIMs			✔[a]				1
Total per EPP	4	3	3	4	3	3	

✔ = Gap identified
[a]Initial Implementation Stage (others at Installation Stage)

The identified participating NH EPP gaps address the following topics:

- **Evidence-Based Alignment**—Misalignment of some course content, activities, and approaches in instruction and assessment (i.e., balanced literacy framework, running records) with evidence-based reading strategies (EPP #1, EPP #2, EPP #4, EPP #5, EPP #6); Underutilization of texts with evidence-based reading content in course assignments (EPP #4).
- **Course Time**—Insufficient time for literacy and reading across coursework to build knowledge and skill in all major reading components (EPP #5).

- **Practice-Based Learning Opportunities**—Insufficient practice-based learning opportunities with scaffolding to develop instructional skill in one or more major reading components (EPP #1, EPP #2, EPP #4, EPP #6). High variability in skill application of major reading components due to preservice candidate choice in course assignments. (EPP #5); Insufficient information on small group instruction (EPP #3); Insufficient reading curricular information and scaffolding of instructional materials evaluation. (EPP #3).
- **Structured Literacy Preparation**—Minimal or insufficient opportunities for preservice candidates to practice explicit delivery of all key structured literacy content in structured literacy instruction (EPP #1, EPP #2, EPP #4, EPP #5, EPP #6).
- **Field-specific learning opportunities**—Insufficient undergraduate field-based reading experiences, support, and feedback for developing reading instructional skills prior to internship (EPP #2, EPP #4); Insufficient preservice candidate observations of a variety of classroom models and instructional contexts (EPP #3); Variability across field supervisors, resulting in inconsistent quality and timely feedback to interns. (EPP #4); Limited opportunities for preservice candidates to interact within a varied range of instructional contexts and student learning needs (EPP #1).

Across interviewees, indicated gaps in preparation to teach reading and provide quality instruction for structured literacy are insufficient opportunities to apply learning and misalignment between coursework and field placement experience.

Interview Findings

Across interviewees, indicated gaps in preparation to teach reading and provide quality instruction for structured literacy are insufficient opportunities to apply learning and misalignment between coursework and field placement experience.

Analysis of EPP #1 survey responses (n = 7) indicate a gap in preparation to teach reading and provide quality instruction for structured literacy perceived by respondents: **increased opportunities for preservice candidates to not only learn about structured literacy practices but apply them too.** Also, 2 faculty interviewees noted that preservice candidates would benefit from receiving feedback immediately, even at the very introductory levels. Similarly, program graduate survey respondents reported a **disconnect between what they were learning in courses and field-based experiences.**

Analysis of EPP #2 interview responses (*n* = 4) indicate several gaps in preparation to teach reading and provide quality instruction for structured literacy indicated by interviewees. These gaps centered on i**nsufficient**

faculty collaboration and engagement and communication among those involved with student teaching internships. Regarding literacy course design and pedagogy, faculty interviewees suggested including more information on **brain research and its function in reading**. One suggested adoption of a residency model. The field supervisor interviewee was unsure how well-prepared preservice candidates are taught to differentiate for English learners and students with special needs and suggested differentiation for these populations. The preservice candidate interviewee spoke of inadequate support for the student teaching internship experience.

Analysis of EPP #3 faculty interview responses (*n* = 1) indicate challenges with preparing preservice candidates who then **enter school systems that may use reading curricula not based on research evidence.**

Analysis of EPP #4 interviewee responses (*n* = 2) indicate that both mentor teachers noted a shift toward incorporating "the science of reading" in EPP coursework over the past 2 to 3 years. However, one mentor teacher stated that this shift is insufficient, **noting gaps in preservice candidates' knowledge.**

Analysis of EPP #5 faculty interviewee responses (*n* = 1) indicate a gap in preparation to teach reading and **limited opportunity to provide quality instruction for structured literacy** due to a minimal focus on literacy in comparison to other areas of "content-focused study."

Analysis of EPP #6 interview findings (*n* = 3) indicate a few gaps in preparation to teach reading and provide quality instruction for structured literacy noted by interviewees including potential **discrepancies between what preservice candidates are learning about evidence-based reading strategies and the use of these practices in their field placement sites.** The preservice candidate interviewees (n = 2) both noted **insufficient opportunities to learn about and apply evidence-based strategies for teaching structured literacy** as a preparation gap.

Survey Findings

Survey respondents were also asked open-ended questions intended to elicit more specific information about their perceptions of how their EPPs prepare or prepared them to be effective teachers of reading. Importantly, these responses give context to the closed-ended questions about program characteristics as well as program graduates' reports that their EPPs prepared them to little or no extent to teach reading.

Analysis of preservice candidate responses (n = 3) indicate a couple of suggestions for strengthening their EPPs to better prepare them to teach reading and provide quality instruction for structured literacy:

- More experiences for upcoming teachers to practice these structured literacy skills.
- More tips on how to work in small groups with students.

Analysis of program graduate responses (n = 14) indicate numerous recommendations for strengthening their EPPs to better prepare them to teach reading and provide quality instruction for structured literacy:

- Several pointed to **the need for more focus on content, especially Science of Reading, and methods**. One respondent wrote, "I wish I had been taught about systematic and explicit instruction, which was information I ended up seeking out on my own less than a year after I graduated."
- With respect to additional training to include, 4 respondents specifically cited **LETRS training**. "LETRS training . . . is what all schools are looking for educators to have," commented one respondent. Another reported that taken a LETRS course "prepared me far more than any classes" in their EPP. Two individuals called out Orton-Gillingham specifically—one indicating current enrollment and another urging that all preservice candidates be trained by Orton-Gillingham-certified instructors.
- Two responses focused on **preparing preservice candidates** to work in schools. One respondent remarked, "I would recommend a stronger emphasis on reading programs that are used in schools. I had little understanding of the work, the time, how much was enough, etc. when it came to testing for reading levels and how to use the curriculum in my school."
- Two responses touched on **in-classroom opportunities to observe experienced teachers plan and implement lessons** and

> "I wish I had been taught about systematic and explicit instruction
>
> *Program Graduate*

> "LETRS training . . . is what all schools are looking for educators to have.
>
> *Program Graduate*

> "I had little understanding of . . . how to use the curriculum in my school.
>
> *Program Graduate*

opportunities to get immediate feedback through peer-based discussion and lesson plan implementation in the classroom.

- One respondent reflected on how programs can **accommodate the needs of professionals returning to school** stating, "We have been in the trenches and are working through our days and studying at night, on weekends and in 'spare' time to make the lives of the students we see every day better."
- Finally, although not a direct recommendation for strengthening programs, one respondent wrote: "Most professors are working from information that is dated and not correct. Field supervisors are inadequately informed and trained as well. All preservice programs must be overhauled."

Which best practices do NH EPPs employ that could be shared with others?

Best Practices in Reading Content

Course content review findings for best practices in reading content across participating NH EPPs indicate:

- The participating NH ECE EPPs provide moderate coverage of critical early literacy skills identified in the National Early Literacy Panel Report throughout course sessions.
- The participating NH EE EPPs provide moderate course coverage of evidence-based reading strategies identified by recommendations published in the IES Practice Guides.

Early Childhood Education

Course content review findings for best practices in reading content indicate the **ECE EPPs provide minimal to potentially moderate coverage of critical early literacy skills** identified in the National Early Literacy Panel Report throughout course sessions. Together, the participating NH ECE EPPs collectively address the following specific early literacy skills:

- **Alphabet knowledge**—Knowledge of names/sounds associated with printed letters.
- **Phonological awareness**—Ability to detect/manipulate/analyze auditory aspects of spoken language, including to distinguish/segment words/syllables/phonemes.
- **Concept of print**—Knowledge of print conventions (left/right, front/back) and concepts (book cover, author, text).
- **Oral language**—Ability to produce or comprehend spoken language, including vocabulary and grammar.
- **Book-sharing interventions (reading books to children)** produced statistically significant and moderate effects on print knowledge and oral language skills.
- **Home and parent programs** involving parental use of instructional techniques with children at home demonstrated statistically significant and moderate to large effects on oral language skills and general cognitive abilities.

One participating NH ECE EPP provided a general education course **option** for preservice candidates to learn the structure of the English language—phonology, phonetics, orthography/spelling, syllable patterns, morphemes—with subsequent requisite course follow-up in the phonological component (e.g., syllable clapping instructional activity) as well as embedded phonics instruction (e.g., letter-sound correspondences) within context of a read-aloud. Another ECE EPP addresses the instructional spectrum from use of literacy frameworks, balanced literacy, and integrated literacy to evidence-based literacy approaches. Prior to field experiences, the program presents Science of Reading information across 2 class sessions, relating findings of the National Early Literacy Panel and National Reading Panel Reports regarding language and literacy development and the major reading components.

Elementary Education

Course content review findings for best practices in reading content indicate **the participating NH EE EPPs provide minimal and potentially moderate course coverage of evidence-based content** identified by recommendations published in the IES Practice Guides. Together, the participating NH EE EPPs collectively address the recommendations in a general fashion as opposed to an in-depth focus on the recommendations' various subcomponents and processes (e.g., orthographic mapping, morphological analyses, text structure) that would support systematic instruction.

Best Practices in EPP Pedagogy

Exhibit 14 shows course content review findings for best practices in EPP pedagogy across participating NH EPPs (see Appendix B). Findings reveal variation in the number and type of EPP best practices in pedagogy occurring across participating NH EPPs. Five specific best practices in pedagogy appear to consistently occur across all or most the participating NH EPPs. All are general best practices except coursework-aligned, a field-based best practice.

- **Spaced learning**—Sustained, repeated, and scaffolded opportunities for preservice candidates to practice the knowledge and skills acquired in coursework over time, increasing overall effectiveness and deepening expertise.
- **Analyzing/reflecting**—Candidate opportunities to employ acquired coursework knowledge and metacognitive skills to reflect

The best practices in pedagogy that appear to consistently occur across all the participating NH EPPs are spaced learning, analyzing/reflecting and lesson study.

upon and improve practice and impact upon student learning before, during, after instruction.

- **Varied Learning**—Candidate opportunities to practice knowledge and skills learned in coursework across different contexts, student learners, and support.
- **Coaching and Feedback**—Supervisor provides input and feedback during candidates' practice of acquired knowledge and skills to improve instructional capacities, reflective practice, expertise, and independence.
- **Coursework-Aligned**—Field-based placements providing opportunities for candidates to practice acquired knowledge and skills in authentic settings that deepen candidates' knowledge for teaching and improving classroom practices.

Collectively, all participating NH EPPs provide a full continuum of high-quality practice-based opportunities with one exception: virtual simulations/lab-like experiences. Based on the content review results, it appears that **none of the NH EPPs have incorporated this campus-based best practice.** Among the participating NH EPPs, 2 methods courses from two EPPs stand out comparatively as exemplars of EPP best practices in pedagogy:

- EPP #3: Course 1 provides faculty modeling, and EE preservice candidates engage in microteaching and lesson planning as part of in-class coursework and then deliver small group instruction in field placements.
- EPP #1: Course 2 has ECE preservice candidates engage in lesson planning, small group teaching, video analysis, assessment administration, and data analysis to inform instruction.

Exhibit 14
Best EPP Pedagogical Practices Identified in Syllabi Across Participating NH EPPs

EPP General Best Practices	EPP Course Content					
	#1	#2	#3	#4	#5	#6
Modeling: Teacher educators explicitly demonstrate a practice or skill to make the underlying knowledge base and thought processes visible, providing examples of expert performance in practice.		✔	✔	✔		
Spaced Learning: Sustained, repeated, scaffolded opportunities for preservice candidates to practice the knowledge and skills acquired in coursework over time, increasing overall effectiveness and deepening expertise.	✔		✔	✔	✔	✔
Varied Learning: Preservice candidate opportunities to practice knowledge and skills learned in coursework across: ▪ Varying contexts (e.g., general ed, resource room). ▪ Diverse range of student learners. ▪ Differing degrees of support.	✔		✔	✔	✔	✔
Coaching and Feedback: Supervisor provides input and feedback during preservice candidates' practice of acquired knowledge and skills to improve instructional capacities, reflective practice, expertise, and independence.	✔		✔	✔	✔	✔
Analyzing and Reflecting: Preservice candidate opportunities to employ acquired coursework knowledge and metacognitive skills to reflect upon and improve practice and impact upon student learning before, during, and after instruction.	✔	✔	✔	✔	✔	✔
Scaffolded: Preservice candidate opportunities to apply knowledge and skills acquired through coursework and within teaching experiences of increasing complexity to improve instructional implementation, and, ultimately, autonomous performance.	✔		✔	✔		✔
Campus-Based EPP Best Practices						
Micro-Teaching: Preservice candidate opportunity to plan a lesson, teach in front of peers, receive coaching and feedback, and engage in reflection to familiarize preservice candidates with new content/strategies.		✔	✔			

EPP General Best Practices	EPP Course Content					
	#1	#2	#3	#4	#5	#6
Case-Based Instruction: A teacher educator technique that provides preservice candidates opportunity to analyze cases of instruction across various contexts for generalizing newly acquired skill-to-classroom practice.	✔	✔		✔	✔	
Simulations and Lab-Like Experiences: A teacher educator approach providing preservice candidates practice teaching in virtual environments prior to teaching students in the classroom (Clark, 2013).						
Field-Based EPP Best Practices						
Coursework-Aligned: Field-based placements providing opportunities for preservice candidates to practice acquired knowledge and skills in authentic settings that deepen preservice candidates' knowledge for teaching and improving classroom practices.	✔	✔	✔	✔	✔	✔
Video Analysis: A practice of capturing teachers' instructional experiences on video and a teacher educator tool to engage preservice candidates in observation and discussion concerning effective practice.	✔			✔	✔	✔
Tutoring: A structured opportunity to practice teaching using newly acquired pedagogical knowledge and instructional skills. It improves preservice candidates' implementation of evidence-based practices and academic performance of struggling learners.				✔		
Lesson Study: A collaborative opportunity involving teams of preservice candidates to (a) analyze student data, standards, and curriculum, (b) plan a lesson based on analyses, (c) implement instruction with students, (d) analyze instruction and its impact on student learning, and (e) debrief about the lesson and discuss next steps.		✔		✔		✔
Coaching: An educator preparation program (EPP} practice that provides feedback and coaching to preservice candidates for improving skill implementation of effective instruction.	✔					

Note. Source: Learning to Teach: Practice-based Preparation in Teacher Education, a publication of the CEEDAR Center, the Center on Great Teachers and Leaders, and the U.S. Office of Special Education Programs.

Overall interviewees indicated their EPPs' best practices in reading content and pedagogy preparation are related to program design, such as the course of study and type and format of learning experiences.

Interview Findings

Overall interviewees indicated their EPPs' best practices in reading content and pedagogy preparation are related to program design, such as the course of study and type and format of learning experiences for preservice candidates. The best practices noted by EPP #1 faculty and a field supervisor interviewee (*n* = 4) are **application of practice and engagement in practical activities, including the development of the literacy handbook**.

Analysis of EPP #2 interview responses (*n* = 4) indicate several best practices in preparation by interviewees, including preservice candidate preparation for the Foundations of Reading test and **the use of interactive and inquiry-based learning to support deeper understanding of literacy content**. The field supervisor commented that the preservice candidates are well prepared and have strong collaboration skills, an indication that they had worked together in their program. The preservice candidate shared how the individual was strategically placed in different practicum placements at various grade levels throughout the early literacy course as well as how **the early literacy and integrated methods course complemented one another**.

Analysis of EPP #3 faculty interviewee responses (*n* = 1) suggest that the overall program provides a **systematic, logical, and focused course structure designed jointly by faculty**, while EPP #5 faculty interviewee responses (*n* = 1) revealed the following perceived best practices in reading content and pedagogy preparation:

- Preservice candidates develop lesson plans that identify content and instructional strategies for meeting student learning outcomes.
- Lesson plan goals correlate with state standards.
- Lessons implemented by preservice candidates are evaluated with feedback from mentor teachers.
- By spring of the preservice candidate's senior year, practicum hours in school placement settings expand to 25 hours per week.
- The senior project places heavy emphasis on literacy with 3 fourths of the day focusing on literacy and literacy development.

The best practice noted by the EPP #6 faculty interviewee (*n* = 1) is **the design of its preparation model** (clinical experience, cohort model, collaboration and support). Both preservice candidate interviewees (*n* = 2) confirmed the strength of the clinical experience, collaboration, and

support provided by mentors and coaches. Interviewees from EPP #4 did not name specific best practices.

What are the factors at the preservice level that influence becoming an effective reading teacher?

Interviewees perceived the preservice level factors are application of learning in coursework and field experiences, receiving targeted feedback and scaffolding from professionals, deep knowledge of how children learn to read, and effective design and delivery of reading lessons to meet the needs of all students.

Overall, interviewees perceived both program design and pedagogical content knowledge factors at the preservice level as influencing becoming an effective teacher of reading. Specifically, **program design factors include application of learning in coursework and field experiences and receiving targeted feedback and scaffolding from professionals.** Pedagogical content knowledge factors include deep knowledge of how children learn to read and effective design and delivery of reading lessons to meet the needs of all students.

Interviewees (*n* = 4) from EPP #1 indicated that the factors for becoming an effective reading teacher are **a strong theoretical understanding of how children learn to read,** a wide-ranging collection of **instructional strategies and tools,** and a **supported, scaffolded pre-practicum experience t**hat allows for practical application of learning. Interviewees (*n* = 4) from EPP #2 noted these factors to be **experience with planning lessons using models** such as Understanding by Design and Universal Design for Learning to meet students' diverse learning needs and **more time in classrooms** so preservice candidates can apply coursework in schools.

The EPP #3 faculty interviewee (*n* = 1) said that the factor is **understanding the components of literacy** (what they're doing, why it is important, and that they're comfortable doing it through application and practice), whereas EPP #4 mentor teacher interviewees (*n* = 2) noted that the preservice level factors for becoming an effective reading teacher are:

- **A strong understanding of how children learn to read and more specific coursework in "breaking the code."** One mentor teacher suggested all preservice candidates be required to take LETRS training.
- Scaffolding preservice candidates' **opportunities for practical application in undergraduate literacy coursework and more clinical experience.**

Analysis of the EPP #5 faculty interviewee responses (*n* = 1) indicate that the preservice level factors are **lots of practice under the direction of skilled mentorship,** including scaffolding through the process, and alignment among courses based on the "science of reading" **and the curriculum used in practicum sites**, while EPP #6 Interviewees (*n* = 3) said

the factor is **opportunities to apply and receive feedback on teaching practice from experts and peers**.

Survey Findings

Survey respondents also shared their perspectives of the factors at the preservice level that influence becoming an effective reading teacher. Analysis of preservice candidate survey responses (n = 3) indicate the following preservice-level factors were perceived by respondents to influence becoming an effective reading teacher:

- Experience.
- Learning how to teach in a way that enables all students to gain understanding.
- Faculty and field supervisor feedback are very helpful.

Analysis of program graduates survey responses (n = 15) indicate the following preservice level factors influence becoming an effective reading teacher:

- Several respondents referred to the faculty and field supervisors as critical. One expressing the positive "great experiences and supportive people who have knowledge and background support" while another suggested the need for "better instructors and better field supervisors. These people are working from an outdated framework." Finally, one program graduate mentioned the lack of observation, writing "It would have been helpful for the observer to attend the class I was instructing. Instead of attending, she simply took my impression of how I performed."
- Several program graduates pointed to the importance of foundational knowledge in reading, "to include phonological awareness, reading decoding, reading fluency, spelling, and comprehension." Understanding how language is acquired at a young age and how reading skills should be taught, such as the scope and sequence of reading. Another added understanding the reading rope and the scope and sequence. One program graduate underscored this understanding writing, "Many new teachers in our school had no knowledge of structured literacy prior to taking LETRS."
- Two respondents noted the value of observing and receiving coaching from experienced reading teachers in the field and observing quality instruction. Another specifically suggested "there

Preservice candidates perceived the preservice level factors are experience, learning how to teach to meet the needs of all students, and feedback from professionals, while program graduates thought they are foundational knowledge in reading and access to high-quality professionals, including observing, coaching, and feedback.

could be more opportunities to spend time with reading specialists, look over a unit for reading instruction from start to finish, and seeing interventions and testing for reading levels as it is implemented by active teachers."

- Finally, one respondent noted the importance of reading disabilities course work including the topic of dyslexia and research-based assessments.

Administrative Data

As part of this research project, the following administrative data were supplied by the participating NH EPPs and provide additional program-related information to consider when examining preservice factors that may influence becoming an effective reading teacher. Exhibit 15 shows average retention rates and completion rates for each participating NH EPP overall and for full- and part-time enrollees. Exhibit 16 shows the average examination score, pass rates, and number of attempts for the Foundations of Reading Exam for each participating NH EPP. Exhibit 17 shows the average graduate employment rates and most common employment locations graduates of each participating NH EPP. Exhibit 18 compares average Grade 3 ELA state summative student assessment results in EPP field placement schools for each participating NH EPP to the average NH state scores. Varying availability of this extant data prohibited RMC from conducting further analyses and drawing conclusions.

Exhibit 15
Participating NH EPP Program Completion and Retention

		Completion		
EPP	**Retention**	**Overall**	**Full-Time**	**Part-Time[c]**
EPP #1	not collected[a]	not collected	not collected	not collected
EPP #2	not provided[b]	4 year 60% 6 year 63%	not provided	N/A
EPP #3	not collected[a]	not collected	3.82 years	N/A
EPP #4	EE Masters 100%	EE Masters 94%	not provided	N/A
EPP #5	Masters 100%	Masters 100%	Undergraduate 4 years	N/A
EPP #6	100%	77.8%	11.3 months	N/A

[a]EPP indicated in its survey responses or follow-up emails that this data is not collected. [b]EPP did not provide this data in their survey responses or via follow up requests. [c]Most programs do not have part-time enrollees.

Exhibit 16
Foundations of Reading: Scores, Pass Rates, Attempts

EPP	Examination Score[a]	Pass Rates[b]	Attempts[b]
EPP #1	251	not collected	1.2
EPP #2	248	not collected	not collected
EPP #3	245	not collected	1.3
EPP #4	ECE Masters: 263 EE Masters: 251	not collected	ECE Masters: 1 EE Masters: 1.3
EPP #5	266.7	93%	not collected
EPP #6	263.5	not collected	1.1
	Benchmark 240		

[a]Scaled total test score reported on a scale from 100 to 300 with a scaled score of 240 representing the benchmark. [b]EPP indicated in its survey responses or follow-up emails that this data is not collected.

Exhibit 17
Employment Rates and Common Employment Locations

EPP	Employment Rates	Common Employment Locations
EPP #1	not collected[a]	not collected
EPP #2	not calculable[b]	MA, NH, RI, VT
EPP #3	not collected[a]	not collected
EPP #4	ECE Masters: 100% EE Masters: 59%	Hooksett, Somersworth, Dover, NH
EPP #5	not collected[a]	not collected
EPP #6	100%	NH, VT

[a]EPP indicated in its survey responses or follow-up emails that this data is not collected. [b]Of the 46 completers in 2021–2022, 21 are employed at NH schools; 7 are employed in VT, MA, or RI; and 6 are currently in graduate school full time. The ME and CT educator employment database are not public, so the EPP cannot monitor alumni who teach in these states.

Exhibit 18
Placement Schools: Grade 3 ELA State Summative Assessment Results

		Student Score		Proficient or Above	
EPP	No. of Schools	Mean	Range	Mean	Range
EPP #1	not collected				
EPP #2	2	591	591–591	58%	54–62%
EPP #3	3	573	559–582	41%	28–51%
EPP #4	3	564.6	557–569	29%	27–31%
EPP #5	1	584	N/A	51%	N/A
EPP #6	3	597.3	593–602	63%	55–67%
NH		579.5	521–616	47%	10–88%

[a]Number of schools with NH Grade 3 data. [b]EPP indicated in its survey responses or follow-up emails that it does not collect this data. [c]NH does not report score and proficiency data for schools with N sizes smaller than 11, or for proficiency data less than 10%.

What can NH EPPs do to identify and support preservice teachers who require remediation and additional support so they become effective teachers of reading?

Interviewees indicated that aligning and balancing coursework and field placement experiences, regular communication and coordination among the professionals, and engaging in comprehensive learning opportunities in how children learn to read and structured literacy would benefit preservice candidates needing support.

Overall, interviewees shared both program design and course content suggestions for preservice candidates who require remediation and additional support so they become effective teachers of reading. Some interviewees identified supports currently in place while others offered suggestions for supports. Specifically, program design suggestions indicated to be supportive for preservice candidates are aligning and balancing coursework and field placement experiences and regular communication and coordination among the professionals working with preservice candidates. Course content suggestions include preservice candidates engaging in comprehensive learning opportunities in how children learn to read and structured literacy and EPP-offered test preparation.

EPP #1 interviewees (*n* = 4) shared that the types of remediation and support provided to preservice candidates are, **regular communication and coordination among faculty, field placement supervisors, and mentor teachers.**

EPP #2 interviewees (*n* = 4) said **providing a course in preparation for the Foundations of Reading test and workshops between faculty and candidates in further prepare for the test**.

EPP #3 faculty interviewee (*n* = 1) indicated that the types of remediation and support provided to preservice candidates are support and **resources from its Education Preparation Office**, including lesson planning and reviewing with preservice candidates their performance on the Foundations of Reading test and **identifying areas of strength and growth**. Finally, the faculty interviewee mentioned that there is financial barrier for some preservice candidates that impacts them taking the Foundations of Reading test in a timely manner.

EPP #4 interviewees (*n* = 5) highly suggested that preservice candidates participate in **more clinical experience that is "balanced with more specific coursework" and focused on different student populations**.

EPP #5 faculty interviewee (*n* = 1) shared that the types of remediation and support provided to preservice candidates are **close communication between faculty and the candidate's mentor teacher and recommending to identified preservice candidates that they take the LETRS training offered by the state**, while EPP #6 interviewees (*n* = 3)

said that each candidate has **an assigned coach** to provide support, answer questions, and follow preservice candidates' progression. A preservice candidate interviewee said that while the EPP does a good job supporting and accommodating students, that "**taking the [comprehensive reading course] in the summer before the start of the program would have been more beneficial**."

Survey Findings

Survey respondents also reported the types of remediation and support participating NH EPPs could provide to preservice candidates, so they become effective teachers of reading. Analysis of preservice candidate survey responses (n = 3) indicate participating NH EPPs can provide the following supports for preservice candidates to become effective teachers of reading:

- Ensure preservice candidates are getting more opportunities to get feedback on teaching literacy
- Help with providing more materials for teaching.
- Provide samples of work with assignments.

Survey respondents reported that feedback, instructional materials and samples, and observation and co-planning would benefit preservice candidates needing support.

Program graduate survey respondents (n = 14) also provided several ideas on how EPPs could support preservice teachers. In many ways these suggestions aligned with what could be described as weaknesses in their own experience feedback and mentoring. Analysis of program graduate survey responses indicate participating NH EPPs can provide the following supports for preservice candidates to become effective teachers of reading:

- Increased opportunities to observe effective instruction and co-planning time with teachers.
- Provide feedback to new teachers and encouraging them to ask questions about literacy instruction was also mentioned.
- More professional development, with 2 respondents specifically mentioning LETRS training.
- Restructure the course of study. One respondent reflected on their courses and noted that instead of a single semester course on reading instruction, "It would have been more beneficial if it were split into 2 semester[s]. Maybe K through 2nd or 3rd and 3rd or 4th though 6th grade . . . Or, cover what literacy looks like for typical learners and a second class for struggling readers and interventions/causes/disabilities. It was too much for a one semester class!"

RECOMMENDATIONS AND ALIGNED RESOURCES

This section provides targeted recommendations and relevant resources to address the findings in the report and support implementation, respectively. The state recommendations include a proposed initial action step to facilitate improvement efforts. Because the institutional goal is to create a high-quality teacher of reading, the actions or improvement efforts should not be owned by any one EPP, course, or individual. NH EPP alignment requires systemic and collaborative effort. Therefore, the applicability of the recommendations to the state, EPP, and/or district level are noted and categorized by those related to content and pedagogy or program implementation. See Appendix C for the list of relevant resources aligned to EPP recommendations included in the EPP-specific reports.

Content and Pedagogy Recommendations

District Recommendations

DISTRICT

Leverage educators trained through the New Hampshire LETRS Science of Reading Professional Learning Courses to serve as local champions and leaders to promote and scale the use of high-quality instructional materials aligned to evidence-based reading strategies and increase district capacity to implement evidence-based reading strategies and Structured Literacy.

Engage in a shared district-EPP partnership that includes collaborative field-based professional development of both preservice candidates and school faculty that support:

- Curricular shifts toward evidence-based reading, including structured literacy
- Increased knowledge and skill of potential future hires.

EPP Recommendations

EPP

Ensure educator preparation faculty who teach reading courses and supervisor field placements have current expertise in reading development and evidence-based reading strategies, including Structured Literacy, so preservice candidates graduate with sufficient knowledge and skills to be effective teachers of reading.

Select Comprehensive Course Text Materials Aligned to Evidence-Based Reading. Overall, the participating NH EPPs are using textbooks in their courses that are misaligned with the scientific research on reading and, therefore, are not comprehensively addressing all 5 major reading components and reading assessments. Consequently, the courses utilize considerable time focusing on literacy content and reading practices in both instruction and assessment that are not evidence-based. The participating NH EPP utilizing comprehensive text materials aligned to scientific reading research provides more comprehensive course content earlier in the course of study.

Increase practice-based learning opportunities across all major reading components. Course misalignment negatively impacts the types and number of practice opportunities to scaffold preservice candidates for developing instructional skills in delivering explicit evidence-based instructional routines, strategies, and assessments. Some participating NH EPP courses provide practice-based learning opportunities in one or 2 reading components (i.e., comprehension) without addressing the remaining reading components (i.e., phonemic awareness, phonics, etc.) essential to the independent reading development of students at risk for dyslexia and those with other reading difficulties.

Provide preservice candidate access to evidence-based instructional materials for instructional skill practice to increase field preparation in operationalizing classroom reading instruction.

Provide sufficient opportunities to learn all 8 key Structured Literacy content areas and the progression of each. Structured literacy encompasses a comprehensive body of language-based content containing 8 key content areas. Overall, the participating NH EPPs provide minimal opportunities to develop full knowledge of the progression of the 8 key language-based content areas essential to structured literacy instruction. This supports partial understanding of the language domains (e.g., phonology, orthography, morphology, etc.) integral to both knowledge and skill in the major reading components: phonemic awareness, phonics, fluency, vocabulary, and comprehension.

Increase Structured Literacy application and practice. While many of the participating NH EPPs provide academic content for preservice candidates to learn about the comprehensive language-based content of structured literacy, the courses provide minimal or no sustained opportunities required for systematic application of that knowledge over time to practice and improve explicit delivery and precise implementation of all 8 key content areas in structured literacy instruction with students, including students at risk for dyslexia.

Expand scope of EPP best pedagogical practices to include strategic options that support evidence-based instructional skill development and refinement. Consider tutoring, simulations, and lab-like experiences. Virtual tutoring could increase frequency of supervised opportunities for preservice candidates to work with students and receive timely feedback with follow-up coaching.

State Recommendations

STATE

Increase rigor and measurability of the corresponding NH ED 500 and 600 standards by adding specific content elements to emphasize the structure of language and student language development and by adding instructional delivery features to support Structured Literacy instruction for increased literacy development and achievement. Several parts of the NH standards contain general rather than specific content knowledge. This need is especially relevant to Ed 507.18 Early Childhood Education Teacher and Ed 507. 31 Early Childhood Special Education Teacher endorsement areas to eliminate ambiguities and strengthen correspondence of ages K to grade 3 literacy with the reading knowledge and instructional skill that overlaps with the elementary education endorsement area.

Initial action step: Include all major reading domains, written expression, explicit and systematic instruction, reading-specific assessment processes, and accommodations and use of assistive technology for students with reading difficulties or disabilities for more thorough and coherent opportunities for preservice candidates to demonstrate sufficient scope and depth of literacy understandings and skills relevant to reading to positively impact student literacy development and achievement.

Relevant Resources

- Structured Literacy Program Framework Guidelines
- Colorado Elementary Education Endorsement (K-6)
- Mississippi Matrix for Teaching Early Literacy Skills

Collect and share with NH EPPs best pedagogical practices that target instructional skill development to promote increased EPP provision of practice-based learning opportunities. Deliberate and strategic EPP use of best practices support a continuum of practice-based learning opportunities essential to preservice candidate readiness for teaching evidence-based reading strategies. Structured opportunities such as tutoring impact preservice candidate

implementation of evidence-based reading instruction, and strategic use of technology (i.e., virtual tutoring) can further increase the number and quality of these practical experiences.

Initial action step: Provide EPP guidance regarding the parameters of deliberate practice-based learning to ensure that EPPs connect frequent preservice candidate practical application to specific learned sub-components (e.g.,grapheme, syllable pattern, etc.) with interleaved practice to provide sufficient teaching and assessing opportunities across all major reading components over time.

Potential follow-up action step: Conduct a sample audit of NH EPP and school district networks and infrastructures to determine technological capacities, compatibilities, and requirements for supporting NH EPP implementation of virtual practice-based learning. Consider a wide variety of practice-based options, ranging from low-tech (i.e., lesson study, case-based) and moderate-tech (web-based tutoring) to high-tech (virtual simulations).

Relevant Resources

- Guidance Document for the Design and Implementation of Practice-Based Field Experiences for EPPs and District Partners
- Learning to Teach: Practice-Based Preparation in Teacher Education
- Learning to Teach: Practice-based Preparation in Teacher Education in Virtual Learning Environments
- Innovation Configuration: Use of Technology in the Preparation of Pre- and In-Service Teachers
- CUNY Reading Corps
- DESE Early Literacy Observation and Feedback Form

Partner with Credentials Unlimited to expand the Science of Reading microcredential offerings to educators who have not enrolled in NHED's Learning Into Literacy LETRS professional development. If needed, utilize allowable ESSA retaining (3% out of 5%) of Title II A funds to support this

endeavor, targeting evidence-based school leader induction and mentoring.

Initial action step: To expand pathway offerings, determine alternative prerequisite criteria for pursuing the microcrential in the absence of LETRS training.

Relevant Resources

- Learning to Teach: Practice-based Preparation in Teacher Education (ESSA Title II-A information, p. 15)

Program Implementation Recommendations

District Recommendations

DISTRICT

Intentionally recruit and incentivize effective teachers to serve as mentors to improve preservice candidates' preparedness to teach reading by using administrative data on teachers' instructional performance in evidence-based reading strategies and Structured Literacy and years of experience to select high-quality mentor teachers of reading.

Provide in-person coaching sessions or professional development with mentor teachers to improve their coaching practices with preservice candidates in evidence-based reading strategies and Structured Literacy.

Allow student teachers a variety of opportunities to observe reading teachers provide support for students in various grades, and instructional settings.

Partner with EPPs to place preservice candidates in schools with collaborative environments, effective faculty, and low turnover, so they have better learning experiences and practice more effective evidence-based reading strategies and Structured Literacy, especially for preservice candidates needing additional support or remediation to be effective teachers of reading.

EPP Recommendations

EPP

Provide Reading Courses Earlier within EPP Course of Study and minimize the autonomy that ECE preservice candidates have in selecting courses and content-area topics for required course assignments to increase exposure to evidence-based literacy content and structured literacy practices. Overall, the participating NH EPPs provide a reading course or courses with reading-specific content near or at the end of the course of

study. The participating NH EPPs with reading courses offered earlier in the course of study provide increased opportunities for preservice candidates to:

- Gain fuller understanding of reading content, including knowledge of evidence-based strategies.
- Apply the learned content in field-based experiences with students in school settings.

Map reading content and practice-based learning opportunities across EPP literacy course of study to increase program coherence relative to the 5 major reading components, evidence-based strategies, 8 areas of structured literacy instruction, and reading assessment.

Align course resources, time, and field-based implementations. The participating NH EPP resources and, in some cases, allocated time for literacy, are misaligned to evidence-based reading instructional strategies. In varying degrees, courses focus on approaches to instruction and assessment (e.g., balanced literacy framework, reading workshop, miscue analysis, etc.) not supported by research evidence of effectiveness. Therefore, any evidence-base-aligned materials included in a course's supplementary reading list are underutilized in course assignments. Preservice candidates' implementations of instruction and assessment at field placement sites appear misaligned, as well.

Identify Specific Criteria to Select Field Sites Using Evidence-Based Strategies. In general, participating NH EPPs either have or do not have selection criteria that identifies school sites for field-based experiences. The participating NH EPPs with field site selection criteria focus on evidence-based strategies used in schools to ensure that preservice candidates' field experiences—from classroom observations to internships—are aligned to EPP course content. Participating NH EPPs that do not appear to have field site selection criteria are heavily invested in literacy content and instructional practices that are not evidence-based.

Partner with districts to establish clear, rigorous criteria for mentor teacher selection for reading to appropriately identify and recruit effective mentors so preservice candidates' field placement opportunities are well aligned to coursework in evidence-based reading strategies and Structured Literacy.

Partner with districts to coordinate and schedule a continuum of reading course-aligned field experiences at field placement sites that ensure sufficient quality and quantity of field placement opportunities for instructional skill development in evidence-based reading strategies, including Structured Literacy.

State Recommendations

STATE

Incentivize the Leaning into Literacy I and II Resource Grantees, Bridging the Gap in the 603: Pathways to Literacy Proficiency Pilotees, and NH EPPs to form field placement partnerships for preservice candidates to promote the use of high-quality instructional materials aligned to evidence-based reading strategies and Structured Literacy, frequent progress monitoring of student reading progress, and implementation supports for educators.

Initial action step: Communicate to EPPs the names of districts participating in these initiatives and identify EPP-district incentivization to encourage field placement partnerships that require field experiences to utilize evidence-based reading strategies and Structured Literacy.

Relevant Resources

- DESE Memo example: Going beyond traditional student-teacher placements to Build Deeper Relationships with Educator Preparation Programs
- Competencies and Coursework/Clinical Experience Standards To Support Effective Use of HQIM for Educator Preparation Programs

Increase rigor of the corresponding NH ED 500 and 600 standards by adding specificity about which skills need to be demonstrated to appropriately mentor candidates and what constitutes modeling of high-quality learning facilitation that results in student learning, via Ed 604.03 Requirements for Cooperating Practitioner (c, d) to ensure candidates receive a well-mentored field experience.

Initial action step: Enhance Ed 604.07 Field Experience Supervision (a) to have criteria include a tight connection to program coursework and goals and application of research to practice, Ed 604.08 Coordination of Field Experience and Cooperating Practitioners (c) to specify what a criteria for mentoring practices must or may include, and the areas of content and learning facilitation practice via Ed 610.02 Professional Education Requirements to reflect pedagogical content knowledge and evidence based practices more explicitly.

Relevant Resources

- Increasing Student Preparedness Through Effective Student Teaching

Identify a minimum duration threshold for both the early and culminating field experiences via Ed 604.05 Early Field Experiences and Ed 604.06 Requirements for the Culminating Field Experience, that facilitates meaningful demonstration of subject and skill mastery and application of research to practice.

Initial action step: Review current duration of field experiences across NH EPPs and consult with EPPs to determine a recommended threshold informed by research and best practices.

Relevant Resources

- Increasing Student Preparedness Through Effective Student Teaching
- Enhancing Teacher Preparation Through Clinical Experience

Support EPP mapping of literacy course of study across all 3 levels of implementation by providing literacy-specific guidance & resources that serve as an EPP self-audit to help them prepare for NH's EPP program approval process.

Initial action step: Develop and distribute EPP literacy course mapping guidance and tools to increase program alignment to evidence-based reading strategies and Structured Literacy and ensure program coherence prior to the NH program review and approval process.

Relevant Resources

- Science of Reading Planning Rubric: Analyzing and constructing undergraduate syllabi across courses
- Developing Quality Fieldwork Experiences for Teacher Candidates A Planning Guide for Educator Preparation Programs and District Partners
- Learning to Teach: A Framework for Crafting High-Quality, Practice-Based Preparation
- Learning to Teach: Practice-based Preparation in Teacher Education in Virtual Learning Environments
- Educator Preparation Program Standards Matrices (Colorado Department of Education)
- Rhode Island Department of Education Guidelines
- Comprehensive UNC System Literacy Framework and Implementation Guidance

Provide guidance on instructional delivery to support EPP and district implementations of evidence-based reading instructional strategies and Structured Literacy instruction in coursework assignments and classrooms.

Initial action step: Collect and share resources and tools on high-leverage practices (e.g., explicit, systematic) that identify and illustrate instructional delivery of evidence-based reading strategies, including Structured Literacy instruction.

Potential follow-up action step: Elicit NH EPP and SISEP Pilotees' collaborative participation in conducting a scoping

review to inform the development of a NH-specific practice profile:

- Option 1: A modified version of the Florida practice profile.
- Option 2: A structured literacy practice profile.

Relevant Resources

- IDA Structured Literacy: "The How"
- Structured Literacy Lesson Videoclip
- Elements Comprising the Colorado Literacy Framework
- PreK–5 Literacy Practice Profile
- Practice Profiles: A Process for Capturing Evidence and Operationalizing Innovations
- Biliteracy Structured Literacy Guidance (New Mexico Department of Education)

Promote early and frequent practice-based learning opportunities that are embedded within a series of campus-based undergraduate reading courses. Practice-based learning that begins earlier in a course of study, includes interleaved practice and field experiences, and continues across coursework promotes a trajectory of preservice candidate readiness to teach evidence-based reading instruction in the field.

Initial action step: Provide EPP guidance in reading-specific course offerings (n->1 course) in undergraduate coursework, going beyond Foundations of Reading test preparation to include embedded, comprehensive, and interleaved practice-based learning opportunities for instructional skill development in the teaching of evidence-based reading strategies and Structured Literacy.

Potential follow-up action steps: Install an undergraduate reading endorsement (K-3 or K-5) with competencies that ensure preservice candidate readiness to teach evidence-based reading strategies and Structured Literacy in NH elementary classrooms upon graduation. This endorsement coursework could contribute toward subsequent

endorsements for candidates pursuing other relevant certifications such as Reading and Writing Teacher, Reading and Writing Specialist, Curriculum and Instructional Leadership, etc.

Relevant Resources

- EPP Competencies for Elementary Literacy

  (Utah Department of Education)
- Reading Resources for Teacher and Principals Preparation Programs (Colorado Department of Education)
- Structured Literacy Program Framework Guidelines (Pennsylvania Department of Education)
- Florida Reading Endorsement Competencies
- Florida Reading Endorsement Matrix
- Literacy in Educator Preparation

  (Tennessee Department of Education)

Develop early literacy program approval criteria that sets expectations for all relevant endorsement area programs so preservice candidates learn evidence-based reading strategies and Structured Literacy enhance systemic alignment statewide among endorsement areas and ensure readiness to impact student literacy achievement across educator roles in the field.

Initial action step: Meet with Division of Educator Support and Higher Education and related staff to determine the viability of this effort relative to current program approval rules and processes.

Relevant Resources

- DESE Early Literacy Program Approval Criteria
- Foundations of Reading, Literacy, and Language Implementation Guide for Educator Preparation Providers (GADOE)

CONCLUSION

It is critical to view this research project from the experience of a preservice candidate in a program course of study over time, and the degree to which this experience coheres and is mutually reinforcing. As such, the findings and recommendations in this report reflect this aim.

Based on results of the content and NHTCAP reviews and interviews and surveys, it appears that most of the participating NH EPP are in the installation stage of implementing evidence-based reading strategies, with one EPP in the initial implementation stage. Participating NH EPPs address:

- All NH ED 600 EPP standards relevant to reading and the corresponding NH ED 500 endorsement standards for the:
- Elementary education certification area except one EPP that did not address text complexity.
- Early childhood education certification area: All 10 essential components specific to reading, providing a 96% NH EPP total of all Implementation Level 1 learning opportunities within academic in-class settings and incorporates most practice opportunities (70% NH EPP total, Level 2) specific to reading in preparing preservice candidates to deliver evidence-based reading instruction with students (54% NH EPP total, Level 3) in the field.
- All (8/8) key structured literacy content areas based on the submitted course materials.
- Best EPP pedagogical practices (57% NH EPP total):
- All 6 EPPs utilize analyzing and reflecting in coursework and work to provide coursework-aligned field experiences.
- 5 EPPs incorporate spaced learning, varied learning, coaching/feedback.
- 4 EPPs have implemented case-based instruction, video analysis, and scaffolded practice.
- 3 EPPs provide modeling and lesson study.

- 2 EPPs engage preservice candidates in microteaching.
- Tutoring and coaching are each provided by 1 EPP.

Overall, the participating NH EPPs implement the general best practices to a greater degree than campus-based or field-based best practices that support instructional skill development, reflecting review findings on implementation of essential components. Other best practices detected by NH EPPs include:

- **General Best Practice:** Uses practical approach to educator preparation with practice-based learning that incorporates instructional materials in course assignments (EPP #3).

- **Campus-Based Best Practices:**
- Course design: Uses a systematic, logical, and focused course structure designed jointly by faculty (EPP #3).
- Course resources: Utilizes an evidence-based comprehensive course textbook (EPP #3); Maintains a curriculum materials library for preservice candidate planning, skill practice, and field preparation (EPP #3); Provides multiple academic resources such as online modules (EPP #1, EPP #6).
- Academic learning application: Provides practice and engagement in practical activities such as Literacy Handbook assignment: develop a collection of practical evidence-based information per major reading component (EPP #1).
- Lesson planning models: Uses universal templates and rubrics to standardize and support reflective lesson planning, lesson adjustment, and lesson evaluation (EPP #1); Uses clear models such as Universal Design for Learning (UDL) to support lesson and unit planning (EPP #2) that address diverse student needs.
- EPP feedback to preservice candidates: Reviews Foundations of Reading test performance with preservice candidates and identifies areas of strength and growth (EPP #3)

- **Field-Based Best Practices:**
- Field experience model: Uses a collaborative clinical experience cohort model with coaches that include lesson studies and video analyses (EPP #6); Engages preservice candidates in field-focused collaborative inquiry prior to independent lesson implementation in classrooms (EPP #5).

- Field experience duration: Prior to internship, provides 2 semesters of academic courses, each containing a practicum (EPP #2).
- Field site and teacher selection criteria: Uses school selection criteria to identify school placement sites (EPP #5); Uses cooperating teacher eligibility requirements, clearly defines responsibilities, and provides ongoing cooperating teacher support (EPP #4).
- Field placement support: Provides gradual immersion of instructional responsibility in classroom field experiences (EPP #3); Provides scaffolding across field experiences (EPP #5).
- Preservice candidate feedback: Professor and field facilitator provide feedback to preservice candidates in the field (EPP #4).
- EPP and placement site PD collaboration: Professional development provided to preservice candidates and school faculty at placement sites support school and EPP transition from balanced literacy to structured literacy (EPP #2).

Though all essential components and key structured literacy areas are addressed across the participating NH EPPs, the proposed recommendations and aligned resources are intended to assist the participating NH EPPs address the preparation gaps noted in this report. These preparation gaps include:

- Course misalignment with evidence-based reading instructional strategies (EPP #1, EPP #2, EPP #4, EPP #5, EPP #6), resulting in underutilization of evidence-based resources in course assignments (EPP #4).
- Insufficient coursework time for literacy and reading to build knowledge and skill in all major reading components (EPP #5).
- Insufficient practice-based learning opportunities in one or more major reading components (EPP #1, EPP #2, EPP #4, EPP #6), insufficient small group instruction information (EPP #3), and insufficient information and scaffolding in instructional materials evaluation. (EPP #3)
- Minimal opportunities to learn, practice, and deliver structured literacy instruction (EPP #1, EPP #2, EPP #4, EPP #5, EPP #6).
- Insufficient undergraduate field-based reading experiences prior to internship (EPP #2, EPP #4) with insufficient observations of different classroom models (EPP #3), inconsistent field supervision

(EPP #4), and limited opportunities to interact with diverse students in different classroom contexts (EPP #1).

NH EPP efforts to achieve the recommendations presented in this report will further support the EPPs transition to evidence-based reading instructional strategies, including structured literacy implementation, in teacher preparation, collectively moving the EPPs toward the Initial Implementation Stage.

Because this was a descriptive exploratory research project, the findings can serve as a foundation for further research. Moreover, this research project may be a valuable baseline resource for identifying changes in data points of interest and to guide and monitor program and policy implementation over time. As EPPs move through stages of implementation, it is imperative that there's evolutionary planning to address the factors known to affect implementation and measure and monitor their progress toward goals, including identifying appropriate benchmarks along the way.

Likewise, this research project is based on the perspective that continuous improvement in educational programs, practices, and policies is necessary to effectively adapt to ever-evolving circumstances and positively affect educator and student outcomes, including at the higher education level. This requires, therefore, that stakeholders view the research project through a continuous improvement lens, value feedback on and approval of EPP programs from outside experts and see the merit in considering practices learned from others engaged in similar efforts. Consequently, information acquired through this research project should be viewed as an opportunity to enhance programs by identifying and sharing best practices, rather than a means to enact punitive measures. Improvement efforts at all levels of the system—state, local, and IHE—are needed to realize the goal of preparing excellent NH reading teachers. Because this is complex work, it necessitates NHED's continued commitment to coordinating and supporting these collective efforts now and in the future.

References

Center on Great Teachers and Leaders. (2016). *Learning to teach: Practice-based preparation in teacher education.* Special Issues Brief. Retrieved from https://files.eric.ed.gov/fulltext/ED570144.pdf

Connor, C.M., Alberto, P.A., Compton, D.L., & O'Connor, R.E. (2014). *Improving Reading Outcomes for Students with or at Risk for Reading Disabilities: A Synthesis of the Contributions from the Institute of Education Sciences Research Centers* (NCSER 2014-3000). Washington, DC: National Center for Special Education Research, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://files.eric.ed.gov/fulltext/ED544759.pdf.

Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS. (2000). *Report of the National Reading Panel: Teaching Children to Read: Reports of the Subgroups* (00-4754). Washington, DC: U.S. Government Printing Office. Retrieved from https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf

Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS. (2010). *Developing Early Literacy: Report of the National Early Literacy Panel (NA)*. Washington, DC: U.S. Government Printing Office. Retrieved from https://lincs.ed.gov/publications/pdf/NELPReport09.pdf

Foorman, B., Beyler, N., Borradaile, K., Coyne, M., Denton, C. A., Dimino, J., Furgeson, J., Hayes, L., Henke, J., Justice, L., Keating, B., Lewis, W., Sattar, S., Streke, A., Wagner, R., & Wissel, S. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade* (NCEE 2016-4008). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/wwc_foundationalreading_040717.pdf

International Dyslexia Association. (2018, March). *Knowledge and Practice Standards for Teachers of Reading.* Retrieved from https://dyslexiaida.org/knowledge-and-practices/.

Lane, H. (2014). *Evidence-based reading instruction for grades K–5 (Document No. IC-12).* Retrieved from University of Florida, Collaboration for Effective Educator, Development, Accountability, and Reform Center website: http://ceedar.education.ufl.edu/tools/innovation-configurations/

National Council on Teacher Quality. *Reviews of Reading Instructional Materials Used by Teacher Preparation Programs.* Retrieved from https://www.nctq.org/review/readingTextbooks.

Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know. *American Educator, 36*(1), 12–39.

Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., & Torgesen, J. (2010). *Improving reading comprehension in kindergarten through 3rd grade: A practice guide* (NCEE 2010-4038). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://files.eric.ed.gov/fulltext/ED512029.pdf.

State Implementation and Scaling Up of Evidence-based Practices Center (SISEP) and The National Implementation Research Network (NIRN). (2015). *Implementation stages overview*. Author: The University of North Carolina at Chapel Hill's FPG Child Development Institute. Retrieved from https://implementation.fpg.unc.edu/wp-content/uploads/Implementation-Stages-Overview.pdf.

Swerling, L.S. (January, 2018). Structured Literacy and Typical Literacy Practices: Understanding Differences to Create Instructional Opportunities. *Teaching Exceptional Children. 51*(3), 201–211. https://doi.org/10.1177/0040059917750160.

Appendix A
Research Design

For this research project, RMC and its partner BU used well-qualified reviewers and interviewers with academic backgrounds in scientific reading, early childhood education, and special education, regularly engaged a panel of external experts to provide oversight on the review process, and employed an established tool for reviewing course syllabi.

Sample Population

Each NH EPP was encouraged to participate in the research project. Five NH Institutes of Higher Education (IHEs) agreed to participate and signed data sharing agreements. The participating IHEs elected to have either their elementary education and/or early childhood preparation program participate. This resulted in 5 elementary education and 2 early childhood education preparation programs participating in the research project.

Project participants were purposively selected from participating EPPs. Each participating EPP identified and submitted contact information via an online survey for relevant faculty, field supervisors, mentor teachers, preservice candidates, and program graduates for interviewing. RMC provided potential interviewees with information about the purpose, expectations, and outcomes of the research project and an informed consent form to secure their agreement to participate in the project. RMC used the following decision rules to guide participating EPPs in identifying project participants:

For faculty, those who teach (a) core requirement reading courses applicable across endorsement areas, (b) courses that descriptions most closely reflect the evidence-based reading and writing instructional practice recommendations from the Institute for Education Sciences, What Works Clearinghouse publication Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (Foorman et al., 2016), and other supporting evidence, and (c) courses that descriptions most closely reflect Structured Literacy (i.e., evidence-based reading instruction practices that prioritizes the acquisition of language, including phonological and phonemic awareness, phonics and spelling, fluency, vocabulary, oral language, and comprehension that can be differentiated to meet the needs of individual students.

For field supervisors and mentor teachers, each participating EPP identified a representative sample of up to 4 each from across participating endorsement areas to serve as a pool of potential interviewees. RMC randomly selected and contacted up to 3 field supervisors and mentor teachers each to interview from the pool.

Additionally, each participating EPP identified, notified, and received permission from a representative sample of up to 10 each of preservice candidates and program graduates within the past 3 years from across participating endorsement areas and grade levels (K–8),

respectively, to serve as a pool of potential interviewees. RMC randomly selected and contacted up to 5 preservice candidates and program graduates each to interview from the pool.

Furthermore, RMC administered an anonymous online survey to all preservice candidates in the pool who were not already interviewed and partnered with NHED to disseminate an anonymous online survey to all program graduates within the past 3 years from the participating EPPs.

Data Collection

RMC incorporated varied sources of qualitative data about courses of study, including the perspectives of faculty, field supervisors, mentor teachers, preservice candidates, and program graduates. RMC formed 2-member course content review teams for each participating EPP overseen by a review team leader. Each participating EPP was also assigned an interviewer who conducted virtual interviews and interacted with the review team. Data sources included:

- **Course content review—**Syllabi, assignments, assessments, course materials, and field experience information from fall 2022 and spring 2023 reading/literacy courses were reviewed. RMC designed an online survey for participating EPPs to uploaded requested information, including course syllabi, program of study guidelines/handbook, other relevant information or artifacts.

The content review focused specifically on the reading portions in each syllabus to analyze course alignment to structured literacy. EPPs were asked to select (a) core requirement reading courses applicable across endorsement areas, (b) courses with descriptions most closely aligned to both the National Early Literacy Panel (NELP) (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2010) and the National Reading Panel (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000) reports and reflecting the evidence-based reading and writing instructional practice recommendations from the Institute for Education Sciences, What Works Clearinghouse publication Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (Foorman et al., 2016), and other supporting evidence; and (c) courses with descriptions most closely reflecting Structured Literacy as defined by the NHED: evidence-based reading instruction practices that prioritize the acquisition of language, including phonological and phonemic awareness, phonics and spelling, fluency, vocabulary, oral language, and comprehension that can be differentiated to meet the needs of individual students.

- **Student NHTAP projects—**A sample of up to 3 graded, redacted student NHTAP projects from participating EPPs were reviewed (as applicable). A matrix was developed for analyzing evidence-based reading content and instruction based on the 5 NHTAP strands used to assess preservice candidates' performance and evidence of structured literacy knowledge and application (coded by source and strength of evidence), adapted from IDA (2018), Rosenshine (2012), and Spear-Swerling (2018).

- **Virtual interviews—**Up to 3 relevant faculty, field supervisors, and mentor teachers and up to 5 preservice candidates and program graduates within the past 3 years were interviewed to determine alignment to state program standards and quality instruction for structured literacy and perceptions of the extent to which preservice candidates have opportunities to apply knowledge to practice in coursework and field placement and are adequately prepared as effective teachers of reading.
- **Online surveys—**Preservice candidates and individuals graduating from participating EPPs within the past 3 years were surveyed to determine alignment to quality instruction for structured literacy and perceptions of the extent to which they have/had opportunities to apply knowledge to practice in coursework and field placement and are/were adequately prepared as effective teachers of reading.
- **Administrative data—**If available, quantitative extant administrative data was collected from participating EPPs to further determine factors at the preservice level that may influence becoming an effective reading teacher. Administrative data included: Average degree-seeking preservice candidate completion rates and time-to-complete program requirements associated with the full-time or part-time status; average preservice candidate scores from the Pearson *Foundations of Reading* exam, the average number of times preservice candidates have taken the exam/s; average program graduate employment placement rates and locations; and publicly available Grade 3 English Language Arts (ELA) aggregate student achievement results on the state assessment from field experience schools of participating EPPs.

Measures

- **Course content review—**For syllabi review, the *Innovation Configurations (IC) for K–5 Evidence-Based Reading Instruction* (Lane, 2014) matrix was used to evaluate EPPs' course syllabi for alignment to state program standards and quality instruction for structured literacy. The IC matrix is organized around 2 dimensions: essential components of evidence-based reading instruction (with descriptors and examples) and level of implementation.

Additionally, an artifact matrix was developed for review teams to analyze course artifacts for evidence of alignment to the NH Ed 600 endorsement standards and quality instruction for structured literacy as a complement to the IC matrix. The artifact matrix was aligned to the 4 recommendations from the What Works Clearinghouse (WWC) publication *Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade* (Foorman et al., 2016), the 5 recommendations in the WWC *Improving Reading Comprehension in Kindergarten through 3rd Grade* (Shanahan et al., 2010) and findings from *Improving Reading Outcomes for Students with or at Risk for Reading Disabilities: A Synthesis of the Contributions from the Institute of Education Sciences Research Centers* (Connor et al., 2014), *Developing Literacy: Report of the National Early Literacy Panel* (Eunice Kennedy Shriver National

Institute of Child Health and Human Development, 2010), and *Report of the National Reading Panel: Teaching Children to Read* (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000). Taken together, these matrices provided comprehensive research-based information in reading development and instruction for the fields of early childhood, elementary, and special education.

For textbooks, the National Council on Teacher Quality's (NCTQ) ratings of Reviews of Reading Textbooks Used in Teacher Preparation Programs was used to determine alignment to quality instruction for structured literacy.

- **Student NHTCAP projects**—A review matrix aligned with NHTCAP project requirements and evidence of structured literacy knowledge and application was developed to document evidence toward meeting competencies in the relevant endorsement areas at the beginning educator level in a sample of NHTCAP student projects.
- **Virtual Interviews**—Interview protocols aligned to the research questions were used to collect additional information about program implementation and effectiveness from the perspectives of program-related faculty, field supervisors, mentor teachers, preservice candidates, and program graduates. The interviews were also used to provide in-depth information about coursework and fieldwork, solicit strengths and weaknesses of current approaches, supports for preservice candidates, and suggestions for improvement.
- **Online surveys**—Surveys aligned to the research questions were used to collect additional information about program implementation and effectiveness from the perspectives of preservice candidates and program graduates. The surveys were also used to provide in-depth information about coursework and fieldwork, solicit strengths and weaknesses of current approaches, supports for preservice candidates, and suggestions for improvement.
- **Administrative data**—An online survey was created to collect aggregate administrative data from the participating EPPs. Participating EPPs uploaded requested data and information into the survey.

Data Analysis

RMC analyzed multiple data sources to determine alignment to state program standards, quality instruction for structured literacy, and cull best practices from participating EPPs based on research evidence.

First, review team members individually assessed course alignment to the standards and quality of instruction for structured literacy using the matrices. Then, review team members met with the team leader to discuss and reach consensus on course alignment to the endorsement standards and quality instruction for structured literacy, noting any clarifying questions for the faculty interviews. Next, the team leader facilitated a meeting between the review team and interviewer before the faculty interviews to convey the clarifying questions to be asked during the interviews. Finally, the team leader facilitated a meeting between the interviewer and the

review team to share the responses to the clarifying questions asked during the faculty interviews and complete their analysis.

Data from interviews and surveys for each participating EPP was summarized by the research questions. Interview, survey, and NHTCAP project data was triangulated with the course content review data: (a) for evidence that the content identified in the standards and quality instruction for structured literacy is fully addressed, noting any discrepancies as well as literacy experiences not captured in the course content review and (b) to describe the overall course requirements of EPPs and provide them with feedback on best practices and recommendations for improvement.

Limitations

There were limitations to this research project. First, this research project was designed to use qualitative methods to learn how participating EPPs are applying existing teacher endorsement standards in relevant preservice programs at NH EPPs, not to generalize outcomes to other situations. Second, the content review was dependent on the course syllabi and any corresponding course materials provided by each EPP. The types and number of corresponding course materials such as links and online access to resources varied across EPPs. Second, the content review was dependent on the course syllabi and any corresponding course materials provided by each EPP. The types and number of corresponding course materials such as links and online access to resources varied across EPPs. Third, the study was exploratory and descriptive and does not assess the impact of ED 600 teacher endorsement standards on preservice candidates. Therefore, findings and recommendations from this research project are specific to the participating EPPs. Attempts to generalize the findings to other EPPs would be discouraged, although they may be transferable to EPPs with characteristics like those participating in the research project, and therefore beneficial to these programs.

Also, despite multiple attempts and strategies used to contact and encourage individuals to participate in the research project, challenges remained in securing individuals who were willing to be interviewed. Likewise, the surveys yielded very low response rates. Conducting these analyses with relatively small samples limited RMC's ability to determine themes or trends within and across participating EPPs. Consequently, caution should be exercised in drawing conclusions about participating EPPs based on the sample size.

Finally, there were variations in the administrative data available to collect from participating EPPs. Some of the participating EPPs did not collect all the requested information. Therefore, RMC could not employ statistical analyses to aggregate findings across the participating EPPs. Furthermore, reporting average rates for the categories of administrative data provides a broad picture of possible contributing factors compared to a more nuanced one necessary for effectively enacting targeted change.

Appendix B
High-Quality Practice-Based Opportunities: EPP Best Practices in Pedagogy

Exhibit B1 High-Quality Practice-Based Opportunities: EPP Best Practices in Pedagogy

EPP General Best Practices	Campus-Based EPP Best Practices
Modeling: Teacher educators explicitly demonstrate a practice or skill to make the underlying knowledge base and thought processes visible, providing examples of expert performance in practice.	**Micro-Teaching:** Preservice candidate opportunity to plan a lesson, teach in front of peers, receive coaching and feedback, and engage in reflection to familiarize preservice candidates with new content/strategies.
Spaced Learning: Sustained, repeated, scaffolded opportunities for preservice candidates to practice the knowledge and skills acquired in coursework over time, increasing overall effectiveness and deepening expertise.	**Case-Based Instruction:** A teacher educator technique that provides preservice candidates opportunity to analyze cases of instruction across various contexts for generalizing newly acquired skill-to-classroom practice.
Varied Learning: Preservice candidate opportunities to practice knowledge and skills learned in coursework across: ▪ Varying contexts (e.g., general ed, resource room). ▪ Diverse range of student learners. ▪ Differing degrees of support.	**Simulations and Lab-Like Experiences:** A teacher educator approach providing preservice candidates practice teaching in virtual environments prior to teaching students in the classroom (Clark, 2013).
	Field-Based EPP Best Practices
	Coursework-Aligned: Field-based placements providing opportunities for preservice candidates to practice acquired knowledge and skills in authentic settings that deepen preservice candidates' knowledge for teaching and improving classroom practices.
Coaching and Feedback: Supervisor provides input and feedback during preservice candidates' practice of acquired knowledge and skills to improve instructional capacities, reflective practice, expertise, and independence.	**Video Analysis:** A practice of capturing teachers' instructional experiences on video and a teacher educator tool to engage preservice candidates in observation and discussion concerning effective practice.
Analyzing and Reflecting: Preservice candidate opportunities to employ acquired coursework knowledge and metacognitive skills to reflect upon and improve practice and impact upon student learning before, during, and after instruction.	**Tutoring:** A structured opportunity to practice teaching using newly acquired pedagogical knowledge and instructional skills. It improves preservice candidates' implementation of evidence-based practices and academic performance of struggling learners.
Scaffolded: Preservice candidate opportunities to apply knowledge and skills acquired through coursework and within teaching experiences of increasing complexity to improve instructional implementation, and, ultimately, autonomous performance.	**Lesson Study:** A collaborative opportunity involving teams of preservice candidates to (a) analyze student data, standards, and curriculum, (b) plan a lesson based on analyses, (c) implement instruction with students, (d) analyze instruction and its impact on student learning, and (e) debrief about the lesson and discuss next steps.
	Coaching: An educator preparation program (EPP} practice that provides feedback and coaching to preservice candidates for improving skill implementation of effective instruction.

Note. Source: Learning to Teach: Practice-based Preparation in Teacher Education, a publication of the CEEDAR Center, the Center on Great Teachers and Leaders, and the U.S. Office of Special Education Programs.

Appendix C
Relevant Resources Aligned to NH EPP Recommendations

EPP Collaborative Supports

- Stronger Together: The Alliance for Reading Science in Higher Education
- Educator Preparation Program Science of Reading Community of Practice
- Network for Transforming Educator Preparation
- Faculty Resources

Evidence-Based Reading Instruction

- Science of Reading
- Phonological Awareness and Phonics Instruction Rubric
- High-Leverage Practices and Evidence-Based Practices: A Promising Pair
- The Meadows Center's 10 Key Series: Research-Based Policies and Practices for Schools
- Intensifying Literacy Instruction: Essential Practices
- Instructional Intensification Toolkit
- On course for reading success: Best practices for teaching beginning readers
- Reading Universe Taxonomy
- Phonics Lesson Routine Template
- How to Use Decodable Texts
- Text Planning Guide for Comprehension
- Foundations in Emergent Literacy Instruction: Snapshot Series
- Instructional Practices for Teaching Emergent Literacy at the Preschool Level
- Phonological Awareness Facilitator Guide
- Print Knowledge Facilitator Guide
- Joyful Reading and Writing with Young Children
- Six Principles from Research
- The Teaching and Learning Cycle
- Planning Guide

Evidence-Based Reading Course Development and Mapping of Practice-Based Learning Opportunities

- Model Syllabi
- Course Enhancement Modules: Evidence-based Literacy Practices K–5
- Higher Ed Literacy Toolkit
- Sample Syllabus #1: Foundations of Literacy
- Sample Syllabus #2: Phonological Awareness and Phonics
- Sample Syllabus #3: Vocabulary, Comprehension, and Writing Instruction
- Sample Syllabus #4: Assessment, Instruction, and Intervention
- Science of Reading and Structured Literacy: Resource Bank for Syllabi Refinement
- Rhode Island Science of Reading and Structured Literacy Syllabi Refinement Tool
- Courses for Education: K–3 Structured Literacy Program
- Science of Reading Planning Rubric: Analyzing and constructing undergraduate syllabi across courses
- Developing Quality Fieldwork Experiences for Teacher Candidates A Planning Guide for Educator Preparation Programs and District Partners
- Integrating Reading Foundations: A Tool for College Instructors of Preservice Teachers, Foundational Skills Lessons 4–12
- Learning to Teach: Practice-Based Preparation in Teacher Education
- Learning to Teach: A Framework for Crafting High-Quality, Practice-Based Preparation
- Learning to Teach: Practice-based Preparation in Teacher Education in Virtual Learning Environments
- Practice-based Learning Opportunities
- The R.I.S.E. Guide to Interleaved Practice

Instructional Materials Considerations

- K–2 Curriculum Materials Review Foundational Skills for Reading
- Curriculum Evaluation Guidelines
- Knowledge Matters Review Tool: A Guide for Evaluating K–8 ELA Curriculum
- Rubric for evaluating reading/language arts instructional materials for kindergarten to Grade 5
- Virtual Teaching Resource Hub

- Reading Universe
- Florida Center for Reading Research Student Center Activities:
- Grades PreK, K–1, 2–3, 4–5, Digital Student Center Activities
- Instructional Routines (K–3)
- Student Center Activities (SCA) in Action
- What Works Clearinghouse Practice Guides and Intervention Reports
- Evidence for ESSA
- FCRR Reading Program Repository
- Curriculum Evaluation Guidelines
- The Reading League's Navigation Reports
- EdReports

Reading Assessment

- Understanding Screening Toolkit
- Screening for Dyslexia
- Faculty Professional Learning Series on Intensive Intervention
- Intensive Intervention in Reading Course Content
- National Center on Intensive Intervention:
- Academic Screening Tools
- Academic Progress Monitoring Tools

Small Group Practices

- Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Primary Grades
- Small Group Reading Instruction and Mastery Learning: The Missing Practices for Effective and Equitable Foundational Skills Instruction
- Tier 1 Instruction is Risk Reduction
- FCRR's Differentiated Instruction
- NCIL's The Educator's Science of Reading Toolbox: Best Practices for Improving Language and Literacy Outcomes for English Learners
- User Guide for Sample Reading Lessons

- Taxonomy of Intervention Intensity
- Introduction to Intensive Intervention in Reading
- Use Flexible Grouping
- HLP 17 Use Flexible Grouping

Supports for Students At Risk for Dyslexia and Students Identified with Dyslexia

- High-Leverage Practices for Students with Disabilities
- Supporting Students with Dyslexia Toolkit

Structured Literacy

- IDA Knowledge and Practice Standards for Teachers of Reading
- Structured Literacy Supports All Learners: Students At-Risk of Literacy Acquisition—Dyslexia and English Learners
- Structured Literacy: An Introductory Guide
- What Is Structured Literacy?
- Structured Literacy and Typical Literacy Practices: Understanding Differences to Create Instructional Opportunities
- Structured Literacy Lesson
- Improving Literacy Brief: Structured Literacy
- Structured Literacy: Instructional Considerations for Literacy Components

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