Science of Reading in Ohio Educator Preparation Programs:

A Statewide Audit

2025

Ohio Department of Higher Education
The Meadows Center for Preventing Educational Risk
Gibson, An Education Consulting & Research Group
Resources for Learning

Executive Summary

Ohio is pursuing a systemwide realignment of literacy preparation with the science of reading, with statutory direction from Ohio Revised Code (§ 3333.048) and implementing authority vested in the Ohio Department of Higher Education (ODHE). To assess readiness and drive improvement, ODHE commissioned an audit of educator preparation programs (EPPs) across the state's institutions of higher education (IHEs). The audit examined 614 literacy-related course sections across 49 public and private IHEs, reviewing syllabi, assigned texts and textbooks, instructional artifacts, observations, and interview evidence against ODHE's science of reading audit metrics and state law prohibiting the three-cueing approach.

Overall results. Ohio's EPPs demonstrated broad uptake of research-aligned practices, yet the audit identified persistent gaps that require focused remediation to achieve full alignment with the science of reading. In all, 33 IHEs were rated ***In Alignment*** and 5 were rated ***In Partial Alignment***. This means that 79% of the IHEs achieved alignment or partial alignment, reflecting substantial alignment with Ohio's definition of the science of reading. A subset of programs were classified ***Not In Alignment*** due to documented use of the three-cueing approach in at least one course section, even when 12-Hour Reading and Literacy Core coverage of audit metrics was otherwise extensive.

What the audit measured. Ratings were based on the following:

1. The percentage of audit metrics addressed within the required 12-Hour Reading and Literacy Core
2. Compliance with Ohio's definition of the science of reading (e.g., prohibition of the three-cueing approach) across all literacy-related courses

Coverage by domain. Institutions demonstrated nearly universal strength in foundational domains: 98% addressed all phonological awareness audit metrics and 100% addressed all decoding/encoding audit metrics. In contrast, several improvement priorities emerged statewide—writing (71%), reading fluency (79%), multi-tiered system of support (MTSS; 83%), and teacher knowledge (85%). Vocabulary/oral language (96%), reading comprehension (92%), and high-quality instructional materials (94%) showed relatively strong coverage. These patterns suggest that EPPs increasingly cover essential word-reading skills while lagging in reading fluency, writing, and systems-level intervention competencies.

Nature of noncompliance. In the 10 IHEs rated ***Not In Alignment***, noncompliance stemmed from the inclusion of the three-cueing approach in assigned texts, lecture materials, assessments (e.g., meaning, structure/syntax, and visual miscue analyses), or classroom observations. These findings were triangulated across data sources, and presence, even in one course section, triggered the ***Not In Alignment*** rating.

Implementation insights and enablers. Interviews and artifact reviews highlight common features that enabled IHEs to align practices with the science of reading:

- **Faculty and leadership engagement in alignment.** IHEs reported cross-rank faculty participation (adjunct, clinical, tenure track) in alignment work and leadership support, including protected time, professional learning investments, oversight processes, and faculty hiring processes.

- **Professional development and external partners.** Many IHEs used state-endorsed modules and programs (e.g., Language Essentials for Teachers of Reading and Spelling, Ohio science of reading modules), collaborated across IHEs, and engaged external reviewers to audit syllabi and artifacts for alignment. ODHE grants funded efforts at roughly half of the IHEs; another 31% leveraged internal or external funds.
- **Course redesign at scale.** Of the audited IHEs, 96% revised existing courses. Additional strategies included creating new courses, overhauling course sequences, and phasing out courses. Several institutions streamlined parallel pathways into coherent, aligned sequences.
- **Field-based learning.** Aligned programs commonly embedded structured, supervised field experiences where preservice candidates applied structured-literacy routines with targeted feedback loops.

Exemplars. The audit identified Kent State University and Lourdes University as exemplars. Kent State executed cross-campus course synchronization led by faculty with science of reading expertise, embedded structured-literacy practice into coursework and field supervision, and pursued grant-supported professional learning. Lourdes focused alignment on a targeted course set, emphasized iterative curriculum revision in response to evolving state standards and audit metrics, partnered with districts, and used external reviewers to ensure fidelity.

Persistent gaps and risks. Three system-level issues warrant attention:

1. **The three-cueing approach persists** in some course texts, assignments, and assessments.
2. **Underdeveloped preparation** in targeted areas limits graduates' readiness to deliver comprehensive literacy instruction.
3. **Capacity constraints**, particularly expertise concentrated in a small cadre of faculty, pose sustainability challenges.

Recommendations. The audit team provided high-level recommendations:

- **Enforce and verify removal of the three-cueing approach** across texts, assignments, and assessments. Require documented replacements with resources aligned with the science of reading. Audit again for verification where warranted.
- **Close remaining audit metric gaps** in 12-Hour Reading and Literacy Core sequences, prioritizing MTSS, writing, and reading fluency domains. Leverage ODHE standards, model syllabi, and crosswalk tools to ensure complete coverage and coherent sequencing.
- **Broaden faculty expertise and redundancy** through strategic hiring, structured professional development (e.g., state modules), and routine peer review of courses, reducing dependencies on small numbers of faculty.

Outlook. All 48 IHEs with 12-Hour Reading and Literacy Core courses addressed more than 80% of the audit metrics—evidence of broad adoption of evidence-based practices. The remaining work is concrete and actionable: Excise prohibited practices, ensure complete coverage of the audit metrics, and build durable faculty capacity. Executed with consistency, these steps will position Ohio's EPPs to produce graduates ready to deliver evidence-aligned literacy instruction statewide.

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Ohio Audit Context

Literacy Reforms

Improving children's reading outcomes at scale requires instructional practices aligned with the body of research known as *the science of reading*, a framework that integrates findings from cognitive psychology, linguistics, neuroscience, and education to identify the component skills and instructional conditions necessary for proficient reading (Petscher et al., 2020; Shanahan, 2020; Vaughn & Clemens, 2024). Key elements include systematic instruction in phonemic awareness, phonics, fluency, vocabulary, and reading comprehension, delivered through explicit and cumulative teaching sequences (Ehri, 2020; Foorman et al., 2016; Gersten et al., 2017). The science of reading also challenges widely used but empirically unsupported methods such as the three-cueing approach (see Rayner et al., 2001).

The State of Ohio is undertaking a broad effort to align K–12 reading instruction with the science of reading. This effort involves revising the curricula taught in schools, retraining the state's educational workforce, and aligning educator preparation programs (EPPs) with modern research (Churchill, 2024; Ohio Department of Education and Workforce, 2025).

The State of Ohio is undertaking a broad effort to align K–12 reading instruction with the science of reading.

In 2021, Ohio formally embraced the science of reading, required universal dyslexia screening for K–3 students, mandated the use of structured literacy methods, and published a dyslexia guidebook grounded in research-based practices (Ohio Rev. Code § 3323.251, 2023; Ohio Department of Education and Workforce, 2024).

Despite this statewide focus on K–12 reading instruction, a 2023 review found that 54% of Ohio's EPPs still taught instructional methods that run contrary to the science of reading (Holston, 2023). This meant that although Ohio's K–12 schools were beginning to implement practices aligned with the science of reading, many EPPs were not preparing preservice candidates to provide instruction aligned with the science of reading.

Soon after, state legislators enacted further literacy reform with 2023's House Bill 33.[1] Among its provisions, HB 33 defined the science of reading for Ohio, codified expectations and accountability measures for institutions of higher education (IHEs), and allocated funds to support the transition of IHEs and the Ohio Department of Higher Education (ODHE) to the science of reading. Key requirements for IHEs include establishing the following:

- **Audit metrics** for EPPs that establish expectations for the curriculum and instruction provided in reading and literacy related courses
- **Regular compliance audits** of all IHEs with EPPs that assess alignment with the science of reading

[1] To view HB 33 in its entirety, see https://www.legislature.ohio.gov/legislation/135/hb33.

- **Enforcement authority** requiring reaudits within 12 months for IHEs ***Not In Alignment*** and empowering the chancellor of higher education to revoke approval of programs that fail to correct identified deficiencies[2]

ODHE commissioned The Meadows Center for Preventing Educational Risk (MCPER) and its partners, Resources for Learning and Gibson Consulting Group, to conduct a comprehensive audit of EPPs housed within Ohio's IHEs.[3] Grounded in the science of reading, the audit assessed whether these programs systematically teach the essential components of reading instruction and avoid practices known to impede reading development. The audit's findings are intended to guide Ohio policymakers, institutional leaders, and faculty in aligning educator preparation with the science of reading.

The Science of Reading

The science of reading refers to the evidence base on how students acquire reading skills and the instructional strategies most effective in supporting their development. This evidence base includes decades of cognitive and neuroscience research as well as numerous large trials of effective reading instructional methods.[4] Findings from these studies show that skilled readers decode fluently, recognize words automatically, and then integrate text with prior knowledge to construct meaning (Foorman et al., 2015; Gough & Tunmer, 1986; Lonigan et al., 2018; Scarborough, 2001).

Findings also indicate that reading proficiency for many students, and likely most, depends on systematic and explicit reading instruction that integrates evidence-based components of reading (Foorman et al., 2016; Gersten et al., 2017). The components of reading, formalized by the National Reading Panel (2000) and reiterated in Ohio's Science of Reading Audit Metrics (ODHE, 2023d; see Appendix E) include the following:

1. **Phonemic awareness.** The ability to hear, identify, and manipulate the individual sounds (phonemes) in spoken words. This is an auditory skill and a precursor to phonics.
2. **Phonics.** The understanding of how letters and combinations of letters represent sounds in written language (grapheme-phoneme correspondence). Evidence-based phonics instruction is explicit, systematic, and cumulative.
3. **Fluency.** The ability to read text accurately, quickly, and with proper expression. Fluent readers decode automatically, freeing cognitive resources for comprehension.
4. **Vocabulary.** The breadth and depth of word knowledge needed to understand spoken and written language. Vocabulary is developed through both direct instruction and rich language exposure.

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[2] A timeline summarizing major dates related to the enactment of HB 33, its implementation, audit activities, and corrective action is shown in Appendix A.

[3] This audit was mandated by the 135th Ohio General Assembly through House Bill 33 and is codified in Ohio Revised Code § 3333.048, which directs ODHE to regularly evaluate EPPs for alignment with evidence-based reading instruction practices.

[4] See reviews from Baker et al. (2014), Ehri (2020), Foorman et al. (2016), Graham et al. (2016), Graham et al. (2018), Kamil et al. (2008), Lonigan et al. (2018), National Reading Panel (2000), Petscher et al. (2020), Seidenberg (2013), Shanahan (2020), Shanahan et al. (2010), Vaughn et al. (2022), Vaughn & Clemens (2024), and Vaughn & Fletcher (2021), in addition to definitions of the science of reading in *Ohio's Dyslexia Guidebook* (Ohio Department of Education and Workforce, 2024), *Science of Reading Audit Metrics* (ODHE, 2023d; see Appendix E), and the Ohio Revised Code (Ohio Rev. Code § 3313.6028; Ohio Rev. Code § 3333.048).

5. **Comprehension.** The ability to derive meaning from text by connecting it with prior knowledge, language structures, and discourse strategies. Comprehension is the ultimate goal of reading instruction and is supported by mastery of the previous components.

These components are interdependent, and effective reading instruction aligned with the science of reading addresses all five systematically and explicitly—not in isolation, but in an integrated, structured, and developmentally appropriate sequence (Ehri, 2020; Foorman et al., 2018; Hjetland et al., 2019; Peng et al., 2019; Vaughn & Clemens, 2024). Phonemic awareness and phonics are most essential during the earliest phases of reading development, and as students gain fluency, effective instruction increasingly focuses on systematically building vocabulary and comprehension through explicit instruction (Elleman et al., 2009; Foorman et al., 2016; Kamil et al., 2008; Vaughn et al., 2022).

Systematic and explicit instruction in reading—often referred to as *structured literacy*—is widely recognized as one of the most effective approaches for developing foundational reading skills (Petscher et al., 2020). This method involves teaching the components of reading with clear modeling and guided practice. Key features include logical sequencing of skills, explicit explanation of concepts, frequent opportunities for practice, and immediate feedback (Foorman et al., 2016; Gersten et al., 2017). Research demonstrates consistently that systematic and explicit instruction significantly improves reading outcomes, particularly for early readers and students at risk for reading difficulties, including those with dyslexia (Al Otaiba et al., 2023; Denton et al., 2014; Denton et al., 2022; Gersten et al., 2020; Hall et al., 2022; Vaughn & Fletcher, 2021).

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The Three-Cueing Approach

The three-cueing approach is an instructional approach based on the theory that children use the anticipated meaning of text, knowledge of structure and syntax, and visual information to predict words, and that students should be taught to use these cues to identify words when reading (Clay, 1966; Goodman, 1967, 1969).[5] This approach de-emphasizes systematically teaching students the knowledge and skills important for mastering letter-sound relationships (Clay, 2015a, 2015b) and differs from evidence-based approaches that emphasize the necessity of phonics-based word recognition skills (see reviews in Ehri, 2020; Foorman, 2023; Shanahan, 2020; Unger et al., 2025). In fact, a body of research indicates that systematic and explicit instruction in phonological awareness and phonics more effectively supports students' reading development than cue-based approaches do (Denton et al., 2014; Ehri et al., 2001; Rayner et al., 2001).

[5] This approach is sometimes referred to as MSV, based on the initials of three cue types (meaning, structure/syntax, and visual).

Instructional practices grounded in the three-cueing approach (Clay, 2016), and popularized through publication in several widely used curricula, include the following:

- Teaching students to teach and model word recognition strategies using picture cues, meaning cues, and structural cues (e.g., "Look for something that would help you. What can you see that would help you?")
- Encouraging students to use the first letter combined with a semantic or syntactic guess to identify unfamiliar words (e.g., "Do you know a word that starts with those letters?" or "Do you know a word that looks like that?")
- Assessing which cueing system a student primarily relies on and using this to guide instructional decisions (see Barone et al., 2020; Clay 2014; Fountas & Pinnell, 2012)

Ohio Revised Code requires that the three-cueing approach not be used as a method of reading instruction in the state's prekindergarten to grade 12 public schools. For the purposes of this audit, ODHE deems EPPs to be not aligned with the science of reading if they teach or promote instructional practices that include a three-cueing approach.

Statewide Audit

The audit described in this report addressed two principal areas of inquiry: (1) the extent to which EPPs adhered to the core components of the science of reading as defined in the *Science of Reading Audit Metrics* (ODHE, 2023d; see Appendix E) and (2) whether programs included legislatively prohibited instructional approaches—specifically, the three-cueing approach to teaching reading.

The audit team conducted an extensive review of course materials, observations of instruction, and interview data from 614 reading and literacy-related course sections across 49 public and private IHEs to determine levels of alignment with the science of reading.[6] Within each institution, the audit focused on coursework and related materials pertaining to reading and literacy instruction, including the following:

- Courses meeting the 12-Hour Reading and Literacy Core instruction requirement (commonly referred to as the "Reading Core"; ODHE, 2023a)[7]
- Courses satisfying the 3-Hour Reading in Content course requirement (ODHE, 2023b)
- Courses used for a Reading Endorsement (ODHE, 2023c)
- Other literacy-related courses at the undergraduate and graduate levels

Each IHE received a rating based on the alignment of its EPPs with the audit metrics and compliance of all

[6] This represents the IHEs in Ohio with EPPs with the exception of one: Indiana Wesleyan University. MGT Consulting conducted a science of reading audit at this IHE concurrently with the audit reported here. Because this IHE did not offer 12-Hour Reading and Literacy courses, the audit focused on compliance with the Ohio Revised Code.

[7] Though Ohio has required reading coursework within EPPs since 2001, the curricular standards for these required courses were not closely aligned with the science of reading until 2023.

literacy-related courses with Ohio's statutory definition of the science of reading.[8]

The rating of ***In Alignment*** requires that

- 97%–100% of the audit metrics were addressed across the full set of Reading Core courses, **and**
- all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

The rating of ***In Partial Alignment*** requires that

- 50%–96% of the audit metrics were addressed across the full set of Reading Core courses, **and**
- all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

The rating of ***Not In Alignment*** requires that

- fewer than 50% of the audit metrics were addressed across the full set of Reading Core courses, **or**
- there was evidence of noncompliance with the Ohio Revised Code in one or more literacy-related courses.

IHEs received a report that included audit findings, commendations, and recommendations. Commendations highlighted exemplary practices related to alignment with the science of reading. Mandatory recommendations addressed deficiencies to be addressed within 12 months, whereas advisory recommendations provided guidance for program improvement. See Appendix A for the full audit methodology and an activities timeline.

[8] Noncompliance was defined as the use of instructional methods grounded in a three-cueing approach. This definition of noncompliance did not include instruction that positioned the three-cueing approach as counter to best practices and the science of reading. See Appendix A for a detailed audit methodology description.

Audit Findings

33 *IHEs are* ***In Alignment***

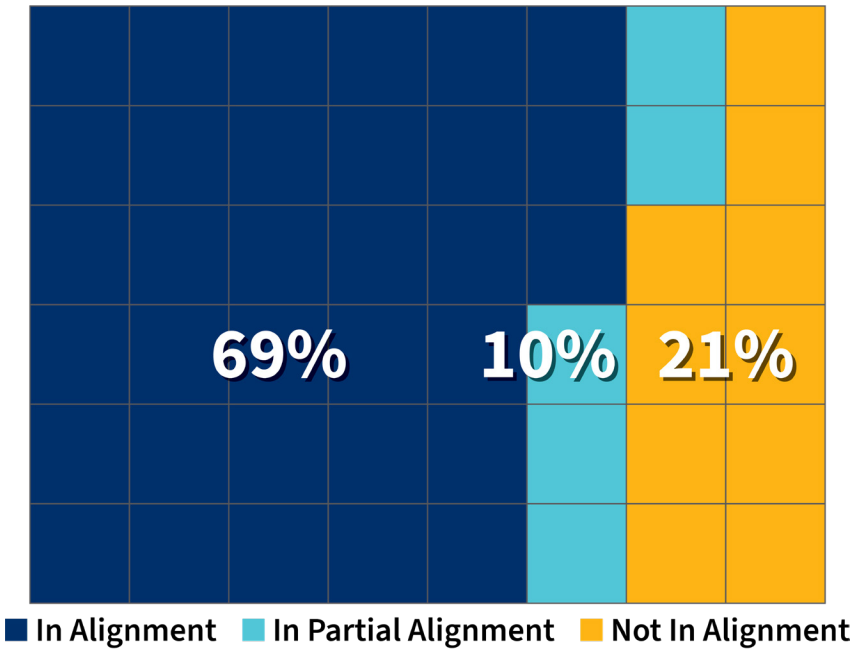
5 *IHEs are* ***In Partial Alignment***

10 *IHEs are* ***Not In Alignment***

A large majority of Ohio IHEs are aligned or partially aligned with the science of reading audit metrics (79%; see Figure 1). These aligned and partially aligned institutions addressed most audit metrics in their Reading Core courses and complied with Ohio's definition of the science of reading in all reading and literacy courses.

However, the audit revealed that EPPs at 10 IHEs are ***Not In Alignment*** with the science of reading due to the presence of the three-cueing approach in at least one course.

Figure 1
Science of Reading Audit Ratings for Ohio IHEs

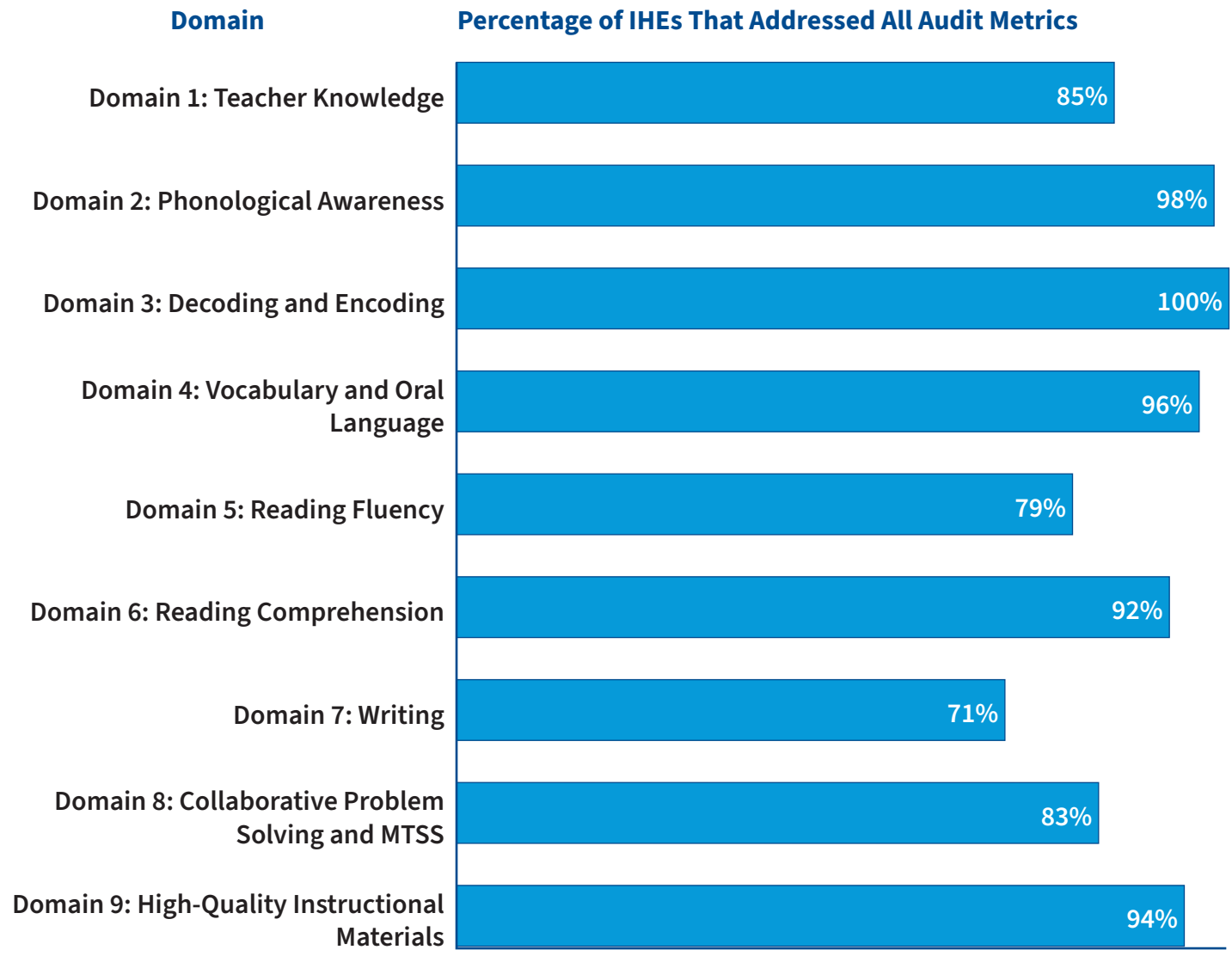


Note. Alignment percentages are based on 48 IHEs because Case Western Reserve University and Indiana Wesleyan University do not offer 12-Hour Reading and Literacy Core courses, making them ineligible for alignment ratings.

Audit Metric Findings Across IHEs

Analysis of audit data reveals that Ohio IHEs, on average, addressed 98% of the audit metrics. Institutions demonstrated strong coverage in several domains, and nearly all institutions addressed all audit metrics related to phonological awareness (Domain 2, 98%) and decoding and encoding (Domain 3, 100%; see Figure 2). In contrast, lower levels of coverage were observed in Domain 7: Writing (71%), Domain 1: Teacher Knowledge (85%), Domain 5: Reading Fluency (79%), and Domain 8: Collaborative Problem Solving and Multi-Tiered System of Support (MTSS; 83%). These domains indicate where targeted alignment is needed to ensure comprehensive preparation in all areas of literacy instruction.

Figure 2
Percentage of IHEs That Addressed All Audit Metrics per Domain



Phonological Awareness and Phonics

Phonological awareness—the ability to recognize and manipulate the spoken parts of words, including syllables, onset-rime units, and phonemes—is a critical foundation for learning to read and spell (Foorman et al., 2016; National Reading Panel, 2000; National Research Council, 1998). Strong phonological awareness in the early years is one of the most reliable predictors of reading success later (Foorman et al., 2016).

Decoding and encoding skills, developed through systematic and explicit phonics instruction, form the core of literacy development. A substantial body of research demonstrates that phonics instruction significantly improves early reading acquisition and is particularly beneficial for students at risk for reading difficulties (Fletcher et al., 2018; Foorman et al., 2016; Moats, 2020). These skills allow learners to accurately translate written language into spoken words, providing the foundation for vocabulary development, reading fluency, and comprehension (Foorman et al., 2016).

The nearly universal alignment of Ohio's IHEs with the audit metrics in these two domains suggests widespread uptake of foundational elements of the science of reading into EPPs.

Implementation of MTSS

Instructional coverage of the MTSS framework remains an area for improvement among several IHEs, particularly related to the use of well-validated assessments to identify students in need of additional support. The audit metrics least addressed in Domain 8 are listed in Table 1.

Table 1
Audit Metrics Most Commonly Not Addressed in Domain 8

Audit Metric Number	Audit Metric Topic	% of Institutions That Do Not Address in Reading Core
64	Demonstrate understanding of how to read and interpret frequently utilized diagnostic tests used by psychologists, speech-language professionals, and educational evaluators.	13%
62	Demonstrate understanding and utilization of well-validated screening tests designed to identify students at risk for reading difficulties and evaluate the extent to which assessments, curricula, and interventions are aligned to reading research.	6%
66	Demonstrate understanding of best practices for test construction and formats (e.g., reliability, validity, criterion, normed).	4%

Note. Percentages were based on 48 IHEs.

Effective MTSS implementation requires preservice candidates to develop a set of interrelated competencies, including early identification of reading difficulties using well-validated tests, accurate interpretation of student data, selection and delivery of evidence-based interventions, and collaboration with other professionals (Baker et al., 2010; Gersten et al., 2017; Haager et al., 2007). These skills are foundational to the MTSS framework, which is supported by research indicating that early identification, targeted intervention, and progress monitoring can positively alter reading trajectories (Fuchs & Fuchs, 2006; Vaughn & Wanzek, 2014).

Use of Assistive Technology

Another underaddressed area within the audit metrics is the use of assistive technologies.[9] These tools—ranging from low- to high-tech—are designed to augment, bypass, or compensate for barriers in reading and writing, allowing students to access and engage with texts and demonstrate literacy while continuing to receive explicit instruction in foundational skills (Fernández-Batanero et al., 2022; Wood et al., 2018).

Assistive technologies can reduce cognitive load, support access to grade-level content, and increase engagement in learning activities (Baker et al., 2014; Graham et al., 2018; Peterson-Karlan, 2011; Wood et al., 2018). Many Ohio IHEs need to strengthen preservice candidate preparation in this area, especially in the use of tools that support student writing and that support students with limited reading fluency.[10]

Support for Multilingual Learners

Instructional coverage related to writing and reading fluency instruction for multilingual learners is limited across some IHEs.[11]

Writing Instruction for Multilingual Learners

Effective writing instruction for multilingual learners requires explicit attention to linguistic transfer, syntactic variation, and responsive scaffolding strategies (August et al., 2009; Capin et al., 2020). For example, students may exhibit nonstandard grammatical constructions or orthographic patterns that reflect their home language systems. Rather than treating these features as deficits, EPPs should equip candidates to recognize these features as assets and design instruction that builds on students' existing linguistic knowledge while supporting mastery of academic writing conventions (Paris, 2012).

Reading Fluency Instruction for Multilingual Learners

Many IHEs lack explicit coverage of how phonological, morphological, and syntactic differences across languages can influence students' reading fluency. Linguistic mismatch between students' home language and language of instruction can disrupt foundational components of fluent reading—namely, phonemic

[9] Assistive technologies include, for example, text-to-speech, audiobooks, speech-to-text (dictation), word prediction, digital graphic organizers, and accessible digital texts with embedded vocabulary/strategy supports.

[10] Audit metrics related to the use of assistive technology to support students' reading fluency and writing were not addressed by multiple IHEs. Audit Metric 42 was not addressed by four (8%) IHEs, and Audit Metric 58 was not addressed by nine (19%) IHEs.

[11] Audit Metric 43 was not addressed by six (13%) IHEs, and Audit Metric 59 was not addressed by seven (15%) IHEs.

awareness, word recognition, and prosody (Cho et al., 2019; Lesaux & Kieffer, 2010; Vaughn et al., 2019). For multilingual learners, limited exposure to English phonology and orthography can delay the development of automaticity, particularly when instruction lacks sufficient oral language scaffolding (Capin et al., 2020; Kieffer, 2008; Lesaux et al., 2006). A growing body of evidence demonstrates that explicit, systematic instruction in learning to read improves outcomes for multilingual learners (Baker et al., 2014; Richards-Tutor et al., 2016; Vaughn et al., 2005).

Alignment Efforts Across IHEs

Nearly half of the institutions reported that they will continue to work on their programmatic alignment with the science of reading.

The audit results show that Ohio IHEs are at varying stages in the program realignment process. Some engaged with the science of reading prior to HB 33, whereas others started programmatic review and alignment efforts in response to HB 33. Nearly half of the institutions reported that they will continue to work on their programmatic alignment with the science of reading. Several leaders also noted that faculty will continue refining courses as part of standard continuous improvement processes, such as updating reading lists or adapting course assignments to practice specific elements of instruction aligned with the science of reading.

Strategies for Alignment

IHE leadership interviews highlighted the importance of faculty collaboration and administrative leadership in achieving meaningful program alignment and ensuring instructional coherence across courses. Simultaneously, strong administrative leadership from department chairs and program leads was a driving force behind systemic change and sustained alignment efforts. IHE leaders also emphasized reliance on ODHE-provided funding and resources to ensure alignment initiatives were high quality and compliant with state expectations.

Faculty and Leadership Engagement

Faculty support proved vital. The majority of the IHEs (88%, $n = 43$) reported that faculty from all levels (i.e., adjunct, clinical, and tenure track) engaged in alignment efforts. Interviewees emphasized that the benefits of involving a wide range of faculty, specifically at larger institutions and those with branch campuses, included consistency, expertise, and awareness of approaches across program areas. Adjunct faculty, particularly those teaching in prekindergarten to grade 12, were often instrumental due to their on-the-ground knowledge.

Leadership support was also important. Department chairs, program leads, and deans' offices actively supported preparation at 78% of the IHEs ($n = 38$) through content area expertise and administrative guidance. Administrative support also included providing protected time to work on alignment efforts,

developing systemic review and oversight processes, securing funding, and creating opportunities for professional development support.

Collaboration took a variety of forms. Faculty engaged in internal collaboration, such as committee reviews of literacy courses, peer reviews of revised curricula, and professional development.[12] Several IHEs relied on external support, with 30% (*n* = 15) collaborating with other IHEs and 22% (*n* = 11) hiring external consultants to conduct course reviews or support curricula revisions. Institutions also participated in professional groups and conferences, like the Ohio Dean's Compact, to ensure understanding of the changes enacted by HB 33 and the ODHE Science of Reading Audit. Many institutions also relied on partnerships with school districts to facilitate alignment with prekindergarten to grade 12 instructional practices.

To support alignment, 8% (*n* = 4) of IHEs reported hiring new faculty or staff with expertise aligned with the science of reading. These strategic staffing decisions were aimed at increasing institutional capacity and ensuring sustainability. In some cases, new hires were tasked with leading curriculum redesign or supporting professional development initiatives. These investments reflect a broader commitment to long-term program improvement and compliance.

Course Content Revisions

IHEs conducted a range of strategies to revise and redesign courses. The most common strategy reported was the targeted revision of existing courses (96% of IHEs, *n* = 47). Revisions included updates to course content (e.g., selecting new textbooks), instruction (e.g., course assignments), or assessments (e.g., final projects). Additionally, 22% (*n* = 11) of institutions created new courses, 14% (*n* = 7) overhauled existing courses, and 12% (*n* = 6) phased out courses. One IHE explained that it collapsed course offerings from parallel programs into a streamlined 12-hour course sequence.

Supports for Realignment

IHEs used a range of supports throughout their program realignment efforts, including financial supports, ODHE-provided materials, and institution-specific resources.

ODHE grants funded alignment at about half of the IHEs, and another 31% (*n* = 15) used internal funding (e.g., endowments, institutional grants, professional development funds) or external funding (e.g., the Ohio Dean's Compact). Funds were often used for professional development and to pay faculty to revise courses.

ODHE also supported IHEs by providing a suite of resources, including revised standards, a standards crosswalk, audit metrics, and access to the Ohio science of reading modules. A majority (73%, *n* = 36) reported using these materials to facilitate alignment. Leaders emphasized that these materials were important for conducting self-assessments and guiding the selection of professional development offerings.

Faculty also engaged with Ohio's science of reading modules to deepen their understanding of the state's definition of the science of reading and to ensure that curriculum and instruction for preservice candidates

[12] In their audit of Indiana Wesleyan University, MGT Consulting noted that, like faculty at other institutions, instructors at the IHE participated in formal training that included external certifications as well as self-directed learning.

were aligned with prekindergarten to grade 12 practices. Additionally, several institution leaders and faculty instructors emphasized the value of referencing model syllabi during course and material revisions, describing them as indispensable for effective course redesign.

IHE Alignment Ratings

Statewide IHE ratings reflect the extent to which EPPs addressed the audit metrics, particularly within Reading Core courses, and whether programs avoided practices not aligned with Ohio's definition of the science of reading (e.g., the three-cueing approach). Each rating is accompanied by commendations and recommended improvement actions to support ongoing program quality.

Taken together, these classifications offer a statewide snapshot of both progress toward the science of reading and areas still in need of improvement. Though many programs demonstrate strong adherence in foundational domains, a subset require targeted remediation to ensure that preservice candidates are fully prepared to deliver research-aligned instruction. Institution-level ratings are detailed in Appendix B.

In Alignment Institutions

More than half of the IHEs (*n* = 33) were classified as ***In Alignment*** with the science of reading audit metrics. Within these institutions, Reading Core courses addressed 97% to 100% of the audit metrics, reflecting complete or nearly complete alignment (see Table 2). All literacy-related undergraduate and graduate courses at these institutions were compliant with the Ohio Revised Code.

Table 2

Audit Rating and Audit Metrics Addressed for In Alignment Institutions

Institution	% of Audit Metrics Addressed in Reading Core Courses	Audit Metrics Not Addressed in Reading Core Courses
Ashland University	100%	--
Kent State University	100%	--
Lourdes University	100%	--
Miami University	100%	--
Muskingum University	100%	--
Ohio Northern University	100%	--
Otterbein University	100%	--
The University of Akron	100%	--
University of Cincinnati	100%	--

Institution	% of Audit Metrics Addressed in Reading Core Courses	Audit Metrics Not Addressed in Reading Core Courses
University of Dayton	100%	--
University of Findlay	100%	--
University of Mount Union	100%	--
Wilmington College	100%	--
Youngstown State University	100%	--
Baldwin Wallace University	99%	58
Bluffton University	99%	59
Cedarville University	99%	59
Franciscan University of Steubenville	99%	64
Franklin University	99%	47
Hiram College	99%	72
John Carroll University	99%	47
Lake Erie College	99%	58
Marietta College	99%	58
Mount St. Joseph University	99%	58
Mount Vernon Nazarene University	99%	64
Shawnee State University	99%	43
Xavier University	99%	62
College of Wooster	97%	54, 58
Heidelberg University	97%	2, 59
Malone University	97%	2, 43
University of Rio Grande	97%	42, 43
Walsh University	97%	58, 59

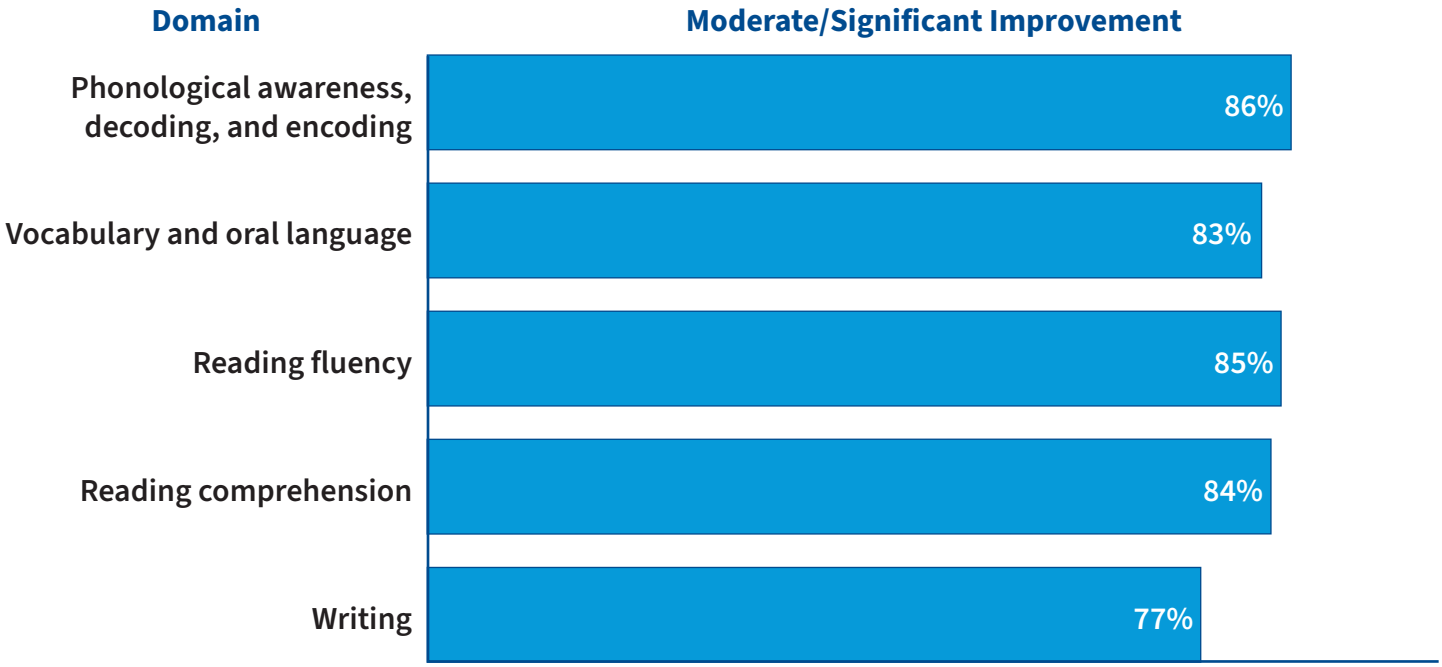
Institution	% of Audit Metrics Addressed in Reading Core Courses	Audit Metrics Not Addressed in Reading Core Courses
Wittenberg University	97%	42, 58

Note. See Appendix B for all audit ratings.

Survey data further support these findings. Most preservice candidates at ***In Alignment*** institutions reported feeling increasingly prepared to implement evidence-based literacy instruction. Notably, preservice candidates indicated improvements in their ability to assess and teach key domains of the science of reading during the spring semester in 2025 (see Figure 3).

Figure 3

Perceived Growth in Literacy Instruction Abilities Among Aligned IHE Preservice Candidates



Source: Statewide Survey of Ohio Preservice Candidates, Spring 2025
Note. Preservice candidate responses to the question, "Since the beginning of the semester, how much has your ability to assess and teach ... improved?" The number of responses ranged from 1,851 to 2,083. See statewide survey results in Appendix C.

Data revealed common practices across many ***In Alignment*** IHEs, including professional development grounded in the science of reading, structured faculty collaboration, and extensive preservice candidate field experiences.

Professional Development Grounded in the Science of Reading

The audit team commended nine ***In Alignment*** IHEs for their active engagement in professional development initiatives, and many ***In Alignment*** institutions reported participating in professional development related to the science of reading. Activities included monthly in-house trainings, literacy-focused book studies, and participation in specialized programs such as Orton-Gillingham, Language Essentials for Teachers of Reading and Spelling (LETRS) training, Reading Revolution training, and the Ohio science of reading modules.

These targeted learning experiences helped to establish a shared knowledge base around the science of reading. For many institutions, this foundation was instrumental in supporting complex alignment efforts across courses, departments, and campuses.

Structured Faculty Collaboration

Several ***In Alignment*** IHEs (n = 8) reported frequent, structured collaboration among faculty and staff, both within and across campuses. Common strategies included formal peer review processes for course syllabi and instructional materials to ensure consistency with audit metrics, partnerships with external service centers to align syllabi with the science of reading, and the appointment of campus leads who facilitated cross-campus collaboration. These leads often supported instructional consistency through shared syllabi and coordinated course materials.

Extensive Preservice Candidate Field Experiences

Extensive opportunities to apply evidence-based literacy practices in authentic field settings were provided to preservice candidates at 14 ***In Alignment*** IHEs. One institution required a 12-week mini-student-teaching experience prior to formal student teaching; another IHE embedded three semesters of field-based practicums into its program. Across institutions, field placements functioned as structured environments where preservice candidates could implement their learning while receiving targeted support and timely feedback from university supervisors.

IHEs classified as ***In Alignment*** received advisory recommendations aimed at supporting ongoing program refinement. These recommendations emphasized the importance of sustaining professional development efforts, routinely reviewing course content to reflect evidence-based practices, and enhancing preservice candidates' preparedness to meet the needs of diverse learners.

In Alignment Exemplars

Kent State University and Lourdes University are exemplars in their alignment with the science of reading, demonstrating institutional commitments to strategic leadership and faculty collaboration.

Kent State University

Institution Description: Kent State University, a large multi-campus institution, comprehensively revised its literacy courses. Faculty across branch campuses collaborated to revise syllabi and instructional materials, eliminating practices related to a three-cueing approach and replacing them with structured literacy practices. The university prioritized science of reading expertise in hiring decisions and appointed faculty with science of reading expertise to guide course redesigns. Leadership also supported professional development through group participation in the Ohio science of reading modules and pursued grant funding to sustain their alignment efforts.

Key Alignment Strategies:

- **State-endorsed professional development completion:** Faculty teaching literacy courses completed Pathway A from the Ohio science of reading modules. Many faculty collectively engaged in this training, which enabled them to support one another throughout alignment efforts.
- **Science of reading expert faculty leadership:** Leadership appointed lead faculty with demonstrated expertise in the science of reading to spearhead the revision and development of literacy courses, ensuring consistent, high-quality alignment with evidence-based practices.
- **Cross-campus course collaboration:** Faculty across main and branch campuses coordinated efforts to align instruction and content across common course sections, promoting consistency and fidelity to the science of reading. This contributed to consistent alignment in course materials, instruction, and assessment across campuses.
- **Interdisciplinary collaboration:** Literacy and special education faculty partnered to codevelop course materials and assessments, integrating strategies aligned with the science of reading across disciplines.
- **Opportunities for preservice candidates to practice structured literacy:** Faculty systematically embedded structured literacy principles into course content. Student comprehension and application were monitored through targeted field placement observations, key course assessments, and performance on the Ohio Assessment for Educators in Foundations of Reading.
- **Continuous course review using ODHE standards:** Faculty conducted ongoing evaluations of course materials using the ODHE materials. This ensured adherence to Ohio's definition of the science of reading and maintained alignment across course sequences.
- **Engagement in Ohio Dean's Compact professional development:** Select faculty participated in professional development opportunities, such as those offered through the Ohio Dean's Compact, expanding their knowledge of Ohio expectations for science of reading instruction and informing course development.
- **School district partnerships for field readiness:** Leadership and faculty were informed by and actively collaborated with local school districts to align preservice candidate preparation with district and state expectations. These partnerships ensured that candidates were well-equipped with evidence-based instructional practices for field placements and future school employment.
- **Strategic hiring practices:** Leadership prioritized science of reading expertise in faculty hiring criteria.
- **Grant-funded professional development:** Leadership actively pursued grant funding to support faculty professional development, including programs such as LETRS training, to build faculty knowledge and sustain long-term instructional reform.

Lourdes University

Institution Description: Lourdes University, a small private institution, focused alignment efforts on a targeted set of literacy courses. This IHE demonstrated a strong commitment to ensuring alignment with the science of reading. Lourdes faculty also engaged in interdisciplinary collaboration with special education colleagues and partnered with local school districts to align preservice candidate preparation with field expectations.

Key Alignment Strategies:

- **Leadership-driven urgency:** Leadership cultivated a proactive culture around science of reading alignment, emphasizing early action and sustained commitment by providing regular support.
- **Faculty-led science of reading alignment:** Faculty with science of reading expertise coordinated course revision efforts and ensured alignment with standards and audit metrics.
- **Interdisciplinary collaboration:** Literacy and special education faculty collaborated to ensure consistency across alignment efforts and courses.
- **Iterative curriculum revision:** Faculty undertook multiple rounds of curriculum revision in response to updated ODHE standards and later to meet audit metrics. Structured collaboration across literacy-related courses reinforced a shared understanding of evidence-based practices and improved instructional coherence across the sequence of literacy-related courses.
- **Evidence-based material updates:** Faculty remained current with publications related to the science of reading and regularly updated course materials to reflect the latest research.
- **External review:** Leadership engaged outside consultants to review syllabi and crosswalks, ensuring full alignment with the science of reading.
- **Grant acquisition for professional development:** Leadership pursued grant funding to support professional development, including programs such as LETRS training, to build faculty knowledge and sustain long-term instructional change.
- **Community-focused field preparation:** Leadership and faculty prioritized the needs of local educators alongside preservice candidates by offering professional development to area teachers and providing candidates with classroom supplies tailored to district curricula.

In Partial Alignment Institutions

Five IHEs in Ohio were classified as ***In Partial Alignment*** with the science of reading audit metrics. These institutions addressed between 50% and 96% of the audit metrics within their Reading Core courses, and all literacy-related courses remained fully compliant with the relevant provisions of the Ohio Revised Code (see Table 3). Notably, four of the five IHEs addressed more than 90% of the audit metrics, suggesting that most are approaching full alignment.

Many ***In Partial Alignment*** IHEs were commended for their efforts in faculty professional development, structured collaboration, and meaningful field experiences for preservice candidates—practices also observed among fully aligned institutions.

Though each institution demonstrated distinct strengths and opportunities for improvement, the primary distinction between the ***In Partial Alignment*** group and the ***In Alignment*** group was that the former did not address three or more audit metrics within the Reading Core courses.

Table 3
Audit Rating and Audit Metrics Addressed for In Partial Alignment Institutions

Institution	% of Audit Metrics Addressed in Reading Core Courses	Number of Audit Metrics Not Addressed in Reading Core Courses	Audit Metrics Not Addressed in Reading Core Courses
Ohio Wesleyan University	96%	3	12, 50, 58
Western Governors University	96%	3	2, 21, 41
God's Bible School & College	95%	4	34, 59, 64, 66
Capital University	93%	5	12, 42, 43, 59, 64
Ursuline College	84%	12	2, 12, 35, 43, 45, 47, 50, 58, 59, 66, 70, 72

Note. See Appendix B for all audit ratings.

Institutions classified as ***In Partial Alignment*** were required to address all audit metrics within Reading Core courses by revising syllabi, course content, and assessments to ensure full integration of the required metrics.

Not In Alignment Institutions

Ten IHEs were classified as ***Not In Alignment*** with the science of reading audit metrics. Evidence of noncompliance was identified in at least one literacy-related course at each institution and was substantiated through multiple sources, including course texts, assignments, supplementary materials, and classroom observations. The number of noncompliant course sections per institution is provided in Table 4. The following sections of this report detail findings from each of these sources.

Though each of these institutions had at least one course section that did not meet the state's definition of the science of reading, most addressed a substantial portion of the audit metrics across all Reading Core courses.

Table 4
Audit Rating and Audit Metrics Addressed for Not In Alignment Institutions

Institution	Number of Course Sections Noncompliant With Ohio's Definition of the Science of Reading	% Audit Metrics Addressed in Reading Core	Number of Audit Metrics Not Addressed in Reading Core	Audit Metrics Not Addressed in Reading Core
The Ohio State University	17	100%	0	--
Ohio Christian University	4	92%	6	12, 43, 62, 64, 70, 72
Central State University	2	97%	2	62, 64
Defiance College	2	99%	1	43
Bowling Green State University	2	100%	0	--
The University of Toledo	2	100%	0	--
Wright State University	2	100%	0	--
Cleveland State University	1	99%	1	42
Ohio Dominican University	1	100%	0	--
Ohio University	1	100%	0	--

Note. See Appendix B for all audit ratings.

Evidence of Noncompliance

Noncompliance was attributed to the use of texts, instructional materials, assessments, or observed practices that promote the three-cueing approach to reading.

Course Texts

At all IHEs classified as ***Not In Alignment***, preservice candidates were assigned textbooks or articles that endorsed a three-cueing approach as a viable instructional method. This endorsement appeared in instructional recommendations, teacher prompts, and assessment practices embedded within the texts. Common features across these materials included prompting students to predict words using contextual or syntactic clues, encouraging cross-checking across cueing systems, and analyzing errors to infer cue use rather than emphasizing phonics-based decoding strategies.

Several texts provided direct teacher prompts aligned with a three-cueing approach. Examples include the following:

- *Assessment for Reading Instruction* (Dougherty Stahl et al., 2020), which instructs teachers to ask: "Does it make sense? Does it sound right? Does it look right?"—a triadic prompt reflecting semantic, syntactic, and visual cueing.
- *The Reading Turn-Around: A Five-Part Framework for Differentiated Instruction* (Jones et al., 2009), which encourages teachers to guide students through "three spheres of reasoning"—visual, meaning, and syntax.
- *An Observation Survey of Early Literacy Achievement* (Clay, 2014), which positions meaning and syntax as primary sources of information, suggesting phonics is less reliable.

Other texts embedded a cueing-based approach within broader instructional models. Examples include the following:

- *The Next Step Forward in Guided Reading* (Richardson, 2016), which encourages strategies such as using picture clues, making multiple attempts, and rereading during guided reading lessons.
- *Guided Reading: Responsive Teaching Across the Grades* (Fountas & Pinnell, 2017), which draws on Clay's framework (1991, 1993), emphasizing word prediction based on meaning and syntax before confirming with visual cues.
- *Opening Minds: Using Language to Change Lives* (Johnston, 2012), which describes a teacher prompting students to "look at the pictures to figure out" unfamiliar words and praising this strategy.

In addition, several texts embedded the three-cueing approach within assessment tools, using cue-based frameworks to interpret student errors and guide instruction. Examples include the following:

- *Literacy Assessment and Intervention for Classroom Teachers* (DeVries, 2023)
- *An Observation Survey of Early Literacy Achievement* (Clay, 2014)
- *The Flynt/Cooter Comprehensive Reading Inventory-3: Assessment of K–12 Reading Skills in English and Spanish* (Cooter et al., 2021)

These texts use miscue analysis and running records to interpret student errors through a cueing approach, which diverges from phonics-based decoding and is not aligned with Ohio's definition of the science of reading.

A full list of textbooks in use across Ohio IHEs not aligned with the science of reading is in Table 5.

Table 5

Textbooks in Use Across Ohio IHEs Not Aligned with the Science of Reading

Textbook	Institution
DeVries, B. A. (2023). *Literacy assessment and intervention for classroom teachers* (6th ed.). Routledge.	Defiance College, Ohio Dominican University, Wright State University
Dougherty Stahl, K. A., Flanigan, K., & McKenna, M. C. (2020). *Assessment for reading instruction* (4th ed.). Guilford Press.	Ohio University, The Ohio State University
Clay, M. M. (2014). *An observation survey of early literacy achievement* (3rd ed.). Heinemann.	The Ohio State University
Cockrum, W. A., & Shanker, J. L. (2013). *Locating and correcting reading difficulties* (10th ed.). Pearson.	Cleveland State University
Cooter, R. B., Flynt, E. S., & Cooter, K. (2021). *The Flynt/Cooter comprehensive reading inventory-3: Assessment of prek–12 reading skills in English and Spanish* (3rd ed.). Pearson.	University of Toledo
Fountas, I. C., & Pinnell, G. S. (2017). *Guided reading: Responsive teaching across the grades* (2nd ed.). Heinemann.	Ohio Christian University
Gunning, T. G. (2025). *Creating literacy instruction for all students* (11th ed.). Pearson.	Defiance College
Gurjar, N., Meacham, S., & Beecher, C. (2023). *Methods of teaching early literacy.* Iowa State University Digital Press.	Central State University
Johnston, P. H. (2012). *Opening minds: Using language to change lives.* Routledge.	The Ohio State University
Jones, S., Clark, L. W., & Enriquez, G. (2009). *The reading turn-around: A five-part framework for differentiated instruction.* Teachers College Press.	The Ohio State University
Leland, C., Lewison, M., & Harste, J. C. (2017). *Teaching children's literature: It's critical!* (2nd ed.). Routledge.	Central State University
Richardson, J. (2016). *The next step forward in guided reading: An assess-decide-guide framework for supporting every reader.* Scholastic.	Ohio Christian University
Tompkins, G., & Rodgers, E. (2020). *Literacy in the early grades: Successful start for prek–4 readers and writers* (5th ed.). Pearson.	The Ohio State University

Note. See Appendix D for alignment and compliance of most frequently assigned textbooks.

Instructional Materials

Three Ohio IHEs incorporated instructional materials that promoted a three-cueing approach. These materials included presentations, course assignments, and intervention resources. Across sources, content reflected multiple elements characteristic of the three-cueing framework, such as the following:

- Expository content describing the roles of meaning, structure/syntax, and visual (MSV) cues, along with instructional strategies for shifting students' reliance among these cues
- Course assignments directing preservice candidates to teach and model word recognition strategies using picture cues, meaning cues, and structural cues
- Intervention materials positioning context clue use and structural analysis as central components of word recognition instruction
- Instructional guidelines outlining "problem-solving actions" based on identifying and responding to student cueing behaviors

Collectively, these materials reflect a pedagogical orientation that is not aligned with the science of reading, which emphasizes phonemic decoding as foundational to word recognition (see Ehri, 2020; Foorman, 2023). Their inclusion in course artifacts highlights the need for targeted curricular revision to ensure alignment with Ohio's definition of the science of reading.

Assessments

Assessments used by ***Not In Alignment*** IHEs included tools that explicitly embedded the three-cueing approach. For example, the "Record of Oral Reading" assessment instructed preservice candidates to analyze student errors by identifying the types of MSV cues they believed students relied on when encountering unfamiliar words. Similarly, certain versions of the "Analysis of Records of Decision Making" assessment required preservice candidates to conduct MSV miscue analyses and use those findings to inform instructional planning.

These assessments operationalized the three-cueing approach through templates and instructional guides, offering step-by-step procedures for integrating cueing-based strategies into assessment practices. Preservice candidates were directed to perform MSV miscue analyses and to prompt students to self-monitor using semantic, syntactic, and visual cues, reinforcing a model that contradicts Ohio's definition of the science of reading.

The underlying premise of these assessments—that reading errors reflect the cognitive processes of skilled readers—is unsupported by research.

The underlying premise of these assessments—that reading errors reflect the cognitive processes of skilled readers—is unsupported by research. Rather, such compensatory behaviors are characteristic of struggling readers and do not represent the processes underlying proficient word recognition or reading comprehension (Blaiklock, 2004; Snow et al., 1999; Unger et al., 2025).

Observed Instruction

Classroom observations conducted during site visits served to contextualize and corroborate findings from course artifacts. In one observation, preservice candidates used a lesson plan template from *The Next Step Forward in Guided Reading* (Richardson, 2016), which included prompts encouraging students to rely on meaning and syntax—rather than phonics—when reading unfamiliar words. This instructional framing reflected core elements of the three-cueing approach.

In another observation, audit team members documented the use of cloze test instruction, a strategy that emphasizes the use of contextual and background knowledge to identify unknown words and assess text difficulty (Gellert & Elbro, 2013). This method similarly prioritized meaning- and syntax-based strategies over phonics-based decoding and is not aligned with Ohio's definition of the science of reading.

Recommendations for Not In Alignment Institutions

The 10 Ohio IHEs classified as ***Not In Alignment*** due to the inclusion of the three-cueing approach within course content received both mandatory and advisory recommendations to support alignment with the science of reading.

Foremost among these recommendations is the need for systematic review and revision of course content, including assigned textbooks, instructional materials, and teaching methods, to ensure full alignment with Ohio's definition of the science of reading. All IHEs classified as ***Not In Alignment*** received mandatory recommendations to remove texts, course materials, and instructional practices that promote the three-cueing approach.

In addition, some institutions may require further alignment to address all audit metrics across Reading Core courses. In several cases, additional faculty professional development is recommended to address persistent misconceptions about the science of reading and to build instructional capacity for implementing evidence-based practices.

Next Steps

This section outlines challenges identified through the audit, highlighting areas that require targeted attention to bring all Ohio IHEs into alignment with evidence-based practices consistent with the science of reading.

Address the Three-Cueing Approach

Ten IHEs were classified as ***Not In Alignment*** due to the use of course materials (e.g., textbooks, presentations, assessments) and instructional practices that conveyed the three-cueing approach as a viable method for teaching reading. These practices are inconsistent with Ohio's definition of the science of reading and risk misinforming preservice candidates about effective literacy instruction. For several IHEs, simply documenting the replacement of noncompliant texts may be sufficient to address their current classification as ***Not In Alignment***. For other IHEs, a comprehensive review by ODHE will be necessary to ensure that future educators are prepared to deliver evidence-based instruction.

Support IHEs in Addressing Audit Metrics

On average, Ohio IHEs addressed 98% of the audit metrics; however, 28 IHEs did not address at least one audit metric. Many of these IHEs may benefit from targeted course revisions and professional development, particularly in preparing preservice candidates in three areas: using well-validated assessments within MTSS, using assistive technology, and addressing the needs of multilingual learners.

Expand Faculty Expertise

Finally, at many institutions, expertise in reading instruction was concentrated among a small number of faculty members. This limited distribution of knowledge contributed to noticeable capacity gaps and raised concerns about program sustainability. In several cases, instructional responsibilities were assigned to graduate students or adjunct faculty with limited background in evidence-based reading instruction. These individuals often relied on materials developed by other faculty and, due to gaps in foundational knowledge, were not well-positioned to deliver the content effectively or adapt instruction when needed.

In addition, some faculty and institutional leaders demonstrated limited familiarity with the principles of the science of reading, which may further hinder alignment efforts. Strengthening faculty knowledge across roles and levels will be essential for ensuring consistent, high-quality instruction and for building long-term capacity to support program improvement.

Conclusion

Ohio's IHEs have made considerable progress in aligning EPPs with the science of reading. All 48 institutions with Reading Core courses addressed more than 80% of the audit metrics, indicating broad commitment to evidence-based literacy instruction.

However, challenges remain. A subset of institutions continues to use instructional methods and materials rooted in the three-cueing approach. Addressing these areas, along with fully aligning instruction with all audit metrics, will ensure that Ohio IHEs are well-positioned to prepare future educators to deliver effective, research-aligned literacy instruction to all students.

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Appendices

Appendix A: Audit Methodology

The audit of all educator preparation programs (EPPs) in Ohio, required by Ohio statute, was designed to assess the extent to which IHEs aligned their coursework, instructional materials, and practices with the science of reading, as defined by the Ohio Department of Higher Education (ODHE) in the *Science of Reading Audit Metrics* document and by relevant provisions of the Ohio Revised Code. See Table A1 for the audit implementation timeline.

Table A1
Ohio Science of Reading Audit Implementation Timeline

Date	Event
July 2023	HB 33 signed into law.
Fall 2023	IHEs began aligning coursework, clinical practice, and faculty training.
Fall 2023	ODHE surveyed institutions of higher education (IHEs) about self-reported science of reading alignment and professional development needs.
December 2023	ODHE released updated standards and crosswalks for required reading and literacy courses.
December 2023	ODHE released the *Science of Reading Audit Metrics*.
Spring 2024	Science of Reading Alignment Grants provided to IHEs to support alignment efforts.
October 2024	ODHE communicated audit process and timeline to IHEs.
January 2025	ODHE began audits of EPPs.
Spring 2026	IHEs not in alignment will submit corrective action plans.
Fall 2026	ODHE will review all IHEs not in alignment.
December 2026	ODHE will revoke program approval if alignment deficiencies are unresolved.
Ongoing	EPPs will be reviewed on a 4-year cycle.

The methodology included a multi-tiered course review, supplemental qualitative data collection, and a structured rating framework for programs and institutions.

Audit Scope

The audit encompassed 49 Ohio IHEs offering licensure-based EPPs. Within each institution, the audit focused on coursework and related materials pertaining to reading and literacy instruction, including the following:

- Courses meeting the 12-Hour Reading and Literacy Core instruction requirement
- Courses satisfying the 3-Hour Reading in Content course requirement
- Courses used for the Reading Endorsement
- Other courses covering reading and literacy topics at both undergraduate and graduate levels

Each course was reviewed based on its role within the program.

12-Hour Reading and Literacy Core Requirement Courses

Courses contributing to the 12-Hour Reading and Literacy Core instruction requirement underwent a comprehensive review across multiple data sources:

- Course syllabi
- Assigned readings and textbooks[1]
- Instructional materials and assignments
- Assessments (e.g., quizzes, exams, rubrics)
- Faculty interviews
- Classroom observations (where available)

These materials were reviewed using protocols aligned with the 73 metrics detailed in the *Science of Reading Audit Metrics*. The audit team assessed which audit metrics were addressed and whether instructional practices prohibited under the Ohio Revised Code were present (e.g., the three-cueing approach). IHEs were not expected to cover all audit metrics in each course. Rather, alignment was assessed across the full set of 12-Hour Reading and Literacy Core requirement courses offered by the IHE. The percentage of total audit metrics addressed was used to assign an overall IHE rating.

The rating of ***In Alignment*** requires that

- 97%–100% of the audit metrics were addressed across the full set of Reading Core courses, **and**
- all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

The rating of In ***Partial Alignment*** requires that

- 50%–96% of the audit metrics were addressed across the full set of Reading Core courses, **and**
- all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

[1] The audit team used the list supplied by IHEs in Form 1 to identify required textbooks, collect textbooks, and assign reviewers. IHEs submitted a list of textbooks used in each class in November 2024 and could update the list through January 2025. Though updates to Form 1 informed audit data collection and analysis, audit analysts did not review textbooks submitted in course materials without a corresponding update to Form 1.

The rating of ***Not In Alignment*** requires that

- fewer than 50% of the audit metrics were addressed across the full set of Reading Core courses, **or**
- there was evidence of noncompliance with the Ohio Revised Code in one or more literacy-related courses.

3-Hour Reading in Content Courses and Reading Endorsement Courses

These courses were reviewed for compliance with the Ohio Revised Code and were evaluated using the same data sources as the 12-Hour Reading and Literacy Core (excluding instructor interviews and observations). However, because audit metrics were not specifically defined for these courses, alignment determinations were made based solely on legal compliance with the Ohio Revised Code.

Other Reading and Literacy Courses

These courses included general education courses, graduate courses, and reading electives. Because no specific audit metrics were defined for these courses, the audit team assessed them only for compliance with the Ohio Revised Code, using textbooks, syllabi, assigned readings, assignments, and assessments.

Supplemental Data Collection

To contextualize course- and IHE-level findings, the audit also incorporated data from the following additional sources:

- **EPP leader interviews:** These interviews provided insight into program design, curriculum decisions, and faculty development.
- **Preservice candidate survey:** This survey captured candidates' perceptions of their preparation to teach reading and familiarity with evidence-based practices.

These data sources did not affect formal ratings but informed IHE recommendations.

Audit Data

Over several months, the audit team reviewed and synthesized all collected and submitted data from each IHE (see Table A2).

Table A2
Audit Data

Audited IHEs, Including Branch Campuses	Course Sections Audited	Site Visits	Course Observations	EPP Leadership Interviews	EPP Faculty Interviews	Textbooks Reviewed
65	614	65	176	55	141	253

Note. The number of site visits includes visits to branch campuses.

Audit Team Members and Auditor Training Process

The audit team was composed of multiple committees and specialized roles to ensure a comprehensive and rigorous evaluation process similar to audits related to the science of reading in Mississippi and Alabama. This team included two principal investigators, who oversaw the design and execution of the audit, and more than 75 audit team members who conducted reviews and analyses across various data sources (see Table A3). Auditor team member selection criteria included relevant expertise in the science of reading, advanced education backgrounds, and analytic skills. Audit team members often served in multiple capacities.

Table A3
Audit Team Members

Audit Team Role	Role Description
Textbook reviewers	Textbook reviewers evaluated textbooks that IHEs submitted as required reading.
Syllabus and course materials reviewers	Syllabus and course materials reviewers reviewed all course materials (e.g., syllabi, schedules, assignments, rubrics, presentations) that IHEs submitted.
Field auditors	Field auditors visited each of the 49 IHEs to observe instruction, interview IHE leadership, and interview course faulty.
Phase 2 audit analysts	Phase 2 audit analysts synthesized data from textbook rubrics, syllabus rubrics, and observation rubrics into a course section rubric to determine metric coverage.
Panel review members	Panel review members reviewed purposefully selected course sections for quality assurance and to validate metric ratings as determined by the Phase 2 audit analysts.
Quality assurance reviewers	Quality assurance reviewers systematically reviewed each instance of the three-cueing approach found during the audit to determine how the material was being used in the specific IHE and course section context.
Quantitative research scientists	Quantitative research scientists analyzed data from individual course section rubrics to develop IHE-level alignment and compliance ratings as well as findings for the statewide report. The quantitative team also conducted a descriptive analysis of the preservice candidate survey results.
Scientific Advisory Committee	Scientific Advisory Committee members reviewed audit methodology, instruments, and reports to ensure alignment with the science of reading.
Implementation Advisory Committee	Implementation Advisory Committee members reviewed all audit methodology, instruments, and reports to ensure high-quality implementation of audit processes.

Note. Audit team members participated in multiple audit team roles (e.g., a textbook reviewer could also serve as field auditor).

Learning List, a curriculum review service, conducted numerous textbook reviews for this project. This team brought specialized expertise in instructional material evaluation and worked in close coordination with the audit leadership to ensure alignment with the audit's criteria and methodology. Learning List's contributions were subject to the same quality assurance protocols as those applied to internal audit team members to maintain consistency and rigor across all textbook evaluations.

The audit team was supported by two expert committees, the Scientific Advisory Committee and the Implementation Advisory Committee, which included nationally recognized scholars in the science of reading (see Table A4). These two committees provided content area and implementation guidance by consulting on instrument development and audit processes and by reviewing audit findings.

Table A4
Audit Committee Members

	Scientific Advisory Committee	Implementation Advisory Committee
Committee chairs	Dr. Sharon Vaughn, *The University of Texas at Austin*	Kelly Allin Butler, *ReadingUniverse.org* Dr. Martha Hougen, Board of Directors, *The Center for Effective Reading Instruction*
Committee purpose	The Scientific Advisory Committee consisted of leading scholars who were consulted on literacy-related questions.	The Implementation Advisory Committee included five experts in audit processes, teacher preparation, and large-scale data collection who were consulted on data-collection operations.

Note. Audit committee members participated in multiple audit team roles (e.g., textbook reviewer, field auditor, Phase 2 audit analysts).

All audit team members, including some members of the Scientific Advisory Committee and Implementation Advisory Committee, participated in comprehensive training workshops designed to ensure consistency, accuracy, and fidelity in the implementation of audit processes. These workshops covered the full scope of audit methods, instruments, and protocols tailored to each role fulfilled by team members. Training sessions were developed and led by expert researchers and professional trainers with expertise in the science of reading and educational evaluation.

A central component of the training was the use of standardized rubrics to document evidence of coverage, or lack thereof, for each audit metric. Reviewers were trained to identify and document any instances of a three-cueing approach. To ensure interrater reliability and data integrity, textbook reviewers, syllabus reviewers, and field auditors completed rater-reliability assessments before being approved to conduct data collection and analysis. Throughout the audit process, team members collaborated and received targeted support from trainers to reinforce best practices and address emerging challenges.

Audit Timeline and Data Analysis Process

The audit team used a rigorous, multi-phase methodology to synthesize evidence from textbooks, instructional materials, course observations, and interviews to assess the presence and quality of coverage across each audit metric and to document any instances of the three-cueing approach (see Table A5). The process ensured a comprehensive, evidence-based understanding of instructional alignment in each course at an IHE.

Table A5
Detailed Audit Activities Timeline

Phase 1 Audit Initiation and Data Collection	Phase 2 Data Synthesis	Phase 3 Data Analysis and Reporting
November 2024–April 2025	April–July 2025	August–November 2025
Preaudit site visits	Preservice candidate survey administration	Quantitative analyses and report development
Auditor training	Data synthesis, panel reviews, and quality assurance	Report writing and delivery
Course materials and document collection		
Site visits (observations and interviews)		

Phase 1: Audit Initiation and Data Collection

The initial phase of the audit focused on the systematic collection and evaluation of course-related data, including the following:

- Course materials (e.g., syllabi, schedules, instructional resources, assignments, assessments, required readings)
- Textbooks submitted by IHEs
- Course observations of instructional delivery
- Instructor interviews to gather qualitative insights

Data sources were analyzed using a standardized rubric aligned with the audit metrics. Reviewers documented evidence of coverage, provided supporting artifacts, and flagged any use of a three-cueing approach for word reading instruction, which is inconsistent with science of reading principles.

Phase 2: Data Synthesis

In the second phase, audit analysts synthesized rubric scores across all data sources—textbook reviews, course materials, and observations—to determine comprehensive coverage at both the course section and individual metric levels. This synthesis process was systematic at the metric level:

- Analysts reviewed evidence across sources to determine whether each metric was fully, partially, or not covered.
- Interview data were incorporated to contextualize findings and clarify instructional intent.

Completed synthesis rubrics underwent a panel review and a series of quality assurance checks to ensure validity and reliability. In cases where evidence of a three-cueing approach was identified, the panel and quality assurance team re-examined all relevant data to assess its context, usage, and instructional impact.

Phase 3: Data Analysis and Reporting

In the third phase, after the course section and metric-level analysis, the audit team conducted statistical analyses of course section rubrics to calculate alignment and compliance ratings for each IHE. Each IHE received an overall rating based on the cumulative alignment ratings of its EPP(s) and individual course compliance findings. These findings were described in reports provided to each IHE with commendations and recommendations. Lastly, this statewide report was written to summarize findings across all IHEs.

Appendix B: Institution-Level Audit Results

Table B1 summarizes audit results for each IHE rated as ***In Alignment*** in the ODHE Science of Reading Audit. The rating of ***In Alignment*** requires that 97%–100% of the audit metrics were addressed across the full set of Reading Core courses, and all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

Table B1

In Alignment IHEs in Descending Order per % of Audit Metrics Addressed

Institution	Percentage of Metrics Addressed in Reading Core	Number of Metrics Addressed	Metrics Not Addressed	Number of Course Sections Reviewed in Reading Core	Number of Course Sections Reviewed in Total
Ashland University	100%	73	N/A	4	11
Kent State University	100%	73	N/A	27	30
Lourdes University	100%	73	N/A	10	15
Miami University	100%	73	N/A	12	23
Muskingum University	100%	73	N/A	9	13
Ohio Northern University	100%	73	N/A	4	4
Otterbein University	100%	73	N/A	12	19
The University of Akron	100%	73	N/A	6	12
University of Cincinnati	100%	73	N/A	11	16
University of Dayton	100%	73	N/A	4	14
University of Findlay	100%	73	N/A	5	13
University of Mount Union	100%	73	N/A	8	9
Wilmington College	100%	73	N/A	4	4
Youngstown State University	100%	73	N/A	4	10
Baldwin Wallace University	99%	72	58	5	12
Bluffton University	99%	72	59	4	4
Cedarville University	99%	72	59	8	10
Franciscan University of Steubenville	99%	72	64	4	6

Institution	Percentage of Metrics Addressed in Reading Core	Number of Metrics Addressed	Metrics Not Addressed	Number of Course Sections Reviewed in Reading Core	Number of Course Sections Reviewed in Total
Franklin University	99%	72	47	5	6
Hiram College	99%	72	72	7	7
John Carroll University	99%	72	47	4	8
Lake Erie College	99%	72	58	10	12
Marietta College	99%	72	58	4	15
Mount St. Joseph University	99%	72	58	8	17
Mount Vernon Nazarene University	99%	72	64	11	12
Shawnee State University	99%	72	43	6	6
Xavier University	99%	72	62	8	19
College of Wooster	97%	71	54, 58	3	4
Heidelberg University	97%	71	2, 59	4	5
Malone University	97%	71	2, 43	6	6
University of Rio Grande	97%	71	42, 43	6	10
Walsh University	97%	71	58, 59	4	12
Wittenberg University	97%	71	42, 58	4	11

Note. The curriculum and instruction provided in EPPs at Case Western Reserve University and Indiana Wesleyan University are not eligible for alignment ratings because these IHEs do not offer 12-Hour Reading and Literacy Core courses.

Table B2 summarizes audit results for each IHE rated as ***In Partial Alignment*** in the ODHE Science of Reading Audit. The rating of ***In Partial Alignment*** requires that 50%–96% of the audit metrics were addressed across the full set of Reading Core courses, and all literacy-related courses complied with relevant provisions of the Ohio Revised Code.

Table B2
In Partial Alignment IHEs in Descending Order per % of Audit Metrics Addressed

Institution	Percentage of Metrics Addressed in Reading Core	Number of Metrics Addressed	Metrics Not Addressed	Number of Course Sections Reviewed in Reading Core	Number of Course Sections Reviewed in Total
Ohio Wesleyan University	96%	70	12, 50, 58	5	6
Western Governors University	96%	70	2, 21, 41	6	10
God's Bible School & College	95%	69	34, 59, 64, 66	5	7
Capital University	93%	68	12, 42, 43, 59, 64	5	6
Ursuline College	84%	61	2, 12, 35, 43, 45, 47, 50, 58, 59, 66, 70, 72	4	9

Table B3 summarizes audit results for each IHE rated as ***Not In Alignment*** in the ODHE Science of Reading Audit. The rating of ***Not In Alignment*** requires that fewer than 50% of the audit metrics were addressed across the full set of Reading Core courses, or there was evidence of noncompliance with the Ohio Revised Code in one or more literacy-related courses. For all IHEs rated as ***Not in Alignment***, there was evidence of noncompliance.

Table B3
Not in Alignment IHEs

Institution	Number of Noncompliant Course Sections	Percentage of Metrics Addressed in Reading Core	Number of Metrics Addressed	Metrics Not Addressed	Number of Course Sections Reviewed in Reading Core	Number of Course Sections Reviewed in Total
Bowling Green State University	2	100%	73	N/A	17	42
Ohio Dominican University	1	100%	73	N/A	4	11
The Ohio State University	17	100%	73	N/A	29	40
Ohio University	1	100%	73	N/A	23	38
The University of Toledo	2	100%	73	N/A	4	10
Wright State University	2	100%	73	N/A	25	25
Cleveland State University	1	99%	72	42	5	11

Institution	Number of Noncompliant Course Sections	Percentage of Metrics Addressed in Reading Core	Number of Metrics Addressed	Metrics Not Addressed	Number of Course Sections Reviewed in Reading Core	Number of Course Sections Reviewed in Total
Defiance College	2	99%	72	43	6	9
Central State University	2	97%	71	62, 64	4	5
Ohio Christian University	4	92%	67	12, 43, 62, 64, 70, 72	8	9

Appendix C: Statewide Preservice Candidate Survey Results

The audit team developed a survey that was administered to preservice candidates enrolled in EPPs across the 49 IHEs during the spring 2025 semester. The purpose of the survey was to understand preservice candidates' perceptions of their knowledge about teaching reading and literacy and experiences in their programs. Survey questions focused on candidates' basic knowledge of and ability to assess and teach foundational reading skills, time practicing instruction with expert feedback, and awareness of the science of reading. A total of 3,502 preservice candidates responded to the survey for a response rate of 44.7%. The aggregated responses from this survey are presented in Tables C1–C4.

Table C1

Statewide Preservice Candidate Survey: Knowledge Assessment

Question	Not/Slightly Knowledgeable	Moderately/ Extremely Knowledgeable	*n*
Focusing on what you have learned this semester, please assess your knowledge of **foundational theories, cognitive processes, and effective strategies for teaching reading and literacy**.	15.8%	84.2%	2,264
Focusing on what you have learned this semester, please assess your knowledge of **phonological awareness, decoding, and encoding**.	10.5%	89.5%	2,028
Focusing on what you have learned this semester, please assess your knowledge of **vocabulary and oral language**.	16.5%	83.5%	2,102
Focusing on what you have learned this semester, please assess your knowledge of **reading fluency**.	12.2%	87.8%	2,108
Focusing on what you have learned this semester, please assess your knowledge of **reading comprehension**.	10.9%	89.1%	2,168
Focusing on what you have learned this semester, please assess your knowledge of **writing**.	22.0%	78.0%	1,932

Note. Only preservice candidates who indicated that they learned about these topics in the spring of 2025 responded to the knowledge and assessment questions, resulting in lower response rates.

Table C2

Statewide Preservice Candidate Survey: Ability to Assess and Teach

Question	No/Small Improvement	Moderate/ Significant Improvement	*n*
Since the beginning of the semester, how much has your ability to assess and teach **phonological awareness, decoding, and encoding** improved?	14.1%	85.9%	2,028
Since the beginning of the semester, how much has your ability to assess and build student **vocabulary and oral language** improved?	17.2%	82.8%	2,103
Since the beginning of the semester, how much has your ability to assess and teach **reading fluency** improved?	15.0%	85.0%	2,108
Since the beginning of the semester, how much has your ability to assess and teach **reading comprehension** improved?	15.2%	84.8%	2,170
Since the beginning of the semester, how much has your ability to assess and teach **writing** improved?	22.8%	77.2%	1,931

Note. Only preservice candidates who indicated that they learned about these topics in the spring of 2025 responded to the knowledge and assessment questions, resulting in lower response rates.

Table C3

Statewide Preservice Candidate Survey: Amount of Time Practicing Instruction With Expert Feedback

Domain	None	1–5 Hours	6–10 Hours	More Than 10 hours	*n*
Phonological Awareness	18.3%	31.5%	23.0%	27.1%	3,332
Decoding and Encoding	18.1%	33.9%	24.7%	23.3%	3,333
Vocabulary and Oral Language	12.1%	36.6%	27.5%	23.8%	3,334
Reading Fluency	14.9%	34.0%	27.6%	23.5%	3,337
Reading Comprehension	12.6%	33.4%	28.1%	25.9%	3,339
Writing	18.2%	41.0%	22.4%	18.4%	3,324
Collaborative Problem Solving and Multi-Tiered System of Support (MTSS)	17.6%	40.8%	23.0%	18.6%	3,337
High-Quality Instructional Materials	18.6%	39.0%	22.6%	19.8%	3,328

Table C4
Statewide Preservice Candidate Survey: Science of Reading

Question	I had not heard of the science of reading before taking this survey.	I have heard of the science of reading but do not know a lot about it.	I know about the science of reading.	I am very familiar with the science of reading.	*n*
Which statement best describes your level of awareness about the science of reading as a body of research?	5.0%	16.1%	39.7%	39.2%	3,347

Appendix D: Textbook Analysis: Most Frequently Assigned Textbooks

Selecting high-quality, evidence-based textbooks helped to ensure that EPPs aligned with the audit metrics. Some faculty-adopted textbooks comprehensively covered course topics; others were supplemental resources targeting specific components of literacy instruction. Table D1 highlights the most frequently assigned textbooks and the number of metrics addressed.

Table D1
Alignment and Compliance of Most Frequently Assigned Textbooks

Number of Assigning Institutions	Textbook	Number of Audit Metrics Addressed	Evidence of the Three-Cueing Approach
39	Honig, B., Diamond, L., Gutlohn, L., Cole, C. L., El-Dinary, P. B., Hudson, R., Lane, H. B., Mahler, J., & Pullen, P. C. (2018). *Teaching reading sourcebook*. Academic Therapy.	38	No
20	Moats, L. C., & Brady, S. (2020). *Speech to print: Language essentials for teachers* (3rd ed.). Brookes.	43	No
13	Diamond, L., & Thorsnes, B. J. (2018). *Assessing reading: Multiple measures* (2nd ed.). Academic Therapy.	5	No
9	Archer, A. L., & Hughes, C. A. (2010). *Explicit instruction: Effective and efficient teaching*. Guilford Press.	11	No
9	Hochman, J. C., & Wexler, N. (2017). *The writing revolution: A guide to advancing thinking through writing in all subjects and grades*. Jossey-Bass.	15	No
8	Hougen, M. C., & Smartt, S. M. (2020). *Fundamentals of literacy instruction and assessment, prek–6* (2nd ed.). Brookes.	55	No
8	Hochman, J. C., & Wexler, N. (2024). *The writing revolution 2.0: A guide to advancing thinking through writing in all subjects and grades*. Jossey-Bass.	12	No

Number of Assigning Institutions	Textbook	Number of Audit Metrics Addressed	Evidence of the Three-Cueing Approach
8	Lewis Hennessey, N. (2021). *The reading comprehension blueprint: Helping students make meaning from text*. Brookes.	45	No
6	Sedita, J. (2023). *The writing rope: A framework for explicit writing instruction in all subjects*. Brookes.	18	No

Appendix E: ODHE Science of Reading Audit Metrics

Department of Higher Education

Science of Reading Audit Metrics:

Standards Alignment for the
Ohio Department of Higher Education

Course Alignment and Planning Tool for Analyzing Alignment to the Science of Reading

Science of Reading Audit Metrics have been determined to perform the eventual audits for Ohio's teacher preparation programs that will begin in early 2025. The metrics are aligned with the standards and qualifications for educator licenses adopted by the State Board of Education under section 3319.22 of the Revised Code and the requirements of the Ohio teacher residency program established under section 3319.223 of the Revised Code. The metrics also align with the International Dyslexia Association's Knowledge and Practice Standards (KPS) for Teachers of Reading (2018) and the Ohio Department of Higher Education (ODHE) 12-Hour Reading and Literacy Core Standards (2023).

Part 1: Course Alignment Review

Domain 1: Teacher Knowledge		
Topic		**IDA KPS and ODHE Alignment**
1	Describe the key features of the definition of reading science and understand seminal research (e.g., Simple View of Reading (Gough & Tunmer, 1986); Ehri's Phases of Word Recognition (1985); The Reading Rope (Scarborough, 2001); The Four-Part Processing Model of Word Recognition (Seidenberg & McClelland, 1989)), and regions of the brain necessary for skilled reading.	KPS 1.2; 1.6; 4A.1 ODHE 1.1
2	Interpret current NAEP data on student reading outcomes and understand the impact on subgroups (e.g., minority populations, students with disabilities, ML learners, etc.).	KPS 1.5; 1.6
3	Explain the importance of research in education and the role it has in informing teaching.	KPS 1.6; 4A.1
4	Describe the differences between and the relationship between written and spoken language.	KPS 1.3; 1.9
5	Explain the contribution of cognitive psychology to reading development and instruction (including how the brain learns to read). Include the underlying cognitive and linguistic processes that contribute to reading and differentiate good from struggling readers.	KPS 1.1; 1.3; 1.4; 1.6; 1.7; 1.9 ODHE 1.2

6	Know phases in the typical developmental progression of oral language, phoneme awareness, decoding skills, printed word recognition, spelling, reading fluency, reading comprehension, and written expression.	KPS 1.8
7	Define and describe Language Systems: orthography, phonetics, phonology, morphology, syntax, semantics, and discourse.	KPS 1.1
8	Explain how environmental, cultural, behavioral, and social factors contribute to literacy development.	KPS 1.5
9	Define and describe the components of effective reading and spelling instruction, including explicit, systematic, cumulative, teacher-directed instruction and multimodal.	KPS 4A.1; 4A.2
10	Demonstrate the ability to adapt instruction to accommodate individual differences in cognitive, linguistic, sociocultural, and behavioral aspects of learning.	KPS 4A.3 ODHE 8.2
11	Demonstrate an understanding of the impact on reading and writing development for students who struggle with phonemic awareness, encoding/decoding, fluency, vocabulary, and comprehension, including the impact on students with language and dialect variations (e.g., multilingual learners, Black language, etc.).	KPS 4B.7; 4B.3; 4C.5 ODHE 3.5
12	Demonstrate understanding of State and Federal special education laws related to literacy including but not limited to learning disabilities, specifically language-based disabilities such as dyslexia.	KPS 2.2 ODHE 1.3
Comments		

Domain 2: Phonological Awareness		
Topic		**IDA KPS and ODHE Alignment**
13	Demonstrate an understanding that phonological processing is a foundational requirement necessary for decoding.	ODHE 2.4
14	Explain the differences between and relationships among phonological awareness, phonemic awareness, and phonics.	ODHE 2.3
15	Explain the reciprocal relationships among phonemic awareness, decoding, word recognition, spelling, and vocabulary knowledge.	KPS 1.3 ODHE 2.2

16	Demonstrate an understanding of how the relationship between phonological awareness and early concepts of print impacts literacy development.	KPS 1.1; 1.3; 1.4; 1.5 ODHE 2.13
17	Identify, pronounce, classify, and compare the consonant and vowel phonemes of English and their application to other languages and dialects.	KPS 1.5; 1.7; 4B.1 ODHE 2.5; 2.6; 2.11
18	Demonstrate the ability to assess the levels and skills of phonemic awareness and how to use assessment data to inform instruction.	KPS 3.4; 3.6; 4B.3 ODHE 8.6
19	Define and differentiate the developmental levels of phonological awareness (word, syllable, phoneme level) and the skills associated with them (discrimination, rhyming, isolation, blending, segmentations, deletion, manipulation) with an emphasis on blending and segmenting of phonemes as most predictive of future reading ability.	KPS 1.6; 1.8; 4B.2; 4B.4 ODHE 2.1; 2.7; 2.8
20	Demonstrate understanding of intervention materials and techniques and the impact of difficulty with phonemic awareness on reading and writing development, including the impact of language and dialect variation on teaching and learning English phonemes	KPS 1.5; 1.7; 4A.3; 4B.3; 4B.7 ODHE 2.5; 2.9; 2.11
21	Observe, plan, and deliver PA lessons that are direct, brief, articulatory, and cumulative using tokens and letters to support conceptual understanding.	KPS 4B.5; 4B.6 ODHE 2.10; 2.12
Comments		

Domain 3: Decoding and Encoding		
Topic		**IDA KPS and ODHE Alignment**
22	Demonstrate knowledge of the structure of English orthography and the patterns that inform teaching single and multisyllabic word reading and spelling.	KPS 4C.1 ODHE 3.1

23	Describe the difference between code emphasis vs. meaning emphasis approaches to word recognition instruction and summarize the characteristics of each and why meaning emphasis approaches are not support by research.	KPS 1.6; 4C.3 ODHE 3.6
24	Describe and apply research-supported methods for assessing and teaching phoneme/grapheme relationships for word recognition and spelling.	KPS 4C.2; 4C.3 ODHE 3.6; 8.6
25	Recognize phonetically irregular words and apply evidence-based techniques to support instruction.	KPS 4C.6 ODHE 3.6
26	Know and apply research to plan and deliver instruction of syllable types to read multisyllabic words.	KPS 4C.7 ODHE 3.7
27	Observe, plan, and deliver a structured phonics lesson that is explicit, systematic, sequential, and multimodal to enhance student engagement and memory.	KPS 1.2; 4A.1; 4A.2; 4C.1; 4C.2; 4C.3; 4C.4; 4C.7 ODHE 3.2; 3.3; 3.4
28	Demonstrate understanding of the different types and purposes of texts, with emphasis on the role of decodable texts in teaching beginning readers.	KPS 4C.8 ODHE 3.8
29	Explain and provide examples of the impact of language and dialect variations on encoding and decoding instruction.	KPS 1.5; 1.7; 4A.3
Comments		

Domain 4: Vocabulary and Oral Language		
Topic		**IDA KPS and ODHE Alignment**
30	Know and apply the research on the role of word knowledge (word recognition, spelling, syntax, etc.) and vocabulary development in oral (listening and speaking) and text (reading and writing) comprehension.	KPS 4E.1 ODHE 4.1
31	Describe the vocabulary gap and identify research-based practices for vocabulary development with consideration to the wide differences in students' vocabularies.	KPS 4E.2 ODHE 4.2

32	Demonstrate understanding of developing vocabulary skills through the systems of language, including phonology, orthography, syntax, semantics, morphology, etymology, and the relationships among them.	ODHE 4.3
33	Know and apply research-based methods of incidental vocabulary instruction (oral language experiences, teacher read-alouds, and independent reading).	KPS 4E.3 ODHE 4.4
34	Demonstrate the ability to assess vocabulary knowledge and how to use the assessment data to inform instruction.	KPS 3.6 ODHE 8.6
35	Observe, plan, and deliver a vocabulary lesson using intentional (direct) methods of vocabulary instruction (tiered-framework, word-learning strategies) and word consciousness (adept diction, word play, etymology).	KPS 4E.4 ODHE 4.5
36	Demonstrate understanding of the importance of wide reading in vocabulary development through the selection of rigorous, culturally responsive, complex grade-level texts.	ODHE 4.6
37	Demonstrate the impact of dialect variation and multilingual learning on vocabulary acquisition in reading and writing development.	KPS 1.5; 1.7; 4A.3; 4E.1; 4E.2
Comments		

Domain 5: Reading Fluency		
Topic		**IDA KPS and ODHE Alignment**
38	Define and demonstrate understanding of the term fluency (i.e., reading accurately with appropriate pace and expression to facilitate and demonstrate comprehension) and the progression of fluency levels including letter recognition, sound-symbol corresponds, word-level reading, phrase level reading, sentence level reading, and connected text.	ODHE 5.1; 5.2
39	Demonstrate understanding of text reading fluency as an indicator of typical reading development that can be advanced through informed instruction and progress monitoring practices.	KPS 3.4; 3.6; 4D.3 ODHE 5.5

40	Demonstrate an understanding of the three important components of fluency: accuracy, automaticity, and prosody and how these play a role in reading comprehension and motivation to read.	KPS 4D.1 ODHE 5.3; 5.7
41	Observe, plan, and deliver evidence-based approaches for assessing and teaching reading fluency to improve fluency outcomes.	KPS 4D.2; 4D.3 ODHE 5.4; 8.6
42	Demonstrate understanding of appropriate uses of assistive technology for students with serious limitations in reading fluency (e.g., speech-to-print translators, audiobooks, etc.).	KPS 4D.4 ODHE 5.6
43	Explain the impact of language and dialect variation and multilingual learning on the acquisition of reading fluency.	KPS 1.5; 1.7; 4A.3
Comments		

Domain 6: Reading Comprehension		
Topic		**IDA KPS and ODHE Alignment**
44	Demonstrate an understanding of factors that contribute to deep comprehension (e.g., background knowledge, vocabulary, verbal reasoning ability, sentence processing, literary structures, conventions, strategies for close reading such as self-monitoring, motivation).	KPS 4F.1 ODHE 6.1
45	Describe the importance of sentence-level comprehension in reading and listening comprehension (syntactic awareness).	KPS 4F.3 ODHE 6.5
46	Explain how explicit instruction in writing can impact reading comprehension.	KPS 1.2 ODHE 6.6; 7.9
47	Observe, plan, and deliver a comprehension lesson using the tenants of explicit instruction.	KPS 4F.4 ODHE 6.3
48	Demonstrate understanding of selecting rich texts appropriate for instruction that includes a wide range of genres (informational text, narrative text, and persuasive) to facilitate comprehension	KPS 4F.2 ODHE 6.2

49	Demonstrate understanding of the teacher's role as an active mediator of student engagement and strategies with text for deep comprehension	KPS 4F.5 ODHE 6.4
50	Understand the importance of selecting authentic text that supports a variety of cultures, ethnicities, and experiences written by a variety of authors with different cultures and backgrounds.	KPS 1.5
Comments		

Domain 7: Writing		
Topic		**IDA KPS and ODHE Alignment**
51	Understand and apply knowledge of the importance of the major skill domains that contribute to written expression (e.g., Not-So-Simple View of Writing, transcription, composition, revision, editing).	KPS 4G.1 ODHE 7.1
52	Demonstrate an understanding of connecting writing instruction and practice to the texts/content children are reading/learning while increasing how much students write according to ability and grade.	ODHE 7.2; 7.5
53	Apply research-based practices for teaching mechanics of writing (e.g., punctuation, spelling) and letter formation (cursive and manuscript).	KPS 4G.2; 4G.3 ODHE 7.6
54	Identify and apply the developmental phases of written expression and the instructional implications of each (e.g., sentence construction and syntax, planning, drafting, revision).	KPS 4G.4 ODHE 7.3
55	Demonstrate understanding and apply in practice the considerations for the development of skilled written composition through assessment and explicit instruction, applying the phases of writing.	KPS 3.4; 3.6 ODHE 7.4; 8.6
56	Demonstrate an understanding of the role of background knowledge and vocabulary as applied to clear expression of ideas in writing.	ODHE 7.8
57	Understand the connection between writing & reading, including the need for automaticity (e.g., handwriting, spelling, syntax, text structure) and how writing supports comprehension.	KPS 4G.3 ODHE 7.7; 7.9
58	Increase awareness of assistive technology options and considerations for when and how to use them.	KPS 4G.5 ODHE 7.10

59	Describe instructional considerations for multilingual learners and those with language variations when teaching written expression.	KPS 1.5; 1.7; 4A.3
Comments		

Domain 8: Collaborative Problem Solving and MTSS		
Topic		**IDA KPS and ODHE Alignment**
60	Demonstrate understanding of language as foundational to reading development, and difficulty with language may lead to reading difficulties.	ODHE 8.1
61	Demonstrate understanding of the differences among and purposes for screening, progress-monitoring, diagnostic, and outcome assessments.	KPS 3.1 ODHE 8.3
62	Demonstrate understanding and utilization of well-validated screening tests designed to identify students at risk for reading difficulties and evaluate the extent to which assessments, curricula, and interventions are aligned to reading research.	KPS 3.4 ODHE 8.4
63	Demonstrate understanding and application of progress monitoring and reporting with Curriculum-Based Measures (CBM).	ODHE 8.5
64	Demonstrate understanding of how to read and interpret frequently utilized diagnostic tests used by psychologists, speech-language professionals, and educational evaluators.	ODHE 8.7
65	Demonstrate the ability to analyze, integrate, summarize, and communicate (orally and in writing) the meaning of educational assessment data for sharing with students, parents, and other teachers through a collaborative problem-solving process as a model for making decisions about systems and students in MTSS.	KPS 3.8 ODHE 8.8
66	Demonstrate understanding of best practices for test construction and formats (e.g., reliability, validity, criterion, normed).	KPS 3.2; 3.3; 3.4; 3.5; 3.7 ODHE 8.9
67	Demonstrate understanding of how to use data to determine the reader profile and intervention needs of struggling readers and writers within a Multi-Tiered System of Support (MTSS) framework and how behavior is connected to reading in the MTSS model.	KPS 1.4; 4A.3 ODHE 8.10

68	Demonstrate understanding of diverse reading profiles for struggling readers, including dyslexia, and for multilingual learners and those with language variations.	KPS 4A.3 ODHE 8.11
69	Demonstrate understanding and application of the general principles and practices of structured language and literacy teaching, including explicit, systematic, cumulative, teacher-directed instruction.	ODHE 8.12
70	Recognize the tenets of IDA's definition of dyslexia and identify the distinguishing characteristics of dyslexia; and explain how reading difficulties vary and change over time in response to development and instruction.	KPS 1.4; 1.5; 2.1; 2.3; 2.4; 2.5
Comments		

Domain 9: High-Quality Instructional Materials		
Topic		**IDA KPS and ODHE Alignment**
71	Demonstrate understanding of selection and utilization of high-quality instructional materials to develop clear learning goals and outcomes.	ODHE 9.1
72	Demonstrate the ability to differentiate between high-quality instructional materials and instructional materials that do not align with Science of Reading.	ODHE 9.2
73	Demonstrate understanding of the selection and utilization of high-quality instructional materials to design instruction that supports student literacy learning.	ODHE 9.3
Comments		