WDE WLLP

Component 6: Effective Evidence-Based Framework for Literacy Instruction

Wyoming Department of Education

122 W. 25th St., Ste. E200 | Cheyenne, WY 82002
P: 307-777-7675 | F: 307-777-6234 | edu.wyoming.gov

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Introduction

Like Wyoming's rivers shape the landscape over time, carving valleys and nourishing the land, the Wyoming Language and Literacy Plan (WLLP) anchors the state's literacy initiatives in evidence-based, high-quality instruction, steadily flowing toward sustained improvement. This adaptive approach is designed to meet the diverse needs of all students across Wyoming, ensuring equitable access to instruction that is grounded in research and proven strategies. By integrating the science of reading, the WLLP aims to transform literacy instruction statewide, fostering long-term growth and success for all learners. The plan provides a structured framework for ensuring that instructional decisions are guided by research, aligned with state policies, and responsive to student needs.

Purpose

At the heart of the WLLP is the science of reading, a vast body of interdisciplinary research that provides critical insights into how proficient reading and writing develop, why some individuals struggle with literacy skills, and how to effectively assess and teach to improve student outcomes. The Reading League (2022) defines the science of reading as:

> A vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing. This research has been conducted over the last five decades across the world, and it derives from thousands of studies conducted in multiple languages. The science of reading is derived from research in education, special education, literacy, psychology, neurology, and more. It provides an explanation of how proficient reading and writing develop, why some have difficulty, and how we can most effectively assess and teach to improve student outcomes. (The Reading League, 2022)

This research draws from multiple disciplines, including cognitive psychology, which examines how memory, perception, and reasoning influence reading; communication sciences, which explore the role of language development in literacy acquisition; and developmental psychology, which studies the progression of reading skills over time. Education research identifies effective teaching methods that enhance literacy instruction, while special education contributes strategies for supporting students with learning difficulties. Linguistics provides a detailed analysis of language structure and function as it relates to reading and writing. At the same time, neuroscience investigates the brain mechanisms involved in reading, and school psychology addresses reading development and difficulties, offering targeted interventions.

To achieve this vision, the framework outlines key evidence-based strategies that address the essential components of effective literacy instruction. These strategies encompass comprehensive approaches to reading and writing across content areas and emphasize phonemic awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel, 2000). Differentiated instruction plays a central role, ensuring that students receive tailored support that meets their individual learning needs. The WLLP also underscores the importance of selecting High-Quality Instructional Materials (HQIM) to enhance literacy development and engage diverse learners (Snow & Matthews, 2016). By embedding these strategies within a structured, research-based approach, the WLLP provides a cohesive plan to improve literacy outcomes statewide.

A critical component of the WLLP is the Multi-Tiered System of Supports (MTSS) Literacy Aligned Framework,

which ensures that literacy instruction is proactive, data-driven, and responsive to student needs. MTSS provides a structured, tiered approach to delivering prevention and intervention strategies that support students at all levels. This framework integrates academic, behavioral, and social-emotional supports into a cohesive system that allows educators to adjust instruction based on data and student progress. The three-tiered system includes Tier 1 universal instruction that benefits all students, Tier 2 targeted interventions for students requiring additional support, and Tier 3 intensive interventions for students with significant reading challenges. By prioritizing prevention before intervention, MTSS creates a strong foundation for literacy success and minimizes the need for long-term remediation.

The WLLP prioritizes the needs of all students, particularly those at risk of not reaching reading proficiency, by ensuring early identification and targeted interventions. The plan is rooted in a commitment to ensuring all students have access to evidence-based instruction, high-quality materials, and necessary supports. It emphasizes alignment with state standards, instructional best practices, and continuous progress monitoring to maintain consistency and effectiveness across Wyoming's schools. By integrating HQIM and professional learning opportunities, the WLLP creates a comprehensive framework that supports literacy development from early childhood through secondary education.

Ensuring that all Wyoming students receive high-quality literacy instruction requires more than individual effort—it demands a systemic transformation. A cohesive approach to systems change is essential, aligning policies, leadership, and instructional practices to create sustained impact. This transformation requires collaboration among educators, policymakers, families, and community stakeholders to build a literacy ecosystem that supports all learners. By fostering shared responsibility and commitment to evidence-based instruction, Wyoming aims to create a sustainable, equitable, and effective literacy system that serves students across the state.

Systems Thinking: Levers to Transform Literacy Outcomes

Systems change in education is a complex and multifaceted process that requires collaboration and transformation across multiple levels. Each component of the education system—from state-level governance to individual families—plays a critical role in creating a more effective and equitable learning environment. When focused on language and literacy, systemic change involves intentional efforts to align policies, practices, and resources to ensure that all students develop strong reading, writing, and communication skills. This alignment is essential for addressing disparities in literacy outcomes and ensuring that every student has the opportunity to succeed academically and beyond.

This process can be understood through systems thinking, which emphasizes the interconnectedness of these components and the need for evidence-based practices rooted in the science of reading research. Systems thinking highlights the importance of identifying key levers for change, such as teacher preparation, curriculum design, and assessment practices, to transform literacy outcomes. By addressing these levels in a coordinated and strategic manner, systemic change can lead to lasting improvements in literacy outcomes for all students. It requires a shared vision among stakeholders and a commitment to continuous improvement to ensure that progress is sustained over time.

In Wyoming, the education reform process begins with legislators, who create and pass laws that establish

the framework for initiatives, allocate funding, and set priorities. These laws provide the foundation for statewide education policies and ensure that critical programs, such as literacy interventions and early education initiatives, receive the financial support they need. Once legislation is in place, the Wyoming State Board of Education (SBE) develops policies, sets academic standards, and creates accountability measures to implement the laws. These policies ensure that all students have access to a high-quality education and that schools are held accountable for meeting state standards.

The Wyoming State Superintendent of Public Instruction (SOPI) oversees the execution of these policies, ensuring compliance, monitoring outcomes, and advocating for improvements. The superintendent works closely with school districts to provide guidance and support, ensuring that policies are implemented effectively at the local level. WDE then works to implement these policies, providing resources, technical assistance, and professional development opportunities to schools and districts. Finally, the Professional Teaching Standards Board (PTSB) ensures that educators meet high professional standards, helping to maintain the quality of teaching across the state. Each group plays a critical role in shaping and improving Wyoming's education system, working together to create a cohesive and effective framework for student success.

With these governance structures in place, the next step is to align policies, practices, and resources to drive systemic literacy improvement. This requires a strategic focus on key levers such as teacher preparation, curriculum design, assessment practices, and professional development. By integrating these elements, Wyoming can ensure that evidence-based literacy instruction is effectively implemented across all levels of the education system. The following section explores these levers in greater detail, outlining the strategies needed to drive meaningful and lasting improvements in literacy.

Driving Systemic Change in Language and Literacy

To achieve systemic change in language and literacy, it is essential to focus on the key levers that drive transformation. These levers include aligning policies, practices, and resources to support evidence-based literacy instruction, preparing educators to teach reading effectively, and ensuring access to HQIM, resources, practices, and assessments. By addressing these critical areas, Wyoming can create a more effective and equitable education system that supports strong literacy outcomes for all students. Ultimately, a comprehensive approach that integrates these elements is necessary for fostering a culture of literacy across the state. The following sections will explore these key levers in greater detail, outlining the strategies needed to drive meaningful and lasting improvements in literacy.

Focusing on the key levers that drive transformation is essential to achieving systemic change in language and literacy. These levers include aligning policies, practices, and resources to support evidence-based literacy instruction, preparing educators to teach reading effectively, and ensuring access to HQIM and assessments. By addressing these critical areas, Wyoming can create a more effective and equitable education system that supports strong literacy outcomes for all students. Focusing on the key levers that drive transformation is essential to achieving systemic change in language and literacy.

Systemic change in literacy also depends on collaboration among stakeholders at all levels of the education system. This includes state-level policymakers, district and school leaders, teachers, families, and community

organizations. Each group has a unique role in supporting literacy development and ensuring students have access to the resources and opportunities needed to succeed. Wyoming can achieve meaningful and lasting improvements in literacy outcomes by working together and maintaining a shared focus on evidence-based practices. Through collective efforts, these stakeholders can create a unified vision for literacy that addresses the diverse needs of all learners. The following sections will explore these key levers in greater detail, outlining the strategies needed to drive meaningful and lasting improvements in literacy.

Legislators and State Board of Education

Legislators play a foundational role in education reform by passing laws, allocating funding, and setting statewide priorities. They ensure that critical programs, such as literacy interventions and early education initiatives, receive the financial backing needed for success. Legislators also respond to public concerns about education and hold education leaders accountable for progress by requiring regular reporting on outcomes. Their decisions establish the framework within which the SBE, the SOPI, the Wyoming Department of Education (WDE), and the PTSB operate. Through their legislative actions, they establish the framework within which the SBE, the SOPI, the DWDE, and the PTSB operate.

The Wyoming SBE, established in 1917, is an independent body responsible for setting key educational policies for Wyoming's K–12 districts. The board consists of 11 volunteer regional representatives appointed by the governor and confirmed by the senate for staggered six-year terms, along with three ex-officio members: the SOPI, the executive director of the Wyoming Community College Commission, and the president of the University of Wyoming or their designees. The board sets policies related to state standards, school accreditation, accountability, and assessments to ensure all students have equal access to a quality education. In fulfilling its mission, the SBE works closely with the WDE, which implements these policies to ensure statewide educational goals are achieved. The board represents the interests of Wyoming's more than 90,000 students and remains focused on ensuring their needs are prioritized across all levels of the education system.

The board also invites Wyoming citizens to participate in the education process by attending public meetings, providing input on state assessments, and engaging in public comment periods during the development of standards and policies. The State Board's responsibilities include several key areas:

- **Accountability:** The Wyoming Accountability in Education Act holds schools, leadership, and teachers to universal standards and helps improve performance. The board develops rules for evaluations and performance targets and participates in the advisory committee to the Select Committee for Statewide Education Accountability.
- **Assessment:** The board collaborates with WDE to review and approve rigorous assessments that measure student proficiency, progress, and readiness for college and careers. Citizens can provide input on state assessments through the assessment task force or their local school boards.
- **Standards:** The board approves Wyoming State Content and Performance Standards across nine content areas to ensure schools align their curricula with statewide expectations. Public input is encouraged during standards review processes and prior to final approval.
- **Accreditation:** Wyoming's K-12 schools are accredited annually by the board, with additional support from AdvancED accreditation every five years. This process ensures schools address performance issues and implement necessary improvements.

In addition to these responsibilities, the board reviews charter school appeals, approves alternative school schedules, and oversees agreements for cooperative educational services (BOCES). The board also focuses on larger issues, such as improving outcomes for American Indian students and expanding early childhood education opportunities to ensure all children enter kindergarten ready to learn.

State Superintendent of Public Instruction

The SOPI serves as the chief executive officer of the WDE and oversees the implementation of education policies across the state. The superintendent plays a key role in ensuring compliance with state and federal education laws, advocating for legislative priorities, and monitoring student outcomes to assess the effectiveness of reforms. They also provide guidance to school districts, promote evidence-based practices, and work to secure resources for schools.

Key responsibilities of the SOPI include:

- **Policy Implementation:** Assisting the SBE in implementing policies and providing necessary information.
- **School Accreditation:** Preparing and maintaining a list of accredited schools in Wyoming and ensuring compliance with state standards.
- **Advisory Role:** Consulting with and advising the state board, local school boards, administrators, teachers, and citizens to develop and improve the state's education system.
- **Legislative Advocacy:** Advocating for legislative priorities, focusing on protecting students and families, improving educational outcomes, and securing resources for schools.
- **Oversight and Guidance:** Providing oversight and guidance to school districts to ensure compliance with state and federal education laws and promoting evidence-based practices.

The Superintendent works closely with the WDE, the SBE, and the PTSB to align efforts and ensure that statewide education initiatives are successfully executed.

Wyoming Department of Education

WDE plays a critical role in implementing the policies. The Department provides resources, guidance, and support to school districts to ensure compliance with state and federal education laws. It oversees the administration of statewide assessments, manages school funding, and monitors student performance data to identify areas for improvement. Additionally, the WDE promotes equity in education by ensuring that all students, regardless of background, have access to quality learning opportunities. The department also collaborates with educators, parents, and community stakeholders to address challenges and improve educational outcomes across the state.

The WDE is responsible for:

- Administering federal and state education programs.
- Supporting professional development for teachers and administrators.
- Managing school funding and ensuring equitable distribution of resources.
- Overseeing statewide assessments and reporting on student performance.
- Providing technical assistance to districts to help them meet state standards and accountability requirements.

The department works closely with the SBE and the SOPI to align efforts and ensure that Wyoming's education system meets the needs of its students.

Professional Teaching Standards Board (PTSB)

The PTSB ensures that educators in the state meet high professional standards. The board oversees the certification and licensure of teachers, administrators, and other educational professionals, ensuring they qualify to provide quality education to Wyoming students. The board also establishes professional

development and continuing education requirements to maintain licensure, ensuring that educators stay current with best practices and evolving educational standards. By setting these standards, the PTSB plays a crucial role in enhancing the overall quality of education in Wyoming.

Key responsibilities of the PTSB include:

- C**ertification and Licensure:** Issuing and renewing licenses for teachers, administrators, and other educational professionals.
- **Professional Development:** Establishing requirements for continuing education and approving professional development programs to ensure educators maintain their skills and knowledge.
- S**tandards for Educators:** Setting and enforcing standards for educator preparation programs ensures that new teachers are well-prepared for the classroom.
- **Background Checks:** Conducting background checks for all applicants to ensure the safety and well-being of students.

The PTSB works closely with the WDE, school districts, and educator preparation programs to ensure that Wyoming's educators are highly qualified and meet the needs of students across the state. This collaboration fosters a supportive environment for educators, ultimately benefiting student learning outcomes.

Institutions of Higher Learning: Teacher Preparation

Colleges and universities are pivotal in shaping the future of literacy education by equipping future educators with the skills, knowledge, and mindset needed to succeed in diverse and dynamic classrooms, particularly in language and literacy. Teacher preparation programs play a critical role in systems change by embedding evidence-based practices aligned with science of reading research into coursework and field experiences. These institutions also conduct research on effective teaching strategies and foster systemic improvements in literacy education. By aligning teacher preparation coursework with evidence-based practices and partnering with school districts, they ensure educators are equipped to address systemic challenges in literacy instruction. This work supports state-level goals and ensures that teacher preparation programs embed these practices into their curricula, preparing teachers to meet the diverse needs of students and improve literacy outcomes.

Local Education Agency

School districts serve as the bridge between state policies and individual schools, playing a critical role in driving systems change for language and literacy. They are responsible for implementing state mandates, allocating resources, and supporting schools in improving literacy outcomes. This includes providing professional development on evidence-based practices aligned with the science of reading, ensuring access to HQIM, and establishing systems for monitoring student progress in language and literacy. Through audits, targeted support for struggling schools, and community partnerships, districts create the conditions necessary for systemic transformation in literacy instruction. At the same time, they must balance centralized support for curriculum, technology, and professional learning while allowing schools the flexibility to implement effective, research-aligned practices tailored to their unique contexts.

A defining feature of Wyoming's education system is local control, which grants Local Education Agencies (LEAs)—primarily school districts—the authority to decide how education is delivered in their communities. Local control allows school districts to determine their curricula, instructional methods, and resource allocation as long as they meet the state's minimum standards and requirements. This approach recognizes the unique needs and priorities of Wyoming's diverse communities, empowering local school boards and

administrators to tailor education to the specific needs of their students. This flexibility enables districts to be responsive to the diverse demographics and educational challenges present in their areas.

In practice, local control allows the state to establish broad policies, standards, and accountability measures while granting LEAs the flexibility to implement these policies in ways that align with their local context. For example, districts can select instructional materials grounded in the science of reading, design professional development programs that reflect evidence-based literacy practices, and adopt teaching strategies that best meet the needs of their students. This flexibility is particularly important in Wyoming, where rural and urban districts face distinct challenges and opportunities. Local control ensures that those closest to the students—educators and district leaders—make informed decisions that directly address their unique needs.

However, local control also requires strong collaboration between state and local entities to ensure alignment with evidence-based practices and statewide goals. For example, in the context of literacy, the state may provide guidance on the science of reading and recommend HQIM aligned with science of reading research, but it is up to each district to adopt and implement these resources. This balance between state oversight and local autonomy is critical for driving systemic change while respecting the independence of Wyoming's LEAs. Ultimately, this collaborative approach fosters a more effective educational environment that benefits all students.

Schools are the frontline of education, where policies and practices directly impact students' language and literacy development. As the primary site of learning, schools play a crucial role in systems change by fostering cultures that prioritize evidence-based practices aligned with science of reading research, and addressing the holistic needs of students. By prioritizing high-quality language and literacy instruction aligned with science of reading research, schools can ensure that all students, regardless of background, develop strong reading and writing skills. Schools also play a vital role in identifying and addressing literacy challenges early, providing targeted interventions for struggling readers aligned with science of reading research, and engaging families in supporting students' literacy development.

Schools rely on the support of districts to provide resources and guidance while working closely with teachers and families to ensure that systemic changes translate into meaningful improvements in language and literacy outcomes for students. This collaboration between schools, districts, and families is essential for creating a cohesive and effective system that supports literacy success for all learners. By fostering strong partnerships, these stakeholders can create a unified approach to literacy that addresses the diverse needs of students.

Teachers are the most influential agents of change within the education system, particularly in language and literacy. They interact with students daily and have the power to shape their literacy learning experiences and outcomes. By adopting evidence-based practices aligned with science of reading research, teachers can ensure that all students develop the foundational skills necessary for academic success and lifelong learning. Teachers also play a key role in identifying students who need additional support in reading and writing and implementing targeted interventions aligned with science of reading research to address these needs.

In addition to their instructional role, teachers contribute to systems change by engaging in lifelong learning, collaborating with colleagues and families, and advocating for access to literacy resources aligned with science of reading research. Their ability to adapt to new research and practices ensures that literacy

instruction remains effective and responsive to students' needs. Teachers' work is essential in ensuring that systemic reforms in language and literacy aligned with science of reading research, translate into real improvements for students, making them indispensable to the success of any education initiative.

Families and Community Stakeholders

Families are vital partners in the education system and play a key role in supporting their children's language and literacy development. As the first educators in a child's life, families contribute to systems change by fostering a love of reading at home, engaging in their children's literacy learning, and advocating for access to high-quality literacy instruction in schools. They can support students' literacy development by reading together, creating print-rich environments at home, and collaborating with teachers to reinforce literacy skills. Their involvement ensures that education systems remain responsive to the needs of students and their communities. Additionally, families provide critical feedback to schools and districts, helping to shape policies and practices that reflect the needs of the broader community, particularly in language and literacy.

In addition to families, community stakeholders—including local businesses, libraries, nonprofit organizations, and civic groups—play an essential role in supporting literacy development and driving systems change. Libraries, for example, provide access to books, literacy programs, and digital resources that extend learning opportunities beyond the classroom. Nonprofit organizations often partner with schools to offer tutoring, after-school programs, and family literacy workshops, helping to address gaps in resources and support. Local businesses can contribute by sponsoring literacy initiatives, donating materials, or funding programs that promote language and literacy skills. Furthermore, civic groups and community leaders can advocate for policies and practices that prioritize language and literacy, ensuring equitable access to resources for all students.

By working together, families and community stakeholders create a network of support that reinforces the importance of literacy and ensures that students have access to the tools they need to succeed. This collaboration also helps to address systemic barriers, such as limited access to books or technology, that can hinder literacy development. When families, schools, and community stakeholders align their efforts, they create a shared vision for literacy success that benefits all learners. This collective approach fosters a sense of ownership and responsibility among all parties involved, enhancing the overall effectiveness of literacy initiatives.

Each layer of the education system has a unique and interconnected role in driving systems change in language and literacy. By working together, these stakeholders can address systemic barriers and create a more effective system for literacy instruction. This interconnected approach ensures that systemic reforms are sustainable and impactful, leading to lasting improvements in literacy outcomes for all learners. Ultimately, the collaboration between families, community stakeholders, and educational institutions is essential for fostering a culture of literacy that supports every child's learning journey.

Systems Change: A Multi-Level Approach

While systems change in education requires transformation across multiple levels, literacy is a critical area where these principles can be applied. Improving literacy outcomes for all Wyoming students requires a fundamental shift in how literacy instruction is supported, delivered, and sustained across the state. This

process aligns with the broader principles of systems change in education, requiring a deliberate, research-informed transformation of policies, leadership structures, instructional practices, and professional learning supports. Achieving this goal necessitates a coordinated effort across multiple levels, from state education agencies and district leadership to school-based instructional teams and classroom educators.

Each system component must be intentionally designed to reinforce and sustain evidence-based literacy practices, ensuring that students receive high-quality, research-aligned instruction from early childhood through secondary education. Wyoming's evidence-based framework for literacy instruction demonstrates how systems-level change can address specific challenges and improve outcomes for all students. The framework builds upon the following core elements:

- **Leadership Development and Professional Learning:** Strengthening the capacity of state, district, and school leaders to implement, monitor, and refine literacy initiatives.
- **Instructional Coaching and Educator Development:** Providing structured support for educators through high-quality professional learning and job-embedded coaching.
- **Data-Informed Decision-Making:** Ensuring that literacy instruction and interventions are guided by comprehensive assessment systems and responsive instructional practices.
- **MTSS and Intensification Frameworks:** Implementing a continuum of literacy supports that prioritize prevention before intervention while ensuring targeted, individualized support for students who need it.
- **High-Quality Instructional Materials and Practices:** Identifying and adopting resources that align with science of reading research, and meet rigorous evidence-based criteria.

These core elements represent the foundational components necessary for systems-level change in literacy instruction, ensuring alignment and cohesion across all levels of the education system. By addressing these elements, Wyoming's framework provides education leaders, instructional teams, and policymakers with the tools, guidance, and structures needed to implement sustainable, evidence-aligned literacy improvements. This document outlines these core elements and serves as a roadmap for transforming literacy instruction in Wyoming. It establishes a shared foundation for action that connects state-level priorities with local implementation.

The framework emphasizes systems alignment, coherence, and long-term sustainability to support literacy achievement across all student populations. It provides a clear path for integrating evidence-based practices into daily instruction and leadership decision-making. By focusing on sustainable impact, the WLLP ensures that Wyoming's approach to literacy remains responsive to student needs while maintaining fidelity to research. This long-term vision positions the state to support future generations through a cohesive, scalable literacy system.

Leader: Professional Development and Coaching

Literacy leaders are at the forefront of driving systems change, serving as catalysts for transforming literacy outcomes across the educational ecosystem. These leaders—whether at the state, district, or school level—play a critical role in aligning policies, practices, and resources to address the structural, cultural, and procedural barriers that hinder equitable literacy achievement. Effective systems change in literacy requires a comprehensive approach that begins with strong leadership to guide the adoption of evidence-based practices, foster collaboration, and ensure accountability at every level of the system. Research indicates that literacy challenges are not isolated to individual students or teachers; they are deeply embedded in broader

systemic factors such as inequitable access to high-quality instruction, gaps in teacher preparation, and inconsistent use of data-driven practices (Fullan, 2006; Fuchs & Fuchs, 2006). By addressing these interconnected elements, literacy leaders ensure that all students, regardless of background, have access to the tools and support they need to succeed.

Key components of systems change include adopting evidence-based practices grounded in science of reading research, which emphasizes phonemic awareness, phonics, fluency, vocabulary, and comprehension as essential pillars of literacy instruction (National Reading Panel, 2000). Literacy leaders at the state and local levels are responsible for aligning these practices with policies and fostering collaboration to implement them effectively (Fullan, 2006). Additionally, systems change focuses on improving access to resources and interventions, particularly for historically marginalized groups, including students from low-income backgrounds, English learners, and students with disabilities (Annie E. Casey Foundation, 2010). Furthermore, professional development for teachers, data-driven decision-making, and family and community engagement are essential to creating a cohesive and sustainable framework for literacy improvement (Desimone & Garet, 2015; Epstein, 2001)

Research underscores that systems change is not a one-time initiative but an ongoing continuous improvement process. Literacy leaders must embed structures for collaboration, accountability, and adaptability to create the conditions for long-term success (Bryk et al., 2015). By serving as the tip of the spear, literacy leaders transform literacy from a classroom priority into a shared responsibility across the entire literacy ecosystem, ensuring that every child has the opportunity to develop strong literacy skills and thrive academically.

Sustainable systems change begins with strong leadership. Leaders at every level—from state education agencies to district administrators and school principals—must have the knowledge and skills to drive literacy reform effectively. Professional development and coaching for leaders are pivotal in ensuring that evidence-based literacy instruction is implemented effectively across Wyoming. The following section details how professional learning opportunities are structured to develop instructional leadership at all levels, emphasizing the need for ongoing support and training.

While leadership development provides the foundation for systemic literacy improvement, coaching serves as the mechanism for translating knowledge into action. Coaching offers continuous, job-embedded professional learning that enhances instructional effectiveness and ensures that leaders and educators implement best practices with fidelity. This ongoing support is crucial for helping educators adapt to new strategies and improve their teaching methods. Additionally, effective coaching fosters a culture of continuous learning within schools, encouraging collaboration among staff and promoting shared responsibility for student outcomes. This section explores the vital role of instructional coaching in sustaining long-term literacy improvement and its impact on creating a supportive learning environment.

Sustainable systems change begins with strong leadership. Leaders at every level—from state education agencies to district administrators and school principals—must have the knowledge and skills to drive literacy reform effectively. Leadership professional development and coaching are pivotal in ensuring that evidence-based literacy instruction is implemented effectively across Wyoming. The following section details how professional learning opportunities are structured to develop instructional leadership at all levels, emphasizing the need for ongoing support and training.

Building capacity for leadership is central to the WLLP and its vision for systemic change. District leaders and principals play a pivotal role in creating systems that cultivate learning environments where all students feel

supported and have the opportunity to succeed. Literacy leader's professional development and coaching are critical strategies for empowering leaders to guide their systems effectively, embedding collaborative structures, and ensuring the sustainability of language and literacy initiatives. Through comprehensive training and coaching, leaders develop the skills to promote responsive instructional practices, remove obstacles to learning, and ensure that every student can access effective literacy instruction.

Research consistently underscores the importance of leadership in driving systemic change. Studies by Fullan (2014) and DuFour and Marzano (2011) highlight that leaders who prioritize collaboration, data-driven decision-making, and professional learning create systems that are more effective in achieving sustained improvement. Similarly, research by Learning Forward (2022) emphasizes that professional learning embedded in daily practice is most effective when leaders actively support and model evidence-based strategies. These efforts ensure that professional learning leads to measurable improvements in classroom instruction and system-wide outcomes. Leadership coaching supports administrators in developing the skills needed to foster a culture of collaboration, accountability, and innovation, ensuring that language and literacy strategies are impactful and enduring.

Foundational Knowledge of Science of Reading Research

Administrators and principals play a vital role in shaping the success of literacy programs and overall student achievement. Administrators, such as assistant principals, vice principals, or instructional coaches, ensure teachers have the tools, training, and support to deliver effective literacy instruction. They design and implement evidence-based programs, provide professional development, and observe and coach teachers to improve their instructional practices. By fostering collaboration and offering guidance, administrators help create a strong foundation for literacy education.

As school leaders, principals set the vision and tone for the entire school; they are responsible for ensuring that literacy instruction aligns with research-based practices and meets the needs of all students. Principals lead by example, making decisions, prioritizing literacy as a core focus, monitoring progress, and creating a culture of continuous improvement. Together, administrators and principals work to build a cohesive, supportive environment where teachers can thrive and students can develop the critical reading and writing skills they need for success. The following table outlines key Administrator/Principal responsibilities and their impact on literacy leadership, as emphasized in the WLLP.

Table 1

RESPONSIBILITIES	IMPACT
Administrators/principals demonstrate knowledge of the foundational reading skills in the science of reading, including phonological and phonemic awareness, phonics, vocabulary development, reading fluency, and reading comprehension.	Administrators/principals ensure that foundational reading skills are embedded in instructional programming to improve literacy achievement for all students. This knowledge supports the implementation of evidence-based practices across classrooms.
Administrators/principals demonstrate knowledge of the instructional practice of explicit, systematic, and evidence-based learning and instruction addressing oral language development and writing.	Administrators/principals guide teachers in implementing explicit and systematic instruction that integrates oral language development and writing, ensuring a comprehensive approach to literacy.

RESPONSIBILITIES	IMPACT
Administrators/principals demonstrate knowledge of the major theoretical instructional models such as The Simple View of Reading (SVR) and Scarborough's Reading Rope.	Administrators/principals use theoretical models to inform instructional programming and professional learning, ensuring that literacy instruction is grounded in evidence-based frameworks.
Administrators/principals ensure the schoolwide adoption and implementation of standards-aligned, scientifically and evidence-based core, supplemental, and intervention curricular resources.	Administrators/principals use their knowledge of the science of reading to select and implement HQIM that meet the diverse needs of students.
Administrators/principals understand that reading difficulty exists along a continuum of severity, understand the distinguishing characteristics of reading difficulties, and understand how this affects curricular and instructional programming decisions to support learners on this continuum.	Administrators/principals guide programming decisions to address the needs of all learners, ensuring that instruction is tailored to support students across the continuum of reading difficulties.
Administrators/principals coach and evaluate educators in their use of evidence-based literacy instruction to ensure that the school meets the literacy needs of all students.	Administrators/principals provide feedback, coaching, and professional development to help teachers refine their instructional practices and improve outcomes for all students.
Administrators/principals ensure that literacy assessments and evaluations are scientifically and evidence-based.	Administrators/principals ensure that assessments are reliable and aligned with instructional goals, providing actionable data to inform teaching practices.
Administrators/principals lead, monitor, and evaluate the school's comprehensive, scientific, evidence-based language and literacy assessment systems. They monitor gaps or redundancies across assessments and adjust the system to foster school literacy improvement for all students.	Administrators/principals align assessment systems with instructional goals, identify gaps or redundancies, and make adjustments to ensure continuous literacy improvement for all students.
Administrators/Principals establish, align, and ensure the implementation of the science of reading through job-embedded professional learning based on school-wide assessment data.	Administrators/Principals use school-wide assessment data to guide professional learning opportunities directly tied to the science of reading, ensuring that teachers are equipped with evidence-based strategies.

RESPONSIBILITIES	IMPACT
Administrators/principals analyze and guide literacy instruction through data analysis, observation, and coaching conversations.	Administrators/principals actively engage in data analysis, classroom observations, and coaching conversations to refine and improve literacy instruction across the school.
Administrators/principals promote self-reflection by school personnel about the effect of culture, beliefs, and potential biases on literacy instruction and lead change in educational practices and institutional structures to promote equitable literacy instruction for all students.	Administrators/principals encourage educators to reflect on their cultural beliefs and biases, leading efforts to change practices and structures to ensure equitable literacy instruction for all students.
Administrators/principals apply foundational knowledge of scientific and evidence-based practices and promote equitable literacy instruction to meet the diverse and inclusive needs of all learners.	Administrators/principals ensure that literacy instruction is both evidence-based and inclusive, addressing the diverse needs of all students to promote equity in learning outcomes.
Administrators/principals create an environment that prioritizes transforming and creating scientifically and evidence-based learning experiences for students that reflect their language and culture and create a link between the school and family literacy practices.	Administrators/principals foster a school environment where literacy instruction reflects students' language and culture, bridging the gap between school and family literacy practices to create meaningful learning experiences.

Administrator/principal training begins with a deep understanding of the science of reading, including the cognitive processes involved in learning to read and the instructional practices that are most effective. Leaders are trained to evaluate and select HQIM aligned with the science of reading and to ensure that these materials meet the diverse needs of students. Furthermore, literacy leadership training emphasizes data-driven decision-making, equipping leaders to analyze student performance data, identify learning gaps, and implement targeted interventions that address those gaps effectively.

Through their multifaceted roles, administrators and principals act as literacy supervisors, guiding and supporting educators, families, and community stakeholders. Their leadership ensures systems are aligned with the WLLP's goals, rooted in evidence-based practices and systemic change. By equipping leaders with the tools to support teachers through professional learning and collaborative opportunities, the WLLP ensures that strategies are implemented with fidelity and adapted to meet evolving needs. Leadership training also prepares administrators to foster equity and access by addressing systemic barriers, ensuring that all students, regardless of background, have access to high-quality literacy instruction.

Literacy Leader: Coaching

Coaching serves as a critical mechanism for translating leadership development into practice. Research by the University of Florida Lastinger Center for Learning, Public Impact (2016), and Kraft, Blazar, and Hogan (2018) highlights the significant impact of coaching in enhancing professional development. Coaching provides

ongoing, personalized support that helps leaders and teachers refine and adapt instructional strategies, ensuring that professional learning is deeply integrated into daily practice. These studies emphasize that coaching fosters deeper integration of new practices, leading to measurable improvements in teaching and leadership practices. Instructional coaching models, such as peer coaching, team-based coaching, and transformational coaching, offer diverse approaches to reinforce professional learning and ensure consistent application across classrooms and schools.

Leadership development and coaching also empower district leaders and principals to influence their systems in critical areas such as curriculum, instruction, and assessment. These leaders ensure that language and literacy programs are developed, implemented, and evaluated effectively at the district and school levels. Through targeted professional development, leaders build the capacity to oversee the adoption and evaluation of evidence-based curricula and instructional practices, ensuring alignment with the WLLP's goals. Literacy leadership training further equips leaders to support teachers in integrating HQIM and High-Quality Instructional Practices (HQIP) across their systems. This collaboration ensures that instructional approaches address the diverse needs of all learners, supporting both students who excel and those who struggle with reading and writing.

In addition to curriculum and instruction, leaders play a pivotal role in assessment and evaluation. Leadership development equips them to design and implement comprehensive assessment systems that monitor student progress and inform instructional decisions across their schools and districts. By analyzing data patterns, leaders identify areas for improvement and advocate for targeted interventions to meet students' specific needs. This data-driven approach ensures that systems are responsive to the needs of all learners and fosters continuous improvement at every level.

The WLLP integrates coaching into its broader vision for instructional excellence, making it a core strategy supported by leadership at all levels. This system-wide commitment includes providing coaches with the necessary resources and time to work closely with leaders and teachers, reinforcing coaching as a central element of the state's literacy initiative. Coaches are selected based on their expertise in literacy instruction and their ability to mentor educators effectively. To ensure they remain well-prepared, continuous professional development for coaches is prioritized. Regular feedback, peer learning opportunities, and ongoing training keep coaches at the forefront of instructional and leadership best practices.

Coaching success within the WLLP relies on a shared responsibility between system coaches and system leaders, with both parties accountable for student outcomes. Coaches collaborate with leaders to refine instructional methods and leadership practices supported by clear role definitions and sufficient time allocations. This collaborative approach ensures that coaching remains a focused and impactful component of the literacy initiative. Fostering a culture of continuous improvement, leadership development, and coaching work together to build capacity at every level.

These efforts create systems that are responsive, data-driven, and aligned with evidence-based practices. Strong leadership teams enhance the sustainability of language and literacy initiatives by ensuring that systems are resilient and adaptable to evolving challenges. This strategic alignment reinforces the long-term effectiveness of coaching and leadership structures. Together, these actions lay the foundation for sustained literacy improvement and student success across districts.

Educator: Professional Development and Coaching

Building capacity for educators is central to the WLLP and its vision for systemic change. Teachers play a pivotal role in creating classroom environments where all students feel supported and have the opportunity to succeed. Professional development and evidence-based instructional practices are critical strategies for empowering teachers to deliver high-quality literacy instruction, foster collaborative learning environments, and ensure the sustainability of language and literacy initiatives. Through comprehensive training and support, educators develop the skills to implement responsive instructional practices, address diverse student needs, and ensure that every learner can access effective literacy instruction.

The Knowledge and Practice Standards for Teachers of Reading (International Dyslexia Association, 2018) and the Overarching Standards for the Preparation of Literacy Professionals (International Literacy Association, 2017) emphasize the importance of ongoing professional development. Additionally, the Center for Effective Reading Instruction (CERI) underscores the need for educators to continually refine their knowledge and skills to stay aligned with evidence-based practices in literacy instruction. Consistent professional growth ensures that instructional quality remains high and responsive to evolving student needs.

Educators: Knowledge of Science of Reading Research

Educators play a critical role in shaping how students develop the skills necessary for reading proficiency. The process of becoming a skilled reader is not natural or automatic; it requires intentional, evidence-based instruction that aligns with how the brain processes written language. Educators are responsible for providing explicit, systematic teaching that builds foundational skills such as phonemic awareness, decoding, and fluency while fostering higher-order skills like vocabulary and comprehension.

Educators can design instruction that activates and strengthens the brain's reading networks by understanding the cognitive and neurological mechanisms involved in reading acquisition. Effective teaching practices profoundly impact students, ensuring they receive the support needed to overcome challenges and develop confidence as readers. This highlights the importance of educators adopting research-based strategies to create equitable and effective learning environments, ultimately empowering students to achieve literacy success.

Table 2

Introduction to the Science of Reading

RESPONSIBILITIES	IMPACT
Understand the language processing requirements for proficient reading and writing: phonological, orthographic, semantic, syntactic, and discourse processing.	Explain and apply knowledge of language processing to support reading and writing development.
Recognize cognitive and behavioral factors affecting literacy, such as attention, executive function, memory, processing speed, and graphomotor control.	Address individual student needs by incorporating strategies to support attention, memory, and processing speed.

RESPONSIBILITIES	IMPACT
Define and identify environmental, cultural, and social factors contributing to literacy development (e.g., home language, cultural values, literacy experiences).	Create inclusive and culturally responsive literacy instruction that reflects students' backgrounds and fosters engagement.
Examine the language foundations of reading and the oral and written language systems related to literacy.	Use evidence-based practices to scaffold literacy components and align instruction with students' developmental stages.
Learn how the relationships among the major components of research-based literacy development change with reading development.	Adapt instruction to reflect the evolving relationships between phonological skills, decoding, fluency, vocabulary, comprehension, and writing.

Oral Language and Phonology

RESPONSIBILITIES	IMPACT
Know and identify phases in the typical developmental progression of oral language (semantic, syntactic, pragmatic) and phonological skills.	Foster oral language development through interactive, language-rich environments and explicit instruction in phonological awareness.
Learn the progression of oral language development and make connections between language components and literacy instruction.	Use strategies to connect oral language development to literacy instruction, ensuring students build foundational skills.
Explore how a language-rich environment in the classroom can help further develop students' oral language and literacy learning.	Create a classroom environment that promotes oral language development through meaningful interactions and activities.
Understand the importance of phonological awareness and explore its levels and developmental progression.	Teach phonological awareness explicitly, including rhyming, blending, segmenting, and other skills, with strategies for typical and struggling readers.

Phonics and Word Study

RESPONSIBILITIES	IMPACT
Become knowledgeable about the structure of language, including orthography (spelling system), historical influences (Anglo-Saxon, Latin, Greek), and graphemes as representations of phonemes.	Teach phonics and word study using explicit instruction in syllable types, spelling patterns, and morphemes (e.g., prefixes, roots, suffixes).
Identify and categorize six basic syllable types in English spelling.	Provide instruction on syllable types and their role in decoding and spelling.
Review common morphemes in English, including Anglo-Saxon compounds, inflectional suffixes, derivational suffixes, Latin-based prefixes, roots, and Greek-based combining forms.	Teach students to analyze words using morphemes to improve vocabulary, spelling, and decoding skills.

Creating Fluent Readers

RESPONSIBILITIES	IMPACT
Understand the importance of fluency in reading and its relationship to comprehension.	Provide explicit fluency instruction, including sight word practice, repeated reading, and assistive technologies, while monitoring progress through assessments.
Learn the progression of foundational skills needed to become a fluent reader, including sight word vocabulary and automatic word recognition.	Use strategies to build automaticity in word recognition and fluency, ensuring students can read with accuracy, speed, and expression.
Understand the consequences for children who do not become fluent and its role in creating motivated readers.	Implement strategies to motivate struggling readers and address fluency deficits.
Explore benchmarks and norming in fluency and understand how to screen, diagnose, and progress monitor fluency.	Use fluency assessments to guide instruction and track student progress.

Developing Vocabulary

RESPONSIBILITIES	IMPACT
Understand the progression of skills needed for students to develop a rich vocabulary and its relationship to comprehension.	Teach vocabulary using direct and indirect methods, such as a six-step approach, morpheme analysis, and contextual strategies.
Recognize that word knowledge is multifaceted, including Anglo-Saxon, Latin, and Greek morphemes.	Select appropriate words to teach and use varied techniques for vocabulary instruction before, during, and after reading.
Explore the role and characteristics of direct and indirect (contextual) methods of vocabulary instruction.	Use explicit instruction and contextual strategies to deepen students' vocabulary knowledge and improve comprehension.

Increasing Reading Comprehension

RESPONSIBILITIES	IMPACT
Understand the factors contributing to deep comprehension, including background knowledge, vocabulary, verbal reasoning, and knowledge of literary structures.	Teach comprehension strategies before, during, and after reading to promote reflective and critical reading.
Understand the levels of comprehension (surface code, text base, conceptual model) and contrast characteristics of major text genres (narration, exposition, argumentation).	Scaffold instruction to help students navigate and comprehend different text genres, addressing inferential gaps and cohesive devices.
Identify and construct expository paragraphs of varying logical structures (e.g., classification, reason, sequence).	Use writing as a tool to build comprehension and teach students to construct logical, well-structured paragraphs.
Interpret measures of reading comprehension and written expression to make appropriate instructional recommendations.	Use assessment data to tailor instruction and improve comprehension outcomes for individual students.

Research consistently underscores the importance of skilled educators in driving student success. Studies by Moats (2020) and Shanahan (2017) highlight that teachers who prioritize evidence-based practices, data-driven instruction, and continuous professional learning create classrooms that achieve sustained literacy growth. Similarly, Learning Forward (2022) emphasizes that professional learning embedded in daily practice is most effective when teachers actively engage in collaborative, reflective, and research-based strategies. These efforts ensure measurable improvements in student outcomes and literacy achievement.

However, in-service training often lacks substantive content and alignment with the science of reading. Effective professional development must provide educators with deep knowledge of language structure,

reading development, and evidence-based practices (International Dyslexia Association, 2018). To bridge this gap, training should focus on structured literacy methods that emphasize explicit, systematic, and cumulative instruction. Additionally, educators need to develop skills in assessment, including interpreting data and applying findings to inform instruction. Specialized instruction for students with dyslexia and related reading difficulties should also be a core component of professional development. Reflective practice should be encouraged, enabling teachers to adapt and refine their instructional strategies continuously. By addressing these key areas, professional development enhances educators' capacity to support all learners, ensuring high-quality literacy instruction for every student (International Dyslexia Association, 2018).

The alignment of research-based HQIM and HQIP with the science of reading is vital to ensuring educators have access to the most effective resources. This alignment strengthens literacy interventions across classrooms and fosters student success. Professional development must emphasize how these materials support instructional strategies, connecting reflective practice with resource alignment. Research consistently shows that job-embedded and collaborative professional learning is the most impactful. According to a National Staff Development Council study, the most effective professional learning occurs when integrated into the workday, enabling teachers to apply new strategies immediately in their classrooms (Wei, Darling-Hammond, & Adamson, 2010).

Professional development programs must be firmly rooted in the science of reading, equipping educators and administrators with the tools, training, and resources to implement evidence-based practices. Structured Literacy, endorsed by the International Dyslexia Association, exemplifies these research-backed practices, benefiting all students, particularly those who struggle with reading (International Dyslexia Association, n.d.). To ensure successful implementation, professional development should include coaching models that provide ongoing support and guidance.

Educator: Instructional Coaching

Instructional coaching focuses on improving teaching practices and instructional strategies. Leadership coaching supports administrators in developing effective leadership skills and strategies. Team-based coaching facilitates collaborative coaching sessions for subject teams or grade-level teams. Peer coaching encourages teachers to provide coaching support to their colleagues within the same school or district. Transformational coaching guides educators through transformative changes in pedagogy and practices. These coaching models offer diverse methods to reinforce professional learning and ensure the consistent application of effective literacy instruction (Lent & Voight, 2018).

Recognizing the importance of job-embedded professional learning—such as collaborative planning, analysis of student work, and instructional refinement—is essential for educators to fully implement new standards and curricula (Lent & Voight, 2018). Building on the diverse coaching models, educators can integrate these practices seamlessly into their daily routines. Desimone and Pak (2017) found that teachers engaged in ongoing, collaborative professional learning during the school day are more likely to implement instructional changes that improve student achievement. The Learning Policy Institute further emphasizes that sustained, collaborative professional development is more effective than short-term workshops (Darling-Hammond et al., 2017). These findings reinforce the need for continuous, embedded professional development opportunities.

However, rigid school schedules often hinder the availability of time for professional learning, prioritizing logistical needs over educational outcomes. To address this challenge, schools must consider flexible scheduling options. Louis and colleagues (2010) indicate that schools with a strong professional learning culture—where time is regularly allocated for collaboration—experience greater gains in student

achievement. DuFour and Fullan (2013) argue that effective Professional Learning Communities (PLC) require structural support, such as flexible schedules, to ensure educators have the time to collaborate and learn together. The Department encourages district and school leaders to develop and strengthen supports that prioritize and facilitate effective literacy instruction.

By building robust systems, leaders can consistently apply evidence-based practices across all educational settings, driving progress and improving literacy outcomes statewide. The principles of implementation science further highlight that the successful adoption of educational innovations relies heavily on ongoing professional learning and collaboration (Fixsen et al., 2019). Several factors influence the adoption of a program and the continued use of curricula, including readiness, need, buy-in, and implementation fidelity. Pinkelman et al. (2022) note that the continued use of curricula is often dictated by buy-in from teachers, administrators, and the constituents these programs serve.

Fullan and Quinn (2016) emphasize that continuous professional learning is essential for effectively implementing new educational practices. To achieve this, it is crucial to allocate sufficient time and resources for educators to engage in meaningful professional development. Job-embedded professional learning, which occurs within the context of educators' daily work, enhances the relevance and application of new strategies in the classroom. Furthermore, transitioning from theoretical knowledge about reading science to its practical application is vital for making professional development valuable for educators. Data-driven decision-making also plays a critical role in effective professional learning, enabling educators to tailor their approaches based on student needs and outcomes. By integrating these elements, schools can create a more impactful professional learning environment that ultimately benefits both educators and students.

Datnow and Hubbard (2016) found that student outcomes improve when teachers use data to guide their collaborative planning and instructional decisions. Hattie's (2009) synthesis of over 800 meta-analyses on student achievement further underscores the importance of using assessment data to inform instructional practices. By understanding where students are in their learning and adjusting instruction accordingly, teachers can significantly enhance achievement. Therefore, analyzing current time use and reallocating it for collaborative learning can strengthen teaching practices and promote student learning even more effectively.

Creating time for professional learning requires intentional strategies that leverage scheduling, resources, and collaboration. Research supports various methods, such as lengthening the school day, hiring additional staff, and repurposing existing planning time for collaborative practices. According to Learning Forward (2017), allocating dedicated time for professional learning is a cornerstone for improving teaching and learning, emphasizing the importance of analyzing current schedules and making strategic adjustments to prioritize educator collaboration. Similarly, Kraft, Blazar, and Hogan (2018) found that professional development programs with consistent and ongoing feedback mechanisms significantly enhance teacher practices and student outcomes, demonstrating the value of regular reflection and support.

Additionally, Darling-Hammond, Hyler, and Gardner (2017) highlight that professional development is most impactful when it is sustained over time and embedded into teachers' daily work. This integration transforms professional learning into a continuous and collaborative effort rather than a one-time event, fostering a culture of ongoing improvement. When professional development is woven into the fabric of daily teaching practices, educators can apply new strategies immediately, reinforcing their learning in real-time. To achieve long-term, transformative change, schedule adjustments and dedicated collaboration time are critical, allowing teachers to engage in meaningful discussions and share best practices. Furthermore, regular monitoring and evaluation of how time is utilized for professional learning are essential to ensure its effectiveness, enabling schools to make informed decisions about future professional development initiatives.

Garet et al. (2001) found that professional development programs incorporating ongoing assessment and feedback are more likely to result in sustained changes in teaching practice and improved student outcomes. Guskey (2002) also emphasizes the importance of evaluating the effectiveness of professional development initiatives, suggesting that tools like surveys and observation protocols are valuable for assessing the impact of collaborative professional learning on educator practices and student results. By addressing these critical areas, the Department aims to significantly improve literacy outcomes for all students, ensuring that every child can achieve their full potential.

To support coherence in literacy instruction, the development of a robust infrastructure is essential. This infrastructure provides ongoing professional learning, data-driven decision-making, and continuous improvement of instructional practices. Comprehensive professional development programs, aligned with HQIM and HQIP, ensure that educators receive the training and support needed to implement these materials and practices effectively. Establishing data systems that enable regular progress monitoring is critical for identifying areas for improvement and making necessary adjustments. This interconnected infrastructure forms the backbone of Wyoming's sustainable and effective literacy education system, linking professional learning with data-driven improvements. Central to this system is the use of well-defined professional standards that guide the development of educator expertise and instructional quality, as outlined in the sections below.

Standards for Building Expertise in Knowledge and Skills

Effective literacy instruction depends on a solid foundation of standards and professional guidance that support the development of educators and leaders. These frameworks ensure that professionals are equipped with the knowledge and skills to implement evidence-based practices effectively, fostering equitable literacy outcomes. The Knowledge and Practice Standards for Teachers of Reading (International Dyslexia Association, 2018), the Standards for the Preparation of Literacy Professionals (International Literacy Association, 2017), and guidance from CERI collectively establish a roadmap for excellence in literacy instruction.

Knowledge and Practice Standards for Teachers of Reading

The Knowledge and Practice Standards for Teachers of Reading serve as a benchmark for educators, emphasizing explicit, systematic, and cumulative instruction rooted in structured literacy principles. These standards guide educators to understand language structure, reading development, and evidence-based instructional practices while equipping them to assess, diagnose, and address diverse student needs. By fostering skills in differentiated instruction, data-informed decision-making, and connecting reading and writing instruction, these standards ensure that educators are prepared to address challenges such as dyslexia and other reading difficulties. Continuous professional growth, aligned with advancements in the science of reading, further enhances instructional effectiveness.

Standards for the Preparation of Literacy Professionals

Complementing these efforts, the Standards for the Preparation of Literacy Professionals provide comprehensive guidelines for literacy educators, including specialists, coaches, and leaders. These standards outline essential areas such as foundational knowledge of literacy development, designing and implementing evidence-based curricula, and using assessments to monitor student progress and advocate for appropriate interventions. They emphasize the importance of creating literacy-rich environments, fostering professional leadership, and gaining hands-on experience through practicum or clinical settings. Together, these standards ensure that literacy professionals are well-equipped to support diverse learners and drive systemic improvements.

Center for Effective Reading Instruction

CERI enhances this foundation by offering resources, certification programs, and training emphasizing structured literacy and evidence-based practices. CERI supports educators through certification credentials like Certified Structured Literacy Teacher and Certified Structured Literacy Interventionist, professional development workshops, and training aligned with the Knowledge and Practice Standards for Teachers of Reading. By promoting reflective practice and collaborating with schools to tailor professional learning, CERI ensures that educators are prepared to meet the needs of diverse learners and implement effective instructional strategies.

High-quality instruction to meet the varied needs of students, and contribute to system-wide literacy advancement. As these standards become embedded in professional learning and daily practice, they lay the foundation for sustained instructional coherence. The next step in supporting this coherence is to create structures that promote collaboration and shared accountability—most notably through the establishment and strengthening of Professional Learning Communities (PLCs).

Professional Learning Communities

PLCs are a central strategy for achieving the WLLP's objectives, providing a structured framework for collaboration and continuous improvement. Guided by DuFour et al.'s (2016) framework, PLCs allow educators to work collaboratively to analyze student data, refine instructional strategies, and address gaps in language and literacy achievement. By fostering a culture of shared responsibility and reflective practice, PLCs empower educators to align their efforts with the WLLP's goals and make measurable progress toward improving statewide language and literacy outcomes.

The research underscores the effectiveness of PLCs in driving student achievement by creating environments where teachers can share expertise and solve instructional challenges collaboratively (Innovating Teaching Practice Through Professional Learning Communities, 2023). PLC activities integrate regular coaching and technical assistance, providing educators with ongoing support to effectively refine their practices and implement evidence-based strategies. Continuous improvement cycles guide PLCs in monitoring progress, assessing the impact of their efforts, and adapting methods to meet student needs.

The WLLP prioritizes sustainability by emphasizing the long-term integration of leadership development, coaching, and educator development into Wyoming's educational framework. Sustainable coaching practices include providing resources, adequate compensation, and long-term planning for coaching roles. Research demonstrates that sustained coaching efforts are essential for maintaining the momentum of instructional improvement and supporting educators in adapting to changing needs over time (University of Florida Lastinger Center for Learning et al., 2016).

Educator development embedded in daily practice further supports the WLLP's objectives. Drawing on principles from Transforming Teaching Through Curriculum-Based Professional Learning (Short & Hirsh, 2022), professional development focuses on curriculum-aligned training that prepares educators to address classroom challenges while deepening their understanding of instructional strategies. This inquiry-driven approach encourages teachers to share experiences, develop solutions collaboratively, and align their efforts with the WLLP's language and literacy goals.

By combining leadership development, coaching, educator development, and PLCs, Wyoming ensures that its language and literacy initiatives are both scalable and enduring. These integrated strategies aim to achieve several critical outcomes:

- **Coaching Models and Teacher Development:** A study highlights the impact of ongoing professional development, specifically through coaching models, on both teacher growth and student achievement.

The research emphasizes that sustained coaching leads to improved instructional practices and measurable gains in student literacy outcomes (Digital Commons, 2023).

- **Professional Learning and Student Outcomes:** A 2023 analysis demonstrates that collaborative professional development (e.g., PLCs and coaching) significantly enhances students' learning and skill acquisition. The study confirms that structured and ongoing professional learning positively affects student literacy proficiency (ScienceDirect, 2023).
- **Professional Learning for Reading Improvement:** Research published by Learning Forward (2023) reveals that new instructional strategies rarely effectively transfer to the classroom without sustained support. However, with ongoing coaching and collaboration, the likelihood of successful implementation rises to 75%- 90%, leading to improved student reading outcomes (Learning Forward, 2023).
- **Enhanced Instructional Practices:** Coaching and PLCs equip educators with the skills to refine teaching strategies, leading to improved instructional quality and higher levels of student engagement (Short & Hirsh, 2022; University of Florida Lastinger Center for Learning et al., 2016).
- **Increased Student Achievement:** Evidence-based practices supported by PLCs and HQIM address learning gaps, fostering significant gains in language and literacy proficiency for students across Wyoming (Short & Hirsh, 2022; University of Florida Lastinger Center for Learning et al., 2016).
- **Sustained Professional Growth:** Collaborative and supportive professional learning opportunities create a culture of continuous development, ensuring that educators stay current with effective practices and innovative teaching strategies (Short & Hirsh, 2022; University of Florida Lastinger Center for Learning et al., 2016).

The WLLP's focus on systems change through leadership development, professional development, and coaching establishes a sustainable foundation for improving literacy outcomes statewide. By equipping leaders and educators with the tools, strategies, and collaborative structures necessary to implement evidence-based practices, Wyoming ensures its language and literacy initiatives are both scalable and enduring. These efforts foster a culture of continuous improvement, where professional learning is embedded into daily practice, and instructional strategies are refined to meet the diverse needs of students.

MTSS-Aligned Literacy Framework: Prevention Before Intervention

The Wyoming MTSS is a critical framework that must be intertwined with language and literacy initiatives to ensure that all students receive the appropriate level of instructional support. MTSS is designed to be preventive and proactive, providing evidence based high-quality class-wide core Tier 1 instruction, Tier 2 supplemental interventions, and Tier 3 intensive interventions based on the specific needs of students. Research supports the efficacy of MTSS in improving outcomes for students with language and literacy difficulties, as it allows for responsive, data-driven decision-making and continuous progress monitoring. Implementing MTSS effectively is essential for creating a structured, supportive educational environment where every student can access the necessary resources and interventions to succeed.

St. Martin (2024), notes that MTSS is a framework that is only as effective as the evidence-based practices, curriculum resources, and assessments used within it. The system of supports within MTSS is designed to address the needs of both students and educators:

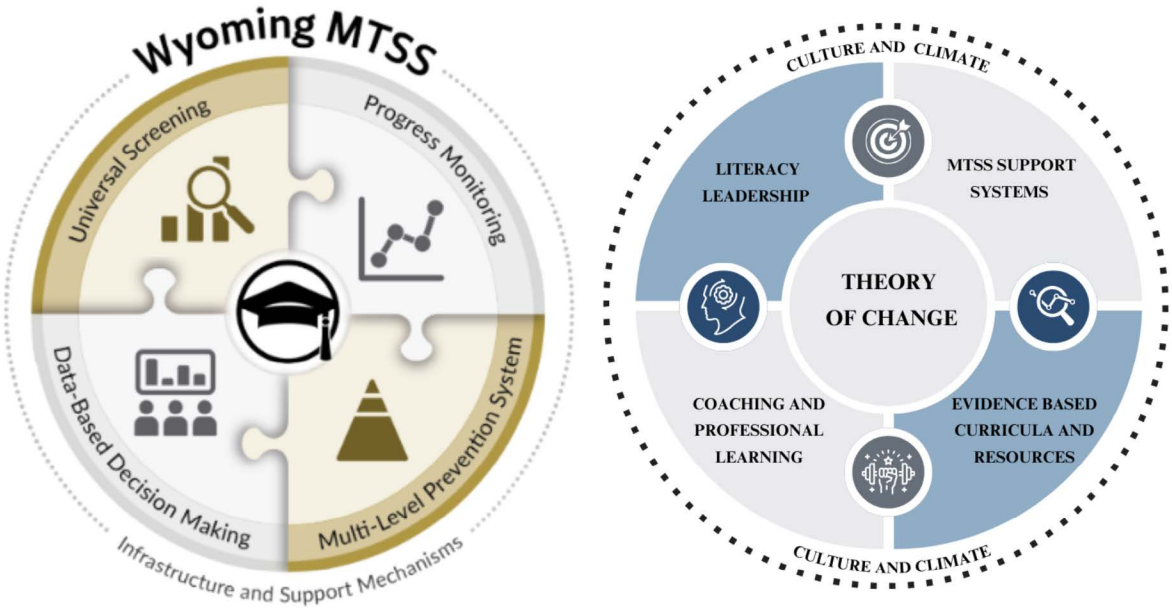
- **Students:** MTSS provides support in both classroom prevention and intervention settings to accelerate student outcomes.

- **Teachers/Staff:** MTSS supports educators in effectively implementing evidence-based practices, curriculum resources, and assessments.
- **Processes and Procedures:** MTSS ensures that teachers and staff are supported in using the processes and procedures established within the school to meet the needs of students flexibly.

Wyoming's MTSS Literacy Alignment

Wyoming's MTSS Literacy Alignment is designed to integrate literacy instruction and interventions within the state's MTSS framework, ensuring that all students achieve strong literacy outcomes. This alignment emphasizes data-driven decision-making, evidence-based practices, and tiered supports to address the diverse literacy needs of students.

Figure 1: The Wyoming MTSS Framework



By prioritizing early identification of literacy challenges, targeted interventions, and ongoing progress monitoring, Wyoming aims to create a cohesive system that fosters equitable access to high-quality literacy instruction and improves overall student achievement. Central to this approach is the belief that prevention should precede intervention; robust Tier 1 instruction serves as the foundation for preventing literacy difficulties for over 80% of students. By embedding literacy as a core component of MTSS, Wyoming is committed to establishing a continuum of supports that effectively meets the unique needs of every student, ultimately leading to better educational outcomes and a more efficient allocation of resources

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Continuum of Supports Using Data-Based Decision-Making

A core tenet of Wyoming's MTSS framework is prevention before intervention. This approach emphasizes that every support layer within MTSS is rooted in evidence-based language and literacy practices. Research demonstrates that preventing reading and language difficulties through robust Tier 1 universal instruction is more effective than addressing problems once they occur (McIntosh & Goodman, 2016). By treating Tier 1 instruction as the first intervention, the MTSS framework prevents language and literacy challenges for over 80% of students, avoiding the "wait-to-fail" cycle.

According to McIntosh and Goodman (2016), a prevention-before-intervention mindset emphasizes proactively addressing potential challenges before they become significant rather than waiting to react once problems arise. This approach focuses on creating strong foundational systems, such as high-quality core instruction, universal screening, and early identification of student needs to prevent academic or behavioral difficulties. By prioritizing prevention, schools can reduce the need for intensive interventions, ensuring that all students have the support they need from the start. This mindset fosters a proactive, rather than reactive, approach, ultimately leading to better outcomes for students and more efficient use of resources.

The MTSS checklist consists of six critical components that support this prevention-focused framework: Prevention Focus: Ensures all staff understand MTSS as a proactive framework to support all students.

1. **Leadership:** Leadership personnel are vital in supporting MTSS implementation by prioritizing it and ensuring its effectiveness.
2. **Professional Development:** School-based professional development provides teachers with opportunities to reflect on and improve instructional practices, data-driven decision-making, and the delivery of interventions.
3. **Cultural and Linguistic Responsiveness:** A key aspect of MTSS is ensuring that instructional practices, assessments, and interventions are inclusive and equitable for all students. This includes considering students' diverse cultural and linguistic backgrounds when designing and implementing supports. By embedding cultural and linguistic responsiveness into the MTSS framework, schools can better meet the needs of all learners, particularly those from historically underserved populations.
4. **Adequate Resources:** Resources such as funding, programs, and staffing are allocated to support MTSS implementation.
5. **Scheduling:** Schedules are designed to accommodate multiple levels of intervention and provide time for collaboration, core programming, and interventions.

This checklist illustrates the six foundational components that support the infrastructure of Wyoming's Multi-Tiered System of Supports (MTSS), emphasizing its design as a proactive and prevention-focused framework. More than a static list, these components reflect a comprehensive strategy for system-level change that promotes access to high-quality learning opportunities for all students. The shift toward a preventative mindset prioritizes strong Tier 1 instruction and early identification, aiming to address student needs before challenges become entrenched. Job-embedded professional development, anchored by coaching, further reinforces this shift by fostering sustainable improvements in instructional practice through ongoing support and capacity building.

In addition to professional development, the inclusion of Resources and Schedules as core components underscores the importance of adequate support structures and practical implementation. These elements act as enabling conditions that make MTSS implementation feasible and equitable, ensuring that all learners have access to the support they need. Collectively, the figure conveys more than the key elements of a checklist. It reflects a statewide vision for transformation that aligns infrastructure with instruction. By embedding prevention, access, and sustainability into the framework, Wyoming's MTSS model reinforces the broader understanding that meaningful literacy improvement depends on both instructional change and structural coherence across the system.

MTSS Literacy Aligned Tiers of Support

Building on the foundation of prevention-focused infrastructure, the MTSS framework is organized into three aligned tiers of support designed to address the diverse literacy needs of students. Each tier provides increasingly targeted interventions to ensure every student has access to the resources needed to succeed. This multi-tiered approach allows educators to systematically identify and respond to the varying levels of support required by each student. By implementing these tiers effectively, schools can create an inclusive environment that promotes literacy development for all learners.

Tier 1: High-Quality Core Instruction
At the heart of MTSS is Tier 1, which focuses on prevention by implementing evidence-aligned, high-quality core instruction provided to all students. This level emphasizes robust, evidence-based curricular resources grounded in the science of reading, ensuring that instruction is accessible, grade-level appropriate, and effective for the majority of learners. Key components of Tier 1 include appropriate time allocation, evidence-based high quality instructional materials and practices tailored to address diverse learning needs. Research underscores the importance of Tier 1 instruction, noting that it is impossible to "intervene out of a Tier 1 problem." When Tier 1 instruction is strong, fewer students require additional interventions, allowing educators to focus resources on those needing extra support (McIntosh & Goodman, 2016).

Tier 2: Supplemental Interventions
For students who do not make adequate progress with Tier 1 Core instruction, Tier 2 provides evidence-aligned targeted interventions. These evidence-based programs and practices work cohesively to address specific areas of need and support striving readers. Tier 2 interventions often include three key strategies:

- **Intervention:** Systematically targeting specific skills causing reading difficulties, such as providing additional time with the core curriculum in small groups, supplementary instruction, or individualized intensive instruction.
- **Remediation:** Re-teaching foundational skills and addressing gaps in understanding or knowledge.
- **Acceleration**: Offering "just in time" supports to help students master grade-level content taught in the core classroom.

Tier 3: Intensive Interventions
Tier 3 interventions offer highly individualized and targeted support for students with the most intensive needs. Schools must establish a clear and structured process to intensify interventions based on each student's unique requirements at this level. These students often need specialized support beyond what is provided in Tiers 1 and 2. While evidence-based instruction focusing on the five critical components of reading—phonemic awareness, phonics, fluency, vocabulary, and comprehension—helps many students progress, some do not respond adequately. For these students, early and intensive interventions are crucial to preventing long-term difficulties. Delays in reading development can exacerbate gaps and hinder academic success. The research underscores the importance of addressing these challenges early, particularly for students who are behind by third grade, as intensive, individualized support at this stage can lead to significantly improved outcomes (Gersten et al., 2008; Wanzek & Vaughn, 2010).

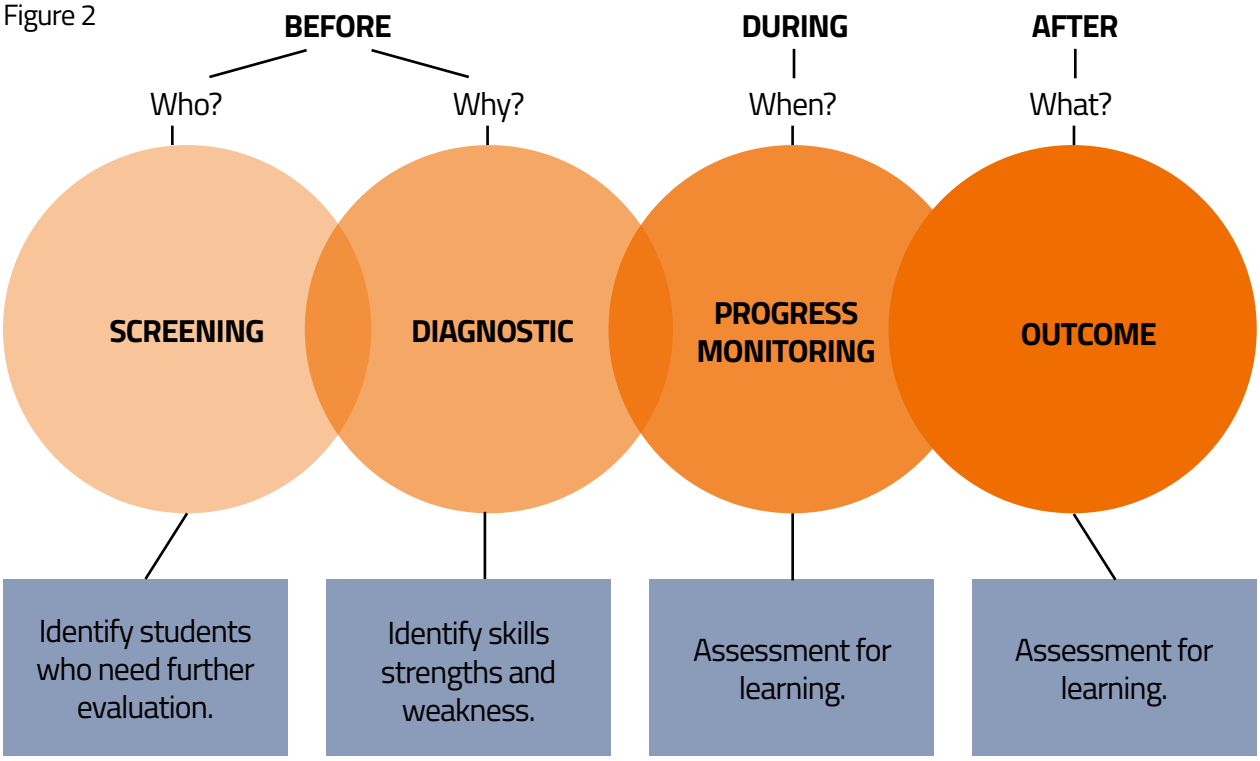
Comprehensive Assessment System for Literacy Improvement

To effectively implement and monitor interventions across all three tiers, a comprehensive assessment system is essential for identifying student needs, tracking progress, and evaluating outcomes. This system ensures that interventions are responsive and tailored to meet the unique needs of each student. By establishing a clear framework, educators can systematically address the diverse challenges students face in their literacy development. A well-structured assessment system not only enhances the effectiveness of interventions but also fosters a culture of continuous improvement within educational settings.

A comprehensive assessment system is vital for advancing literacy improvement by systematically addressing critical questions—"Who?", "Why?", "When?", and "What?"—at various stages of the educational process. This system incorporates screening, diagnostic, progress monitoring, and outcome assessments, ensuring a cohesive and structured approach to identifying, addressing, and evaluating student needs. Each stage is aligned with specific tools and objectives, facilitating data-driven instruction that promotes

continuous improvement. As shown in Figure 1, the comprehensive assessment system provides a visual representation of how these components work together to support literacy improvement efforts. By providing timely and tailored support, this framework enables educators to implement targeted interventions that effectively address the diverse needs of all students (Foorman et al., 1998; Hamilton et al., 2009).

Figure 2



Note. This graphic illustrates a comprehensive assessment system to implement literacy improvement efforts. Cowen, C. D. (2016). What is structured literacy? International Dyslexia Association.

The comprehensive assessment system is divided into three key stages: Before, During, and After. Each stage is critical in identifying student needs, monitoring progress, and evaluating outcomes to ensure effective interventions. By clearly delineating these stages, educators can focus their efforts on specific aspects of the assessment process, leading to more informed decision-making. This structured approach not only enhances the overall effectiveness of literacy interventions but also ensures that all students receive the support they need to succeed.

Before: Screening and Diagnostic Assessments

The first step in a comprehensive assessment system is screening and diagnostic assessments, which focus on the early identification of students who may require additional support. Screening assessments are conducted universally to identify students at risk for literacy challenges, enabling timely intervention. These tools help pinpoint students who may need further evaluation or support, ensuring that no child falls behind. By identifying at-risk students early, educators can implement strategies that promote literacy development from the outset.

Following the screening process, diagnostic assessments are used to determine the specific skills, strengths,

and weaknesses of students flagged as at risk. These assessments provide detailed insights into the root causes of literacy difficulties, guiding the selection of targeted interventions that address individual student needs. By understanding each student's unique profile, educators can tailor their instructional approaches to maximize effectiveness. Ultimately, the combination of screening and diagnostic assessments forms a critical foundation for supporting student success in literacy.

During: Progress Monitoring
Once students have been identified and their specific needs assessed, the next step is to monitor their progress throughout the intervention process. This monitoring ensures that the support provided is effective and responsive to their needs. Progress monitoring occurs continuously during the intervention to assess how well students respond to the support offered. This ongoing assessment not only verifies the effectiveness of interventions but also allows for timely adjustments based on student progress.

The primary purpose of progress monitoring is to evaluate the effectiveness of interventions and ensure that students are making progress toward their goals. By continuously tracking student growth, educators can make informed decisions about whether to continue, modify, or intensify interventions. This data-driven approach enables educators to tailor their strategies to meet the evolving needs of each student. Ultimately, effective progress monitoring is essential for fostering an educational environment that promotes success and supports every learner's journey.

After: Outcome Assessments
After interventions have been implemented and progress has been monitored, the final step is to evaluate the overall outcomes. This evaluation ensures that the interventions successfully address the student's needs and meet grade-level expectations. Outcome assessments are conducted to measure overall student learning and achievement following these interventions. These assessments specifically gauge whether students have met grade-level expectations and literacy goals, providing insight into the overall impact of the interventions.

By analyzing the results of outcome assessments, educators can determine the effectiveness of the interventions and identify areas for further improvement. This critical analysis allows for informed decision-making regarding future instructional strategies and interventions. Additionally, it helps educators recognize patterns in student performance, which can guide adjustments to teaching methods and support systems. Ultimately, outcome assessments play a crucial role in fostering a responsive educational environment that prioritizes student success and continuous growth.

Progress Monitoring and Data-Based Decision-Making

Progress monitoring is a cornerstone of MTSS, enabling educators to track student growth and evaluate the effectiveness of interventions. Schools should use valid, reliable tools and establish structured processes for collecting and analyzing data. Universal screening three times yearly (fall, winter, and spring) ensures consistent monitoring and early identification of at-risk students. Setting clear benchmarks, utilizing diagnostic assessments to inform targeted interventions, and adjusting supports based on data are essential practices within this iterative process. These efforts ensure instruction remains responsive and effective, enabling all students to succeed.

When students are not making the desired progress despite receiving data-based individualization, further intensification of the intervention becomes necessary, particularly during Tier 3 intervention within an MTSS

framework (Austin et al., 2017; Vaughn et al., 2012; Wanzek & Vaughn, 2010). This intensification may involve increasing the frequency or duration of interventions or employing more specialized instructional strategies. Educators must remain vigilant in monitoring student responses to these intensified interventions to ensure that they are meeting the specific needs of each learner. Such adjustments are vital for maximizing student outcomes and ensuring that no child is left behind.

Wyoming's MTSS Language and Literacy Alignment, grounded in a prevention-before-intervention mindset, demonstrates the power of proactive, data-driven approaches to ensure equitable language and literacy outcomes for all students. By prioritizing robust Tier 1 instruction, supporting educators, and addressing cultural and linguistic needs, the MTSS framework creates a cohesive system that fosters success for both students and staff. Through its focus on prevention, Wyoming's MTSS framework not only addresses current language and literacy challenges but also builds a foundation for long-term student achievement and equity. This comprehensive approach ensures that all students have access to the resources and support they need to thrive academically.

The WDE, through the Wyoming MTSS Center, provides comprehensive support to school districts in implementing the MTSS framework. The center plays a critical role in ensuring that the core components of MTSS—data-based decision-making, progress monitoring, and targeted interventions—are effectively applied to support students with language and literacy difficulties and other learning challenges. Additionally, the MTSS framework is reinforced by the K-3 Literacy Guidance Framework, which emphasizes the importance of early intervention and the use of evidence-based practices in foundational reading instruction. Together, these efforts ensure that schools are equipped to provide high-quality, targeted support to all students, fostering an environment conducive to learning and growth.

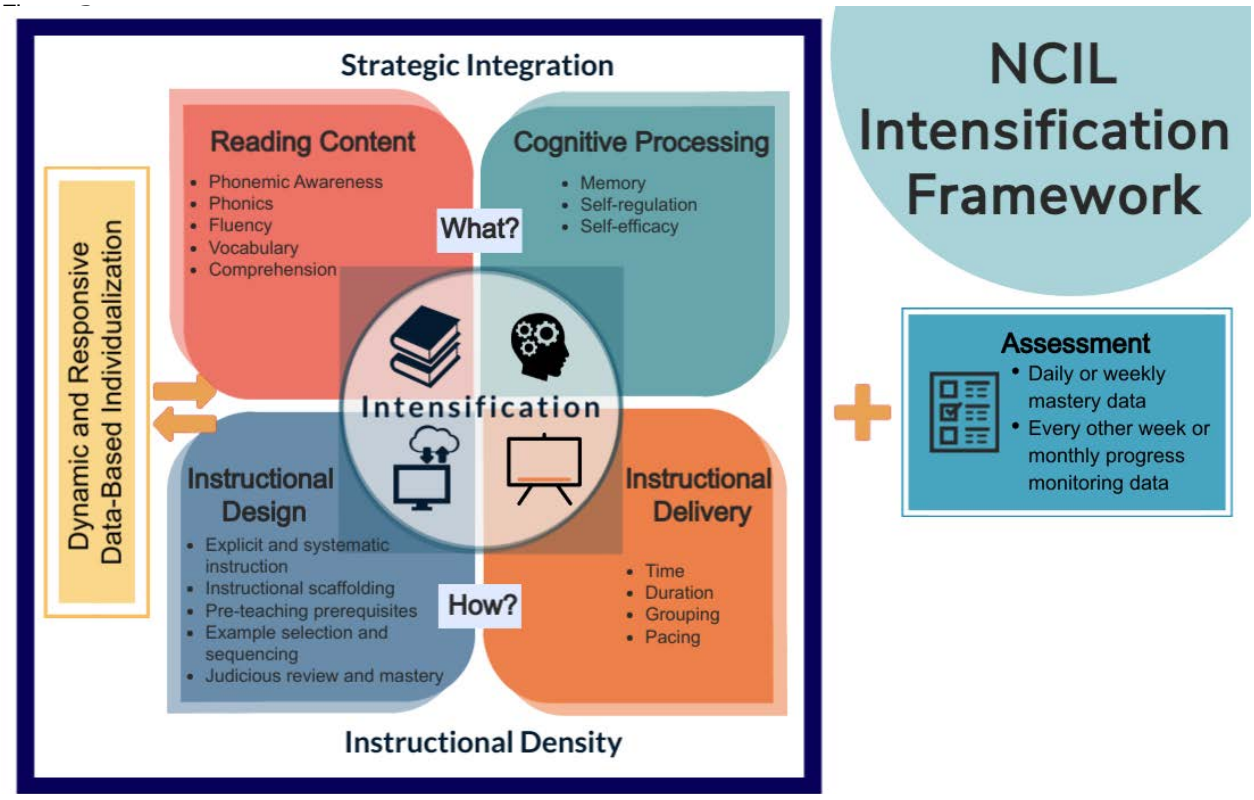
Literacy Intensification Framework

The National Center on Improving Literacy provides the NCIL Intensification Framework with a structured approach to designing and delivering Tier 3 interventions. The NCIL Intensification Framework outlines a structured approach to support students who experience reading difficulties by intensifying interventions when adequate progress is not achieved. The framework emphasizes targeting the five key components of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension, while using a combination of explicit instruction and cognitive processing strategies to promote student learning and confidence. Dynamic and responsive data-based individualization and regular assessment are crucial for providing tailored interventions and fostering significant reading improvements.

The NCIL Intensification Framework provides a structured and visual approach to intensifying reading interventions for struggling students. It emphasizes the interconnected and cyclical nature of the process, beginning with Dynamic and Responsive Data-Based Individualization and flowing through the central concept of Intensification, which integrates the instructional components of what to teach and how to teach. The framework highlights the critical role of assessment in driving instructional decisions and ensuring interventions are effective. By using this framework, educators can create a dynamic, data-driven process that adapts to the unique needs of each student, ensuring that interventions are both targeted and impactful (National Center on Improving Literacy, 2023).

The NCIL Intensification Framework, as illustrated in Figure 2 below, provides a comprehensive structure for

understanding the key components and processes involved in intensification efforts. This visual representation helps educators grasp the interconnectedness of the various elements within the framework. By clearly outlining the steps involved in implementing effective interventions, the framework serves as a valuable resource for educators seeking to enhance their instructional practices. Ultimately, the NCIL Intensification Framework aims to ensure that all students receive the support they need to overcome reading challenges and achieve literacy success.



Note. The framework integrates key instructional components with data-driven individualization and assessments to support effective literacy interventions. Adapted from the National Center on Improving Literacy (NCIL), 2023.

Dynamic and Responsive Data-Based Individualization

The process begins with Dynamic and Responsive Data-Based Individualization, which serves as the framework's foundation. This step emphasizes using data to guide instructional decisions, ensuring that interventions are tailored to each student's specific needs. Teachers collect daily or weekly mastery data to monitor short-term progress and biweekly or monthly progress monitoring data to track long-term growth. These data points provide critical insights into student performance, helping teachers identify areas of struggle and adjust instruction accordingly (Gersten et al., 2008; Vaughn et al., 2012). By systematically analyzing this data, educators can make informed decisions that enhance the effectiveness of their teaching strategies.

The framework integrates data collection and analysis as an ongoing process, ensuring that instruction remains responsive and effective. Continuous feedback is essential; without it, interventions risk becoming static and less impactful, underscoring the importance of data-driven decision-making (National Center on

Improving Literacy, 2023). This ongoing assessment allows educators to adapt their approaches based on real-time information about student progress. Ultimately, the commitment to using data effectively fosters a more personalized learning environment that meets the diverse needs of all students.

Central Focus: Intensification

At the heart of the framework is Intensification, which represents the targeted effort to increase the focus, density, and specificity of instruction. This central concept is directly informed by Dynamic and Responsive Data-Based Individualization and the Assessment Process, ensuring that interventions are precise and responsive to student needs.

Intensification is not a one-size-fits-all strategy but a tailored approach that integrates diverse instructional components into a comprehensive, individualized intervention plan. Its central placement in the framework underscores its role as the unifying element, bridging all other components and ensuring that instruction is cohesive and effective. Intensification addresses persistent learning challenges with precision and ensures that struggling students receive the targeted support they need to make meaningful progress (Austin et al., 2017; Vaughn et al., 2012).

What to Teach: Reading Content and Cognitive Processing

The framework identifies two key instructional focus areas that branch out from Intensification: Reading Content and Cognitive Processing. These components work together to address students' academic and cognitive needs, ensuring a comprehensive approach to intervention.

- **Reading Content:** This component focuses on the five big ideas of reading—phonemic awareness, phonics, fluency, vocabulary, and comprehension. These areas form the foundation of effective instruction, with targeted support tailored to individual needs. For example, a student struggling with phonics may benefit from explicit instruction in fluency and vocabulary, reinforcing both current learning and future readiness. The connection between Reading Content and Intensification highlights the importance of addressing these areas strategically to meet individual student needs, ensuring that interventions are both effective and aligned with classroom instruction (Seidenberg, 2017; Snowling, 2013).
- **Cognitive Processing:** This component focuses on the strategies and skills that support learning and retention, such as memory, self-regulation, and self-efficacy. Memory can be strengthened through tools like writing during lessons to aid retention. At the same time, self-regulation helps students monitor and manage their learning behaviors using self-monitoring checklists and frequent checks for understanding. Self-efficacy builds students' confidence through goal setting, rewards, and positive reinforcement, fostering a sense of ownership over their learning. By addressing these foundational skills, Cognitive Processing enables students to internalize effective reading strategies and develop a positive self-concept as learners (Vaughn et al., 2012; Vaughn & Zumeta, 2014).

The framework integrates Reading Content and Cognitive Processing to ensure that interventions address academic and cognitive needs. This alignment supports sustainable progress and fosters confidence in students, helping them overcome persistent challenges and succeed.

How to Teach: Instructional Design and Delivery

The framework also emphasizes how to teach, focusing on Instructional Design and Instructional Delivery to ensure high-quality, targeted instruction. These components work together to ensure that both the planning and execution of instruction are optimized to meet the diverse needs of learners.

- **Instructional Design:** This component centers on structuring lessons to maximize learning through explicit and systematic instruction. Skills are taught clearly and directly to prevent confusion, while

scaffolding provides gradual support that is systematically removed as students gain independence. Pre-teaching prerequisites ensure that foundational skills are solid before introducing new material, creating a strong base for advanced learning. Additionally, careful example selection and sequencing allow for logical progression, while regular review and mastery ensure that skills are reinforced and retained over time (Gersten et al., 2008; Vaughn et al., 2012). The connection between Instructional Design and Intensification highlights the importance of creating lessons that are clear, consistent, and responsive to individual student needs.

- **Instructional Delivery:** This component focuses on executing lessons, emphasizing the importance of density, pacing, and grouping strategies. Time allocation is critical, with sufficient instructional time dedicated to addressing student needs, while the duration of interventions must be sustained long enough to ensure meaningful progress. Grouping strategies, such as small-group or one-on-one instruction, allow for personalized support. At the same time, pacing is adjusted to align with student readiness, ensuring instruction is neither too fast nor too slow. Research-based routines like the "I Do-We Do-You Do" format provide structured opportunities for guided practice and proactive error correction, ensuring students receive the consistent support necessary for success (Wanzek & Vaughn, 2010).

The framework integrates Instructional Design and Delivery with the central concept of Intensification, ensuring that planning and execution are optimized. This alignment allows educators to deliver targeted, high-quality instruction that meets learners' evolving needs.

Feedback Loop: Assessment

The feedback loop, represented by the plus sign and arrows in the framework, illustrates the dynamic process of using data to adjust instructional components continuously. This iterative cycle ensures that interventions are effective and responsive to each student's progress, fostering a tailored approach to learning.

Daily or weekly mastery data plays a critical role in this feedback loop, enabling teachers to monitor short-term progress and pinpoint skills that require re-teaching. By promptly addressing these areas, instruction remains targeted and relevant to the student's immediate needs. In contrast, biweekly or monthly progress monitoring data provides a broader perspective, tracking long-term progress toward skill-based reading goals. This data helps educators evaluate the effectiveness of interventions and make informed decisions about adjustments or next steps (Gersten et al., 2008; Vaughn et al., 2012).

The feedback loop reinforces the framework's dynamic nature, where instruction is continually refined to align with student performance and evolving needs. This ongoing assessment and adjustment process ensures that teaching strategies remain effective and adaptable, ultimately supporting student success.

Tools and Resources for MTSS Implementation

Effective implementation of a MTSS framework requires evidence-based tools and resources to guide decision-making, evaluate interventions, and align practices with proven strategies. Key resources include:

- **Hexagon Tool:** Developed by NIRN, this tool evaluates programs based on six factors—need, fit, resources, evidence, readiness, and capacity—to ensure alignment with MTSS goals.
- **Taxonomy of Intervention Intensity:** This rubric assesses academic interventions across MTSS tiers, focusing on evidence strength, alignment with student needs, dosage, and individualization.
- **Academic Screening Tools Chart:** Guides on selecting reliable and valid tools for identifying students needing additional support.
- T**he Reading League's Curriculum Evaluation Guidelines:** Ensures literacy curricula align with the science of reading, emphasizing explicit instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension while avoiding ineffective practices like three-cueing systems.
- **Michigan MTSS Fiscal Guidance:** Offers practical advice on budgeting for MTSS initiatives, including funding professional development and evidence-based interventions.

These tools equip schools and districts to implement effective interventions, align curricula with research-based practices, and allocate resources strategically. By leveraging these supports, educators can establish a sustainable MTSS framework that advances equitable literacy opportunities and fosters meaningful growth for all learners. The integration of these tools ensures that instructional decisions are informed, intentional, and responsive to student needs.

The System Thinking, Systems Change, and MTSS-Aligned Literacy Framework section concludes by emphasizing the importance of a comprehensive and collaborative approach to literacy instruction. This framework underscores the critical role of early identification, culturally responsive practices, and evidence-based interventions in supporting students, particularly those from multilingual and diverse backgrounds. As systems align around shared goals, the framework provides a pathway for coherence across practices and policies. Moving forward, the next section explores the underlying evidence base, theoretical foundations, and models grounded in the science of reading.

Building a Literate Brain

Building a literate brain is a complex and deliberate process, as reading is not an innate human ability. Unlike spoken language, which develops naturally through exposure and interaction, reading requires explicit instruction and significant cognitive effort. Dehaene (2011) explains that children are not biologically prepared to read; instead, they must rewire their brains to connect phonological and visual systems in ways that evolution did not design. For teachers, this means recognizing that the steps they perform effortlessly as expert readers—thanks to their fully automated and unconscious reading systems—are far from intuitive for young learners. Before children can master reading, they must undergo substantial changes at both the phonological and visual levels, highlighting the critical role of systematic, evidence-based instruction in fostering this essential skill.

A significant body of research, including contributions from Stanislas Dehaene, Maryanne Wolf, Mark Seidenberg, and Kearns et al. (2019), has deepened our understanding of how humans learn to read. Over the past 50 years, these scholars have explored the cognitive and neurological processes involved in reading acquisition. Advancements in functional magnetic resonance imaging (fMRI) technology over the past two decades have further illuminated these processes by identifying specific brain regions activated during reading. According to Dehaene (2009), fMRI studies have pinpointed three primary regions in the left hemisphere associated with reading: the inferior frontal gyrus (Broca's area), the parieto-temporal area, and the occipito-temporal area.

Evidence and Frameworks Grounded in the Science of Reading

The WLLP is firmly rooted in reading science. The science of reading is defined as a vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing. This research has been conducted over the last five decades across the world, and it derives from thousands of studies conducted in multiple languages. The science of reading has emerged from research in education, special education, cognitive psychology, developmental psychology, neuroscience, and linguistics. It provides us with a deeper understanding of how we learn to read, what happens when the brain reads, what skills are involved, how children learn to read, why some have difficulty, and how we can most effectively assess and teach to foster strong reading skills" (The Reading League, 2022).

By integrating insights from diverse scientific disciplines, the science of reading provides a robust framework for understanding how the brain processes written language. Cognitive psychology sheds light on memory,

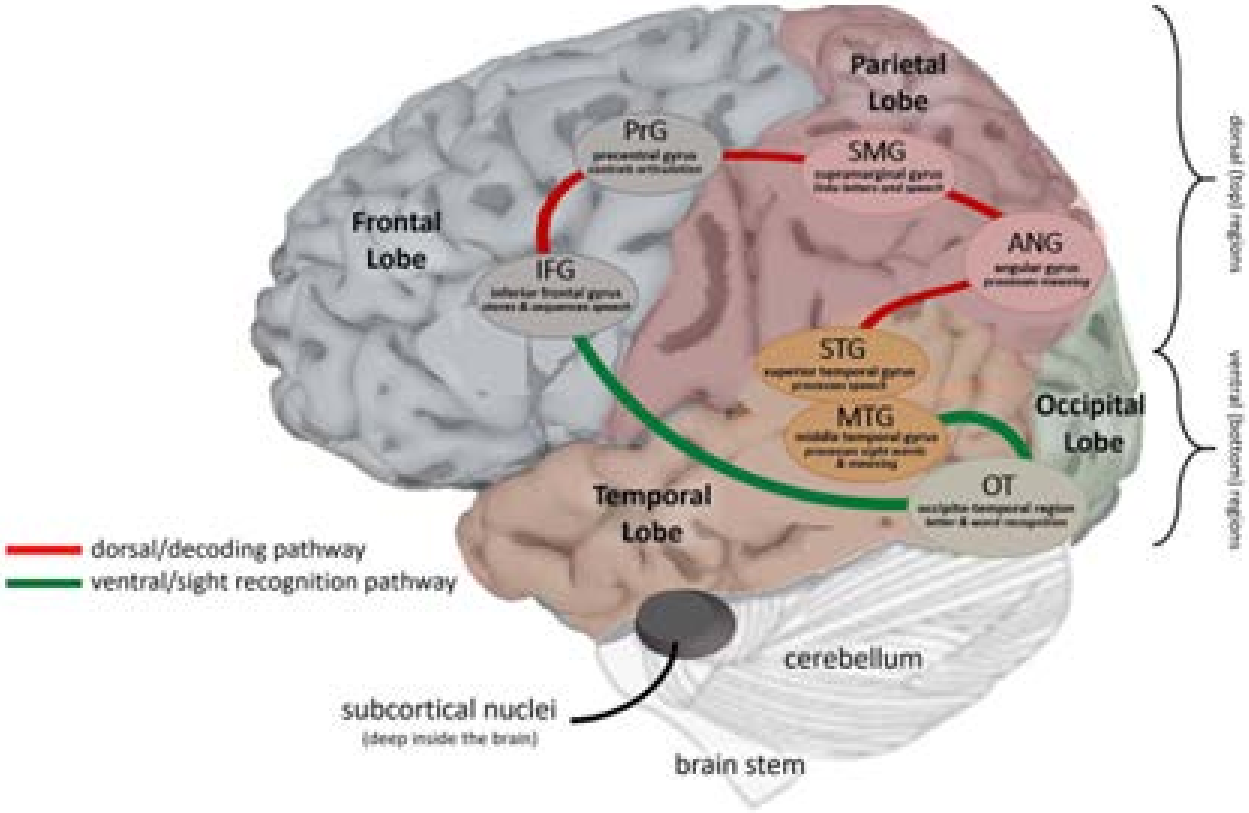
attention, and the mental processes involved in decoding and comprehension (Snowling & Hulme, 2011). Neuroscience reveals how specific areas of the brain are activated during reading. At the same time, linguistics explores the structure of language, including phonology, morphology, and syntax, which are essential for decoding and meaning-making (Dehaene, 2009). Developmental psychology examines how reading skills evolve over time, and education research identifies evidence-based practices that align with these findings (Foorman et al., 2016).

Grounded in this extensive body of evidence, the WLLP emphasizes explicit, systematic instruction in foundational skills while addressing the broader components of language comprehension. This approach ensures that literacy instruction is effective, equitable, and responsive to the needs of all learners, providing a solid foundation for building a literate brain. The next section delves into the evidence-based, theoretical frameworks and evidence-based models grounded in the science of reading, exploring HQIM and HQIP, explicit and systematic instruction, and evidence-based practices. It also emphasizes supporting multilingualism and students identified with language and literacy development variations, ensuring that all students have access to the pathways necessary for proficient reading.

The Reading Brain: Regions and Pathways

Kearns et al. (2019) present a graphic (see Figure 4) that illustrates the regions and pathways of the brain involved in the reading process. This figure highlights the intricate interactions among neural systems that enable decoding, word recognition, and comprehension. Specifically, it shows how the inferior frontal gyrus (Broca's area), the parietal-temporal area, and the occipitotemporal area work together to process phonological, orthographic, and semantic information. These regions are connected by two primary neural pathways: the dorsal pathway, which supports decoding, and the ventral pathway, which facilitates sight word recognition and fluency.

Figure 4



Note. This figure illustrates the neural systems that support decoding, word recognition, and comprehension from "The Neurobiology of Reading Development: Integrating Human and Animal Studies to Understand the Role of Brain Regions and Pathways in Literacy" by Kearns, Hancock, Hoeft, Pugh, and Frost, 2019, Developmental Cognitive Neuroscience, 36, p. 180 Copyright 2019 by Elsevier.

The visualization underscores the importance of explicit and systematic instruction in developing these neural pathways, particularly for struggling readers. By understanding how these brain regions and pathways function, educators can better tailor their instruction to support the development of decoding, word recognition, and comprehension skills. This is especially critical for students with reading difficulties, as targeted interventions can help strengthen underdeveloped neural connections.

Seidenberg (2017) highlights that the hallmark of skilled reading is integrating print with spoken language. His research underscores the importance of phonological awareness and automaticity in reading development, showing how the brain links print to speech through efficient neural pathways. Similarly, Eden's (1996, 2002) work using MRI scans has revealed structural and functional differences in the brains of skilled and struggling readers. Eden found that dyslexic individuals exhibit reduced activity in the left hemisphere, where language is processed, and compensatory overactivity in other brain regions. These findings emphasize the need for targeted interventions to help struggling readers develop the neural pathways necessary for fluent reading.

The inferior frontal gyrus (IFG), often referred to as Broca's area, plays a critical role in phonological processing and articulation, as it is responsible for sequencing sounds and linking them to other word representations in the brain, enabling decoding and fluent reading. The temporoparietal region, located at the intersection of the temporal and parietal lobes, serves as the brain's decoding center. Within this region, the superior temporal gyrus processes speech sounds, the supramarginal gyrus links phonemes (sounds) to graphemes (letters), and the angular gyrus contributes to semantic processing by connecting word meanings.

The occipitotemporal region, which includes the fusiform gyrus (commonly referred to as the Visual Word Form Area or VWFA), processes familiar visual information such as letters and words, supporting word recognition and linking visual symbols to their meanings (McCandliss et al., 2003; Yeatman et al., 2013). Neural pathways also play a critical role in reading, with the dorsal pathway, known as the decoding pathway, connecting the temporoparietal region to the IFG to allow readers to link sounds to letters. Meanwhile, the ventral pathway called the sight recognition pathway, connects the occipitotemporal region to the IFG, enabling fluent recognition of familiar words.

Subcortical structures, including the striatum and thalamus, contribute to attention, motor control, and other cognitive functions that indirectly support reading (Yeatman et al., 2013). Researchers have identified the timing and sequence of processes in the reading circuit using tools like functional magnetic resonance imaging (fMRI) and event-related potentials (ERP). The VWFA is activated within the first 200 milliseconds of seeing a word, followed by phonological processing at around 200 milliseconds and semantic processing at approximately 400 milliseconds (McCandliss et al., 2003; Coch, 2017). These findings provide a vivid picture of how the reading circuit builds new connections in the brain and how it is influenced by cultural factors, such as the type of writing system and educational instruction (Dehaene, 2009; Yeatman et al., 2013).

The National Reading Panel

Literacy is more than the ability to read and write—it is a multifaceted skill set encompassing reading, writing, speaking, and listening, enabling individuals to communicate effectively and engage meaningfully with the

world. True literacy involves not only decoding words on a page but also understanding, analyzing, and using language to express ideas, acquire knowledge, and think critically. These skills are essential for academic success, personal growth, and active participation in society. By developing a comprehensive set of literacy skills, individuals can navigate complex information and contribute to their communities in meaningful ways.

The National Reading Panel (NRP) was a landmark initiative in literacy education, established in 1997 by the U.S. Congress as part of the National Institute of Child Health and Human Development (NICHD). Its purpose was to evaluate decades of scientific research on reading instruction and identify evidence-based strategies to improve student reading outcomes. The panel consisted of 14 members, including leading scientists, educators, and policymakers, who reviewed over 100,000 studies on reading instruction to determine the most effective methods. This extensive review provided valuable insights into effective literacy practices and laid the groundwork for future educational policies and instructional approaches.

In 2000, the NRP published its findings in a report titled "Teaching Children to Read", which became a cornerstone of literacy education policy and practice. The report identified five essential components of effective reading instruction, often referred to as the "Five Pillars of Reading":

1. **Phonemic Awareness:**
   - The ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words.
   - The NRP found that teaching phonemic awareness significantly improves students' ability to read and spell. It is particularly important in the early stages of reading development, as it lays the foundation for decoding and word recognition.
2. **Phonics:**
   - Instruction in the relationship between letters and sounds (the alphabetic principle).
   - The NRP determined that systematic and explicit phonics instruction is highly effective, especially for young readers and struggling students. Phonics helps students decode unfamiliar words and recognize spelling patterns, which is critical for reading fluency.
3. **Fluency:**
   - The ability to read text accurately, quickly, and with proper expression.
   - The NRP emphasized the importance of fluency in reading comprehension. Fluent readers can focus on understanding the meaning of the text rather than decoding individual words. Practices such as guided oral reading and repeated reading were found to improve fluency.
4. **Vocabulary:**
   - Knowledge of word meanings, pronunciation, and usage.
   - The NRP found that vocabulary development is essential for reading comprehension. Direct instruction in vocabulary and exposure to a wide range of texts helps students understand and engage with increasingly complex material.
5. **Comprehension:**
   - The ability to understand, interpret, and derive meaning from text.
   - The NRP identified strategies such as summarization, question generation, and comprehension monitoring as effective ways to improve students' understanding of what they read. Comprehension is the ultimate goal of reading and requires integrating all other components.

The NRP used a rigorous process to evaluate research, focusing on experimental and quasi-experimental designs that demonstrated measurable improvements in students' reading skills and could be replicated in classrooms. This emphasis on evidence-based practices set a new standard for literacy instruction and remains a cornerstone of how reading is taught today. The five pillars identified by the NRP—phonemic

awareness, phonics, fluency, vocabulary, and comprehension—continue to guide the development of effective reading programs, ensuring students receive the support needed to become proficient readers. Building on this foundation, Wyoming recognizes the critical importance of these five components, each contributing to a well-rounded and effective approach to literacy development. In addition, Wyoming emphasizes oral language development, writing, and knowledge building as essential elements of comprehensive literacy instruction. Oral language development, encompassing receptive and expressive communication, forms the foundation of literacy by fostering students' ability to engage meaningfully with language and build essential knowledge. Writing extends this foundation by linking oral language to the structured expression of ideas. Meanwhile, knowledge building equips students with the background understanding necessary to comprehend complex texts and navigate academic challenges. Together, these elements strengthen the literacy framework, supporting a holistic approach to developing proficient and confident readers and writers.

The Simple View of Reading (SVR)

The NPR's (2000) findings on the importance of phonemic awareness, phonics, fluency, vocabulary, and comprehension provide a foundational framework for understanding effective literacy instruction. These five components are essential for developing proficient readers and are supported by extensive research that highlights their roles in the reading process. By emphasizing these elements, educators can create a comprehensive approach to literacy that addresses the diverse needs of students. Building on this foundation, the SVR offers a complementary and well-established theoretical model that explains reading comprehension as the interaction of two fundamental skills: word recognition and language comprehension.

First proposed by Gough and Tunmer (1986), SVR has been widely accepted and supported by research, providing a clear framework for understanding the processes involved in reading. Word recognition refers to the ability to accurately and fluently decode written words by recognizing how letters and words relate to their corresponding sounds. This skill encompasses understanding the sound system of the language (phonology), the writing system (orthography), and the structure of words (morphology). Strong word recognition skills enable readers to decode unfamiliar words and read fluently, which is critical for comprehension and overall reading success. Thus, effective instruction in word recognition is vital for developing competent readers.

Language comprehension focuses on the ability to understand spoken language, including interpreting the meaning of words, sentences, and larger passages of text. It involves knowledge of sentence structure (syntax), word meaning (semantics), the social use of language (pragmatics), and the ability to understand extended spoken or written communication (discourse). Without strong language comprehension, even fluent readers may struggle to derive meaning from text. Therefore, both word recognition and language comprehension are essential for effective reading, as they work together to facilitate understanding and engagement with texts.

According to the SVR, reading comprehension is the product of these two components, expressed as Reading Comprehension = Decoding × Language Comprehension. This multiplicative relationship highlights that both components must work together; if one is weak or missing (e.g., decoding is strong, but language comprehension is poor), overall reading comprehension will be limited. This model underscores the importance of balanced instruction that addresses both decoding skills and language comprehension strategies. As shown in Figure 4, the SVR illustrates how decoding and language comprehension interact to produce reading comprehension, providing a visual representation of this critical relationship.

Figure 5

Note. This figure represents the Simple View of Reading, which explains skilled reading as the product of decoding and language comprehension. Adapted from "Decoding, Reading, and Reading Disability," by Gough and Tunmer, 1986, Remedial and Special Education, 7(1), p. 6 4). Copyright 1986 by SAGE Publications.

Scarborough's Reading Rope

While SVP highlights the interplay between decoding and language comprehension as the foundation of reading comprehension, Scarborough's Reading Rope offers a more nuanced and detailed model. Developed by Hollis Scarborough (2001), this model unravels the complex, interwoven strands of skills that contribute to skilled reading, emphasizing how both word recognition and language comprehension are composed of multiple, tightly connected subskills. This model illustrates the developmental progression of reading and underscores the importance of integrating these components to achieve fluent and meaningful reading comprehension.

SVP provides a foundational framework for understanding how skilled reading emerges from the interaction of decoding and language comprehension (Gough & Tunmer, 1986). Scarborough's Reading Rope expands on this framework by offering a detailed depiction of the intricate processes involved in skilled reading. Visualizing how multiple strands of literacy knowledge and skills intertwine over time highlights the essential components required for deep reading comprehension. Building on this model, experts such as Moats (2020) emphasize that skilled reading does not occur naturally but requires intentional, evidence-based instruction to develop the full range of literacy skills necessary for proficiency.

The Word Recognition strand focuses on foundational skills critical for decoding words accurately and fluently. According to Moats (1999), a leading researcher in structured literacy and the science of reading, word recognition depends on systematic instruction in phonemic awareness, phonics, and automatic decoding. Deficits in these areas are a primary cause of reading difficulties, making comprehension nearly impossible without strong decoding skills. Phonological and phonemic awareness, which involve the ability to recognize and manipulate the smallest sounds in words, are essential components of reading success.

Moats (2020), in her influential paper Teaching Reading is Rocket Science, emphasizes that explicit instruction in these foundational skills lays the groundwork for decoding and phonics. Teaching letter-sound correspondences and blending sounds enables students to decode words accurately and fluently. Kilpatrick (2015) further highlights the importance of orthographic mapping—a process that links sounds to letters and stores them in long-term memory for instant recall. Without this process, students struggle to achieve the fluency necessary for comprehension.

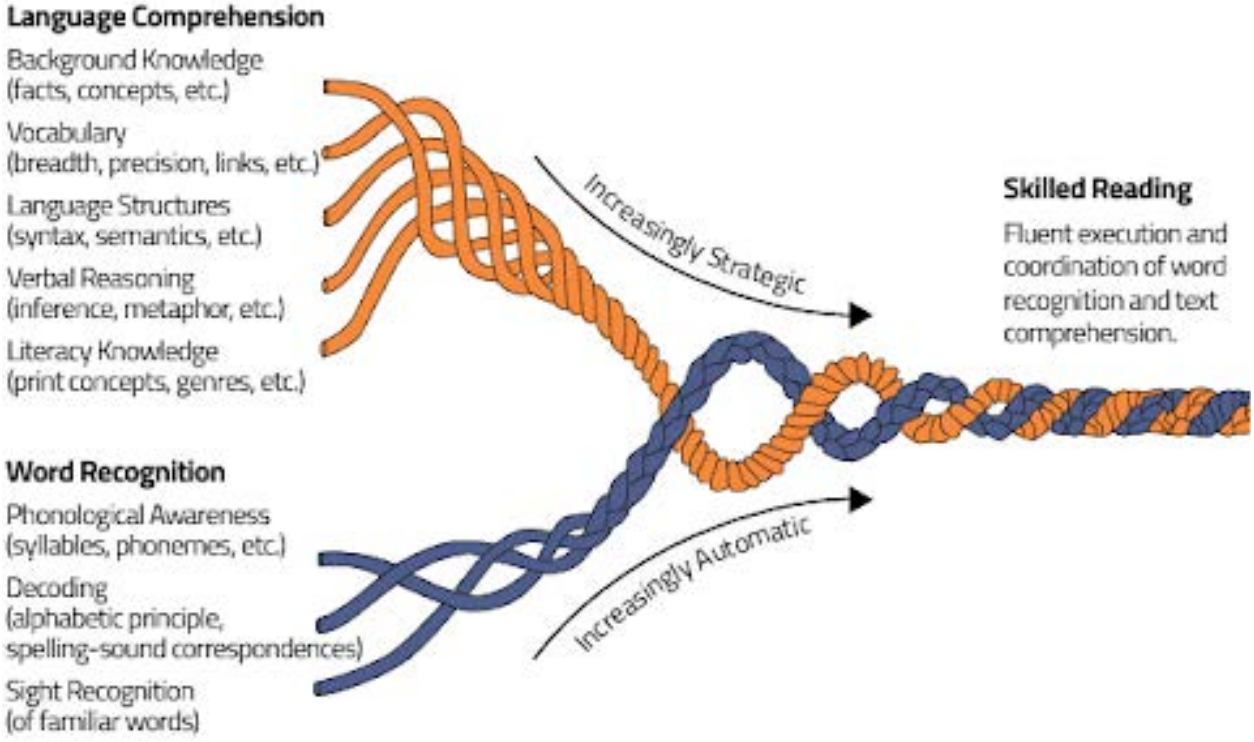
Equally essential to skilled reading is the Language Comprehension strand, which must be cultivated alongside word recognition. Researchers such as Scarborough (2001), Snow (2019), and Nation (2019) have illuminated the complexity of language comprehension and its pivotal role in deep reading comprehension. Key components of this strand include vocabulary, background knowledge, syntax, and verbal reasoning. Beck, McKeown, and Kucan (2013) emphasize that a rich vocabulary is critical for understanding complex

Hirsch (2006) argues that background knowledge is fundamental to reading comprehension, as students with a broader understanding of the world can better contextualize new information in texts. Syntax and grammar are also essential for comprehension; Moats (2020) notes that direct instruction in sentence structures helps students parse complex sentences effectively. Snow (2019) highlights the importance of verbal reasoning skills, such as making predictions, understanding figurative language, and drawing conclusions from context, to develop inferential thinking and deeper comprehension.

The interwoven nature of both strands underscores the importance of integrated instruction. Experts agree that focusing solely on one strand while neglecting the other undermines reading proficiency. Moats (2020) emphasizes that effective reading instruction must integrate both word recognition skills and comprehension strategies to ensure that neither side of the Reading Rope is overlooked. Nation (2019) reinforces this by noting that even fluent word recognition will not lead to comprehension without strong language skills. Similarly, Shanahan and Shanahan (2008) advocate for a systematic approach to reading instruction that simultaneously builds decoding skills and fosters the integration of Content and Disciplinary Literacy as students progress through the grades. This dual focus ensures that students develop the full spectrum of skills necessary for proficient reading, aligning with Scarborough's model of skilled reading as a tightly woven rope of interdependent strands.

The Reading Rope graphic below illustrates how the word recognition and language comprehension strands are intertwined to support the development of skilled readers. Achieving deep reading comprehension requires a deliberate, multifaceted approach that addresses both strands of Scarborough's Reading Rope.

Figure 6



Note. This adapted figure illustrates the two primary strands of skilled reading—word recognition and language comprehension—and their interwoven subskills, as described in Scarborough's Reading Rope model. Adapted from Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis) abilities: Evidence, theory, and practice. In S. B. Neuman & D. K. Dickinson (Eds.), Handbook of early literacy research (pp. 97–110). Guilford Press.

Achieving deep reading comprehension, the ultimate goal of reading, requires a deliberate, multifaceted approach that addresses each strand of Scarborough's Reading Rope: word recognition and language comprehension. Structured literacy provides explicit, systematic, and cumulative instruction in phonics, decoding, and sight recognition to strengthen word recognition and ensure students develop a solid foundation in these essential skills (Moats, 2020). Equally critical are rich language experiences that cultivate background knowledge, vocabulary, and comprehension strategies through engaging read-alouds, meaningful discussions, and content-rich curricula. These experiences weave the language comprehension strand of the rope, enabling students to make sense of complex texts and ideas (Scarborough, 2001).

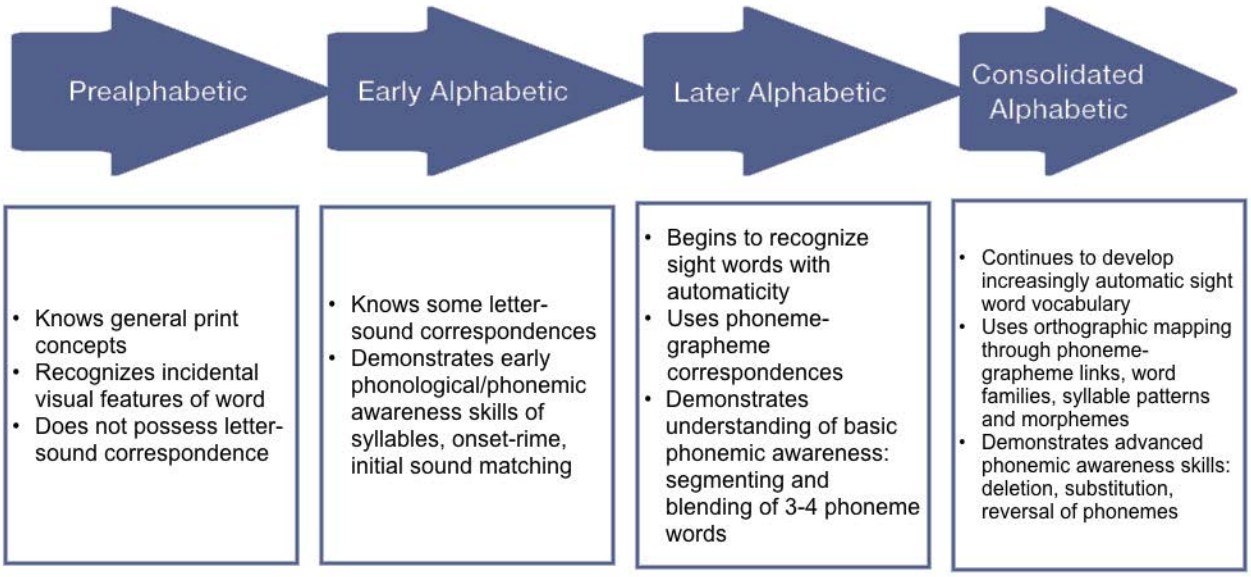
Evidence-based practices grounded in the science of reading further guide instructional choices, ensuring that teaching methods align with research-proven strategies (Kilpatrick, 2015; Moats, 2020). By incorporating these insights into classroom practice, educators implement a comprehensive approach that supports decoding and comprehension. This dual focus equips students with the full range of skills necessary for skilled reading, a foundation that underpins academic achievement and lifelong learning (Scarborough, 2001; Moats, 2020).

As students develop proficiency in decoding and language comprehension, they are empowered to access, analyze, and enjoy increasingly complex texts, setting them on a path toward literacy success and lifelong intellectual engagement. To achieve these outcomes, structured literacy must be prioritized as a cornerstone of effective reading instruction, ensuring that both strands of the Reading Rope are fully addressed.

Ehri's Phases of Word Reading Development

Scarborough's Reading Rope provides a comprehensive framework for understanding the intricate interplay between word recognition and language comprehension in skilled reading. By illustrating how these components are woven together, the model highlights the importance of developing both foundational decoding skills and higher-order comprehension abilities. However, while the Reading Rope emphasizes integrating these skills, it is also essential to examine how word recognition develops over time. Ehri's (1996) Developmental Model of Word Reading offers a detailed, phase-based perspective on how children progress from early reliance on visual cues to automatic word recognition. By exploring Ehri's model, we can better understand the step-by-step process through which children build the foundational skills necessary for fluent reading, complementing the broader insights provided by Scarborough's framework.

Table 3: Ehri's Phases of Word Reading Development



Note. This table shows the phases of word reading development. Adapted from Ehri, L. C. (1996). Phases of development in learning to read words by sight. Journal of Research in Reading, 18(2), 116–125.

Linnea Ehri's (1995, 2005) Developmental Model of Word Reading provides a detailed framework for understanding how children acquire the ability to read words. Her model outlines a series of phases that describe the gradual progression from early reliance on visual cues to the automatic and fluent recognition of words. These phases—Pre-Alphabetic, Partial Alphabetic, Full Alphabetic, Consolidated Alphabetic, and Automatic—highlight the interplay between phonological awareness, orthographic knowledge, and memory in the process of learning to read (Ehri, 1995, 2005). By recognizing these phases, educators can tailor their instruction to meet the specific needs of students at each stage, ultimately fostering better literacy outcomes.

The first stage in Ehri's (1995) model is the Pre-Alphabetic Phase, where children rely on visual and contextual cues to recognize words. At this stage, children do not yet understand the alphabetic principle—the idea that letters represent sounds in spoken language. For example, a child might recognize the word "stop" by associating it with the shape or color of a stop sign rather than decoding the letters. This phase is characterized by a lack of phonological awareness, and children often guess words based on visual features rather than their letter-sound relationships (Ehri, 1995). Understanding this phase is crucial for educators, as it informs the types of strategies and supports that can be implemented to help children transition to the next stage of reading development.

As children begin to develop phonemic awareness, they enter the Partial Alphabetic Phase. In this phase, children start to connect some letters with their corresponding sounds, but their understanding is incomplete. They may rely on the first and last letters of a word to guess its pronunciation, often ignoring the middle sounds. For instance, a child might read the word "cat" by recognizing the "c" and "t" sounds but struggle with the vowel "a." Instruction in phonemic awareness and letter-sound correspondence is crucial during this phase to help children build a stronger foundation for decoding (Ehri, 1995, 2005). Educators can enhance learning by providing targeted activities that focus on sound-letter relationships, which are essential for progressing to the next phase.

The Full Alphabetic Phase marks a significant milestone in word reading development. At this stage, children fully grasp the alphabetic principle and can decode words by blending individual sounds together. They begin to recognize patterns in words, such as common phonograms (e.g., "-at" in "cat" and "hat"), and use this knowledge to decode unfamiliar words. Repeated exposure to words helps children store them in memory, transitioning from decoding to more fluent word recognition. Systematic phonics instruction is particularly important during this phase to reinforce decoding skills and build fluency (Ehri, 1995). By providing ample opportunities for practice and application, educators can support students in solidifying their reading skills and enhancing their confidence.

In the Consolidated Alphabetic Phase, children consolidate their knowledge of letter patterns, syllables, and morphemes (e.g., prefixes, suffixes, and root words). They no longer rely on decoding individual letters but instead recognize larger chunks of words, such as "ing" or "tion." This ability to process words in larger units increases reading fluency and allows children to focus more on comprehension. Instruction in morphology and multisyllabic word reading is especially beneficial during this phase, as it helps children decode more complex words and expand their vocabulary (Ehri, 2005). By integrating morphological instruction into the curriculum, educators can further enhance students' understanding of word structures and meanings, which is vital for advanced literacy skills.

Finally, the Automatic Phase represents the culmination of word reading development. At this stage, word recognition becomes automatic and effortless. Children can quickly and accurately recognize most words,

including irregular ones, without needing to decode them. This automaticity frees up cognitive resources for higher-order processes, such as comprehension and critical thinking. Skilled readers in this phase can focus entirely on understanding and interpreting text, as word recognition has become second nature (Ehri, 1995, 2005). This phase is crucial for developing proficient readers who can engage deeply with texts and apply their reading skills across various contexts.

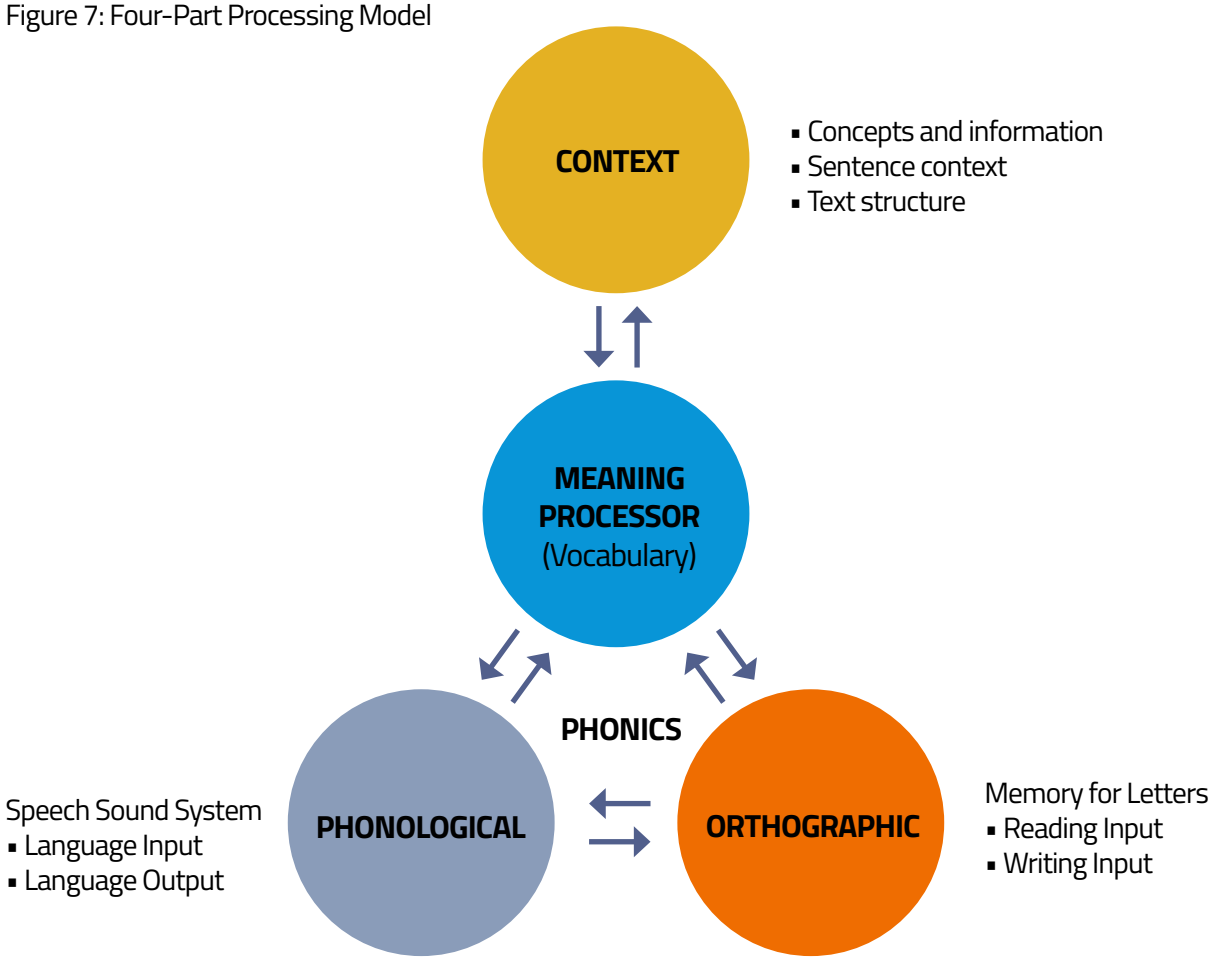
Ehri's (2005) model emphasizes the importance of systematic instruction in phonics and decoding to support students as they move through these developmental stages. By understanding the phases of word reading development, educators can provide targeted instruction to help children become fluent and proficient readers. This targeted approach not only addresses the specific needs of students at each phase but also fosters a love for reading and learning. Ultimately, effective literacy instruction grounded in Ehri's model can lead to significant improvements in students' reading abilities and overall academic success.

Building on this foundation, the Four-Part Processing Model, expired in the next section, offers a deeper understanding of how the brain processes written language. It highlights the interconnected roles of phonological, orthographic, meaning, and context processors in reading development. This model provides valuable insights into the cognitive mechanisms that support skilled reading and offers further guidance for effective literacy instruction. By integrating insights from both Ehri's model and the Four-Part Processing Model, educators can create a comprehensive literacy framework that addresses the multifaceted nature of reading development.

The Four-Part Processing Model

The Four-Part Processing Model provides a detailed look at the mental processes involved in reading and spelling. Developed by Seidenberg and McClelland (1989) and expanded upon by researchers such as Moats and Ehri, this model highlights the interconnected roles of four key processors: the phonological processor, the orthographic processor, the meaning processor, and the context processor. Each processor plays a unique role in the reading process. The phonological processor is responsible for processing the sounds of language, while the orthographic processor handles the recognition of written symbols and their patterns. The meaning processor connects words to their definitions and semantic knowledge, and the context processor uses surrounding information to interpret meaning and resolve ambiguities.

Figure 7: Four-Part Processing Model



Note. The Four-Part Processor Model demonstrates how the phonological, orthographic, meaning, and context processors interact to support reading and spelling. Adapted from Language at the Speed of Sight (Seidenberg, 2017) and Speech to Print: Language Essentials for Teachers (Moats, 2020).

The Four-Part Processor outlines actions that must occur sequentially for the brain to decode and understand words in text. First, the phonological and orthographic processors collaborate to decode a word. Once decoded, the meaning processor assigns significance to the word. Finally, the context processor applies the meaning appropriately to the specific situation or environment. These sequential actions establish the foundation for orthographic mapping, a vital process in fluent word recognition. According to Ehri (2014), orthographic mapping allows readers to form connections between the spellings, pronunciations, and meanings of words, aiding fluent word recognition and memory of written language words.

Orthographic mapping is the cognitive process that underpins the reciprocal relationship between encoding (spelling) and decoding (reading). It involves anchoring the sounds of spoken words (phonemes) to their written forms (graphemes) in long-term memory, enabling readers to recognize words automatically and fluently. As Kilpatrick (2016) explains, orthographic mapping is essential for developing word recognition skills, as it allows readers to store and retrieve words efficiently. This process relies on a strong foundation in phonological awareness, letter-sound knowledge, and repeated exposure to words in meaningful contexts.

Decoding involves translating written words into spoken language by applying knowledge of letter-sound relationships, while encoding is the reverse process of converting spoken language into written words. These

skills are interdependent because they both rely on shared phonological and orthographic knowledge. For example, when students decode a word, they activate its phonological representation, strengthening their ability to encode the same word in writing. Similarly, encoding tasks, such as spelling, require students to process words at a deeper level, reinforcing their memory of word forms and improving their ability to decode unfamiliar words (Kilpatrick, 2016). Orthographic mapping integrates phonological, orthographic, and semantic information, allowing students to develop automaticity in word recognition. This automaticity frees up cognitive resources for higher-order comprehension tasks, which are essential for reading fluency and proficiency (Wolf, 2007).

Without orthographic mapping, students may struggle to achieve fluency, as they must rely on slow, effortful decoding strategies for each word. Instructionally, integrating encoding and decoding strategies into reading practices offers significant benefits for developing the neural connections necessary for reading. For example, dictation exercises, word-building activities, and explicit morphological instruction bridge the gap between decoding and encoding, ensuring students grasp the relationships between sound and print.

These methods actively engage phonological processing areas of the brain, integrating them with visual and linguistic comprehension regions to build fluency and automaticity (Wolf, 2007). Encoding tasks also promote precision and long-term retention, equipping students with the skills needed for fluent and proficient reading. Additionally, these strategies support vocabulary growth and reading fluency, particularly in teaching multisyllabic word structures (Kilpatrick, 2016).

Moats (2007) explains that spelling is more than a mechanical process; it is a cognitive skill requiring the integration of phonology, orthography, and morphology. She advocates for explicit instruction in spelling patterns, phonemic awareness, and morphology, particularly for students with learning disabilities. Her research shows that spelling instruction must focus on both sound-letter correspondence and understanding word components, aligning with systematic and structured literacy practices.

Building on Moats' emphasis on the integration of phonology, orthography, and morphology, Stanovich (2000) explores orthographic mapping as the mental connection between spoken and written words. He argues that spelling and reading are interconnected, and a strong understanding of word structure supports both spelling accuracy and reading fluency. His research advocates for an integrated approach to teaching spelling and reading, ensuring that both skills are developed simultaneously.

While Stanovich highlights the interconnectedness of spelling and reading, Beck and McKeown (2007) expand on this by linking spelling instruction with vocabulary development. They argue that spelling should not be taught in isolation but in connection with understanding word meanings and structures. By focusing on components such as roots, prefixes, and suffixes, students can improve their ability to spell complex words while also enhancing their vocabulary. Their work reinforces the importance of teaching spelling as part of broader literacy skills.

Building on the importance of understanding word structure, Henry (2010) emphasizes the need for structured, multi-tiered instruction in spelling. She advocates for teaching students about syllable structures, roots, and affixes, particularly for more complex, multisyllabic words. Henry suggests that explicit instruction in breaking words into manageable parts not only enhances spelling ability but also supports writing and reading skills. Her approach aligns with Moats' and Stanovich's emphasis on systematic spelling instruction, where each component of a word is understood and applied in context.

Extending the focus on systematic instruction, Kastner (2024) enriches the understanding of spelling instruction by promoting the analysis of spelling errors as a diagnostic tool to identify gaps in phonological, orthographic, or morphological knowledge. Her research highlights the importance of analyzing errors to determine where breakdowns occur in a student's understanding of language. This diagnostic approach enables educators to tailor instruction to meet specific student needs and target areas for improvement.

In addition to these foundational scholars, other researchers like Shanahan (2017), Kilpatrick (2015), and Spear-Swerling (2018) have further expanded on the connection between spelling and reading. Shanahan argues that spelling is crucial to the reading process, as it helps students decode words accurately and highlights the importance of orthographic mapping in both spelling and reading. Kilpatrick (2015) emphasizes the role of phonological processing in spelling, arguing that students need to understand phonemic patterns and orthographic rules to spell effectively. Spear-Swerling (2018) highlights the importance of letter-sound correspondences and word structures in spelling, advocating for a structured, explicit approach to these elements to strengthen spelling and reading skills.

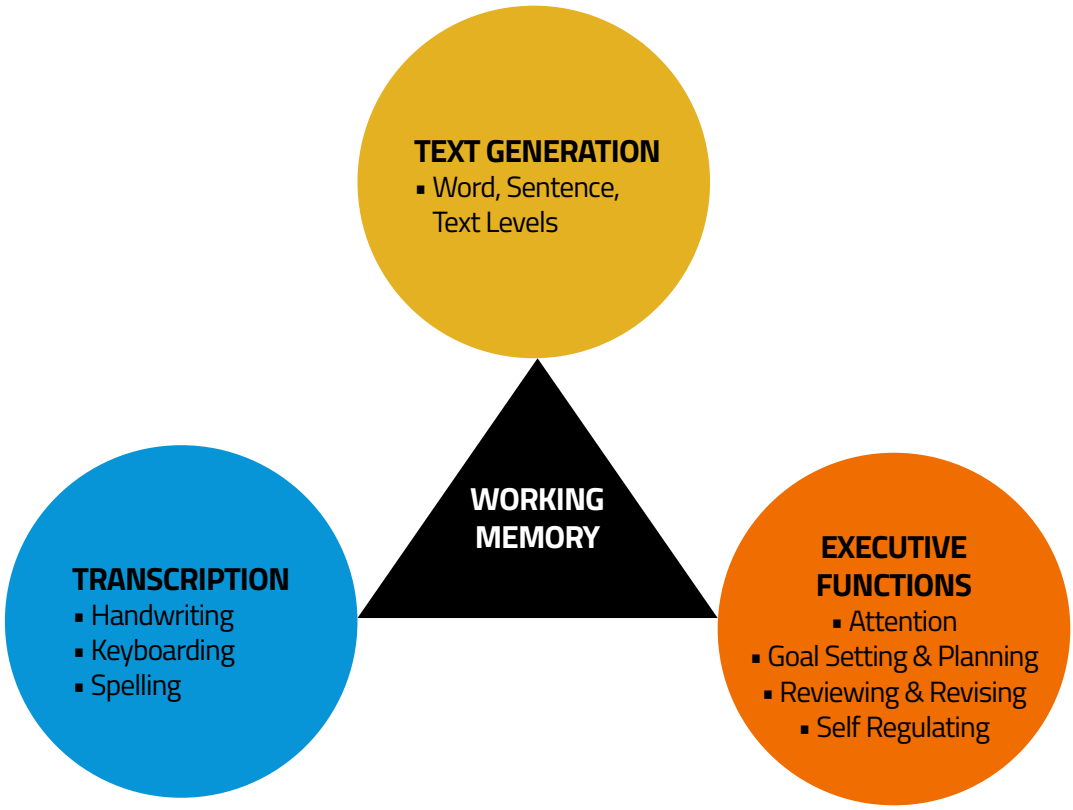
Drawing from this extensive body of research, the WLLP translates these findings into practice by advocating for a tiered approach to spelling instruction. Tier 1 involves universal, explicit instruction in spelling patterns, phonics, and morphology for all students. Tier 2 provides targeted, small-group interventions based on error analysis to address specific challenges, while Tier 3 offers intensive, individualized support for students with significant spelling difficulties. The WLLP emphasizes that spelling instruction should be integrated with broader literacy goals to develop students' reading, writing, and vocabulary skills. By embedding these practices into the framework of the WLLP, Wyoming schools are equipped to provide differentiated support for all students, ensuring that they become proficient spellers, readers, and writers.

Not-So-Simple View of Writing and Writing Rope

While the Four-Part Processor Model provides a foundational understanding of how the brain processes reading and spelling, writing requires an intricate interplay among cognitive, linguistic, and self-regulatory skills. Writing is not simply the reverse of reading; it is a multifaceted process that demands the coordination of numerous mental functions. To better capture this complexity, researchers first introduced the Simple View of Writing (Berninger et al., 2002), which focused on two primary components: transcription (e.g., handwriting and spelling) and text generation (e.g., translating ideas into written language). This model provided an important foundation for understanding the writing process but did not fully account for the broader cognitive and self-regulatory demands of skilled writing.

Recognizing the need for a more comprehensive framework, Berninger and Winn (2006) developed the Not-So-Simple View of Writing, an expanded model that builds upon the earlier framework. This updated model incorporates additional layers such as executive function and self-regulatory processes, including attention, goal setting, planning, and reviewing. Furthermore, it emphasizes the roles of working memory, which is crucial during the planning stage, and short-term memory, which supports the review process. Ahmed et al. (2021) explain that this expanded model highlights the intricate interplay among cognitive, linguistic, and self-regulatory processes in writing, making it a comprehensive tool for understanding and teaching writing effectively.

Figure 8: The Not-So Simple View of Writing



Note. The Not-So-Simple View of Writing illustrates the interplay between transcription, text generation, and executive functions, all supported by working memory at the core. Adapted from Gough & Tunmer's (1986) Simple View of Reading; Berninger et al.'s (2002) Simple View of Writing; and Berninger & Winn's (2006) Not So Simple View of Writing. This interpretation also reflects explanatory contributions from Kim & Schatschneider (2017) and Ahmed et al. (2021) regarding the roles of transcription, ideation, executive function, and memory systems in writing development.

This interconnectedness underscores the importance of addressing all these components in writing instruction, particularly for struggling writers or those with learning disabilities. Building on this cognitive perspective, Sedita's Writing Rope provides a practical framework for integrating these components into explicit writing instruction. For instance, students with weak transcription skills may require explicit instruction in handwriting or typing to free up cognitive resources for higher-order processes like planning and revising. Similarly, those with executive function challenges may benefit from targeted strategies to support organization and self-monitoring. Motivation and self-regulation can also be fostered through tools and strategies that help students manage their writing process more effectively (Ahmed et al., 2021). By addressing these interwoven elements, educators can better support striving writers and ensure they develop the skills needed for proficient writing.

The Writing Rope

Building on the Not-So-Simple View of Writing (NSVW), which emphasizes the interplay between transcription, executive functioning, and text generation, Sedita's "Writing Rope" (2019) provides a complementary framework for conceptualizing the skills required for proficient writing. While the NSVW highlights the cognitive and linguistic processes involved in writing, Sedita's model offers a practical, instructional lens by breaking writing into interwoven strands that represent the key components of skilled writing. Inspired by Hollis Scarborough's "Reading Rope," Sedita explains, "Significant attention is paid to the multi-component nature of skilled reading, while writing tends to be referred to as a single, monolithic skill and suggests a model that identifies the multiple components that are necessary for skilled writing—a similar 'rope' metaphor used to depict the many strands that contribute to fluent, skilled writing."

The Writing Rope identifies three primary strands—transcription, text generation, and executive functioning—each supported by foundational skills such as spelling, handwriting, sentence construction, and planning. These strands must work together seamlessly to produce coherent, fluent, and purposeful writing. Sedita's model emphasizes that writing is not a linear process but a dynamic and recursive one, requiring students to integrate lower-level skills, such as transcription, with higher-order processes, such as critical thinking and organization. This mirrors the NSVW's assertion that as transcription skills become more automatic, cognitive resources are freed for higher-level processes like planning, revising, and editing (Berninger & Winn, 2006).

This image illustrates Joan Sedita's Writing Rope, a visual framework that breaks down the components of skilled writing into five interwoven strands. Each strand represents a critical area of writing instruction, emphasizing the interconnected nature of these skills in producing fluent, coherent, and purposeful writing.

Figure 10: Skilled Writing

CRITICAL THINKING

- Generating ideas, gathering information.
- Writing process: organizing, drafting, writing, revising.

CRITICAL THINKING

- Grammar & syntactic awareness.
- Sentence elaboration
- Punctuation

TEXT STRUCTURE

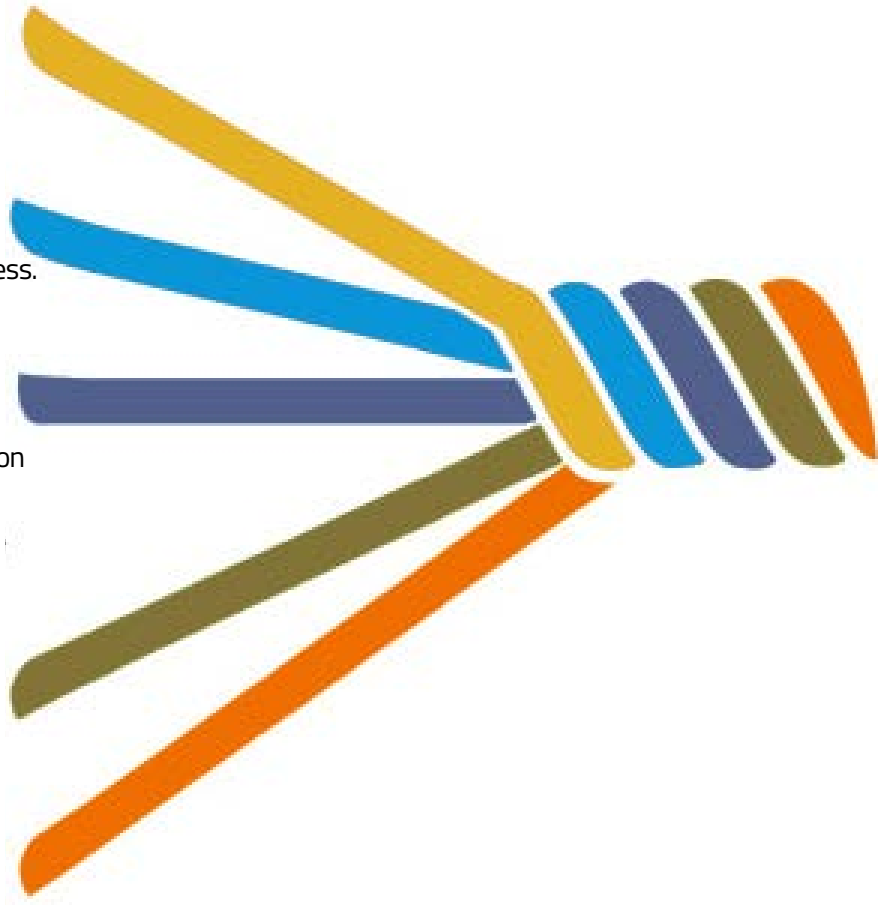
- Narrative, informational, opinion structures.
- Paragraph structure.
- Patterns or organization.
- Linking & transition words.

WRITING CRAFT

- Word choice.
- Awareness of task,audience, purpose.
- Literary devices.

TRANSCRIPTION

- Spelling.
- Handwriting, keyboarding.



Note. The Writing Rope visual depicts how individual strands like syntax, transcription, and critical thinking weave together to form a cohesive writing process. Adapted from The Writing Rope: A Framework for Explicit Writing Instruction in All Subjects (Sedita, 2023). © 2019 by Joan Sedita, **www.keystoliteracy.com.**

The Critical Thinking strand focuses on the cognitive processes involved in generating ideas and gathering information for writing. This includes brainstorming, researching, and developing background knowledge about a topic. It also encompasses the writing process, which involves organizing ideas, drafting, revising, and editing. Students must think critically about what they want to communicate and how to structure their ideas effectively. For example, when writing an informational or opinion piece, students may need to analyze sources, synthesize information, and evaluate how best to present their arguments. Explicit instruction in brainstorming strategies, note-taking, and planning tools, such as graphic organizers, helps students develop these essential skills (Sedita, 2019). These critical thinking skills also support the development of syntax and text structure by helping students organize their ideas and construct coherent, well-structured sentences and paragraphs.

The Syntax strand is closely tied to critical thinking, which addresses the structure of sentences, the building blocks of written communication. This includes grammar, sentence construction, and punctuation. Students must develop syntactic awareness, which involves understanding how words, phrases, and clauses work together to form coherent sentences. Activities such as sentence combining, sentence elaboration, and punctuation practice help students refine their ability to write clear and varied sentences. Mastery of syntax is essential for producing writing that is grammatically correct, engaging, and easy to understand. Explicit instruction in these areas ensures students can construct sentences that effectively convey their ideas (Hochman & Wexler, 2017; Sedita, 2019).

Beyond sentence-level skills, the Text Structure strand focuses on the organization of writing at multiple levels, from individual paragraphs to entire compositions. Students must learn the structures of different types of writing, such as narrative, informational, and opinion pieces. This includes understanding how to craft introductions, develop body paragraphs, and write conclusions. Additionally, students need to recognize and use patterns of organization, such as cause and effect, compare and contrast, and problem-solution. Using linking and transition words is critical for creating cohesion and flow within and between paragraphs. Explicit instruction in text structure helps students organize their ideas logically and tailor their writing to specific purposes and audiences (Sedita, 2019; Graham & Perin, 2007).

Complementing text structure is the Writing Craft strand, which focuses on the stylistic elements of writing, often referred to as "writer's craft" or "writer's moves." This includes word choice, tone, and the use of literary devices such as imagery, figurative language, and alliteration. Students must also consider the task, audience, and purpose of their writing, as these factors influence decisions about style, length, and vocabulary. For example, writing a persuasive essay requires a different tone and word choice than writing a narrative. Explicit instruction in writing craft helps students develop their unique voice and create engaging and impactful writing. This strand encourages students to think creatively and strategically about how to communicate their ideas effectively (Sedita, 2019).

Finally, the Transcription strand addresses the mechanical skills of writing, including spelling, handwriting, and keyboarding. These foundational skills are essential for fluent writing, as they allow students to focus on higher-order processes like idea generation and organization. Just as decoding fluency supports reading comprehension, transcription fluency supports writing proficiency. Students benefit from explicit instruction in spelling patterns, handwriting techniques, and keyboarding skills, particularly in the early grades. As these skills become automatic, students can devote more cognitive resources to the content and structure of their writing. Mastery of transcription ensures that students can accurately and efficiently translate their thoughts into written form (Berninger & Winn, 2006; Sedita, 2019). By addressing these strands systematically and explicitly, educators can help students develop the skills necessary for skilled writing.

Knowledge Building

Knowledge building is a critical component of effective literacy instruction, as it directly impacts students' ability to comprehend and engage with complex texts. Integrating background knowledge into teaching practices enhances reading comprehension and supports academic success across all subject areas. Research consistently demonstrates that students with a strong foundation of prior knowledge are better equipped to make sense of new information, connect ideas, and apply their learning in meaningful ways. This underscores the importance of addressing knowledge building as a central focus in education.

The Knowledge Matters Campaign highlights the essential role of systematically building students' knowledge to improve literacy outcomes. This approach aligns with foundational research, such as Recht and Leslie's "Baseball Study" (1988), which revealed the profound influence of prior knowledge on reading comprehension, regardless of a student's reading proficiency. Similarly, frameworks like Nancy Hennessy's The Reading Comprehension Blueprint (2020) emphasize the intentional development of content knowledge alongside comprehension strategies, vocabulary, and language structures. These findings reinforce the idea that knowledge building is not an isolated process but a critical element of effective literacy instruction.

Prominent researchers such as E.D. Hirsch Jr., Daniel T. Willingham, John Sweller, Doug Lemov, and Linda Darling-Hammond have further emphasized the importance of knowledge-building in education. Their work highlights how background knowledge serves as the foundation for reading comprehension, critical thinking, and equitable learning opportunities. By prioritizing knowledge building, educators can create inclusive and effective learning environments that prepare students for academic success and lifelong learning.

The Importance of Addressing Knowledge Building

The Knowledge Matters Campaign emphasizes the critical importance of integrating background knowledge into literacy instruction to improve reading comprehension and support academic success. This focus on building knowledge aligns with foundational research, such as Recht and Leslie's "Baseball Study" (1988), and the recommendations outlined in Nancy Hennessy's The Reading Comprehension Blueprint (2020).

Recht and Leslie's "Baseball Study" demonstrated how prior knowledge significantly impacts reading comprehension. In their study, students with a deep understanding of baseball comprehended a narrative about a baseball game more effectively than peers with limited knowledge, regardless of their reading proficiency (Recht & Leslie, 1988). This finding underscores the importance of prior knowledge as a scaffold that helps students reconstruct and make sense of new information. It also highlights the need for literacy instruction to reflect the cultural and experiential backgrounds of all students, ensuring equitable opportunities for learning.

E.D. Hirsch Jr., a leading advocate for knowledge building, has long argued that background knowledge is essential for reading comprehension and academic success. In his book Cultural Literacy: What Every American Needs to Know (1987), Hirsch explains that shared knowledge enables students to understand texts and participate in meaningful communication. His Core Knowledge Foundation promotes a content-rich curriculum that systematically builds students' knowledge across subjects, ensuring all learners have the foundational knowledge needed to succeed. Hirsch's work underscores the importance of integrating content-rich instruction into literacy practices to close achievement gaps and promote equity.

Cognitive scientist Daniel Willingham further supports the role of knowledge in comprehension and critical thinking. In his book Why Don't Students Like School? (2009), Willingham explains that knowledge is the foundation for cognitive processes such as problem-solving and reasoning. He argues that students cannot think critically about a topic without a solid knowledge base. This assertion underscores the necessity of integrating knowledge into the curriculum to enhance students' cognitive abilities. Willingham's research

highlights the importance of embedding knowledge-building practices into instruction to support higher-order thinking and long-term learning (Willingham, 2009). By prioritizing knowledge acquisition, educators can foster an environment where students are better equipped to engage in critical thinking and apply their understanding in various contexts.

Knowledge building and Cognitive Load Theory (CLT), as developed by John Sweller and later expanded upon by researchers like John Hattie, emphasize the importance of managing cognitive resources to facilitate effective learning. Sweller's CLT highlights the limitations of working memory and the need to reduce extraneous cognitive load—unnecessary mental effort caused by poorly designed instructional materials, so learners can focus on essential information and schema construction (Sweller, 1988). Knowledge building, in this context, involves creating and refining mental schemas, which are the building blocks of long-term memory.

Hattie (2008), in his work Visible Learning, integrated CLT into his broader research on effective teaching strategies, emphasizing that reducing extraneous load and fostering germane cognitive load (the mental effort directed toward learning) are critical for deep understanding and knowledge construction. Together, Sweller (1988) and Hattie's (2008) contributions underscore the importance of designing instructional environments that support cognitive efficiency, enabling learners to actively build and organize knowledge for long-term retention and application.

Doug Lemov (2010) offers practical strategies for building knowledge in the classroom. Lemov emphasizes the importance of reading complex texts, teaching vocabulary in context, and integrating content-rich instruction into daily lessons. He also advocates for the use of questioning techniques that promote deeper understanding and engagement with the material. His work aligns with the idea that knowledge-building is essential for literacy development and academic success. Lemov's strategies provide educators with actionable tools to ensure all students have access to the knowledge they need to thrive. By implementing these strategies, teachers can create a more inclusive learning environment that fosters critical thinking and enhances students' overall educational experience.

Finally, research underscores the critical role of knowledge-building in closing achievement gaps and promoting educational equity. Linda Darling-Hammond (2010) emphasizes that providing all students with access to high-quality, content-rich instruction is essential for fostering equity and inclusion. By prioritizing knowledge-building, schools can ensure that students from diverse backgrounds are equipped with the tools they need to succeed academically. This approach requires systemic changes in curriculum design and instructional practices to create equitable learning opportunities that support excellence for all learners (Darling-Hammond, 2010).

Practical Applications of Knowledge Building

To address knowledge building effectively, educators must adopt intentional strategies that integrate content knowledge into literacy instruction. This includes:

- **Embedding Content-Rich Topics into Literacy Instruction:** Incorporating subjects like science, social studies, and the arts into reading and writing activities helps students build background knowledge while developing literacy skills. For example, reading informational texts about ecosystems or historical events can simultaneously enhance comprehension and expand students' understanding of the world.
- **Teaching Vocabulary in Context:** Vocabulary instruction should go beyond isolated word lists and focus on teaching words within meaningful contexts. This approach helps students connect new vocabulary to existing knowledge, making it easier to retain and apply.
- **Integrating Inquiry-Based Learning:** Encouraging students to ask questions, explore topics of interest, and engage in collaborative discussions promotes deeper understanding and active participation in the knowledge-building process.

- **Providing Opportunities for Cross-Disciplinary Learning:** Literacy instruction should not occur in isolation. By integrating reading and writing activities with other subjects, educators can create meaningful connections between disciplines and help students see the relevance of their learning.

Addressing knowledge building in literacy instruction is essential for fostering reading comprehension, academic achievement, and equity. Foundational research and expert insights, such as those from Recht and Leslie, Hirsch, Willingham, and others, emphasize that prior knowledge provides a scaffold for understanding complex texts and developing higher-order thinking skills. Practical strategies, including embedding content-rich topics, teaching vocabulary in context, and integrating cross-disciplinary learning, empower educators to create meaningful and equitable learning experiences. By prioritizing knowledge building, schools can bridge achievement gaps, enrich students' educational journeys, and equip them with the foundational skills needed for lifelong success. This commitment to building background knowledge is vital to cultivating skilled and confident readers who are prepared to navigate the challenges of an increasingly complex world.

High-Quality Instructional Materials

HQIM are essential components of effective teaching and learning. HQIM are educational resources that are standards-aligned, evidence-based, and designed to ensure that all students, regardless of background or ability, have access to rigorous, engaging, and equitable learning experiences. In literacy instruction, HQIM includes explicit, systematic instruction in foundational skills and opportunities to build background knowledge, vocabulary, and comprehension through content-rich texts. hese materials play a crucial role in providing a structured approach to literacy that supports diverse learning needs.

HQIP refers to evidence-based teaching strategies and instructional routines, such as explicit modeling, scaffolding, formative assessment, and differentiated instruction, that have been proven to positively impact student learning. When paired with HQIM, these practices ensure equitable access to high-quality education. By integrating these strategies with HQIM, educators can create a comprehensive framework that enhances student engagement and understanding. Combining rigorous, research-based materials and effective instructional practices, educators can create learning environments that meet the diverse needs of learners, maximize academic growth, and support all students in achieving their full potential.

The WLLP prioritizes evidence-based practices aligned with reading science to enhance literacy outcomes, incorporating structured literacy protocols that address oral language development, phonemic awareness, phonics, vocabulary development, and reading comprehension. Evidence-based strategies encompass programs, practices, or activities that have undergone evaluation and have proven to enhance student outcomes. The term "evidence-based" gained significant prominence with the introduction of the Every Student Succeeds Act (ESSA), reflecting the federal government's commitment to making decisions grounded in rigorous evaluation. While some resources developed before ESSA may claim to be evidence-based, this designation does not necessarily align with ESSA's specific criteria.

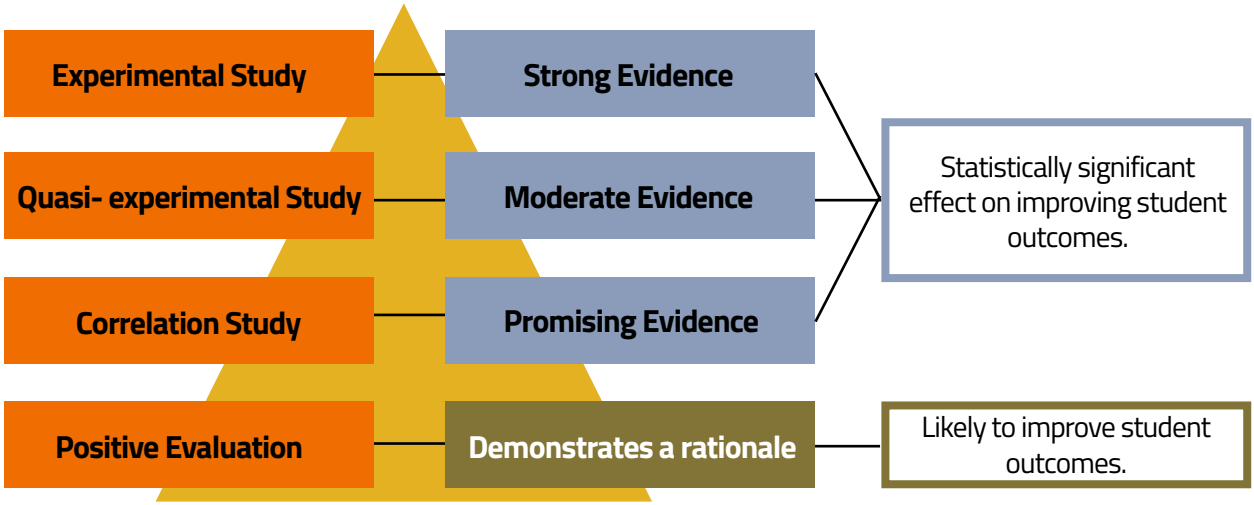
The WLLP cautions that while evidence-based and research-based are often used interchangeably, they are distinct. A strategy may be rooted in research, but it must be rigorously tested independently to be considered evidence-based according to ESSA's criteria. This distinction is crucial for ensuring that educational practices are not only theoretically sound but also practically effective in real-world settings. This distinction ensures that strategies implemented in schools are informed by research and have demonstrated effectiveness

through rigorous evaluation. The requirement for evidence-based materials, resources, and practices aligned with reading science promotes equitable access to methods proven to improve student outcomes.

ESSA Evidence

The Every Student Succeeds Act (ESSA) emphasizes the importance of using evidence-based practices in education to improve student outcomes. The law categorizes evidence into four tiers: strong, moderate, and promising, and demonstrates a rationale based on the level of rigor in supporting research. These tiers are associated with the study designs employed to evaluate interventions. Experimental studies, such as randomized controlled trials, provide the highest level of evidence, classified as "strong," while quasi-experimental studies support "moderate" evidence. Correlational studies contribute to "promising" evidence, and positive evaluations that logically connect interventions to desired outcomes fall under "demonstrates a rationale." This framework helps educators, administrators, and policymakers identify and implement practices most likely to benefit students (REL West, 2022).

Figure 10: ESSA Evidence Levels



Note. ESSA evidence levels diagram. Adapted from "Evidence in Education Is All the Buzz in the Beehive State," by Institute of Education Sciences, 2019, https://ies.ed.gov/learn/blog/evidence-education-all-buzz-beehive-state

The ESSA evidence levels framework, as illustrated in the graphic, offers a systematic approach for educators, policymakers, and stakeholders to evaluate the reliability and impact of educational interventions. By organizing evidence into tiers, this hierarchy ensures that decision-making is firmly grounded in evidence-based practices that can positively influence student outcomes. This structured framework not only aids in the selection of effective interventions but also promotes accountability in educational decision-making.

At the top of the hierarchy, Strong Evidence (Tier 1) represents the highest standard of research quality. To meet this criterion, studies must adhere to the What Works Clearinghouse (WWC) Standards Without Reservations (version 2.1 or later), meaning they are well-designed and well-executed randomized controlled trials (RCTs). These studies avoid critical issues such as participant attrition and demonstrate statistically significant positive effects. Additionally, they must include a sample size of at least 350 students across at

least two educational sites. This level of rigor ensures that the results are both reliable and valid, providing educators with confidence in the intervention's effectiveness and applicability in diverse educational settings.

Moderate Evidence (Tier 2) represents the next level of rigor. Studies in this category also meet WWC Standards but may do so With or Without Reservations. Like Tier 1, these studies require a sample size of at least 350 students conducted across multiple sites and must demonstrate statistically significant positive effects. However, studies meeting WWC Standards With Reservations may have limitations, such as non-random selection or less rigorous implementation. While these studies still show positive outcomes, their methodological constraints require careful interpretation and consideration when applying their findings in practice.

Promising Evidence (Tier 3) reflects studies that demonstrate statistically significant positive effects but rely on correlational designs rather than RCTs. These studies include controls for selection bias, showing a positive relationship between the intervention and outcomes. However, because they lack the rigor of randomized trials, their findings should be considered suggestive rather than conclusive. Educators and policymakers should approach these findings with caution, recognizing the need for further research to establish stronger causal links.

This evidence hierarchy provides a clear and systematic way to evaluate the credibility and reliability of educational interventions. By categorizing studies based on their methodological rigor and outcomes, the framework helps educators, policymakers, and stakeholders make informed decisions grounded in evidence-based practices and aimed at improving student outcomes. Ultimately, this structured approach fosters a culture of continuous improvement in education, ensuring that interventions are both effective and aligned with the needs of students.

Understanding Evidence of Effectiveness Under ESSA

Equally significant, the WLLP emphasizes the critical role of evidence-based HQIM and HQIP in advancing effective literacy instruction. Research consistently demonstrates that carefully selected HQIM, paired with instructional practices grounded in the science of reading, can significantly enhance student achievement, rivaling even the impact of teacher effectiveness (Chingos & Whitehurst, 2012). Ensuring equitable access to HQIM and providing robust training in HQIP is particularly vital in under-resourced and rural areas. By prioritizing these evidence-based tools and methods, Wyoming can close achievement gaps, promote equitable educational opportunities, and ensure consistent literacy instruction across all districts.

Central to this effort is the alignment of instructional materials and practices with the science of reading, marking a deliberate shift from whole language and balanced literacy approaches to Structured Literacy. This evidence-based approach integrates oral and written language, which is essential for developing foundational reading and writing skills, particularly among historically underserved students (Carter & Webster, 2024). Structured Literacy emphasizes explicit, systematic, and sequential instruction, making it especially effective for students who struggle with reading. Aligning HQIM and HQIP with Structured Literacy ensures a consistent and effective educational environment across the state, supporting the overarching goals of the WLLP.

The successful implementation of evidence-based HQIM and HQIP depends on strengthening systems capacity—the collective ability of educational policies, processes, and resources to sustain effective literacy instruction. Building systems capacity involves creating robust frameworks that support educators through well-designed policies, infrastructure, and resources. This foundational approach ensures educators receive

the necessary support to deliver high-quality instruction. It also fosters the long-term success and scalability of literacy initiatives. Strengthening these systems is essential for achieving sustainable improvements across Wyoming's schools and districts.

Central to this effort is the alignment of instructional materials and practices with the science of reading, marking a deliberate shift from whole language and balanced literacy approaches to Structured Literacy. This evidence-based approach integrates oral and written language, which is essential for developing foundational reading and writing skills, particularly among historically underserved students (Carter & Webster, 2024). Structured Literacy emphasizes explicit, systematic, and sequential instruction, making it especially effective for students who struggle with reading. Aligning HQIM and HQIP with Structured Literacy ensures a consistent and effective educational environment across the state, supporting the overarching goals of the WLLP.

Wyoming's proactive approach to literacy improvement prioritizes coherence and scalability to achieve long-term success. Embedded within Wyoming's Evidence-Based Language and Literacy Framework, this approach emphasizes early intervention and comprehensive support to prevent reading difficulties, shifting away from reactive, "wait-to-fail" models. Standardized processes for selecting, implementing, and evaluating instructional materials ensure consistency across schools while fostering coherence and strengthening the foundation for literacy success. As outlined in the next section, Wyoming Literacy Supports are strategically designed to align with this framework, offering educators, caregivers, and stakeholders the tools and resources needed to strengthen literacy outcomes statewide.

In summary, the interconnectedness of theory and practice is central to Wyoming's proactive approach to literacy improvement. By establishing coherence as a theoretical foundation, the framework aligns curriculum, instruction, assessment, and professional development, linking evidence-based principles like HQIM and HQIP to actionable strategies. This transition from theory to practice is evident in the emphasis on curricular and resource evaluation processes to ensure consistent instructional quality across educational settings.

Furthermore, Wyoming's proactive approach prioritizes early intervention and comprehensive support, embedding prevention within practical applications and moving away from reactive, "wait to fail" models. Finally, integrating stakeholders such as educators, caregivers, and community members ensures these theoretical principles translate into systemic alignment. This collective effort reinforces a statewide commitment to sustainable literacy success, grounded in evidence-based research and implementation.

Evaluating and Selecting Evidence-Aligned Core, Supplemental, and Intervention

A critical aspect of advancing literacy outcomes under the WLLP is carefully evaluating and selecting instructional materials and resources. These materials lay the foundation within the literacy-aligned MTSS-tiered prevention and intervention model. Core, supplemental, and intervention materials must meet the criteria of being evidence-aligned, ensuring they effectively meet the diverse needs of Wyoming's students. Importantly, all materials must be reviewed and rated for alignment to evidence-based practices proven effective, as indicated by ESSA evidence standards.

These materials provide the foundation for tiered supports, beginning with Tier 1 Core as prevention and moving into Tier 2 and Tier 3 intervention and acceleration. In Tier 1, Core evidence-aligned materials guide high-quality, whole-class instruction to address the needs of most students. For students requiring additional support, adjustments in time, intensity, and group size are made in Tier 2 and Tier 3, allowing for targeted, explicit instruction and individualized attention to accelerate progress and close learning gaps. When applied with fidelity, these resources support a system where instruction is responsive, equitable, and grounded in research.

Tier 1 Core Materials

When evaluating and selecting Tier 1 Core materials, it is essential to recognize that they represent the first level of preventive instruction and are foundational for all students. Tier 1 Core materials involve delivering high-quality, comprehensive, and evidence-based literacy instruction using core materials as the primary instructional resources. These materials should align with the science of reading and provide systematic, explicit instruction in foundational reading skills, including phonemic awareness, phonics, fluency, comprehension, vocabulary, and writing. Tier 1 Core instruction is designed to meet the needs of the majority of students by ensuring they receive consistent, research-based teaching practices within the general education classroom. Regular assessments and progress monitoring identify students needing additional support beyond Tier 1.

Supplemental Materials

When evaluating and selecting supplemental materials, it is important to recognize that they are designed to support and enhance core literacy instruction by providing additional, targeted practice for students who need extra support to meet grade-level expectations. These materials should align with the core curriculum and address specific skill gaps identified through student data, such as phonics, fluency, vocabulary, or comprehension. Supplemental materials are not a replacement for core instruction but serve as a critical component of Tier 2 interventions, offering explicit, evidence-based instruction proven effective under ESSA.

The evaluation and selection of supplemental materials should focus on their alignment with evidence-based practices, ability to address identified skill gaps, and adaptability for small-group instruction. High-quality materials should also include opportunities for guided and independent practice with immediate feedback and tools for progress monitoring to track student growth and inform instructional adjustments. By integrating carefully evaluated and selected supplemental materials into the literacy plan, educators can deliver targeted support to prevent students from falling behind and ensure they stay on track to meet grade-level expectations. While supplemental materials provide additional practice for students needing extra support, intervention materials are designed for those requiring more intensive, individualized instruction to address significant skill deficits.

Intervention Materials

Tier 3 intensive literacy intervention materials must be carefully chosen to effectively address unfinished learning and meet the unique needs of students requiring the most intensive support. The evaluation process should focus on identifying materials that target specific skill deficits identified through student data, such as phonics, decoding, fluency, or comprehension. High-quality intervention materials should provide explicit, systematic instruction, frequent opportunities for practice, and immediate corrective feedback. They must also include progress monitoring tools to track student growth and allow for adjustments to instruction as needed.

Flexibility and adaptability are key, as materials should support one-on-one or small-group instruction tailored to individual student needs. By prioritizing evidence-based practices and aligning with student data, educators can select intervention materials that effectively close learning gaps and accelerate progress within a MTSS framework. Instruction must be tailored to individual student needs. By prioritizing evidence-based practices and aligning with student data, educators can choose intervention materials that effectively close learning gaps and accelerate progress within a MTSS framework.

Guiding Principles for Selection

The selection of instructional materials should be guided by well-defined principles to ensure they align with the science of reading and effectively address the needs of Wyoming's diverse student population. This process prioritizes alignment with the science of reading, focusing on explicit, systematic, and sequential instruction in foundational reading and writing skills. Structured Literacy embodies these guiding principles, providing a research-based approach to teaching foundational literacy skills systematically and explicitly. Thorough curriculum reviews are essential to ensure the chosen materials are evidence-based and adapted to meet the specific challenges of local contexts, including those faced by under-resourced and rural schools.

When identifying whether curricula and resources are evidence-based, leaders, educators, and decision-makers should evaluate the following key indicators:

- **Research Design and Methodology:** Evidence-based curricula must be supported by studies employing experimental or quasi-experimental designs that establish clear causal relationships between the instructional methods and improved student outcomes.
- **Peer-Reviewed Research:** Materials should be backed by research published in peer-reviewed journals, ensuring their rigor and credibility.
- **Clear Descriptions and Replicability:** Resources should include detailed information about the study's participants, settings, instructional practices, and outcomes, allowing for replication and adaptation in similar educational contexts.
- **Alignment with Established Frameworks:** Curricula should reflect the principles of the SVR and Scarborough's Reading Rope, which are foundational to understanding how reading proficiency develops.
- **Evidence of Positive Outcomes:** Resources should demonstrate success in improving student literacy outcomes, with results validated by multiple studies to ensure reliability and generalizability.

Equitable access remains a critical consideration in this process. Instructional materials must be designed to support all learners, including multilingual students and those with significant reading challenges, by incorporating structured approaches that provide targeted, evidence-based interventions. By focusing on materials that align with these criteria, Wyoming can ensure that all students, regardless of their background or ability, have access to high-quality educational opportunities. Finally, the selected materials should align with the goals of both district and state literacy initiatives. This alignment promotes coherence across schools and districts, ensuring unified instructional practices, professional development, and assessment strategies.

Evaluation Tools for Evidence-Aligned Resources

Wyoming educators can utilize various trusted evaluation tools to guide the selection of HQIM. These resources provide critical support in identifying core, supplemental, and intervention materials that align with evidence-based practices and meet the diverse needs of students. Key tools include:

- **The Reading League Curriculum Evaluation Guidelines:** This resource offers practical tools for assessing the alignment of curricula with evidence-based practices. It emphasizes structured literacy and the science of reading, providing educators with a clear framework for evaluating instructional materials.
- **EdReports:** An independent platform, EdReports provides comprehensive reviews of instructional materials, evaluating them based on rigor, coherence, and alignment with state and national standards. Its transparent evaluations empower educators to make informed decisions.
- **What Works Clearinghouse (WWC):** Managed by the U.S. Department of Education, the WWC rates the effectiveness of educational interventions and materials. It categorizes resources based on the strength of their evidence, offering educators a reliable benchmark for identifying high-impact tools.

- **Knowledge Matters Campaign:** This initiative underscores the importance of content-rich, evidence-based curricula. It highlights the role of knowledge-building materials in improving literacy outcomes, particularly for underserved and struggling readers.

HQIM serve as the foundation for effective teaching and learning, providing educators with the tools and resources needed to engage students and support their academic growth. However, the impact of these materials is maximized only when paired with HQIP. While materials set the stage, the evidence-aligned strategies, techniques, and approaches employed by educators bring them to life in the classroom. In the next section, we will explore the essential components of HQIP and how they work in tandem with instructional materials to create meaningful and impactful learning experiences.

High-Quality Instructional Practices

The Science of Learning

Understanding how the brain learns is essential to designing effective literacy instruction. While the science of reading provides research-based insights into how students acquire reading skills, the science of learning offers a broader perspective on how knowledge is absorbed, retained, and applied. Drawing from cognitive psychology, neuroscience, and education research, the science of learning informs instructional practices that optimize student engagement, comprehension, and mastery (Dehaene, 2020; Harvard University, 2021).

In How We Learn: Why Brains Learn Better Than Any Machine...for Now, Dr. Stanislas Dehaene identifies four fundamental pillars of learning: attention, active engagement, error feedback and correction, and consolidation through practice (Dehaene, 2020). These principles underscore the importance of explicit, structured instruction, where students actively engage with content, receive precise feedback, and reinforce their learning through targeted practice. Research from Harvard University's Science of Learning Initiative supports these findings, demonstrating that students learn more effectively when instructional strategies align with how the brain processes information (Harvard University, 2021).

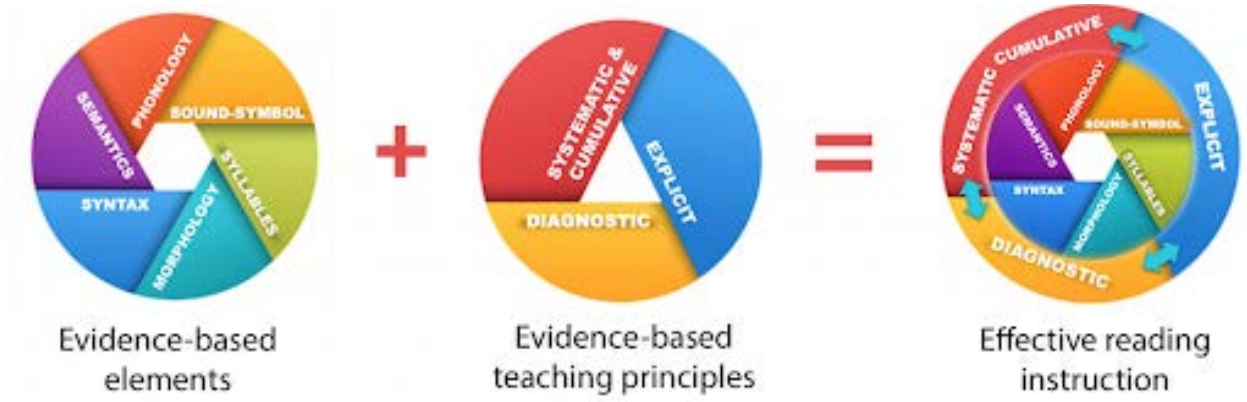
The principles of the science of learning directly inform the best approaches to literacy instruction. Research has demonstrated that reading is not a naturally occurring process in the brain—it requires structured and explicit teaching to develop the necessary neural connections (Dehaene, 2009). Structured Literacy is the instructional approach that applies these findings, ensuring that all students, including those with dyslexia and multilingual learners (MLs), receive systematic and evidence-based instruction. The following section explores the Structured Literacy framework, outlining its key components, instructional methods, and alignment with cognitive science to support literacy development for all learners.

Structured Literacy

Structured Literacy is an evidence-based approach to teaching reading and writing that emphasizes systematic and explicit instruction of language skills. Unlike oral language, the human brain is not prewired to read and process written language; instead, it requires the development of specific neural connections to enable reading. These connections, which begin forming during oral language development, are strengthened through Structured Literacy instruction, making it essential for all learners, including those with dyslexia and MLs (Pugh, 2013; Wolf, 2018).

This approach is built on six foundational pillars: phonology, sound-symbol correspondence (phonics), syllable instruction, morphology, syntax, and semantics. These components are taught systematically and explicitly, ensuring that students develop a strong foundation in literacy (Cowen, 2016; International Dyslexia Association, 2019). By progressing from simpler to more complex skills, Structured Literacy ensures mastery of each skill before advancing, fostering confidence and competence in reading and writing.

Figure 11



Note. Adapted from Cowen (2016) for I**nternational Dyslexia Association**.

The accompanying graphic visually represents the concept of Structured Literacy, illustrating how its components work together to create effective reading instruction. It is divided into three parts: the left box highlights the Evidence-Based Elements, which are the key components of language explicitly taught in Structured Literacy; the middle box emphasizes how instruction is delivered through Systematic & Cumulative methods that build on prior knowledge; and the right box represents Effective Reading Instruction, showing how Structured Literacy integrates systematic, cumulative, explicit, and diagnostic methods into a unified approach to teach all aspects of language effectively.

Implementing Structured Literacy: Key Principles

The ability to read proficiently is not an innate skill but a learned process that relies on the brain's capacity to form new neural connections. Research in cognitive science and neuroscience has demonstrated that reading acquisition requires explicit and systematic instruction to develop the pathways that connect visual recognition of letters and words to their corresponding sounds and meanings. Without evidence-based teaching methods, many students, especially those with dyslexia or other language-based learning difficulties, struggle to build these critical neural circuits.

Structured Literacy provides a comprehensive framework for addressing these challenges by focusing on explicit, systematic, cumulative, and diagnostic instruction. These methods are designed to align with how the brain learns to read, particularly benefiting students with language-based learning difficulties. By applying these principles, educators can ensure that all students, regardless of their individual needs, receive the high-quality instruction necessary to develop strong foundational literacy skills. The following sections explore these key principles in detail, highlighting their role in fostering reading proficiency and addressing the diverse needs of learners.

Dehaene (2009) and other researchers highlight that while the brain possesses innate structures for processing language and visuals, the neural circuits that connect vision and speech must be developed

through systematic reading instruction (Dehaene, 2009; Wolf, 2007; Seidenberg, 2017). These findings underscore the importance of evidence-based literacy instruction in building these neural pathways and ensuring successful reading acquisition. Without structured and explicit teaching, these connections may remain underdeveloped, hindering a student's reading proficiency. This research reinforces the need for educators to implement instructional methods grounded in reading science. Given that many teachers receive inadequate training in evidence-based reading instruction, professional learning in the principles of Structured Literacy is essential for ensuring that they can effectively build these neural connections.

Dr. Nadine Gaab (2014) emphasizes the importance of early identification of children at risk for reading difficulties, such as dyslexia. Her research demonstrates that early interventions can take advantage of the brain's plasticity, reshaping neural pathways to support reading development. Similarly, Dr. John Gabrieli (2014) has shown that targeted interventions can significantly improve reading outcomes by altering brain activity in struggling readers. These findings highlight the transformative potential of evidence-based instruction and the critical role of teachers in changing the brains of their students.

While our brains are "hard-wired" for oral language, the written code has not existed long enough for humans to develop a "reading brain naturally." As cognitive scientist Steven Pinker explains, "Children are wired for sound, but print is an optional accessory that must be painstakingly bolted on" (Pinker, cited in McGuinness, 1999). Therefore, explicit and systematic instruction connecting spoken language to print is essential for building and accelerating the neural connections necessary for reading.

A structured literacy approach provides this type of instruction, covering phonemes, letter-sound relationships, syllable patterns, morphology, syntax, semantics, and discourse structures. This approach ensures students develop automaticity in mapping sounds to print while also building the background knowledge, syntax, and semantics needed to comprehend text effectively.

To implement Structured Literacy effectively, educators rely on four key instructional principles: explicit, systematic, cumulative, and diagnostic instruction. These methods ensure that students receive clear, structured, and individualized teaching that builds foundational skills and supports their progression toward literacy proficiency. Each of these principles plays a critical role in addressing the diverse needs of learners and is explained in detail below. By applying these principles consistently, educators can provide equitable access to instruction and help all students become confident, proficient readers.

Explicit Instruction

Explicit instruction is a highly structured and methodical teaching approach that enhances student engagement and improves academic outcomes (Archer & Hughes, 2011). This method begins by clearly stating the learning objectives, connecting new content to prior knowledge, and setting a clear purpose for the lesson. In this approach, educators provide students with direct explanations and use visual aids to make abstract concepts more understandable. Reading skills are developed through clear and concise explanations supported by concrete examples. Educators model new skills, guide students through practice, and offer multiple opportunities for independent application, ensuring students can grasp and apply the concepts.

For students with developmental language disorder (DLD) or dyslexia, explicit instruction is particularly beneficial as it builds on existing knowledge, follows a logical sequence, and includes ample practice and repetition. These students often require a more structured approach to master foundational literacy skills. Research shows that oral language and phonics instruction, when delivered explicitly and systematically,

significantly improve reading outcomes for students with DLD and dyslexia, especially when delivered with clarity and intensity (Shanahan, 2021; Ukrainetz, 2024). Implementing these practices with fidelity can close persistent gaps and support equitable literacy development.

Systematic Instruction

Systematic instruction involves teaching language and literacy skills through a structured and sequential approach, where concepts are introduced logically from simple to more complex (Klages et al., 2020). This method ensures that foundational skills are mastered before moving on to advanced topics, fostering a solid understanding of each step in the learning process. By breaking learning into manageable components, systematic instruction supports students in building confidence and competence over time.

Aligned with explicit instruction, systematic instruction begins with clearly defined objectives articulating expected student behaviors and learning outcomes (Klages et al., 2020). Each activity is intentionally designed to reinforce these objectives, ensuring alignment between instruction and practice. Students engage in numerous opportunities to apply and refine their skills through targeted exercises, fostering meaningful connections to the content being taught (Catts & Petscher, 2022). This deliberate approach to instruction enhances the likelihood of student success and retention.

Cumulative Instruction

Cumulative instruction is the systematic and intentional process of building upon previously learned skills. This approach ensures that new concepts are introduced logically, connecting them to what students have already mastered, reinforcing and expanding their knowledge (Moats, 2020; Kilpatrick, 2015). In phonics instruction, cumulative teaching might involve starting with simple phoneme-grapheme correspondences and progressing to more complex syllable types and word structures, such as multisyllabic words and irregular spellings (Adams, 1990; Ehri, 2005). Each lesson revisits and integrates earlier material, allowing students to consolidate their understanding and achieve automaticity in decoding and spelling (Kilpatrick, 2015; Ehri, 2005).

For language comprehension, cumulative instruction involves layering increasingly sophisticated language skills over time. For example, students might first learn basic vocabulary and sentence structures, then progress to more advanced syntax, morphology, semantics, and discourse analysis (Beck & McKeown, 2002; Scarborough, 2001). Each new skill is explicitly taught and practiced in meaningful contexts, ensuring that students can apply their learning to both oral and written language tasks (Seidenberg, 2017; Beck & McKeown, 2002).

This cumulative approach is particularly crucial for students with language-based learning disabilities, such as dyslexia or DLD, who often require additional support to connect foundational skills to higher-level language use (Vellutino & Fletcher, 2005; Kilpatrick, 2015). By systematically revisiting and expanding on prior knowledge, cumulative instruction helps students develop the confidence and competence necessary for both decoding and comprehending increasingly complex texts (Moats, 2020; Scarborough, 2001).

Diagnostic Instruction

Diagnostic instruction refers to a responsive and data-driven teaching approach that uses ongoing assessment to tailor instruction to the individual needs of each student. Unlike cumulative instruction, which focuses on systematically building skills over time, diagnostic instruction emphasizes identifying specific strengths, weaknesses, and patterns of difficulty in real-time (Moats, 2020; Kilpatrick, 2015). For phonics, diagnostic instruction involves analyzing students' errors in decoding and spelling to uncover underlying challenges, such as difficulties with phoneme-grapheme correspondence or syllable segmentation (Kilpatrick,

2015; Vellutino & Fletcher, 2005). This data allows educators to adjust instruction, offering targeted practice on specific phonics rules or patterns students have yet to master (Moats, 2020).

In language instruction, diagnostic teaching focuses on identifying deficits in vocabulary, syntax, or discourse skills. For example, if a student struggles with understanding complex sentences or using morphological endings correctly, lessons can be adapted to address these specific issues through explicit and systematic teaching (Beck & McKeown, 2002; Seidenberg, 2017). This individualized approach is particularly beneficial for students with dyslexia, DLD or other learning challenges, as it provides the targeted support necessary to make meaningful progress (Kilpatrick, 2015; Fuchs et al., 2014). By closely monitoring and responding to student performance, diagnostic instruction ensures that teaching is dynamic and responsive, enabling all students to achieve their full literacy potential (Connor, 2016; Moats, 2020).

De-implementation of Resources and Practices

Implementing high-quality, evidence-based instructional materials is essential for improving student outcomes. Equally important is the intentional removal of curricula and practices that are ineffective or misaligned with the science of reading—a process known as de-implementation. This strategic approach ensures that educational efforts are concentrated on methods proven to be effective, thereby enhancing overall instructional quality. It also reduces the cognitive and logistical load on educators, allowing them to focus on practices with the greatest instructional return.

The National Implementation Research Network (NIRN, 2020) emphasizes that successful implementation depends not only on adopting effective practices but also on discontinuing those that no longer fulfill their intended purpose. Their framework highlights three key drivers—competency, organization, and leadership—that together support sustainable systems change. Within this model, the removal of misaligned instructional practices is a deliberate act of leadership that promotes consistency and coherence. This ensures that educators' time and energy are concentrated on methods that are most likely to improve student outcomes.

Educational leadership experts suggest that de-implementation involves carefully determining which practices are most effective and eliminating those that are not, allowing room for evidence-aligned strategies to flourish (DeWitt, 2023). This process is not simply about reducing workload but about creating space for meaningful and research-based instruction. It reflects a commitment to empowering educators and leaders to make thoughtful decisions about how time and instructional effort are used. Ultimately, de-implementation is a key step toward fostering a coherent and impactful system of language and literacy instruction.

Districts are encouraged to audit current practices and materials to identify those that contradict the science of reading, including cueing systems, leveled texts that promote guessing strategies, visual memory-based word walls, and unstructured writing instruction. These practices are not aligned with the evidence base that supports structured, explicit, and systematic instruction in foundational reading skills. De-implementation is a strategic leadership move to protect instructional time and improve student access to what works. It is a process grounded in data, supported by stakeholder collaboration, and essential to creating coherent, sustainable improvement.

Experts in implementation science have long cautioned against the tendency in education to continually add initiatives without removing ineffective ones (Reeves, 2023). Sustainable school improvement requires narrowing focus, maintaining long-term commitment to effective practices, and embedding them into school culture. This disciplined approach emphasizes the importance of choosing initiatives thoughtfully and resisting the urge to layer new programs on top of outdated or ineffective ones. Streamlining systems allows schools to direct resources where they are most needed.

The Windward Institute (2023) defines de-implementation as the deliberate discontinuation of practices that are ineffective, unproven, harmful, or overly relied upon. In reading education, this means moving away from methods based on tradition or familiarity rather than evidence. Their perspective positions de-implementation as a crucial element of educational reform, particularly in schools striving to align with the science of reading. Removing outdated approaches is essential to advancing equitable and effective instruction for all students.

Educational researchers such as Hamilton, Hattie, and Wiliam have also emphasized the value of de-implementation in systems that are overwhelmed by the constant addition of new initiatives (as cited in Reeves, 2023). They argue that long-term improvement depends on strategic reductions just as much as thoughtful adoption. Their work underscores the need for educational systems to recognize limits on time and capacity and to prioritize high-impact practices. Effective systems leadership involves knowing what to remove, not just what to add.

To support effective de-implementation, Wyoming encourages districts to follow a structured process: (1) audit and evaluate existing practices; (2) engage educators, literacy coaches, and leaders in identifying misalignments; (3) use reliable data and evaluation tools such as The Reading League's Curriculum Evaluation Guidelines, the Knowledge Matters Review Tool, EdReports, and other tools which help educators understand how key research insights and practices should be translated into curriculum design for K–8 English Language Arts; (4) communicate the rationale for removing certain practices; and (5) provide targeted professional learning to support transitions.

This work requires not only technical changes—such as swapping out one material for another—but also adaptive change, a concept developed by Heifetz and colleagues (Heifetz, Grashow, & Linsky, 2009), which involves shifting mindsets, beliefs, and habits. Adaptive change is often more challenging but critical for lasting improvement. It acknowledges that deeply held practices may persist due to tradition or comfort, even when they no longer align with evidence. Leaders must support educators through the discomfort of change and build collective ownership of a shared instructional vision.

By embedding de-implementation into systems-level planning, Wyoming continues to demonstrate its leadership in supporting instructional coherence. Removing outdated and ineffective practices is not a step backward—it is a forward-looking strategy that ensures students receive instruction grounded in what works. De-implementation, when paired with adaptive change, is essential for making space for aligned, impactful practices that build language and literacy success for all learners.

Understanding and Supporting Language and Literacy Variations

Multilingual Learners in Literacy

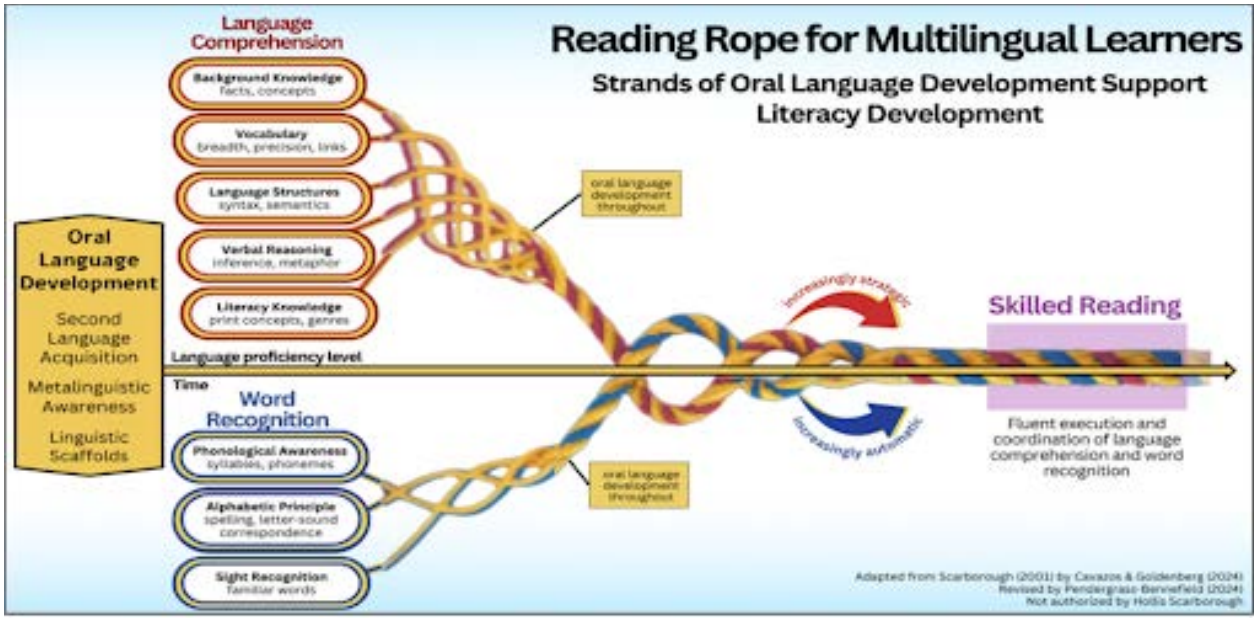
In Wyoming, we are committed to fostering equitable and inclusive learning environments that address the diverse needs of all students. The state recognizes the unique needs of MLs, who bring rich linguistic and cultural assets to the classroom. By viewing an ML's first language as a foundation for learning rather than a barrier, educators can build on students' strengths to enhance their literacy development while addressing their specific language and literacy needs through the MTSS framework. Additionally, Wyoming emphasizes the importance of understanding and supporting students with specific learning disabilities (SLD), DLD, Dyslexia, Hyperlexia, Dysgraphia, and Dysorthography. These require targeted, evidence-based interventions through the MTSS process to address the unique challenges they present. While these challenges are not reflective of intelligence or effort, they represent distinct learning profiles that call for tailored instruction and support.

The WLLP also recognizes MLs' unique needs, who bring rich linguistic and cultural backgrounds to the classroom. For MLs, including those with DLD and dyslexia, it is crucial to integrate effective instructional practices catering to their language development and literacy needs. Research indicates that MLs benefit significantly from instruction incorporating their native language and English, as this dual-language approach enhances their English literacy outcomes (Goodall, Gomez, & Webster, 2024).

To support MLs effectively, the WLLP advocates integrating Structured Literacy principles with culturally and linguistically responsive practices. These include direct, explicit instruction in language structures, consistent instructional routines, and the provision of corrective feedback tailored to the specific linguistic needs of MLs. The plan promotes the idea that an ML's first language serves as foundational background knowledge—rather than a barrier—to learning English and that this knowledge should be leveraged in the learning process.

The Reading Rope for MLs, figure 12, visually illustrates how the components of the science of reading are adapted to support MLs. This graphic highlights the interplay between foundational skills, such as phonological awareness and decoding, and higher-order skills, such as comprehension and vocabulary, within the context of multilingual education. By adopting these components to address the unique needs of MLs, educators can create a more inclusive and effective literacy framework.

Figure 12



Note: Adapted from Cavazos, L., & Goldenberg, C. (2020) and Scarborough's Rope. Reading rope for multilingual learners: Strands of oral language development support literacy development.

Building on this foundation, Wyoming recognizes the increasing importance of supporting MLs by combining insights from research with the MTSS framework and Structured Literacy approach. This ensures that all students, regardless of their linguistic background or learning challenges, have access to high-quality literacy instruction. Goldenberg and Cárdenas-Hagan (2023) emphasize that historically, the education of MLs in the U.S. has often been approached from a deficit perspective, focusing on what these students lack rather than the assets they contribute. This deficit-based approach has led to suboptimal educational outcomes, particularly in literacy.

However, research consistently demonstrates that when MLs receive literacy instruction in both their native language and English, they develop stronger literacy skills in English and achieve higher overall academic success. Goldenberg and Cárdenas-Hagan (2023) highlight that bilingual education, especially during middle school, produces superior long-term outcomes for MLs compared to short-term or English-only programs. These findings underscore the importance of viewing an ML's first language as a foundational asset that enhances their learning experience in English.

Goodall, Gomez, and Webster (2024) further advocate integrating Structured Literacy principles with culturally and linguistically responsive teaching practices to support MLs, including those with DLD and dyslexia. Structured Literacy, characterized by its explicit and systematic approach to teaching language and literacy, is particularly beneficial for MLs. This method involves direct modeling of concepts, routine practice, and corrective feedback, all essential for helping MLs navigate the complexities of learning multiple languages. The researchers stress the importance of leveraging the background knowledge that MLs bring to the classroom, such as their proficiency in their first language, to facilitate their acquisition of English literacy skills. This approach not only honors the linguistic heritage of MLs but also builds on their existing knowledge, making the learning process more effective and meaningful.

Moreover, the connection between oral language development and literacy cannot be overstated. Goodall, Gomez, and Webster (2024) emphasize that well-developed oral English proficiency is closely linked to literacy outcomes, particularly for MLs learning English while simultaneously developing literacy skills. To ensure success, they argue that structured and systematic oral language development should be integral to literacy instruction. By embedding systematic, explicit, cumulative, and diagnostic oral language instruction within daily routines, educators can help MLs internalize these skills more effectively, supporting their overall language and literacy development. This consistent practice not only aids in language acquisition but also strengthens students' ability to comprehend and produce written texts.

Despite the clear benefits of bilingual education and Structured Literacy, challenges remain. Goldenberg and Cárdenas-Hagan (2023) acknowledge the ongoing difficulties faced by MLs, particularly the high number of students who become long-term MLs, struggling to reach proficiency even after several years in U.S. schools. This reality underscores the need for continuous, high-quality support beyond initial literacy instruction. While bilingual education is undoubtedly beneficial, the researchers note that it alone cannot ensure educational equity for MLs. They call for a comprehensive approach that integrates findings from various research streams and continues to explore effective strategies for accelerating English language development and improving literacy outcomes for all MLs.

The combined insights of Goldenberg, Cárdenas-Hagan, Goodall, Gomez, and Webster provide a strong foundation for the WLLP's approach to supporting MLs. By integrating bilingual education, Structured Literacy, and culturally responsive practices within the MTSS framework, the WLLP ensures that all students,

regardless of their linguistic background or learning challenges, have access to high-quality literacy instruction. The plan's focus on early identification, evidence-based instruction, and individualized support reflects a commitment to fostering an educational system where every student, including MLs with DLD and dyslexia, can thrive and achieve their fullest potential.

Dyslexia and Dysgraphia

Students with Dyslexia and Dysgraphia bring valuable strengths to the classroom, including creativity, perseverance, and innovative problem-solving abilities. These characteristics often serve as assets in their academic and personal development. By adopting an asset-based approach, educators can provide targeted, evidence-based interventions that address the specific challenges associated with reading and writing while fostering the unique talents and potential of these learners. With the right support, these students can achieve academic success and fully engage in their educational experience (International Dyslexia Association, 2019).

Structured Literacy is particularly effective for supporting diverse learners, including those with dyslexia, DLD, MLs, and students who struggle with reading for various reasons. Structured Literacy is appropriate for all students because it provides a systematic and explicit approach to teaching foundational reading and writing skills, which benefits learners of all abilities (Moats, 2020). For students on track with reading development, Structured Literacy reinforces essential skills and prevents gaps from forming. For struggling readers, including those with dyslexia or other learning challenges, it provides targeted, research-based instruction to address specific deficits.

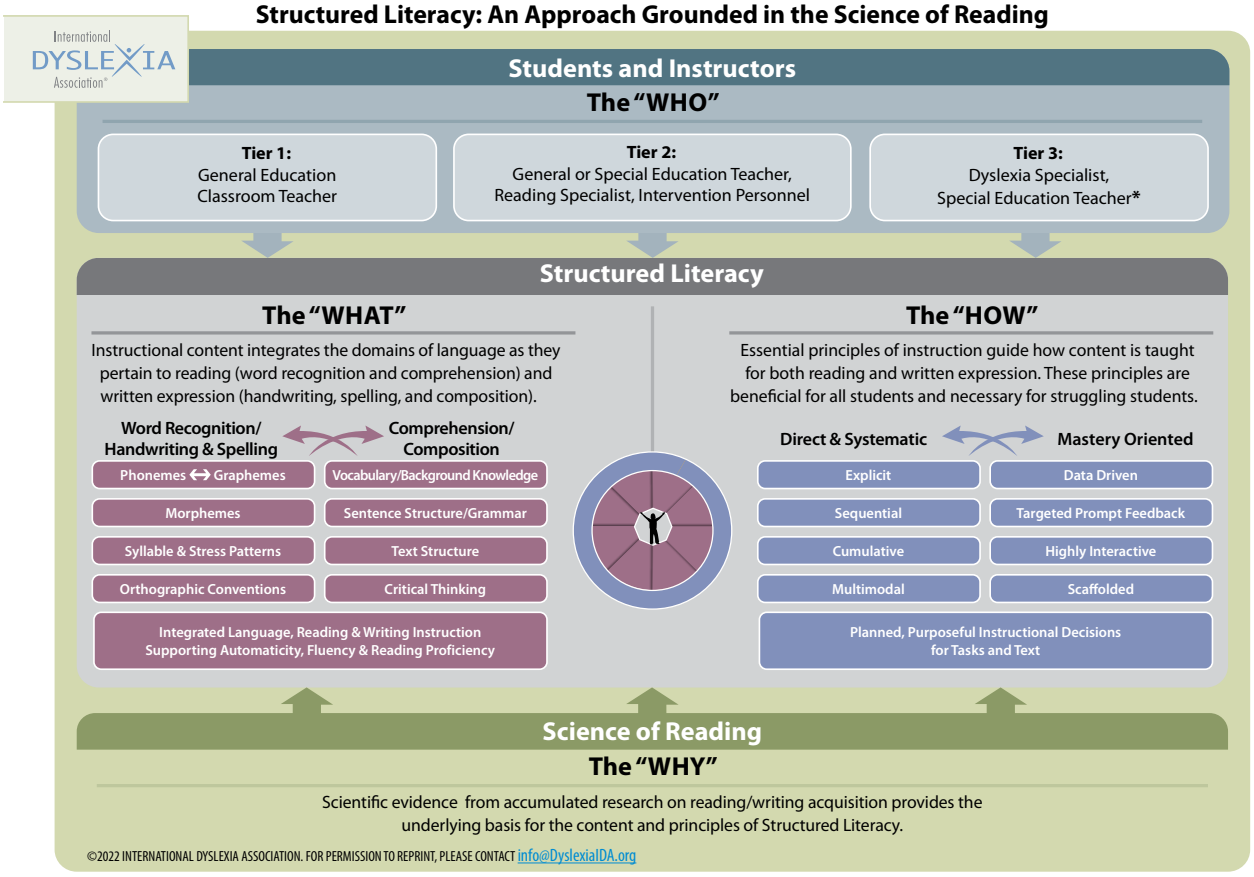
While Structured Literacy is systematic, it is also diagnostic and adaptable, allowing teachers to tailor instruction to meet the needs of individual students. Doing so ensures that all learners develop the skills necessary for literacy success. This instructional flexibility enables educators to respond to varied learning profiles and to make data-informed adjustments that promote growth. By continuously refining instruction, educators can support students in developing the foundational and advanced skills necessary for long-term reading and writing success (Spear-Swerling, 2019).

This approach is particularly effective for students with SLDs, such as dyslexia and DLD, as well as for MLs and those with generalized reading difficulties. For students with dyslexia, Structured Literacy directly addresses deficits in word recognition, spelling, and decoding by emphasizing phonological processing and systematic phonics instruction (IDA, 2019; Foorman et al., 2016). Students with DLD benefit from cumulative instruction at the discourse, sentence, and word levels, supporting expressive and receptive language development (Gillam et al., 2020). For MLs, Structured Literacy systematically builds connections between spoken and written language, aiding in navigating multiple linguistic systems (Goodall, Gomez, & Webster, 2024).

Additionally, Structured Literacy's diagnostic approach ensures that instruction is continuously adapted to meet individual needs, allowing educators to identify strengths and address gaps in knowledge. This targeted adaptation supports equitable access to effective instruction and promotes student confidence. As learners experience success, they are more likely to stay engaged and motivated throughout their educational journey. With consistent application, Structured Literacy equips all students with the tools they need to achieve mastery and thrive academically.

Figure 13 illustrates the framework of Structured Literacy, an evidence-based approach grounded in the Science of Reading. It highlights three key components: The "WHO," The "WHAT," and The "HOW."

Figure 13



Note. International Dyslexia Association (2023). Retrieved from **https://dyslexiaida.org/infographics/**

The "WHO" identifies the educators involved, ranging from general education teachers to dyslexia specialists, depending on the level of student need. The "WHAT" outlines the instructional content, integrating word recognition (e.g., phonemes, graphemes, and morphemes) and comprehension (e.g., vocabulary, grammar, and critical thinking) to support reading fluency and proficiency. The "HOW" emphasizes essential instructional principles, including direct, systematic, and mastery-oriented methods, such as explicit, sequential, and scaffolded teaching. Finally, the framework is underpinned by the Science of Reading, which provides the research-based rationale for these practices, ensuring effective reading and writing instruction for all students, particularly those with dyslexia or other reading challenges.

Dyslexia

Dyslexia is one of the most common SLDs impacting language and literacy development. It is crucial to provide a shared understanding of dyslexia to ensure that educators, families, and stakeholders can identify and support students effectively. According to the International Dyslexia Association (2002), "Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and

background knowledge" (International Dyslexia Association, 2002). This definition underscores the complexity of dyslexia and the need for targeted interventions.

These challenges are not a result of a student's cognitive abilities or the quality of classroom instruction (International Dyslexia Association, 2002). Secondary consequences often include difficulties with reading comprehension, reduced reading experience, and limited vocabulary growth and background knowledge development (Shaywitz, 2003). Despite these challenges, research underscores that early identification and systematic, evidence-based interventions can significantly improve reading skills and academic achievement. Programs focusing on explicit, structured phonological and decoding instruction have proven particularly effective in addressing the core difficulties associated with dyslexia (Buckingham, 2020; Torgesen, 2002). This highlights the importance of implementing effective strategies to support students with dyslexia.

Dyslexia affects students across all demographic and socioeconomic backgrounds, necessitating a focused and strategic statewide response to enhance educational outcomes. Estimates suggest that between 5% and 17% of school-aged children experience dyslexia, with many more facing challenges in foundational reading skills (Yang et al., 2022). A systematic review and meta-analysis reported a global prevalence of 7.10% among primary school children, with higher incidence rates in boys (9.22%) compared to girls (4.66%) (Yang et al., 2022). In the United States, approximately 1 in 10 people have dyslexia, meaning around 20% of elementary school children encounter difficulties learning to read (Yang et al., 2022).

Grounded in the Knowledge and Practice Standards for Teachers of Reading (International Dyslexia Association, 2018) and the Overarching Standards for the Preparation of Literacy Professionals (International Literacy Association, 2017), effective instruction for students with dyslexia and DLD is essential to prevent reading failure. CERI advocates structured literacy as the gold standard for supporting these students through explicit, systematic, and multisensory instruction. By utilizing structured literacy approaches, educators can effectively assess and monitor student progress, ensuring that each learner achieves their full potential in literacy development. This structured approach not only addresses the specific needs of students with dyslexia but also fosters a supportive learning environment.

Dyslexia, characterized by difficulties with word recognition, spelling, and decoding, originates from core issues in phonological processing (International Dyslexia Association, 2018). These difficulties affect approximately 15-20% of young students, making early intervention critical. Instruction must be explicit and systematic, teaching phonological awareness, decoding, and language structures directly. Multisensory techniques integrating listening, speaking, reading, and writing are essential for supporting these students' learning. Reliable assessment tools must be used to identify reading disabilities early and monitor progress. Differentiated support based on the severity of the disorder ensures that students receive the intensity of instruction needed. By implementing these strategies, both general education teachers and specialists can effectively meet the needs of students with dyslexia and DLD (International Dyslexia Association, 2018).

While dyslexia presents substantial challenges, it is essential to recognize and cultivate the strengths these students often possess. Dyslexia may be characterized by difficulties with speech, rhyming, phoneme-grapheme correspondence, and decoding (International Dyslexia Association, 2002). However, students with dyslexia frequently excel in creativity, problem-solving, and spatial reasoning. Cognitive neuroscientist Dehaene (2009) highlights that individuals with dyslexia often possess unique neurological strengths that can be leveraged for innovative thinking. By focusing on these strengths, educators can help students with dyslexia build confidence, achieve academic success, and transform potential obstacles into pathways for growth.

By embedding these principles into the WLLP, Wyoming ensures that students with dyslexia receive the evidence-based, explicit, and systematic instruction they need to succeed. This approach affirms the state's commitment to equity, early identification, and tailored support that honors the unique strengths of every student. Ultimately, this commitment to effective instruction and support can lead to improved outcomes for students with dyslexia, fostering a more inclusive educational environment.

Dysgraphia

Dysgraphia is a neurological disorder characterized by writing disabilities. The National Institute of Neurological Disorders and Stroke (NINDS) defines it as a learning disability affecting a person's handwriting and fine motor skills. Problems may include illegible handwriting, inconsistent spacing, poor spatial planning on paper, poor spelling, and difficulty composing writing, as well as thinking and writing at the same time. This definition highlights the multifaceted nature of dysgraphia, emphasizing its impact on handwriting and broader aspects of written expression. Students with dysgraphia often face challenges in producing legible and organized written work, negatively affecting their academic performance and self-esteem. These difficulties stem from impairments in fine motor skills and cognitive processes, making it difficult for individuals to coordinate the physical act of writing with the mental effort required to generate and organize ideas.

Research has shown that dysgraphia can be identified as early as the first two years of schooling by observing students' handwriting and motor skills. Common indicators include difficulty forming letters, inconsistent spacing, poor pencil grip, and slow writing speed (University of Nevada, Reno, 2023). These challenges often result in frustration for students as they struggle to keep up with their peers in written tasks. Early screening tools that assess handwriting and written expression can help educators identify students at risk for dysgraphia. Once identified, targeted interventions can be implemented to address these difficulties before they lead to more significant academic challenges. Early intervention is particularly important, as it can prevent the development of negative attitudes toward writing and learning in general (University of Nevada, Reno, 2023).

The difficulties experienced by students with dysgraphia are often rooted in cognitive processes, particularly impairments in orthographic coding. Orthographic coding refers to the ability to store and retrieve written word forms in working memory, a skill essential for fluent handwriting and written expression (Berninger & Wolf, 2009). When this process is disrupted, students may struggle to form letters automatically, organize their thoughts, or write at a pace that matches their peers. These challenges affect their ability to express ideas clearly and efficiently in writing. For example, a student with dysgraphia may have excellent verbal skills but struggle to translate those ideas into written form due to the cognitive load required for handwriting. Strategies such as explicit handwriting instruction, structured writing supports, and assistive technology can help alleviate the burden on working memory. These supports allow students to focus on content rather than the mechanics of writing (International Dyslexia Association, n.d.).

One of the most significant barriers to supporting students with dysgraphia is the lack of awareness and training among educators. Many teachers are unfamiliar with the signs and may misinterpret a student's struggles as laziness or lack of effort. Research underscores the importance of professional development programs that equip educators with the tools to identify and support these students (Dysgraphia Life, 2021). Effective training should include strategies for differentiating instruction, such as breaking down writing tasks, using visual aids, and incorporating multisensory approaches. Educators should also be trained to use assistive technologies, such as speech-to-text software and word prediction tools. These tools help students with dysgraphia overcome barriers to written expression. Professional development fosters understanding and empowers teachers to create inclusive classrooms that support diverse learning needs (Dysgraphia Life, 2021).

To effectively address dysgraphia, a comprehensive approach is needed that combines early identification, targeted interventions, and ongoing support. First, schools should implement handwriting and written expression assessments in early grades to identify students who may be at risk for dysgraphia. These assessments should be followed by evidence-based interventions, such as explicit handwriting instruction and the use of assistive technology, to address the specific needs of each student. Additionally, professional development programs should be offered to educators to ensure they have the skills and knowledge to support students with dysgraphia effectively. Finally, awareness campaigns should be launched to educate parents, teachers, and policymakers about dysgraphia and its impact on literacy development. By taking these steps, schools can create a more inclusive learning environment that supports the literacy development of all students, including those with dysgraphia.

Dysgraphia presents unique challenges for students, particularly in handwriting and written expression. However, with early identification, targeted interventions, and well-trained educators, these challenges can be addressed effectively. Understanding the cognitive basis of dysgraphia and implementing evidence-based strategies can help students overcome barriers to literacy and achieve their full potential. By fostering awareness and providing the necessary resources, schools can ensure that all students, regardless of their learning differences, have the opportunity to succeed.

Developmental Language Disorder

DLD is a persistent difficulty with language acquisition that cannot be attributed to cognitive impairments or environmental factors (Bishop et al., 2016). Affecting approximately 7% of children, DLD often co-occurs with dyslexia or other SLDs, resulting in challenges with both language comprehension and expression (Georgan et al., 2023; Tomblin et al., 1997). Children with DLD may struggle to follow multi-step directions, understand different perspectives, express thoughts clearly, and comprehend academic material. These difficulties significantly impact academic performance, social interactions, and emotional well-being. As Hogan (2020) notes, if language difficulties are not actively sought out, they can remain undetected, leaving children without essential support.

Early identification through efficient whole-classroom screening tools is crucial for addressing the needs of children with DLD. Screening measures help detect subtle language difficulties before they escalate into more significant academic challenges (Dockrell et al., 2009). Consistent use of these tools ensures timely identification and intervention. Embedding screening in classroom routines allows educators to make informed decisions about instructional strategies tailored to students' language needs. Identifying children at risk for DLD enables speech-language pathologists (SLPs) and teachers to collaborate on interventions that enhance vocabulary, background knowledge, and communication skills, thereby improving literacy outcomes (Leonard et al., 2019; Hogan, 2020).

Working memory difficulties are common among children with DLD and can affect their ability to process and retain language information. These challenges are exacerbated when DLD co-occurs with dyslexia or other learning disabilities (Georgan et al., 2023). While dyslexia primarily involves phonological processing and decoding difficulties, DLD encompasses broader issues with syntax, semantics, and narrative skills (Bishop et al., 2016). When these conditions co-occur, the cognitive load increases, making it difficult for children to handle tasks that require simultaneous processing and retention (Conti-Ramsden et al., 2012). Understanding these challenges helps educators and SLPs design interventions that reduce cognitive load, incorporate multisensory learning techniques, and provide structured support.

SLPs play a pivotal role in supporting children with DLD, particularly when challenges intersect with dyslexia. Effective interventions often include explicit instruction in phonological processing, systematic vocabulary development, and working memory support strategies, such as breaking tasks into smaller steps and using visual aids (Hogan, 2020; Leonard et al., 2019). Collaboration between SLPs and teachers integrates language

support into daily instruction, ensuring consistent reinforcement across contexts. SLPs also advocate for accommodations like extended time or assistive technology to help children with DLD access the curriculum effectively (Georgan et al., 2023).

A comprehensive approach to supporting children with DLD addresses both the phonological deficits associated with dyslexia and the broader language challenges of DLD. This approach includes explicit instruction, repeated practice, extended discourse activities, and collaborative planning between SLPs and teachers (Dockrell et al., 2009; Leonard et al., 2024). These strategies support students with DLD and benefit the entire classroom. By prioritizing language development, educators create inclusive environments that build stronger literacy foundations for all students. Integrating these practices into the WLLP ensures that students with DLD and dyslexia receive the comprehensive support needed to succeed academically and socially.

Systematic screening, understanding the interplay between working memory and language difficulties, and implementing targeted interventions are essential for supporting children with DLD. SLPs and teachers, working collaboratively, are critical to identifying and addressing these challenges. Aligning these efforts with the WLLP promotes equity, leverages students' strengths, and fosters literacy success. By addressing the unique challenges faced by children with DLD, educators create supportive environments where all students can achieve their fullest potential.

Navigating the intersection of DLD and multilingualism presents a complex yet critical challenge in literacy education. MLs with DLD face unique obstacles due to the overlap between language-learning challenges and the normal processes of acquiring a second language. It is essential to distinguish between language difference, which refers to variations in language use due to cultural and linguistic diversity, and language disorders like DLD, which involve underlying deficits in language processing and development. Misidentification in this area can lead to inadequate support or inappropriate interventions, significantly impacting language literacy outcomes (Paradis, Genesee, & Crago, 2021).

During the comprehensive assessment stage, educators and specialists must gather detailed information about the child's primary or first language to differentiate between DLD and language differences. Research suggests that diagnostic tools and processes must be culturally and linguistically responsive to ensure accurate identification (Kohnert, 2013). For example, assessments that evaluate the child's proficiency in their first language and emerging English skills can provide valuable insights into whether observed difficulties stem from limited exposure to English or an underlying language disorder. This distinction is critical for developing effective interventions that address the root cause of the student's challenges while supporting their unique linguistic needs.

The implications of this differentiation extend to instructional planning and intervention design. MLs with DLD benefit from structured, evidence-based practices that integrate oral language development, phonological awareness, and explicit vocabulary instruction. These strategies must be adapted to include both the primary language and English to support cross-linguistic transfer and strengthen literacy outcomes. Research by Cárdenas-Hagen (2010) emphasizes the importance of leveraging the child's home language as a scaffold for building literacy skills in English, which is particularly beneficial for MLS with DLD. This comprehensive approach ensures that all students, regardless of their linguistic background, have the opportunity to achieve their fullest potential, reflecting a commitment to educational excellence and inclusivity.

Dyslexia and Developmental Language Disorder in Multilingual Learners

Navigating the intersection of DLD and multilingualism presents a complex yet critical challenge in literacy education. MLs with DLD face unique obstacles due to the overlap between language-learning challenges

and the normal processes of acquiring a second language. It is essential to distinguish between language difference, which refers to variations in language use due to cultural and linguistic diversity, and language disorders like DLD, which involve underlying deficits in language processing and development.

Misidentification in this area can lead to inadequate support or inappropriate interventions, significantly impacting language and literacy outcomes (Paradis, Genesee, & Crago, 2021). Similarly, English learners (ELs) with dyslexia face comparable challenges, as their reading and writing difficulties may be misattributed to second-language acquisition rather than a neurobiological learning disability (Francis et al., 2020). These misunderstandings can delay appropriate intervention and widen existing achievement gaps. This overlap underscores the importance of culturally and linguistically responsive assessment practices to ensure accurate identification and effective intervention.

During the comprehensive assessment stage, educators and specialists must gather detailed information about the child's primary or first language to differentiate between DLD, dyslexia, and language difference. For MLs, this involves evaluating literacy skills in both the native language and English. Research suggests that diagnostic tools and processes must be culturally and linguistically responsive to ensure accurate identification (Kohnert, 2013). For example, assessments that evaluate phonological awareness, decoding, and spelling in the native language can help determine whether observed difficulties stem from limited exposure to English or an underlying language disorder like dyslexia or DLD (Francis et al., 2020). Additionally, comparing the student's performance to peers with similar linguistic and cultural backgrounds is critical for teasing apart the effects of second-language acquisition from those of a learning disability (Klinger et al., 2005). This distinction is vital for developing interventions that address the root cause of the student's challenges while supporting their unique linguistic needs.

The implications of this differentiation extend to instructional planning and intervention design. MLs with DLD or dyslexia benefit from structured, evidence-based practices integrating oral language development, phonological awareness, and explicit vocabulary instruction. These strategies must be adapted to include both the primary language and English to support cross-linguistic transfer and strengthen literacy outcomes. For instance, research by Cárdenas-Hagen (2010) emphasizes the importance of leveraging the child's home language as a scaffold for building literacy skills in English. This approach is particularly beneficial for MLs, as it capitalizes on the similarities between the native and second languages to enhance literacy development. Similarly, structured literacy instruction tailored to the student's language proficiency has improved outcomes for ELs with dyslexia (Francis et al., 2020). By addressing both oral and written language skills systematically and explicitly, educators can ensure that MLs with DLD or dyslexia receive the support they need to succeed.

Finally, the importance of early identification cannot be overstated. Research indicates that MLs with dyslexia are often under-identified in early grades and over-identified in later grades, leading to delays in intervention and support (Odegard et al., 2020). This pattern highlights the need for frequent progress monitoring and multiple measures to capture the nuances of language and literacy development in MLs (Petscher et al., 2019). A collaborative team approach involving educators, specialists, and families is essential for ensuring that all relevant factors—such as family history, instructional quality, and cultural context—are considered during the identification process (International Dyslexia Association, 2002). By adopting a comprehensive and inclusive approach, educators can provide MLs with DLD or dyslexia the tools they need to achieve their fullest potential, reflecting a commitment to educational equity and excellence.

Building a Cohesive Statewide System

The WLLP exemplifies a strategic and integrated approach to improving literacy outcomes by fostering collaboration, aligning resources with evidence-based practices, and building leadership capacity. This cohesive statewide system ensures that all students, regardless of their background or ability, have equitable access to high-quality language and literacy instruction. By embedding sustainability, responsiveness, and data-driven decision-making into its framework, the WLLP aligns with research-backed principles for systemic educational improvement.

Through its integrated approach, the WLLP strengthens Wyoming's commitment to delivering high-quality language and literacy instruction, ensuring that every student has the opportunity to achieve their full potential. By fostering collaboration among educators, administrators, and stakeholders and by aligning resources with evidence-based practices, Wyoming has created a unified system that supports educators and promotes student success. This strategic framework ensures that language and literacy practices remain responsive to student needs, data-driven in their implementation, and sustainable over time, aligning with the WLLP's vision for long-term improvement.

This cohesive statewide system serves as the foundation for Wyoming's comprehensive approach to literacy development, ensuring that every student has access to high-quality instruction and support. To further solidify this commitment, the Wyoming Literacy Continuum provides a structured framework that aligns evidence-based practices with state standards. This continuum guides educators and policymakers in fostering literacy growth at every stage of a child's educational journey, creating a seamless progression of skills that prepares students for success in school, career, and life.

Wyoming Literacy Continuum

The Wyoming Literacy Continuum represents a structured approach grounded in scientifically validated, evidence-based literacy principles and a standards framework. It is designed to ensure that literacy development is prioritized at every stage of a child's educational journey, beginning in early childhood and continuing through high school. The critical role of standards within this initiative is to align the state's efforts cohesively and coherently, providing a unified direction for educators and policymakers. By anchoring the initiative in these principles and standards, it offers a solid foundation for effective literacy instruction and supports the goal of ensuring all students achieve academic success.

The Wyoming Content and Performance Standards serve several essential purposes. They clearly define a set of expectations outlining what all Wyoming students should know and be able to do, ensuring they are prepared for college and career success while equipping them to contribute to the global community. These expectations are communicated to students, parents, educators, and all other Wyoming stakeholders, fostering a shared understanding of what students should learn at various grade levels. The standards provide a common framework for educators across the state, offering guidance on what to teach at each grade band.

WDE works collaboratively across all department areas to serve the needs of students, educators, and communities throughout Wyoming. By fostering strong partnerships and reducing silos, the WDE ensures that resources, support, and expertise are shared efficiently, maximizing the impact of state-led initiatives. This cross-departmental collaboration enhances the department's ability to address the diverse needs of schools and districts, ensuring a cohesive approach to education that supports student success at every level.

Through these efforts, the WDE aligns with its mission to create a transformative system that provides wrap-around supports to schools, ensuring that all students—especially those in underserved areas—receive the comprehensive services they need to thrive.
The WLLP outlines a detailed framework for implementing literacy strategies across all educational stages, ensuring a seamless continuum of support for learners from early childhood through high school.

The plan is divided into three key stages, each addressing specific literacy needs and development milestones:

- **Emergent Language and Literacy:** Focused on supporting learners from birth through kindergarten entry, this stage emphasizes foundational skills such as language development, phonological awareness, and early exposure to print. Strategies in this section aim to prepare young children for successful transitions into formal education.
- **Conventional Language and Literacy:** Targeting learners in kindergarten through grade 5, this stage builds on emergent literacy skills by introducing and strengthening reading, writing, and comprehension abilities. It incorporates evidence-based practices to ensure students develop the literacy skills necessary for academic success.
- **Adolescent Language and Literacy:** Designed for learners in grades 6 through 12, this stage focuses on advanced literacy strategies to support critical thinking, content-area reading, and writing skills. The goal is to prepare students for post-secondary education, careers, and lifelong learning.

Each continuum section is presented in clickable boxes, providing an overview of tailored implementation strategies. These strategies are supported by research findings, resource links, and best practices, all aimed at improving literacy outcomes for all students. The WLLP ensures educators have the tools and guidance to foster literacy development at every stage of a student's educational journey.

Conclusion of Component 6 and Transition to Component 7

Component 6 has provided a comprehensive blueprint for advancing literacy instruction through systems thinking, professional development, research-based frameworks, and evidence-aligned instructional practices. By emphasizing the interconnected roles of policymakers, educators, and community stakeholders, this component underscores the importance of a cohesive, statewide literacy system that fosters systemic change, sustainable improvement, and equitable access to high-quality instruction. Through the alignment of policies, resources, and instructional practices, Wyoming has established the foundational structures necessary to support long-term literacy success for all students.

A key focus of Component 6 has been the role of leader and educator development in transforming literacy instruction. Professional development, coaching, and PLCs provide essential supports for educators, ensuring that they are equipped with the knowledge and skills to implement evidence-based literacy practices effectively. The integration of research-backed frameworks—including the SVR, Scarborough's Reading Rope, and the Four-Part Processing Model—further strengthens instructional effectiveness by grounding teaching practices in scientifically validated approaches. Additionally, structured literacy instruction and HQIM have been identified as essential components in fostering explicit, systematic, and differentiated instruction that meets the needs of all students, including MLs and students with literacy-related learning differences.

The MTSS-Aligned Literacy Framework and the Literacy Intensification Framework ensure that prevention precedes intervention, reinforcing the importance of data-driven, student-centered instruction that is dynamic and responsive to individual needs. These frameworks promote continuous assessment,

individualized support, and targeted interventions that help students at all levels of proficiency make meaningful progress. The emphasis on data-based decision-making and responsive instruction provides a structured pathway for ensuring literacy growth through individualized and equitable support systems.

As Component 6 concludes, it lays the groundwork for Component 7: Implementation and Continuous Improvement at the Local Level. While the previous component emphasized statewide systems alignment and research-backed strategies, Component 7 shifts the focus to how LEAs translate these strategies into local action. This phase examines the use of continuous improvement cycles, such as Plan-Do-Study-Act (PDSA), and highlights the role of strategic partnerships and ongoing professional learning in supporting sustainable literacy gains. By integrating systems thinking with implementation science, Component 7 ensures that the strategies introduced in Component 6 are not only adopted but are also sustained, monitored, and refined over time, positioning Wyoming's literacy transformation as an ongoing and evolving process.