

Phonics in Motion: The Research & Theory

The Science of Reading & The PIM Routines

Preface: Dr. Terry Kindervater

Dr. Terry Kindervater is the creator and founder of PIM. An educator for over 40 years, she combined her classroom experience with professional knowledge to create a solution to the literacy challenges faced by both teachers and students.

The discussion of how to best teach vital early literacy skills led Dr. Kindervater to dive deeply into the process of teaching and learning the pillars of early literacy. Dr. Kindervater spent years studying the literacy acquisition process through her work in the classroom with students, graduate studies and doctoral program. All the while Dr. Kindervater developed her classroom routines and methodology which is encompassed in Phonics in Motion.

Dr. Kindervater continues to engage in deepening her understanding of early literacy instruction and firmly values all research. She supports the ongoing learning and community that teaching literacy demands and openness to building the toolkit necessary to meet the needs of all learners in their journey. As such, her work embraces the theories of teaching and learning. Over decades of synthesis, she has both built her own knowledge of teaching, learning, and theory as well as having experienced the practical application in the classroom setting.

Born out of the classroom, PIM develops support for teachers in efficiently teaching all pillars of early literacy without relying on multiple, siloed programs. As Tim Raskinski notes, "It is my belief that the science of reading and the art of teaching must go hand in hand, with the teacher and the student at the forefront of the equation." (Young et al., 2022).

When building PIM, Dr. Kindervater was highly invested in developing routines to integrate all pillars of early literacy while keeping students at the center of meaningful and authentic instruction. Thus, she created a unique method for kids to make connections between phonemic awareness, phonics, vocabulary, fluency, and comprehension using a simplified, engaging process.

Dr. Kindervater's deep respect for teachers and their challenging roles has always been at the core of PIM. She is dedicated to simplifying the teaching process for educators to bring ease and joy to the reading and writing instruction process while improving literacy outcomes.

Her respect does not end with educators, but extends to students and their families. She understands that learning is a complex process, and a unique experience for each student. Dr. Kindervater aims to reduce the cognitive load while giving them the skills they need to succeed.

Early in Dr. Kindervater's career, she worked with students with hearing impairments, which gives her a deep appreciation and empathy for students with exceptional learning needs. One of her greatest joys is receiving messages from former PIMs students (now adults) who still remember their motions, the fun they had, and the positive effect it had on their relationship with learning.

Introduction

Overview of Phonics in Motion (PIM)

PIM is a research-aligned program that delivers explicit instruction of the fundamental skills of reading and writing in the Early Childhood and Primary classrooms. It is a multisensory instructional method with spiraling scope and sequences (S & S) for preschool through third grade, and beyond for remediation and intervention.

Within PIM there are four interconnected explicit teaching routines which develop all five pillars of early literacy in an efficient and engaging manner:

1. Kinesthetic Motions for the Phonemes (KMPs) with Poetry
2. The Reading & Writing Monster (R & W Monster)
3. The Language Calendar (LC)
4. The Vowel House (VH)

The PIM program is designed using Vygotsky's theory of spiraling, wherein the teacher and students move through a gradual release of responsibility (GRR), from modeling and cooperative practice, to independent practice and application in their own work (Pearson & Gallagher, 1983; Schunk, 1996; Tharp & Gallimore, 1988; Vygotsky, 1978). The program is constructed so that teachers can observe the learners' performance to make instructional choices that support the students in front of them.

The use of nonlinguistic scaffolds, such as KMPs and graphic organizers, enhance the effectiveness of instruction and the learner's ability to "...understand, visualize, and use whatever thinking process they are learning" (Marzano et al., 2000). The program not only considers the body of research that is the science of reading (SoR) but also integrates the art of teaching, with a basis from theories of teaching and learning. The instructional practices from PIM keep the learner at the heart of the learning process. The scaffolds within the four routines create clear language and structures that allow teachers to hone their instruction while delivering a quality, research-aligned S & S for all students.

Best practice emphasizes that all five pillars of literacy must be taught in a connected manner instead of siloing each component. Demonstrating how to connect the dots between phonemic awareness, phonics, vocabulary, fluency, and comprehension is critical. Two frameworks of the Simple View of Reading and Scarborough's Rope demonstrate the significance of an integrated approach. These frameworks demonstrate the power that PIM offers in the classroom.

The framework of the Simple View of Reading (Gough & Turner, 1986) highlights the necessity for the component parts of decoding and language comprehension in order to develop reading comprehension. Likewise, Scarborough expanded the model to include the underlying skills of language comprehension and word recognition (Scarborough, 2001). Both frameworks demonstrate the importance of the relationship of the parts to the whole.

Scarborough's Rope demonstrates the necessity of weaving individual skills together to combine language comprehension (background knowledge, vocabulary, language structure, verbal reasoning, and literacy knowledge) with word recognition (phonological awareness, decoding, and sight recognition) to develop competent readers and writers (Scarborough, 2001).

Shanahan (2021) points out that employing explicit instruction to teach the skills outlined by Scarborough enhances learning outcomes, backed by the findings of over 100 studies (National Early Literacy Panel, 2008; National Reading Panel, 2000). However, efficient literacy instruction integrates the specific skills to the whole, systematically, in order for learners to become literate (Scarborough, 2001). PIM provides systematic, explicit instruction in all of the skills that children need, and connects the silos in daily routines, weaving Scarborough's Rope together.

Multisensory, Explicit Instruction and Spiraling Scope & Sequence

The four routines of PIM focus on decoding and encoding through dedicated daily practice. This involves systematically breaking down words and syllables at the phonemic level, blending them and effectively mapping speech to print. The program uses graphic organizers throughout the routines in order to lessen the burden on the learner while anchoring concepts with visually organized information (Marzanno, 2000). Through a systematic, explicit, direct instruction model, PIM routines continually connect sound to the code, model writing and reading, and teach handwriting based on what you hear.

Each component consists of modeling and cooperative engagement. At the heart of each component is phonemic awareness. Whether a child is listening for a vowel sound or mapping a sound to print, the PIM strategy starts with "What do you hear?" or "Show me." The prompts guide the learner to use the KMP, or gross motor gesture, to anchor the fleeting phoneme.

The program's strength lies in delivering the five pillars of early literacy development. The uniqueness of PIM is that it articulates the routine of how to deliver high quality instruction while supporting and engaging the learner.

In the following paper, PIM presents each component and outlines:

- The explicit instruction of isolated skills within each component
- The daily routine within each component to model the integration of isolated skills into meaningful applications
- The framework that allows the integration of isolated skill to occur seamlessly within the classroom setting

In addition, the paper presents research on two levels for becoming literate: 1) the necessary skills as delivered by the components of PIM; and, 2) the engagement of the learner in the process of becoming literate. The purpose is to note the foundational theory and research linked to the practical application with young learners.

Kinesthetic Motions For The Phonemes (KMPs)

Developing and Integrating Phonemic Awareness Across Literacy Routines

The KMPs

There are two types of KMPs: 1) motions for each phoneme based on its articulation, and 2) gestures that represent many common word endings. KMPs for the phonemes are gross motor representations of the articulation of the sound; how the sound is produced and felt by the speaker. They are unique, physical representations of the phonemes which carry meaning and information for the learner. The KMPs qualify as gestures which bring effective nonlinguistic value to the learning (Paul, 2021).

The purpose of the KMPs is to develop phonemic awareness and to map the phoneme to print. The KMP provides a concrete marker for the corresponding phoneme which it represents. Through a multisensory delivery, the KMPs scaffold students to hear, identify and manipulate phonemes through all components of PIM.

Rich language experiences delivered in the form of weekly and monthly poems provide the platform for introducing and practicing the KMPs. The other three PIM components embed the KMPs. The KMPs provide the link between explicit skill development and application. The KMP as a scaffold is modeled, used cooperatively, and carried into independent literacy practice. PA is the underpinning in this routine and is purposefully woven throughout the entire PIM program.

Research and Theory Supporting the KMPs

The Importance of Phonemic Awareness & Letter Identification

Foundationally, phonemic awareness (PA) and letter identification (Letter ID) are the two most significant predictors of literacy success (Adams, 1990; National Early Literacy Panel, 2008). Research indicates that those who struggle in reading and writing have a deficit in the foundational skills (National Early Literacy Panel, 2008; Spear-Swerling, 2006).

To become literate, students must first have the ability to hear, identify, and manipulate the phonemes in spoken language. PIM continually develops PA and Letter ID, creating a secure foundation for early learners. Adams (1990) states, "...children need to be aware phonemes are present and can be manipulated." Furthermore, Juel (2006) notes the difficulty of working with the phoneme because phonemes can remain "elusive for the child." The use of the KMPs makes sound visible and demonstrates an awareness of the phoneme in spoken language. Just as cubes are used as manipulatives in math as a concrete representation (Stein and Bovalino, 2001), the KMP is a manipulative to operate with the elusive phoneme. The ability to identify

and link the phoneme to its symbol is foundational to early literacy. The complex task of holding a symbol without a concrete representation is a challenge for the young child (Piaget, 1977). The KMP anchors the phoneme helping the child to manipulate it.

KMPs as Gestures: Loaded with Information

The KMPs are multisensory: they employ the kinesthetic, visual, tactile and auditory modalities. However, the KMPs are different from other sensory motions and cues, such as tapping. Beyond their kinesthetic nature, they deliver information and meaning; therefore the KMPs qualify as gestures.

Gestures are powerful tools for learning and recalling information, strengthening the learning process (Paul, 2021). Paul (2021) notes, "...gesture can enhance our memory by reinforcing the spoken words with visual and motor cues; it can free up our mental resources by "off-loading" information onto our hands."

The use of the KMP indicates a present level of performance. If there is a mismatch between the sound and the KMP the teacher can see it. This 'mismatch', or error, provides a critical teaching opportunity to both the teacher and the learner, independently. As Paul notes, gestures give the brain a sensation of knowledge gaps- when gestures don't match what we're saying, the brain takes note and learns from it (Paul, 2021).

In conclusion, the use of gestures to develop phonemic awareness is part of what makes PIM unique. Unlike other multisensory phonemic awareness programs, when the KMP is performed, it isolates the phoneme and enables the learner to identify a particular sound. The motion parallels the articulation of the sound, carrying more information. The scaffold of the KMP is able to be pulled back and used anywhere, anytime, mapping directly to the sound.

The KMP Routine

PIM presents a concise, 5-8 minute daily poetry routine with three distinct goals:

1. Develop phonemic awareness (PA) through explicit phonemic foci, review and exposure
2. Map phonemes to print
3. Review and exposure to vowel sounds utilizing the Vowel House (phonics)
4. Develop oral reading fluency

The KMPs are introduced systematically through an explicit daily poetry routine which develops phonemic awareness. Weekly and monthly poems highlight a focus sound and are practiced daily. The teacher first presents each poem auditorily, modeling the KMP anytime the phoneme occurs. Once again, the starting point for each routine is listening for the sound. The prompts of "what do you hear?" and "show me" ask for the KMP representing the sound. Anchoring the sound to its symbol is critical and is developed in the KMP routine and all other routines in PIM.

The KMP links the sound to the symbol in an explicit exercise of identifying the spelling pattern that represents the phoneme in the text. The task of mapping sound to print changes in complexity over time. The interactions with the poems develops fluency and concepts of print.

Fluency Through Multiple Exposures with Poetry

PIM's daily poetry routine incorporates multiple exposures to a manageable text over the course of the week. Therrion (2004) notes reading the same text three times is one practice that shows significant gains in fluency and comprehension for both typically developing students and those with learning disabilities. The guided interaction of repeated readings daily supports achievement in fluency, word recognition, and comprehension (Chomsky, 1978; National Reading Panel, 2000; Samuels, 1979; Shanahan, 2017).

Rasinski (2014) notes the challenge in the experience of repeating readings in keeping the learners engaged. His recommendation is "...making it purposeful and authentic. One way to do this is to make it a performance activity." He emphasizes gains beyond the original text practiced. Specifically, he explains "... (they) not only improve their performance on the practiced text, they improve on new texts - some of which may be more challenging than the original text." In addition, he adds, "... research into this more authentic form of repeated reading has shown that readers improve in their word recognition, reading rate, prosody, comprehension, and motivation for reading."

The classroom poetry routine of PIM engages the learner as it culminates in a Friday performance. PIM provides purpose and engagement to the activity while enabling students to gain a sense of accomplishment over the text. The PIM routine incorporates distinct features weekly. The teachers send the weekly poem home for practice of the phonemic and phonic focus of the week, guidance on what it means to read fluently, and suggestion to practice for performance! Some teachers use technology to send parents a video recording of their child's performance. Most significantly, the practice of mapping the KMP of the sound to the text is front and center.

Summary

The poetry routine delivers the KMPs explicitly. The KMPs scaffold and unify each of the PIM components and support the learner's ability to work with the phoneme. The KMPs help students hold the sound in front of them, begin articulation and understand how the sound feels. The KMPs are loaded with information and are categorized not only as motions, but more importantly as gestures.

The use of KMPs by the learner informs the teacher about the learner's PA. The child's KMP performance aids the teacher in making informed decisions, including modeling, supporting, or providing direct instruction. More direct instruction takes the form of remediation or challenging the learner. The interactions provide ongoing, targeted intervention.

The use of the scaffold makes the GRR observable. The learner demonstrates whether they need more direct modeling, cooperative engagement or if they are free to operate independently. This puts the learner's needs at the center of the skill development and instruction. Interestingly, students drop the scaffold of the KMP once it is no longer needed (Tharp & Gallimore 1988; Vygotsky, 1978). Teachers often note that learners incorporate the KMPs to assist themselves during the task of independent writing. The ability to use a scaffold only when it is helpful to the learner is the essence of a scaffold.

Lastly, the KMP routine develops with the learners and offers a spiraling experience within the poems to differentiate at varying levels. A video library of the KMPs, video examples of the poems, and digital copies of the poems all assist learners and teachers through the use of technology (Bond & Bedenlier, 2019). The S & S highlights sounds for review and optional enrichment. Plus, the poems and accompanying activities expose learners to various spelling patterns to support phonics development. In this way, the study of text within the poems integrates with the Vowel House routine.

The following sections outline the use of the KMP in each of the other PIM components. The presence of the KMP in each component unifies the separate components and integrates the practice of listening for and linking sound to its symbol or vice-versa, in all literacy experiences.

The next section, the PIM Reading and Writing Monster, defines the explicit practice of mapping the sound to print in the daily handwriting routine.

Handwriting: The Reading & Writing Monster

The Importance of Handwriting: Fluency and Phonics Instruction

The PIM handwriting routine explicitly teaches Letter ID, directionality, letter formation and the mapping of phonemes to print. The uniqueness of the routine is the use of the child-friendly character of the Reading & Writing Monster (R & W Monster) along with fun and engaging handwriting stories.

The PIM handwriting component links the sound to the symbol in an explicit, daily phonics routine. Anchoring the sound to its corresponding symbol is a critical element that builds and cements phonemic awareness. During this programmed and concise routine children are learning directionality, stroking, and letter formation, while also developing writing fluency.

Research and Theory Supporting the Handwriting Routine

The Importance of Handwriting: Fluency and Phonics Instruction

Spear-Swerling notes the significance of handwriting fluency as it relates to literacy, "When a child has to pause to create proper letters, they transfer the focus from the meaning and sound of the text to focus attention on the physical task of writing." (Spear-Swerling, 2006).

In addition to the significance of handwriting to literacy, Graham emphasizes the impact of a short and efficient routine, "Effective handwriting instruction does not require a large investment of school time. During K-3, it should be taught in short sessions several times per week or even daily" (Graham, 2009). He further notes the value of the routine, "There are considerable returns for such a small investment of time, as students' sentence-writing skills, the amount they write, and the quality of their writing all improve along with their handwriting." (Graham, 2009). In their conversation about the importance of handwriting, Pam Austen and Laura Stewart note how much is lost by not having a dedicated, efficient handwriting routine as it relates to the development of all crucial early literacy skills (Voyager Sopris Learning, 2022).

In addition to fluency with the physical task of writing, among the layers of skills needed, young learners are also tasked with mapping speech to print. Shaywitz (1999) noted, early on, the significance of children understanding that language is comprised of smaller units, and that the letters represent sounds. The daily handwriting routine builds this critical understanding. As Ehri (2020) delineates, learners progress through 4 phases in beginning reading and spelling. In Ehri's 'partial Alphabetic phase' learners are solidifying the relationship between letters and sounds. Again, the daily handwriting experience cements the association of letter-sound correspondence (Ehri, 2020).

The PIM Handwriting Routine

PIM outlines a short, 5-8 minute daily handwriting routine. The routine develops four distinct goals:

1. Identifying the name of the letter (Letter ID)
2. Isolating the embedded sound (phoneme) using the KMP in the handwriting story
3. Mapping the isolated sound in the story to print
4. Developing accurate stroking and letter formation (directionality) using the language from the handwriting story as an embedded guide

The beloved character, the Reading & Writing Monster, is central to the daily routine. The fun character is on display to the left side of all writing surfaces. The presence of the R & W Monster in the “Monster Zone” anchors the left side for the learner (Clay, 1975). In daily handwriting activities the Monster is a concrete reference in the development of directionality. Directionality has two components. First, the Monster dictates where to start, providing spatial awareness of the left. Secondly, each story directs the actual writing of the letter with the language of directionality: moving “up,” “to,” or “away from” the Monster. For example, “*C* thinks she’s cute. *C* goes up, to the Monster, and then comes away.” The R & W Monster is a visual cue and concrete marker that learners can reference when needed.

The PIM Handwriting Method

The routine intentionally teaches lowercase letters first as they are encountered and necessary in reading and writing. Each letter is presented in a multi-modal method, covering auditory, visual, and kinesthetic representations, which gives children the building blocks they need to properly identify and form all letters, uppercase and lowercase.

After the introduction of the letter name, the handwriting story for the letter of focus is modeled by the teacher. The delivery of the sound is front and center in the story; however in the presentation the teacher begins with “I’m going to tell you the story of ‘b’,” -with emphasis that the letter name (Letter ID) is a character; it is a clear name of the letter. The routine moves immediately to the handwriting story, where the phoneme is the critical focus. The lesson is a cooperative exchange with instructional modeling and active learner participation. For example:

Adult: “Today we will learn the story of ‘p’
What’s its name (*presenting letter card*)?”

Learner: *choral response*: “p”

Adult: “Yes, ‘p’ is a ***pole**”

(*saying handwriting story while modeling the letter formation:*)

‘p is a ***pole** that goes down fishing.

up, up, up, up up, up, up,

and a *pot belly away from the Monster.’

**Note: adult and learners use KMP only with the embedded in the story, i.e. /p/ in ‘pole’, ‘pot’, not the letter name*

Learner and Adult: *Write the letter cooperatively chanting the handwriting story as they write*

Learner and Adult: *Recite the story again after writing and use the KMP to focus on the sound.*

Each handwriting story helps to lessen the the cognitive load on the learner. In addition to the kinesthetic scaffold, the PIM handwriting routine embeds the phoneme of focus and directionality to provide information to the learner. The characterization of the letters and how they behave and move adds context for the learner, making the stories easy to remember and recall. Jess Surles (Improving Literacy.org (n.d.)) emphasizes that a key component of efficient literacy instruction is the intentional minimal use of language. Although the language of each story is simple, the purpose of chanting the story while writing at the same time is an explicit plan to map the embedded sound to print. The language of the handwriting story is an effective tool that provides instruction and scaffolded support for each learner.

Summary

PIM provides effective handwriting instruction and connects the dots between phonemic awareness and phonics while developing writing fluency. The story delivers the letter name, sound, and directions for proper letter formation in an engaging and efficient manner. The routine embeds and strengthens early literacy skills to meet the needs of all learners. Graham (2009-2010) emphasizes that "...children-especially those who struggle with handwriting-benefit from carefully planned, explicit handwriting instruction." Additionally, he notes significant scientific evidence supporting the direct instruction of handwriting for the improvement of legibility and fluency (Graham, 2009).

The PIM isolated handwriting exercise leads to automaticity. The value of handwriting as a transcription skill is highlighted in the Voyager Sopris Learning (2022) podcast episode "How Handwriting Supports the Science of Reading" with Laura Stewart and Pam Austin. Laura Stewart notes "... it frees up working memory to devote that cognitive energy to composition" (Voyager Sopris Learning, 2022).

Through the daily R & W Monster routine students practice connecting the sounds they hear to the code, and later learn to make spelling decisions within the Vowel House Phonics Routine. The PIM handwriting method and routine are explicit and follow the GRR, with teachers first modeling skills, working cooperatively and gradually releasing responsibility to learners (Pearson & Gallagher, 1983). A video library with story animations to support learners and teachers through the use of technology as a tool for positive student engagement (Bond & Bedenlier, 2019).

The efficiency of the handwriting stories is evident within the other PIM components.-The LC routine incorporates the modeling of the handwriting stories when needed in a quick and efficient manner.

The LC component also demonstrates the utility of handwriting in the context of authentic language; that the skill is purposeful and useful. The routine brings language to life for children, and they engage as the teacher models shared written language on The Language Calendar.

The Language Calendar

A Routine for Integration: Modeling Meaningful Shared Language Experiences

The Language Calendar (LC) is a key component of PIM. It provides a structured, interactive lesson demonstrating integration of all the 5 pillars defined by the National Reading Panel (NRP) and SoR. The routine features modeled writing, highlighting the mapping of sounds to their symbols. The format delivers concepts of print, grammar, mechanics and the craft of writing; every aspect is present in the daily recording of shared, meaningful conversation. The LC provides a rich platform for structured-language while developing the key features of structured literacy over time (Spear-Swerling, 2019). The GRR Model (*I do, we do, you do*) guides the interactive practice in a low risk, high reward routine (Pearson & Gallagher, 1983). The daily entries remain available to learners as a permanent reference to support the transition to independent practice (Marzano, 2000).

The LC component deepens the understanding and development of written language over time, encompassing the following skills:

- Modeling concepts of print (i.e. directionality, punctuation, capitalization)
- Isolating syllables and their component sounds
- Mapping sounds to print (phonics)
- Segmenting and blending individual syllables and multi-syllable words
- Focusing on spelling patterns displayed in the PIM Vowel House (phonics)
- Demonstrating comprehension strategies in response to reading
- Recognizing meaningful parts of words (morphemes)
- Developing sight word knowledge
- Building rich and varied vocabulary
- Modeling of metacognitive skills necessary for composing and comprehending various text structures
- Reading and rereading entries for fluency practice while highlighting features of fluency (expression, volume, phrasing, smoothness, and pace)

The written language demonstrations are explicit, encompassing three distinct goals: 1. mapping sounds to print from simple to complex spelling patterns 2. presenting structured language, and 3. developing the craft of writing.

The goal of the LC routine is to lead students to independently use and comprehend increasingly complex language structures while appreciating the beauty and power of language. The experience offers an explicit platform for learners to engage in interactive discussion by asking and answering questions. The routine constantly clarifies understandings and concepts within a social context (Shotter, 1993; Vygotsky, 1978). The written entries of the LC reflect the shared experiences of the learners' lives in and beyond the classroom. Plus, the personal and

shared academic experiences set the stage for deepening the understanding of the written text (Dixon & Nessel, 1983; Rosenblatt, 1978).

The routine builds from a sentence to a detailed paragraph over time in a rich, cooperative conversation. Entries in the LC can integrate across content areas. The routine is planned to offer "cumulative practice and ongoing review" of writing while being a vehicle for modeling various types of writing such as: a summary, a writing trait, an exit slip highlighting subject matter concepts, or an entry with specific academic vocabulary (Spear-Swerling, 2019). In addition, the routine of the LC plan offers the high quality instructional aspects of cumulative practice and ongoing review (Spear-Swerling, 2019). Central to the practice is the direct instruction of how to transcribe thoughts to print accurately. The LC allows the practice of each of the components of PIM: KMPs, VH, the R&W Monster, and the PIM stories to help recall spelling patterns. The routine integrates all the scaffolds to support mapping sound to print.

The interactive conversation specifically focuses on modeling complex language structures which supports student development of reading and writing comprehension (Shannahan, 2022). The interactions require a "high level of student–teacher interaction" which is outlined as a key feature of structured literacy (Spear-Swerling, 2019). The LC format requires conversation between adults and classroom peers to construct written language entries daily. The interactive routine models the purpose of writing in a meaningful, cooperative context and offers opportunity for growth in literacy and a window into the learners' understandings (Newman & Roskos, 1997).

The PIM LC: The Method

The LC is a vehicle for demonstrating written language in an engaging daily practice. The adult models and elicits the critical language structure for the written entry. Whether the focus is a simple or complex structure, the LC entries are a result of specific questioning through the interactive conversation.

The use of questions by the teacher prompts the students to add more detail and strengthen writing. Questions deepen the language structures used in the collaborative writing activity. The use of who/what/where/ when/why questions allow the learners to provide more information and expand their thinking as pre-writing brainstorming; the questions prime them for the direct instruction to follow. Modeling the necessary complex language structures and how they work together is accomplished through ongoing conversation and skillful questioning elicits language understanding highlighted in the following example:

Teacher Questioning: What happened?

Initial collaborative sentence: *Ellen cried hard.*

Teacher Questioning: "Why did Ellen cry hard?"

Student responses: She lost her tooth; it hurt; she was sad; her mouth hurt.

Final sentence collaboratively written with a direct instruction focus on '**because**':

Ellen cried hard because she lost her tooth and her mouth hurt.

Through direct modeling of complex structures, students demonstrate gains in the complexity of their own sentences both in oral and written form, as well as gains in reading (Shanahan, 2022). The PIM LC method continuously models and encourages rich written expression for students.

SUMMARY

The LC is a multi-layered method to systematically develop critical literacy skills. Not only is the LC useful during collaborative writing activities, but it also serves as a graphic organizer in the classroom. The S & S of the LC guides the attention to phonics features appropriate for the developing learner, meeting the needs of all students by providing instruction at their appropriate level. The routine makes space for teachers to introduce, review and enhance skills over time. The interactive platform allows teachers to make informed decisions based on feedback from the students in front of them; teachers are able to kid-watch and continuously respond to the learners in real time. The end product is a meaningful transcription of thought and a rich demonstration of the writing craft, while developing the mechanics of language in context for the learners.

The Vowel House

For Grades 1st and Up: Mapping Speech to Print with Primary and Alternate Spelling Patterns

The Vowel House (VH) is a graphic organizer that scaffolds the ongoing practice of hearing and identifying vowel sounds and mapping them to print accurately. The VH routine begins formally after learners have had guided experiences with hearing and identifying speech sounds, or phonemes. Reading Rockets notes the importance of the foundation of phonemic awareness skills and learning to identify the spelling patterns in text, "Children who cannot hear and work with the phonemes of spoken words will have a difficult time learning how to relate these phonemes to letters when they see them in written words." (Reading Rockets, 2023). The VH routine supports learners with the identification of vowel sounds, and bridges the phoneme to the written code, or phonics.

The graphic organizer of the VH provides a non-linguistic representation to assist students with the mapping of sounds to print (Marzano, 2001). Plus, the VH is an accessible, visual scaffold that displays the similarities and differences in the study of vowel spellings. For example, each window displays the different spelling patterns of a vowel sound, yet the window frames the similarity of the common sound or phoneme. Breaking down concepts explicitly by identifying similarities and differences is a highly effective strategy; Marzano (2001) notes a 45% learning gain with the use of the strategy.

The Organization of the VH by Phoneme

Two distinct layers organize the VH: 1) the phoneme or sound of the vowel, and 2) the spelling patterns for the vowel sound. The VH routine outlines explicit instruction to identify the vowel sound as the constant link to the spelling patterns displayed in the windows. The continual habit of listening for the vowel sound secures the search for the appropriate window. Each window organizes the multiple spelling patterns of the vowel sounds. Ultimately, the sounds and corresponding spelling patterns reinforce each other.

The VH Windows

The phoneme of each vowel organizes the VH and the vowel sound is the name of each window. The most common spelling pattern for the vowel sound is at the top of each window. As the learner develops, each window displays the various spelling patterns for the vowel beneath the top spelling, or primary spelling. For example, the spelling pattern in the following words: be, beat, bee, and berry appear in the /ē/ window because each word has the /ē/ sound with a different spelling pattern. The shutters on each window highlight example words.

Markings on the VH: Wavy, Straight, and Long Solid Lines

The use of wavy, short and long solid lines on the VH is purposeful. The different types of lines indicate additional information about the structure of the syllable or word. The lines indicate whether a syllable or word is short or long, or whether a syllable is open or closed. The wavy line shows a consonant(s) might be present, however it does not need to be. The solid line indicates a consonant(s) must be present in the spelling pattern. A short line represents a single syllable or word while a long solid line indicates a two or more syllable word. From the VH students gain information about both the syllable structures and spelling patterns in our language.

The PIM VH: The Method

The overall method of the VH investigates spelling patterns in reading and writing. Two important principles guide the format of presentation. First, the VH lessons incorporate the GRR (Pearson & Gallagher, 1983). Secondly, phonemic awareness grounds all portions of the lessons, whether the focus is being modeled, used cooperatively or during independent practice.

The GRR underpins all PIM activities including the study of the VH. Lessons begin with modeling and move to the cooperative engagement of the learners. Lastly, the routine outlines exercises for independent practice of the presented skills. All VH routines begin with the phoneme or sound of the vowel. “What do I hear?” is basic to each investigation. Whether the inquiry is about the spelling pattern of a short vowel or one of the alternate spellings for a long vowel, the identification of the sound of the vowel is the first step.

The routine of beginning with the sound is modeled and practiced cooperatively in a continual manner until the approach becomes a habit for the learner. This transfer from modeling and cooperative experiences to independent application is the goal. The use of the VH indicates that students are beginning to make spelling decisions. By asking themselves “What do I hear?” the important information needed to choose the correct Vowel House window is available to them. It is a crucial step towards independent literacy behavior. When learning and later interacting with the Vowel House, the student performs the KMP for the sound and emits the corresponding sound. The phonemic awareness is the foundation for finding the spelling pattern displayed on the VH. The routine bridges the sound to its code continually.

The PIM VH: The Routine

The daily practice of the VH includes two explicit, systematic phonics routines: 1) the S & S for vowel study with weekly words lists; and, 2) the distinct plan for weaving the study of vowels into the components of poetry with the KMPs, the LC, and independent journaling.

The S & S presents an isolated and explicit experience in vowel study with a Monday through Friday plan for each year of study. The weekly plan for 1st through 3rd grade, and for remediation, focuses on the vowel spelling patterns. In addition, the scope of the word lists

encompass the development and review of consonants, blends, digraphs, prefixes and suffixes over the course of the year. A separate plan with the rationale and practice worksheets is available for those using an alternate S & S, or for those who are in need of an effective remediation protocol. The vowel study includes whole-body segmenting and blending. This provides an explicit kinesthetic practice to scaffold the hearing and manipulating of the component sounds in syllables. In addition, corresponding worksheets allow for additional practice with the various spelling patterns.

The second routine explicitly models how to weave vowel study into meaningful reading and writing experiences. Modeling how to identify the vowel sound and how to find its corresponding window is key to the following daily activities. The incorporation of vowel study in the integrated experiences is not random; the overall scope and sequence guides the focus of the learning.

First, the adult engages the students in reviewing vowel sounds and spellings patterns with examples from the daily poems. Secondly, adults point out examples of vowel spellings in the cooperative construction of sentences and paragraphs on the daily LC. For example, the construction of the sentence, “We made eight sides on each stop sign with our rulers,” allows for the comparison of the two spelling patterns (~a_e and ~eigh~) within the /ā/ window.

The integration of skills into authentic experiences demonstrates daily the utility of the VH and the importance of finding the correct window and spelling. The ongoing plan of highlighting a few examples a day builds confidence for the learner to use the VH while reading and writing independently.

SUMMARY

The VH routine directly maps phonemes to print. The organization of the Vowel House corresponds back to the essential question of “What do you hear?” and uses the phoneme as the organizational tool to assist learners with primary and alternate spelling patterns for vowels. The VH itself supports students by providing a concrete scaffold for students and reference that supports the GRR model within the PIM program. When the VH routine is used as a support program in conjunction with other literacy programs, the eBook guides a progression through a S & S of vowel work, including worksheets to introduce, review or challenge all learners. Otherwise, the S & S- including the weekly word list and the weekly plans for vowel work, explicitly delivers the tools necessary for teachers to guide students within daily teaching and application. When woven into the other routines the VH supports and strengthens learners’ understandings of syllable and word structures.

Conclusion

PIM: Supporting the Learner, Teacher & Classroom Culture

How PIM Supports The Learner

The implementation of the PIM program goes beyond literacy instruction; it fosters a classroom culture that promotes engagement and authentic interactions between adults and children. Phonemic awareness, letter name learning, phonics, decoding, and text reading fluency are at the forefront of PIM, rooted within research of the SoR. PIM ensures that students receive comprehensive instruction and engage in meaningful, high quality learning experiences.

PIM prioritizes the child's learning experience and enables teachers to provide effective instruction that cultivates growth in readers and writers. Knowing the task and understanding the learner are both crucial elements in the formula for effective teaching ([citation]). Respecting the learning process through positive relationships is equally important, as it acknowledges the significance of the learning at hand (Anderson, 2008). Neglecting to consider the requirements for accomplishing a task undermines the importance of the learning involved (Anderson, 2008). The systematic and explicit routines within PIM create a consistent and familiar format allowing learners the comfort in the focus on their skills.

Within the PIM approach, multisensory and kinesthetic instruction is emphasized, as it honors the importance of incorporating the body to enhance learning, attention and retention. The focus upon the struggling learner in reading has informed the use of multi-modal scaffolding. Compelling research notes the sensitive nature of the body to the transmission of information (Berman, 1939; Fernald, 1936, 1988; Montessori, 1967). For years, linguists have used the Total Physical Response approach with second and other language learners, based again on the powerful connections built when the brain and whole body work in tandem to enhance and expedite the learning experience (Anderson, 2008). Phonics in Motion (Kindervater, 2012) is a method to engage young children in the exploration of sounds in a multi-modal way.

In addition to utilizing multisensory approaches with students, PIM recognizes the importance of controlling cognitive load for students. Among many scaffolds built into PIM, the KMPs carry throughout each routine as means to minimize cognitive load. The KMP connects automatically to the sound as it contains vital information for the learner. As a carrier of information, the motion is a gesture and scaffold. As Dr. Kindervater notes, the motions are "able to be pulled back and used anywhere, anytime, mapping directly to the sound- unlike tapping" (Kindervater, 2012; Anderson, 2008). The gesture allows for a lower cognitive load on the student within the learning process and supports; the power of the gesture is that it offloads information to the hand; it allows for the connection of abstract ideas. The KMPs offer a valuable approach for developing PA among students with varying literacy skill levels. These patterns break down barriers for learners facing challenges or struggling with the sounds in our language.

PIM values the importance of technical language and understanding of the terms and concepts regarding literacy and reading and writing instruction. However, PIM notes that the research shows that using these terms in lessons with children is adding unnecessary cognitive load onto the learner, resulting in shorter learning windows and a sense of incompetence among kids (Sweller et al., 2011). PIM instruction is built on the necessary understanding of controlling cognitive load for students; acting as a union between research, theory, and classroom practice, thus optimizing learning (Sweller et al., 2011).

Authentic language is a cornerstone of the PIM program, making learning engaging and meaningful for students. This approach allows children to gain contextual experience rather than learning skills in isolation. Foundational theorist John Dewey, whose work has been supported by current educational theories and empirical studies, emphasized the importance of learning in shared experiences and real-world context (Dewey, 1988; Garrison et al, 2012). The Language Calendar (LC) illuminates the power of authentic, collaborative writing, serving as a valuable tool for integrating handwriting into composition and the construction of written language. The LC routine models how to connect the sounds with the correct written representations; it's a planned and meaningful daily exercise in breaking the code.

Overall, PIM offers a comprehensive approach that considers the needs of learners, incorporates effective instructional strategies, and creates a positive and engaging learning environment.

How PIM Supports Teachers

PIM trusts and empowers teachers' professional knowledge, understandings of their students, and unique ability to respond in real-time during learning opportunities (Wood et al., 1976).

PIM empowers teachers to apply learning theories in practice; teachers observe students' performance and make informed and professional decisions based on the individual needs of their learners (Schunk, 1996; Tharp & Gallimore, 1988; Vygotsky, 1978). The PIM instructional routines provide teachers with the ability to respond to the needs of their students, leading to steady gains.

The four routines of PIM allow teachers to assess, correct, remediate, and extend instruction to best support students within meaningful learning experiences. Moats (2020) notes the importance of the teachers' instructional practices and decision making to reach all learners, stating, "To accommodate children's variability, the teacher must assess children and tailor lessons to individuals or groups. This includes interpreting errors, giving corrective feedback, selecting examples to illustrate concepts, explaining new ideas in several ways, and connecting word recognition instruction to meaningful reading and writing" (Moats, 2020). Within each PIM routine, teachers can observe the learners' performance and make instructional choices that support the students in front of them, in real-time (Anderson, 2008).

By utilizing PIM routines teachers create a positive classroom environment and are able to respond and model effectively to each student. To support differentiation and the development of all learners, PIM employs a GRR approach, moving from modeling and cooperative practice to gradually releasing students to practice and apply the skills independently (Pearson & Gallagher, 1983).

PIM offers the opportunity to have a tight S & S of skills so that all teachers are clear about the task to be learned; however, PIM offers a platform for creating a culture and community where continual modeling offers both the raw data and continual opportunities for learning for all students. In that environment the teacher has the opportunity to make decisions in real time and to know each learner. The format highlights two critical aspects in learning: knowing the task; and knowing the child (Wood & Middleton, 1975). Research defines the necessary tasks for early literacy clearly, however, the other side of the equation is knowing the learner. Engaging the learner necessitates using a platform that is artful. Young et al. (2022) explain the notion in this way, “Artful instruction needs to be authentic, aesthetic, and creative” (p. 5).

How PIM Supports the Classroom Culture & Community

PIM builds the culture through shared experiences of literacy learning for the teacher and students. Creating the appropriate environment for rich literacy learning is a key component of success in the classroom setting. Cambourne’s *Conditions of Learning* state that immersion, demonstration, engagement, expectations, responsibility, approximation, use, and response all must be met in a way that sets children up for success in the classroom (Cambourne, 2001; Rushton et al., 2003). When all conditions are met, students have the optimal setting in which to engage and grow their literacy skills in what are known as “high involvement–low stress” activities (Rushton, 2003).

The spiraling S & S of PIM includes new learning (presentation), practice, ongoing review, and the use of carefully chosen experiences (Spear-Swerling, 2019). The routines serve as a daily demonstration of foundational literacy skills, transforming isolated skills into meaningful applications for students. The integration of relevant experiences of the learners and engaging materials is key to student success and engagement (Vygotsky, 1978). Moats (2020) also explains the function of structured literacy skill building in effective teaching. She highlights the necessity of the daily application of purposeful reading and writing experiences for learners of varying skills levels. PIM offers routines to map sound to print, develop concepts about print including sentence structure, grammar, and rich vocabulary, and promotes the craft of fluent writing.

Schools that implement PIM have chosen to do so based on a positive growth mindset and instructional technique backed by decades of educational studies. Creating a positive classroom environment impacts effective teaching and learning; students must feel able to take safe risks with their learning, feeling trust and partnership with their teacher and classmates. Teachers

must feel free to make professional decisions while honoring the underpinnings of science (Young et al., 2022).

PIM supports positive behavioral management philosophies and values the creation of community within classrooms. PIM offers scaffolds that are gradually released to the learners and owned by them. Learners drop the scaffolds when no longer needed. Teachers and administrators note that the use of PIM with students from grade to grade produces a school-wide, shared-language and culture of literacy. In the end, the culture of PIM honors the uniqueness of every child, teacher and classroom setting; no child or classroom is one-size-fits-all.

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