SECTION III-3

LITERACY DEVELOPMENT AND LEARNING:
Features of an early literacy assessment system that reflect what we know

This chapter describes what we know about the learning and development of literacy and how this knowledge can be helpful in informing the selection of valid and useful tools and practices to be used to assess early literacy learning. It also provides information useful in creating a district early literacy assessment system (ELAS) that reflects what we know about the whole child. The content provides some of the relevant explanation and backing for Principle #3 and associated Phase II Implementation Recommendations—in particular Recommendations 2.2 and 2.3.

<table>
<thead>
<tr>
<th>Phase II RECOMMENDATIONS (Principle #3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle #3</strong>—The ELAS must reflect what we know from theory, research, and practice about the LITERACY DEVELOPMENT.</td>
</tr>
</tbody>
</table>

| 2.1: The ELAS LEADERSHIP TEAM should use the logic model and theory of action (called for in Phase I) to guide the selection and implementation of assessment tools and resources for inclusion in the system. |

| The ELAS LEADERSHIP TEAM, in collaboration with PRINCIPALS AND TEACHERS, should: |

| 2.2: Select individual assessment resources on the basis of evidence of their capacity to provide construct(s)-relevant and instructionally valuable information about a student’s literacy development and growth in a given literacy domain(s) – reading, writing, speaking, or listening. |

| 2.3: Select individual assessment resources on the basis of evidence that they are developmentally appropriate and respectful with regard to the cognitive, social, emotional, cultural, and performance demands they place on children. |

Introduction

We begin with a characterization of literacy development to make the point that literacy is, in fact, always in development as texts, tasks, and purposes for using literacy change. Consider the following examples:

- A two-year old turns each page of a well-worn children’s book and repeats with each page, “Are you my mother?”
- A four-year old, displaying a mix of drawings, scribbles, and letters, asks that you “listen to my story.”
- A ten-year old considers the evidence collected from an investigation of condensation and writes an explanation for the water that has collected on the outside of a glass.
• A fourteen-year old considers how two accounts of an historical event compare and contrast.
• A twenty-year-old wrestles with learning an obscure form of code for her start-up company.
• An elder reads the labels on two of his prescriptions and wonders whether they should be taken together.

Each of these represents a literacy event and illustrates the range of literacies in which we engage over the lifespan. Literate activity, such as recognizing street-signs, playing with rhyming sounds, and using a longer string of squiggles to represent a longer word, emerges long before conventional reading and writing, and there really is no end point in literacy development. Furthermore, new kinds of social communication, hypertext, and “the Internet of everything” all have profound implications for the forms of literacy that will support productive engagement in contemporary society. Our point is that what is “developmentally appropriate” in the way of literacy assessment is more complex than might appear at first blush.

Michigan’s Action Plan for Literacy Excellence 2017-2020 defines literacy as “the ability to read, view, listen, write, speak, and visually represent to comprehend and to communicate meaning in various settings through oral, written, visual, and digital forms of expression.” (Michigan Department of Education [MDE], 2017, p. 8). The Educational Testing Service provides an expanded definition of literacy to include: “the deployment of a constellation of cognitive, language, and social reasoning skills, knowledge, strategies, and dispositions, directed towards achieving specific purposes” (Sabatini, Bruce, & Steinberg, 2013, p. 7). This definition, in hand with Michigan’s definition, is useful because it reflects contemporary standards movements (such as the Common Core State Standards, Next Generation Science Standards, and National Council for the Social Studies Curriculum Standards). Also, it embraces the broad range of processes and factors, such as prior knowledge, metacognition, self-regulation, reading strategies, student motivation, and student engagement that influence literacy learning and development. This is why Recommendation 2.2 takes an expansive view of the learner.

Required features of an ELAS

Consistent with the focus of this Guide, we will focus on development and learning from pre-kindergarten through third grade. We propose features that ensure the ELAS:

• is developmentally sensitive.
• identifies whether students are receiving excellent early instruction.
• identifies students who may have risk factors so that these children receive effective literacy intervention programs as early as possible.
• yields information that is useful to guiding teacher decision making so that literacy instruction can be tailored to the various profiles of strengths, challenge, and interests that students present.
• is informed by the range of processes and factors that explain literacy achievement.
• takes into consideration the complexities of reading comprehension and reflects the dynamic and developmental nature of comprehension.

• provides information on students’ interests so that educators can use this information in planning instruction, and takes students’ interests into account when reporting assessment results.

• applies an asset orientation motivated by the question, “What knowledge and skill is the learner bringing to the table?”

ELAS FEATURE 1: A literacy assessment system should be research-based and developmentally sensitive.

It is perhaps obvious that the tasks and tools that we use to assess literacy for a kindergarten child should differ from those used to assess a third-grader. This feature emphasizes that we should be drawing on research regarding how literacy develops and individual differences in literacy development, as we decide what should be included in an ELAS.

For example, an assessment system appropriate for young children needs to provide the teacher with information regarding foundational skills of reading. These skills include phonological processing (e.g., blending syllables or phonemes to form a word), print awareness (e.g., knowing the difference between a word and a letter), and oral language. We know that children who are more adept with these foundational skills profit more from reading instruction; they learn to read sooner, and they are better readers than children with fewer of these skills (National Institute of Child Health and Human Development [NICHD], 2000; Snow, Burns, & Griffin, 1998).

Teachers armed with information about the emergence and development of these foundational skills can take them into consideration when planning instruction; for example, providing children who are still acquiring phonological processing skill with opportunities to acquire this skill, but not wasting the time of children who have already acquired this skill. The document titled Free or Very Low Cost Early Literacy Assessments with Diagnostic Value and Demonstrated Reliability and Validity (Duke, Lindsey, & Brown, n.d.) provides a helpful list of assessments that provide useful information regarding the skills requisite to literacy development (see Tools/Resources for Phase II).

Young children vary a great deal on these foundational skills (e.g., Justice & Ezell, 2001 regarding print awareness); the teacher who is aware of this variation can take it into consideration when planning instruction. The Portraits in this Guide illustrate the many ways that children’s literacy knowledge and skill can vary even when they are the same age.

Research also tells us that the relationship between word reading skills and comprehension changes over time (Ahmed et al., 2016; Cain & Oakhill, 2012; Storch & Whitehurst, 2002). While word reading skill strongly predicts comprehension among young children, vocabulary knowledge and background knowledge are stronger predictors of comprehension as children get older and as they read more challenging texts. This means that it is important to assess comprehension and not assume that a child who reads words fluently is necessarily comprehending.
We know that children perform differently when being assessed with narrative versus informational text; informational texts are typically harder for younger readers to read (McNamara, Graesser, & Louwerse, 2012). This could be a function of experience; it could be a function of how informational texts are written (e.g., how the ideas are organized and presented); or it could be because of vocabulary demands. This means that it is important to attend to how children understand both narrative and informational text.

An additional idea that is helpful to consider when thinking about literacy development is that some reading skills are “constrained” and some are “unconstrained” (Paris, 2005). Constrained skills are those that develop from non-existence to a high level of proficiency in early childhood. Examples of constrained skills include knowledge of the alphabetic principle (i.e., knowledge that written spellings systematically represent spoken words) and phonemic awareness (e.g., knowledge that spoken words can be conceived as a sequence of phonemes). Unconstrained skills include vocabulary and comprehension; they continue to develop through the lifespan.

What is the relevance of this distinction when thinking about developmentally sensitive assessment? Assessments should distinguish between constrained and unconstrained skills because of their scope and different developmental trajectories. Furthermore, it is important to guard against the assumption that the instruction of constrained skills should take priority over other skills; mastery of constrained skills does not ensure the development of unconstrained skills. Finally, it is important to be cautious about the use of proxies; for example, while print knowledge measures are indeed correlated with later reading achievement, the moderator may be parent education, parent-child interactions, or access to literacy resources. These are all factors that continue to be influential in a child’s reading development.

The Portraits in Section II reveal multiple ways in which educators engage in developmentally sensitive assessment; consider, for example, the teachers’ use of early childhood standards to guide their decision making about the features of literacy development to which they attend over time. Furthermore, we see evidence of the ways in which the foci of assessment change as the children matriculate through the grades and the expectations regarding the nature of—and purposes for using—text change over time. For example, in kindergarten, the teachers are systematically attending to alphabet knowledge, phonological awareness, and concepts of word. By the time the three students are in second grade, their teacher is attending to the students’ use of context clues to ascertain the meaning of unfamiliar words, morphological analysis, and vocabulary knowledge.

ELAS FEATURE 2: A literacy assessment system should identify whether students are receiving excellent early instruction.

This feature reminds us that—before concluding there is something wrong with the child—it is important to ascertain that the child has received appropriate learning opportunities.

Excellent classroom instruction has long been extolled as a major prevention strategy (Snow et al., 1998) and has been associated with such long-term benefits as less
grade retention, less likelihood of being referred for special education services, and higher graduation rates (Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005; Schweinhart, Berrueta-Clement, Barnett, Epstein, & Weikart, 1985). Specific to literacy achievement, there is a more complex story; longitudinal research that was conducted in high-poverty schools (Mehta, Foorman, Branum-Martin, & Taylor, 2005)—using multiple indicators of teacher quality, instruction, and student literacy achievement—suggests that the best predictor of literacy achievement takes into consideration the combined effects of teacher quality, instruction, and classroom composition (i.e., student language competence and prior achievement).

One way to think about this is that excellent literacy instruction is particularly important in classroom contexts in which there are significant numbers of children who enter the classroom with low language and literacy skills. Furthermore, the determination of what constitutes excellent literacy instruction involves multiple instructional components that interact with and support one another (Pressley et al., 2001, studied in grade 1). The document *Essential Instructional Practices in Early Literacy: Grades K-3* (MAISA/GELN/ELTF, 2016) and related online modules provide extensive information about what to look for to ascertain the quality of literacy instruction (see Tools/Resources for Phase II).

With respect to the Portraits, recall that the teachers maintain data binders documenting where each of their children are with respect to specific standards or components of standards. This practice is consistent with gathering information that ensures students are receiving excellent early instruction. Indeed, the teachers use this information not only to document growth on the part of their students, but also as grist for reflecting on how they will continue to improve their curriculum and instruction.
ELAS FEATURE 3: A literacy assessment system should be capable of identifying students who may have risk factors so that these children receive effective literacy intervention programs as early as possible.

This feature focuses on the predictive value of the assessments used in the system. Children most at risk for reading difficulties in the primary grades are those who begin school with:

- fewer verbal skills (e.g., storytelling, vocabulary knowledge),
- less phonological awareness (e.g., noticing rhymes; clapping along with each syllable in a phrase; noticing that the pronunciation of words like, “bed,” “bark,” and “banana” all begin the same way),
- less letter knowledge (i.e., ability to name printed letters), and
- less familiarity with the basic purposes and mechanisms of reading (Snow, 2002).

Longitudinal correlational studies of the development of reading show that reading problems become increasingly hard to change over time; furthermore, individual differences in reading skills become remarkably stable by second grade (Schatzschneider, Wagner, & Crawford, 2008). All of this suggests that a powerful ELAS will attend to these indicators of success and challenge and will be designed with the goal of determining who will profit from well-designed, tailored reading instruction in the foundational skills described above.

Evidence of this claim is provided by the research of Vellutino and his colleagues (2006). Using intervention research, they determined that early reading difficulties in most readers who struggled with reading tasks in first grade can, in fact, be successfully remediated. They found that reading difficulties were best explained by differential learning opportunities (in both in- and out-of-school contexts), rather than by cognitive differences on the part of the children.

Furthermore, they replicated this finding with kindergarten students; they found that 58% of the children who were involved in the intervention in kindergarten and continued to need—and received—remedial assistance in first grade performed at average levels on all measures of reading achievement at the end of first, second, and third grades. These findings led the researchers to conclude that either kindergarten intervention alone, or kindergarten- and first-grade intervention combined, can prevent long-term reading difficulties in the majority of children identified as at risk for such difficulties at the beginning of kindergarten.

Reflecting on the Portraits, perhaps as a consequence of frequent ear infections, Emma’s articulation and her difficulties identifying and generating rhyming words suggest to her teachers that she may be at risk for difficulty with important component skills of reading, such as phonological awareness and phonological processing. Consistent with ELAS Feature 3, the teachers use observational data, as well as screening data, to ensure that Emma, even while in a prekindergarten program, receives appropriate support services (i.e., with a speech and language pathologist) that may serve to mitigate against long-term consequences of these risk factors. Furthermore, multiple individuals participate in the intervention, including her teachers and parents.
ELAS FEATURE 4: A literacy assessment system should yield information that is useful to guiding teacher decision making so that literacy instruction can be tailored to the various profiles of strength, challenge, and interests that students present.

This feature focuses on usefulness. It is possible to have an assessment system that includes a number of reliable measures but is not all that useful to teachers. To understand why usefulness is such an important feature, we point to the research of Carol Connor and her colleagues.

Studies of literacy learning reveal that children who have the same instructional opportunities respond differently to these opportunities. For example, in a systematic and wide-reaching program of research, Connor and her colleagues (Connor, 2019) determined that students with weak decoding skills made greater gains when they were in classrooms in which the teachers committed more instructional time to teaching phonics and fluent reading, while students with stronger decoding skills made weaker reading gains in these same classrooms. Furthermore, students with weaker vocabulary knowledge made weak gains in classrooms in which they were asked to spend significant amounts of time reading independently, whereas children with stronger vocabulary skills made greater gains in these classrooms. Finally, students with weaker decoding skills showed greater gains when teachers gradually increased the amount of independent, meaning-focused instruction across the school year.

These findings regarding child-by-instruction interactions were observed in preschool (Connor, Morrison, & Slominski, 2006), in second grade (Connor, Morrison, & Underwood, 2007), and in third grade (Connor, Morrison, & Petrella, 2004). What is especially noteworthy about this program of research is that there were no “inoculation effects;” in other words, receiving high-quality instructional opportunities at a single grade level did not protect students from reading difficulties if they received lower-quality instruction in later grades. Instead, individualized literacy instruction needed to be delivered effectively across grades one through three for students to attain grade-level literacy expectations.

ELAS Feature 4 urges that assessment provides information that will guide teacher decision making so that instruction is tailored to the strengths and challenges presented by each of the students. While this feature is evident throughout the Portraits, there are several particularly striking examples. One is the use of the data binder in which teachers enter data specific to standards or components of standards; these data support the teachers in monitoring the progress of students and adjusting instruction accordingly. In fact, the teachers are portrayed “handing off” the data binders, ensuring that all teachers have access to data with which to plan subsequent instruction. As another example, recall that when Emmanuel provided ample evidence that he had mastered word reading, his teacher focused on reading fluency, especially prosody. Similarly, this systematic monitoring, hand-in-hand with the use of the spring benchmark assessment, led Emma’s teachers to recommend that Emma attend summer school, which ultimately increased her word reading skills. A final example is the formation of needs-based small groups in first grade, ensuring that students are receiving instruction appropriate to their strengths and challenges.
ELAS FEATURE 5: A literacy assessment system should be informed by the range of factors that account for literacy achievement.

As descriptions of ELAS Features 1–4 suggest, there are a number of factors that account for literacy achievement; furthermore, the factors play different roles over time (see Feature 6). Thus, a solid assessment system should address this range and variability of factors. We illustrate this ELAS Feature with a few examples drawn from research.

Specific to assessing comprehension, Ahmed et al., (2016) found that background knowledge, vocabulary knowledge, word reading skill, inference making, and reading strategy use all made significant direct contributions to comprehension. O’Reilly, Sabatini, & Deane’s (2013) research added student motivation and engagement to this list. Indeed, research has identified many factors that account for students’ reading comprehension, including—but not limited to—concepts of print, reading motivation and engagement, decoding knowledge and strategies, phonological awareness, reading fluency, vocabulary and morphological knowledge, knowledge of text structure, content knowledge, strategic reading, and executive function skills (see Cartwright & Duke, 2019).

The point of this ELAS Feature is that educators need to be able to entertain a broad range of possible explanations for students’ reading achievement. In the Portraits, we see the range of evidence that the teachers collected to compile a rich picture of each child’s literacy development; this includes evidence of: metalinguistic knowledge, phonological awareness, morphological analysis, language comprehension, word reading/fluency, vocabulary knowledge, comprehension, and reading strategies. Furthermore, the Portraits reveal the broad range of tools and processes that teachers use to gather evidence regarding literacy development. In these Portraits, we see teachers using: games; observations; writing samples; formal assessment, including computer-adaptive assessment (that provides standardized data); data binders; and retellings.

ELAS FEATURE 6: A literacy assessment system should take into consideration the complexities of reading comprehension and reflect the dynamic and developmental nature of comprehension.

The ultimate goal of reading instruction is to support readers to comprehend, or to “extract and construct meaning through interaction and involvement with written language” (Rand Reading Study Group [RRSG], 2002, p.11). Reading comprehension is a complex and dynamic activity. It begins with a purpose for comprehending and conditions (e.g., texts, mood) that have been shown to affect comprehension. It is complex because at the sentence level, text comprehension depends upon the ability to process words, virtually simultaneously attending to their orthographic (spelling), phonological (sound), and semantic (meaning) representations, and connect words using rules of syntax (word order). Beyond the sentence, the reader must integrate meaning across sentences, making use of relevant prior knowledge; engage in inferencing to bring cohesion to the text; use text structure and features; and consider the authors’ goals and motives (Graesser, 2015). The result of this activity is a mental representation that reflects the overall meaning—or situation model—of the text (Kintsch & van Dijk, 1978).
Reading comprehension is a dynamic activity because the variables that most strongly predict comprehension skill change over time. In the early grades, decoding skills, which include the processes that are needed to decipher written code (i.e., phonological processing, orthographic processing, and word recognition) are evident as contributors to comprehension. In the later grades, vocabulary knowledge, inference generation, and oral language are stronger contributors (Catts, Hogan, & Fey, 2003; Ehri, Nunes, Stahl, & Willows, 2001). And after grade six, inferencing skill and background knowledge are increasingly predictive of reading comprehension (Ahmed et al., 2016). Furthermore, as students advance through the grades, disciplinary knowledge (Goldman et al., 2016) and academic language skills (LaRusso et al., 2016) play an increasingly important role in comprehension. Although the strength of these contributors changes over time, that should not be interpreted to mean that instruction should address only the strongest contributors in a given developmental period.

In the Portraits, we see the multiple ways in which teachers are attending to comprehension. For example, we see that they are mindful of the reading diets of young children so that they get information about how students comprehend different genres of text and read for different purposes. In kindergarten, the teacher is providing students opportunities to read literature, as well as science, social studies, mathematics, and the arts. Similarly in grade 2, the teacher is attentive to the students’ reading and writing in units of instruction that are designed across different content areas. Furthermore, the teachers are gathering information, through retellings and text-based discussions, regarding the processes in which students engage that promote or inhibit comprehension.

**ELAS FEATURE 7: An assessment system should (a) present texts and tasks that are meaningful to learners and reflect meaningful uses of reading, (b) provide information regarding students’ interests so that educators can use this information in planning instruction, and (c) take students’ interests into account when reporting assessment results.**

There is substantial research indicating that interest, especially situational interest (i.e., temporary interest based on environmental factors such as the task or a specific text), increases readers’ level of involvement with the text, as well as positive affect toward reading. A number of studies have shown that children’s comprehension, inferencing, deeper processing of the text, and retention are facilitated by reading personally interesting text segments, as well as by reading passages written on high-interest topics (e.g., Hidi, 2006). Furthermore, well-developed individual interests can help individuals comprehend beyond what is typical for them (Renninger & Hidi, 2011).

Research has demonstrated that interest has a powerful facilitative effect on cognitive functioning. Its influence on academic performance has been established across individuals, knowledge domains, and subject areas. Theorists have also suggested that interest may be the key to early stages of learning, as well as to differences between expert and moderately skilled performers (Alexander, 1997; Renninger, Hidi, & Krapp, 1992; Hoffmann, Krapp, Renninger, & Baumert, 1998).

“A number of studies have shown that children’s comprehension, inferencing, deeper processing of the text, and retention are facilitated by reading personally interesting text segments, as well as by reading passages written on high-interest topics.”
In summary, interest is important to both the motivation to read and the memorability of the text. Certain text characteristics such as ease of comprehension, novelty, surprise, vividness, intensity, and character identification contribute to situational interest. Interesting text segments produce superior reading comprehension and recall. Well-developed individual interest in an area may help individuals to cope with relevant but boring texts. Situational interest elicited by texts can maintain motivation and comprehension, even when individuals have no initial interest in the topic.

In the Portraits, we see the multiple ways in which teachers are attending to student interest; in fact, the pre-K teachers’ initial contact with parents is largely driven by questions regarding what the children find interesting in their daily lives. The teachers make available to the students reading material designed to both stimulate and satisfy their interests. Teachers’ interest inventories inform their selection of text to be included in both instructional and independent time.

**ELAS FEATURE 8: An assessment system should be adaptable to individual, social, linguistic, and cultural variations.**

It is widely recognized that assessment practices can serve an exclusionary purpose for students who are from minoritized groups by virtue of race, ethnicity, and/or home language (Boykin & Noguera, 2011). One way to redress this trend is to focus not only on assessment of learning but on assessment for learning (see Pellegrino et al., 2001). The focus of such assessment should be on *why* students perform as they do and *how* differences in performance should be addressed. This assessment should consider the contexts, social-cultural considerations, and experiences that are related to students’ diverse backgrounds.

For example, Solano-Flores (2011) has asserted that differences in “communication patterns, values, beliefs, and lived experiences” help to explain the comparatively lower test performance for emergent bilingual speakers, noting that English learners performed better on standardized achievement test items when the items were modified to reflect local dialect, were linguistically simplified, or were modified to be more experientially meaningful for these students. Stiggins (2002, p.1) has urged that we ask: “How can we use assessment to help all of our students want to learn? How can we help them feel able to learn?” Such a focus would naturally lead to questions about students’ opportunities to learn and how the cultural assets they bring to the table can be used productively to enhance learning opportunities.

Consistent with Recommendation 2.4, the Portraits are filled with examples of how the teachers are bringing an asset perspective to their instruction and are using approaches to assessment that will inform their understanding of the child, including the children’s—and families’—funds of knowledge that the teacher can build upon. As one example, Ms. Robins, as she teaches Ayesha, is attentive to connecting Ayesha’s background knowledge to the ideas in the text. The spirit of the assessment processes—including their ongoing, informal nature, in hand with the instructional decisions they support (e.g., needs-based grouping)—is consistent with the goal of helping the students feel “able to learn” and equipping them with the knowledge and skills supportive of learning.
Tools/Resources for PHASE II, Principle #3

These tools can be adopted or adapted to help educators and educational leaders evaluate an existing assessment system and design an ELAS that reflects what we know about literacy development and learning.

Assessment for Reading Instruction, fourth edition (Guilford Press, 2019)
This book by Katherine A. Dougherty Stahl, Kevin Flanigan, and Michael C. McKenna explains in reader-friendly text how to use both formal and informal assessments to evaluate students’ strengths and needs in all components of reading. It is available for purchase online.

Essential Instructional Practices in Early Literacy: Grades K to 3, and online modules (MAISA/GELN/ELTF, 2016)
This set of resources outlines ten instructional practices in early literacy that research suggests can have a positive impact on literacy development.

Available at https://literacyessentials.org.

Free or Very Low Cost Early Literacy Assessments with Diagnostic Value and Demonstrated Reliability and Validity (Duke, Lindsey, and Brown, n.d.)
Authors Nell K. Duke, Julia B. Lindsey, and Erin M. Brown provide information about valid and reliable early literacy assessment tools that are free or at very low cost.


Teaching advanced literacy skills: A guide for leaders in linguistically diverse schools (The Guilford Press, 2016)
This book by Nonie K. Lesaux, Emily Phillips Galloway, and Sky H. Marietta guide school leaders through the design and implementation of advanced literacy instruction. The book includes reproducible forms and templates that can be used to design, implement, or evaluate a literacy assessment system.

Available for purchase online.

Understanding and Using Reading Assessment K-12, third edition (ASCD, 2018)
This book by reading and assessment expert Peter Afflerbach provides detailed case studies from all grade levels to illustrate reading assessment done well. It also includes 15 reproducible forms and checklists that teachers and administrators can use to optimize their reading assessment efforts.

Available for purchase online.

A listing of all Tools and Resources mentioned in this Guide to help you develop an early literacy assessment system (ELAS) is available online at www.MichiganAssessmentConsortium.org/ELAS.