



What's Next?

How Learning Progressions Help Teachers Support Children's Development and Learning

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Formative assessment is an essential part of high-quality practice for early childhood educators (IOM & NRC 2015). But what exactly does formative assessment mean, and what does it look like in early childhood practice? This question is harder to answer than it seems because there are many different types of formative assessment. Let's start with a general definition of assessment.

In the broadest terms, developmentally appropriate assessment produces information that illuminates what children "know and are able to do" (NRC 2008, 27). The National Research Council's 2008 report on early

childhood assessment describes the formative purpose of assessment as tracking the progress of individual children toward learning objectives and using the information to inform curricular and instructional planning (NRC 2008). Similarly, a more recent definition says formative assessment is “a process teachers use to monitor and provide feedback on children’s learning and to adjust their own instruction to better meet children’s needs” (Bodrova & Leong 2018, 18). To be as useful and meaningful as possible for teachers, formative assessment in early education should have “a fixed plan and structure,” and yet be “individualized, flexible to meet the context, and comprehensive” (Riley-Ayers 2018, 2). Ideally, formative assessment constitutes a key part of an ongoing instructional cycle aimed at understanding children’s current and next levels of learning (IOM & NRC 2015).

Because they give educators a research-based lens through which to understand children’s current and next levels of knowledge and skills, *learning progressions* (sometimes called learning trajectories to emphasize the goal they are moving toward) are a central feature of high-quality formative assessment (IOM & NRC 2015). Progressions define sequences of learning and development from less complex to more complex and from less challenging to more challenging. Well-defined, research-based progressions incorporating data gathered on thousands of children help teachers deepen their understanding of the development and learning of the children they teach. Such an approach to assessment provides essential information about how individual children are gaining skills and knowledge, so learning progressions are critical to making formative assessment useful. Formative assessments grounded in learning progressions enhance teachers’ abilities to identify what each child currently knows and to design educational activities that support children in moving to the next level of learning and development. This is especially powerful when teachers combine it with their personal understanding of each individual child’s development, ideas and input from families, and a child’s own reflections on documentation.

Formative assessment in practice

In practice, formative assessment ranges from informal to formal, reactive to planned, and brief to extended (Orland & Anderson 2013). For example, a teacher might

make a quick note on the fly about a question a child asked. In documenting a moment of learning in this informal way, the teacher might not necessarily have in mind how the question may be tied to indicators of progress; the teacher might also have briefly reflected on the meaning of the child’s question before responding.

Formative assessment is a key part of instruction aimed at understanding children’s current and next levels of learning.

A more formal assessment might look very different. For example, a toddler teacher might have planned to formatively assess children’s progress in learning about cause and effect. While looking for examples of children’s experimentation with cause and effect in their self-directed play, she might notice a toddler dropping objects to find out which ones bounce and then, over several days, trying new strategies (dropping them from different heights, throwing them) to see whether they bounce higher. To determine the child’s current and next levels of learning, the teacher might take a series of photos and link the photos to learning progressions for understanding cause and effect. As part of documenting the sequence of learning, the teacher might also note ways to support the child’s continuing exploration of causal mechanisms, such as introducing new play materials in the environment, making sure the child has ample uninterrupted time to explore materials, and extending the play outside.

For intentional teachers, formative assessment is embedded in the curriculum planning process. It



involves the ongoing collection of information through observation and documentation, including written notes, photos, videos, audio recordings, and portfolios of children's products. As documentation is gathered, teachers reflect on it. They continue reflecting as they organize the information, and as part of the process, they link documented moments of learning to research-based progressions of knowledge and skill development. Teachers' reflection on children's learning—individually and with colleagues, the children, and family members—leads to the planning of experiences, environments, and activities that further children's learning.

To support intentional teaching, there are structured measurement tools, such as the Desired Results Developmental Profile (DRDP) (California Department of Education 2016), Teaching Strategies Gold (Teaching Strategies 2013), and Work Sampling (Meisels, Xue, & Shablott 2008). These tools enable teachers to use the documentation they collect daily as evidence in rating children's developmental progress and learning. As members of teams that created and guide the implementation of the Desired Results Developmental Profile, we devote the rest of this article to explaining the DRDP and how it supports teaching and learning.

Desired Results Developmental Profile

The DRDP is an observational assessment that teachers use to measure children's developmental progress and learning in the following domains:

- › Approaches to Learning—Self-Regulation
- › Social and Emotional Development
- › Language and Literacy Development
- › Cognition, including Math and Science
- › Physical Development—Health
- › English Language Development
- › History Social Science
- › Visual and Performing Arts

There are multiple forms of the DRDP. The Infant/Toddler Comprehensive View covers the first five domains. The Preschool Comprehensive View and DRDP-K Comprehensive View (for use with transitional kindergarten and kindergarten-age children) address

all of the DRDP domains. There are also shorter versions of the Preschool and the DRDP-K, called the Fundamental and Essential Views, which include fewer domains and measures.

The DRDP represents an authentic approach to assessment. As a formative assessment, it focuses on children's skills and behavior that are observable and

The DRDP in Action

"At first, I didn't understand the value of the DRDP. I thought it was just something to do to meet requirements. I now appreciate the information it gives me about all my children, because now I can see that the things I observe help me to change the classroom and change the opportunities in the classroom. This helps me be a better teacher."

—Early Head Start Teacher

As part of a program-wide professional learning community, the infant and toddler teachers in an Early Head Start program meet weekly to reflect on their written observations and the photos they take of the children. As the teachers study their observations, they use the DRDP's (Desired Results Developmental Profile) learning progressions to deepen their understanding of the children's learning and behavior. Teachers discuss how the concrete information they have documented about the children's knowledge, skills, and behaviors gives them ideas about next steps in supporting the children's continuing development and learning. They identify new ways to interact with the children and adjustments they may make to the learning environment.

Sometimes the teachers focus on a specific learning progression to better prepare experiences that will support children's movement along a progression. The teachers' changes may be small, such as placing play materials on a somewhat higher shelf to encourage the infants to pull themselves to standing. The teachers will then observe what happens, keeping in mind the learning progression, which helps them anticipate what may come next. They see more clearly how a small change affords children opportunities to practice emerging skills that eventually lead to a big move to the next level of development and learning—in this case, from pulling up to standing to being able to "coordinate basic movements in an upright position without using support" (California Department of Education 2016, 39).

After gaining experience with the DRDP, several of the teachers have found it beneficial to think about learning progressions every day. The infants and toddlers in their group are developing rapidly, and the progressions help the teachers track progress and offer appropriate challenges.



that naturally occur in an early childhood program (Bagnato & Yeh-Ho 2006). The DRDP is completed over time by a teacher who knows a child well (i.e., the regular classroom teacher, not an assistant brought in to assess all of the children as quickly as possible), using evidence gathered through systematic observation and documentation. During the rating process, teachers document each child's behavior and engagement in learning in various ways, which may include notes, photos, videos, and other electronic records as well as artifacts produced by each child (e.g., art or building projects, drawings that depict a story, dictation, writing, or input from a child's family). For dual language learners, the knowledge and skills they demonstrate in their home languages and in English are both documented and used in the DRDP's rating process.

The DRDP was developed by the California Department of Education in collaboration with University of California Berkeley Evaluation and Assessment Research (BEAR), WestEd (where the authors of this article work), and the Napa County Office of Education. The BEAR Assessment System (Wilson 2009) provided the initial framework. The first step was consulting with leading experts in each developmental domain to identify major constructs (like self-regulation) from theory and research that could be specified as learning progressions. The constructs and related learning progressions were then presented to panels of early childhood educators, whose feedback informed the revision process. Once early educators arrived at wording they considered meaningful and useful, the DRDP development team conducted a series of studies. The goal of these studies was to establish the DRDP scales that would produce valid and reliable

measurements of individual children's developmental progress in each domain.

The following principles guided the overall development of the DRDP. Assessments should

- › Begin from constructs that are based on developmental theory and research
- › Be developmentally and individually appropriate for the specific child being assessed
- › Be culturally and linguistically appropriate for the population being assessed
- › Align with states' early learning and development guidelines or standards
- › Meet psychometric standards for reliability and validity
- › Provide teachers with information that helps them be effective in supporting the ongoing learning of young children

How teachers use the DRDP

As a formative assessment, the DRDP is designed to contribute to teachers' understanding of individual children's developmental progress and learning; it can also inform planning to support children as they seek to reach the next steps in learning. Many different early childhood education programs have creatively incorporated the DRDP into their curriculum planning.

Learning progressions use data gathered on thousands of children to help teachers deepen their understanding of the learning of the children they teach.

One example comes from the Learning Center, a preschool located in a rural community in California. The program's director and teachers review DRDP data as a group three times a year. The director described the process in the following way: "We all sit together at one long table. We have our copies of the *California Preschool Curriculum Framework*, volumes 1–3, and the *California Preschool Learning Foundations*, volumes 1–3, in front of us. I project the data on a large LCD screen." As they go through the data together, they discuss possible meanings, ask questions, and identify patterns that reveal areas in need of more attention.



During their initial reflection on the DRDP data last year, the director and teachers at the Learning Center looked at the information in several ways, including reviewing individual reports for each child and group reports for each class. In particular, they focused their attention on the group reports, which indicated that the children generally appeared to need more opportunities to grow in the social and emotional domain. They turned to the chapter on social and emotional development in volume 1 of the *California Preschool Curriculum Framework* (California Department of Education 2010) to find ideas they could implement to better support the children's development in that domain.

Comparing that framework with their curriculum resources, the teachers noticed that though they had many great practices in place for social and emotional development in general, the classrooms lacked opportunities to support children's curiosity and initiative. Since the DRDP has a learning progression for curiosity and initiative as part of its social and emotional domain, the teachers had a clear picture of the next steps in the children's progress. The teachers decided to focus on creating more developmentally appropriate opportunities for the children to ask questions, engage in problem solving, and take initiative in making sense of how things work. In addition, because close to 50 percent of the children spoke a language other than English at home, in every action plan the teachers decided to weave in ideas from the curriculum framework's chapter on English language development.

The next step for the teachers was to implement their action plans, which expanded children's process-based problem-solving experiences, exploration, and investigation of ideas and questions—and de-emphasized product-based activities. In the weeks that followed, the teachers gave heightened attention to the areas

emphasized in their action plans as they reflected on the children's learning. In doing so, they continued to refer to the DRDP learning progression for curiosity and initiative, as well as to the other learning progressions in the social and emotional domain. The director noted that the teachers grew in their understanding of social and emotional development and the children also made progress. The director felt that the use of the DRDP learning progressions and data had informed classroom decisions and refinements in the teachers' curricular approach.

Teachers need dedicated time to learn to use progressions, review children's progress, and plan next steps in supporting children's growth.

Ultimately, this process led to an agency-wide exploration of what might happen if teachers provided more open-ended opportunities for play and learning and removed many of the product-based experiences. It is noteworthy that once this change was fully implemented, a quality rating and improvement system coach reported that the program showed increased quality of language interactions between teachers and children (as indicated by the CLASS program assessment tool [Pianta, LaParo, & Hamre 2008]).

Closing thoughts: A call for systemic change

A concern that often arises when teachers start to use learning progressions embedded in a structured assessment tool is that the process requires too much time and can be overwhelming. To address this concern, teachers may ask for a shorter assessment form with fewer learning progressions. In contrast, other teachers sometimes express concern if an assessment is too short, with too few learning progressions; they want to be sure they are addressing all of the key areas of young children's knowledge and skill development. The issue boils down to a trade-off between the amount of information an assessment provides and the amount of effort needed to use the set of learning progressions that comprises the assessment. As programs examine the content of different assessment tools, they need to consider this trade-off carefully, making sure they select a tool that fits well with the major areas addressed by

their curriculum and that supports children's learning and development.

The lack of time teachers have to engage in professional development related to learning progressions and to spend in reflection is a major barrier to the use of comprehensive formative assessment in early childhood education. Simply put, teachers need dedicated time to learn to use research-based progressions, to review evidence of children's progress, and to plan next steps in supporting the continuing growth of children's knowledge and skills. Program directors who take an active interest in facilitating teachers' ongoing use of formative assessment for curriculum planning can structure teachers' work schedules to allow for reflection and planning time. However, programs have limited resources and may be unable to allocate sufficient time for these activities without additional funding.

Making meaningful formative assessment an integral part of young children's education will ultimately require systems change.

Making meaningful, thorough formative assessment that is grounded in learning progressions an integral part of how the early childhood workforce educates young children will ultimately require systems change. Professional learning, reflection, planning, and assessment tools and processes all must work together to transform practice. In the meantime, program directors and teachers will continue to do what the limited time and resources currently available to them allow them to do: creatively use formative assessment to enhance their support of young children's development and learning.

References

- Bagnato, S.J., & H. Yeh-Ho. 2006. "High-Stakes Testing with Preschool Children: Violation of Professional Standards for Evidence-Based Practice in Early Childhood Intervention." *KEDI International Journal of Educational Policy* 3 (1): 23–43.
- Bodrova, E., & D.L. Leong. 2018. "Common Assessment Terms and How to Use Them: A Glossary for Early Childhood Educators." In *Spotlight on Young Children: Observation and Assessment*, eds. H. Bohart & R. Procopio, 15–20. Washington, DC: National Association for the Education of Young Children (NAEYC).
- California Department of Education. 2010. *California Preschool Curriculum Framework, Volume 1: Social-Emotional Development, Language and Literacy, English Language Development, Mathematics*. Sacramento: California Department of Education.
- California Department of Education. 2016. *DRDP (2015): A Developmental Continuum from Early Infancy to Kindergarten Entry: Preschool Comprehensive View for Use with Preschool-Age Children*. Sacramento: California Department of Education.
- IOM (Institute of Medicine) & NRC (National Research Council). 2015. *Transforming the Workforce for Children Birth through Age 8: A Unifying Foundation*. Washington, DC: The National Academies Press. www.nap.edu/read/19401/chapter/1.
- Meisels, S.J., Y. Xue, & M. Shablott. 2008. "Assessing Language, Literacy, and Mathematics Skills with *Work Sampling for Head Start*." *Early Education & Development* 19 (6): 963–81.
- NRC (National Research Council). 2008. *Early Childhood Assessment: Why, What, and How*. Report. Eds. C.E. Snow & S.B. Van Hemel. Washington, DC: The National Academies Press. www.nap.edu/read/12446/chapter/1.
- Orland, M., & J. Anderson. 2013. *Assessment for Learning: What Policymakers Should Know about Formative Assessment*. San Francisco: WestEd.
- Pianta, R.C., K.M. LaParo, & B.K. Hamre. 2008. *Classroom Assessment Scoring System (CLASS) Manual, Pre-K*. Baltimore, MD: Brookes.
- Riley-Ayers, S. 2018. "Introduction." In *Spotlight on Young Children: Observation and Assessment*, eds. H. Bohart & R. Procopio, 1–5. Washington, DC: NAEYC.
- Teaching Strategies. 2013. *Teaching Strategies Gold: Birth through Kindergarten, Touring Guide*. Bethesda, MD: Teaching Strategies. https://www.buffalo.edu/content/dam/www/ubccc/Documents/Teaching%20Strategies%20-%20GOLD-Touring-Guide_5-2013.pdf.
- Wilson, M. 2009. "Measuring Progressions: Assessment Structures Underlying a Learning Progression." *Journal of Research in Science Teaching* 46 (6): 716–30.

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