

# ADVANCING EQUITY IN PRE-K ASSESSMENTS

## Elevating the Strengths of Children from Racially and Linguistically Marginalized Backgrounds

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**R**obust investment in early childhood education can help expand children’s access to high-quality pre-K programs. These investments can also strengthen the ability of educators to gather valuable information about young children’s behaviors, skills, and competencies in order to make better decisions about how to support their learning and development. This is a critical need: Pre-K programs currently lack accurate, reliable, and routine data about children’s skills and competencies.<sup>1</sup> At the same time, inequities in the design and use of early learning assessments to inform decision-making mirror disparities in access to and experiences of high-quality pre-K programs and subsequent outcomes based on children’s race, ethnicity, language, and geographic location.<sup>2</sup> Most existing assessments have been developed with insights drawn from study samples of children from predominantly White, English-speaking, middle- to upper-income families. This masks the important skills and competencies of children from racially and linguistically marginalized communities.<sup>3</sup>

The purpose of this brief is to provide a resource to help the early childhood field use a strengths- and assets-based lens to identify and measure the skills and competencies of an increasingly diverse population of young learners in pre-K. It begins by describing some of the limitations in current early learning assessments and highlights the implications of using assessments that are not designed with and for historically marginalized groups of children, namely children of color and those from linguistically diverse backgrounds. The brief then draws on the existing literature to identify content-focused opportunities to address shortcomings in existing assessment tools: (1) acknowledging cultural and linguistic strengths in children from historically marginalized groups, and (2) expanding measurement within domains of interest to elevate a broader range of strengths and competencies for these children. With this information, the field will have better information to help design pre-K programs that support *all* children’s development over time.

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## Challenges with the Current State of Early Learning Assessments

Emphasis on the development of the whole child has been a hallmark of the early childhood education field, as evidenced by the Head Start Early Learning Outcomes Framework. The framework presents five broad areas of early learning, referred to as central domains: (1) approaches to learning, (2) social and emotional development, (3) language and literacy, (4) cognition, and (5) perceptual, motor, and physical development.<sup>4</sup> While the framework is comprehensive in scope, the early childhood field continues to lack the tools to effectively *measure* the full range of children’s early learning skills, as well as tools that are reliable and appropriate to children’s age, culture, and language.<sup>5</sup> Though there are many measures that are psychometrically sound, very few assessment tools were specifically developed with culturally or linguistically diverse samples of children in mind.<sup>6</sup> Rarely do these tools consider the lived experiences of these groups of children, or elevate their strengths and capabilities.<sup>7</sup> Specifically, existing measures typically fail to take into account the sociocultural and linguistic relevance of test constructs and items that consider the developmental contexts of these young children.<sup>8</sup>

For example, since the mid-1970s, the Peabody Picture Vocabulary Test (PPVT) has been widely used to measure receptive vocabulary in research studies involving young children. Scoring approaches for the original measure were developed using a sample of more than 4,000 children of northern European descent residing in Tennessee.<sup>9</sup> It has now been revised four times, after studies suggested it was negatively biased against Black children and children from families with lower incomes. Measurement studies found that the second and third editions of the PPVT disproportionately assigned low scores to these children compared with their White counterparts, likely due to the largely White and upper-income samples of children used during assessment development.<sup>10</sup> Additionally, as shown in Table 1, researchers in a subsequent analysis demonstrated that some items used in the third edition of the test (PPVT-III) have alternative and salient meanings for children from Black communities, exhibiting a mismatch in the way young children are exposed to language at home and what is expected of their language comprehension in early learning programs.<sup>11</sup> This bias is particularly problematic because it means that low scores on a standardized test like the PPVT-III may be

**Table 1. PPVT-III Items Identified as Having Salient Alternative Meanings in the Black Community**

PPVT-III ITEM	ALTERNATIVE MEANING
12 Fly	Cool, stylish
13 Digging	Liking somebody
20 Wrapping	Heard as “rapping,” a popular style of music
27 Square	Uncool, not stylish
52 Diving	Rooting for cans and so forth, as in “dumpster diving”
57 Drilling	Harassing
58 Hook	Dressed nicely, as in “She got the hook up,” or connected with someone
60 Dripping	Said of gheri curls—that you “follow the drip” or, due to pronunciation differences, children heard the word as “tripping”
69 Squash	“Squash this” means to end current activity
72 Frame	Physique
79 Trunk	A person’s derriere

SOURCE: Tempii Champion, Alyssa Mccabe, and Yvette Hyter. 2003. “‘A Matter of Vocabulary’: Performances of Low-Income African American Head Start Children on the Peabody Picture Vocabulary Test—III,” *Communication Disorders Quarterly* 24, 3: 121-127.

NOTES: PPVT-III = Peabody Picture Vocabulary Test—Third Edition. Numbers refer to PPVT item numbers.

interpreted as children having lower abilities. In reality, the low score may be more indicative of test items not being culturally relevant to the children being assessed, masking their competence in this learning domain.

In addition, there has been an effort to translate measures into Spanish to account for the large numbers of emergent bilingual children in pre-K who are from Spanish-speaking families.<sup>12</sup> But test instructions are sometimes poorly translated and do not consider how direct translation into another language may make items more or less difficult to understand than the English version of the assessment. Poor item translation can also affect the difficulty of an item, capturing something different about a child’s ability than the original item.<sup>13</sup> Translation can also change the meaning of some words if variations across countries that speak the same language are not considered. For example, in Spanish the words *coche* and *carro* can mean *stroller* or *car*, depending on where a person is from.

Further, few measures are available in languages other than English or Spanish, despite the vast, linguistically diverse population of children attending early childhood education programs. As a result, many children are assessed in a language they do not fully understand, limiting the knowledge of their full breadth of skills and capabilities.<sup>14</sup>

Another substantial limitation of early childhood studies is a narrow focus on the assessment of rote skills that are learned through direct instruction, using brief and widely used measures of literacy (for example,

letter-word identification) and numeracy (for example, counting).<sup>15</sup> These types of measures capture a narrow set of skills within those important domains of child development. Additionally, early childhood studies can often overemphasize negative developmental outcomes such as aggression, delinquency, attention deficits, and hyperactivity, because these behaviors may be easily observed and therefore more easily quantified and measured. Scholars have pointed out that this overemphasis is particularly problematic for research conducted with children of color because it may perpetuate a deficit perspective about their skills and competencies, particularly since existing measures often rely on teachers' reports of children's behavior that can be affected by implicit biases against children of color.<sup>16</sup> Further, early childhood studies sometimes fail to assess other domains that are relevant for future academic functioning, such as problem-solving, oral language skills, creativity, and racial-ethnic identity, because they are more difficult to measure or are less widely used.<sup>17</sup>

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Designing early childhood studies that build on previous research is a common practice and valued by researchers and funders. But the field ultimately suffers if that earlier work focused on a narrow set of skills or development domains that are more typically used to assess White children or that reflect exposure to specific academic content.<sup>18</sup> Anchoring the early childhood research field in a narrow view of children's development or assessing children's skills in a limited way has contributed to a deficit orientation of children of color or from linguistically diverse backgrounds. The field can only learn from what it chooses to and is able to measure.

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## Implications

As described above, early childhood studies can perpetuate existing disparities, rather than work to promote more equitable learning opportunities and outcomes for young children, depending on how their skills and development are measured. How that information is used has real implications for children of color and those of diverse linguistic backgrounds:

- if they are not provided with needed early intervention services or programming,<sup>19</sup>
- if they are tracked into different learning contexts based on those results, such as placement into remedial programs or special education, particularly as children get older,<sup>20</sup>

- if they are disproportionately disciplined, suspended, or expelled from preschool,<sup>21</sup>
- if their strengths are not seen (for example, Black children’s strength in oral language).<sup>22</sup>

## An Opportunity to Rethink Measurement in Early Childhood

The early childhood field can work to create more equitable measurement tools by applying a culturally relevant and strengths-based lens to improve existing measures, develop new tools, and assess a more inclusive and comprehensive set of learning domains.<sup>23</sup> This call is not new. Researchers have been emphasizing the need to assess a broader range of the adaptive behaviors of children from marginalized backgrounds for at least three decades.<sup>24</sup> Yet there continues to be a need for a paradigm shift that simultaneously acknowledges the assets and strengths that children of color and from diverse linguistic backgrounds bring to pre-K settings—forms of cultural and linguistic capital that are often unrecognized or unacknowledged—and the detrimental impacts of systemic forces such as poverty, bias, and racism on children’s development.<sup>25</sup>

### Acknowledging the Cultural and Linguistic Strengths of Children from Historically Marginalized Backgrounds

Culture is embedded in children’s everyday activities with their families, in childcare settings, at school, with their peers, and in their neighborhoods.<sup>26</sup> By elevating the role of culture as central to understanding children’s development, the early childhood field will better capture the full continuum of skills and strengths that children of color or from linguistically diverse backgrounds exhibit, such as adeptness in oral language and storytelling.<sup>27</sup> However, tools that accurately capture skills for one group of children may not be appropriate for another group. Thus, tools should be designed in ways that embrace cultural and linguistic differences to support accurate inferences from the data for all children.

The linguistic experiences of young children served by pre-K are varied.<sup>28</sup> Some Black and Latine children’s home language environments are exclusively General American English (GAE), while other households include a spectrum of languages.<sup>29</sup> Some households may use a single heritage language, such as Spanish, while others may be bilingual, for example, speaking Spanish and English. Still others may be bidialectal, that is, using two dialects of the same language at home, as is the case for many Black families of African American heritage who also speak African American English (AAE).<sup>30</sup> And in some households, family members may regularly “code-switch”—seamlessly switching from one language or dialect to another within conversations or across settings. For example, Black children may speak AAE at home and GAE at school.<sup>31</sup>

Research shows that the vast majority of Black preschoolers use AAE when telling oral stories.<sup>32</sup> Yet the language and communication competencies they bring with them to early learning settings—their linguistic capital—may or may not be valued or appreciated by educators.<sup>33</sup> Further, clinical practice and research studies typically examine the language development of children who are bilingual or bidialectal by comparing them with children who are monolingual or who speak GAE. This can result in deficit-based conclusions about

what bilingual and bidialectal speakers are *not* doing, rather than focusing on the strengths of these children’s language use within their respective language systems.<sup>34</sup>

Children who speak two or more languages have the opportunity to experience two or more cultures and connect with family values and practices from their cultural heritage. Additionally, a large body of evidence points to the cognitive advantages of bilingualism related to executive functions such as working memory, inhibitory control, and cognitive flexibility.<sup>35</sup> These cognitive and self-regulatory processes are associated with children’s math, literacy, and language skills, as well as social competence and prosocial behavior.<sup>36</sup> More research is needed to understand whether early evidence on the cognitive advantages for bidialectal speakers extends to speakers of AAE and GAE.<sup>37</sup> Being able to flexibly code-switch between two dialects based on context may also alter the efficiency of executive functions.<sup>38</sup>

Together, this research highlights the importance of retaining children’s home languages or dialects as they enter early childhood and elementary education settings, and of promoting children’s rich linguistic repertoires and code-switching abilities. Still, it is unclear how the timing of when a child learns a language and the amount of exposure to a second language or dialect affect the manifestation of these cognitive advantages.<sup>39</sup> More research is needed to understand the experiences of Black children who learn to code-switch between AAE and GAE, given the cognitive and emotional load it can take to flexibly switch between two contexts when the development and retention of AAE has typically not been supported in educational settings.<sup>40</sup>

### Expanding Measurement to Include a Broader Range of Strengths and Competencies

The field of measurement can be enhanced by ensuring that assessments give all children the opportunity to demonstrate strengths and competencies within domains that are commonly studied, such as language and math, as well as in other domains and subdomains that are not (as shown in Table 2). The section below

**Table 2. Examples of Domains of Children’s Development Not Typically Examined in Early Childhood Studies**

DOMAIN	SUBDOMAIN	DEFINITION
Language	Oral language and storytelling	A form of oral discourse that communicates real or imagined events.
Math	Mathematical thinking and reasoning	A way of thinking that involves math to solve real-world problems. Involves the ability to define, systematize, abstract, make connections, and integrate different mathematical concepts and skills.
Approaches to learning	Curiosity	A desire to know more or learn something about the unfamiliar.
Approaches to learning	Creativity	The ability to produce novel and useful ideas.
Social skills and emotional well-being	Peer collaboration	The extent to which children work together toward a shared goal.
Social skills and emotional well-being	Self-identity (racial and ethnic)	The integration of self-concept and self-esteem that includes an awareness of group membership, and expectations, values, privileges, and social responsibilities that can be attributed to group membership. Racial-ethnic identity includes attitudes and beliefs held about one’s particular racial or ethnic group.

highlights a few areas that reflect strengths exhibited by children from culturally and linguistically diverse backgrounds that can be included in early learning assessments and data systems to better serve the needs of all children enrolled in pre-K.

### **Oral Language and Storytelling**

Assessments that emphasize unconstrained skills that are developed over time, such as oral language acquired through extended interactions with caregivers, may more robustly predict later academic performance when compared with more constrained skills such as alphabet knowledge and name writing.<sup>41</sup> Further, expanding assessments to include other areas of language development can help elevate critical cultural assets for all children, especially for children of color. For example, children enter school with unique strengths in oral storytelling and these skills may be particularly valued and developed in Black families. Yet existing early childhood research typically examines vocabulary knowledge and ignores oral narrative skills.<sup>42</sup> This limited understanding of the full range of children's language abilities contributes to a deficit orientation that Black children are behind their peers, contributing to the Black-White achievement gap.<sup>43</sup> In fact, an examination of Black children's language skills shows that oral narrative skills in preschool are highly predictive of literacy skills by age 5. And Black children's preschool oral narrative skills play a mediating role in the relationship between early language skills in toddlerhood and their emerging literacy in kindergarten irrespective of their socioeconomic status, a relationship that was not present for the full sample or the other subgroups that were examined.<sup>44</sup>

### **Mathematical Thinking and Reasoning**

The last 10 years have seen an increased emphasis on early childhood math education that extends beyond basic numeracy to include number recognition and operations (for example, addition and subtraction), geometry, measurement, early algebraic thinking, and data analysis. This is based on the understanding that all young learners, beginning in infancy, are capable of engaging with diverse mathematical skills.<sup>45</sup> Further, early mathematical reasoning and the development of a mathematical identity is linked to the development of young children's early academic identity and is key to both early school readiness and later academic achievement across all subject areas.<sup>46</sup> However, most current assessments focus on constrained skills such as naming shapes or counting to 10. This limits the understanding of young children's mathematical thinking. And, as with language skills, while children may demonstrate their skills in different ways, many existing assessments were tested only on middle class, White children, whose performance on these limited tasks is normalized as the standard for all children.<sup>47</sup>



Because of this, the measurement of early learners' math skills would benefit from incorporating the rich experiences and cultural knowledge of a broader set of children, including children of color, which are often learned in the home and in informal, out-of-school settings, that can be assets in pre-K learning.<sup>48</sup> Research

demonstrates that families from Latine and Spanish-speaking backgrounds engage in everyday math talk with their preschool-aged children at home, incorporating opportunities to learn about numbers, shapes, matching, patterns, sorting, and logical reasoning.<sup>49</sup> Informal math experiences in the home, such as playing counting games, have been shown to be predictive for Black boys' math skills as they enter kindergarten.<sup>50</sup> In research with older children, studies have found that Black youth display more sophisticated mathematical knowledge in informal contexts, such as using money at grocery stores, than what is captured in formal, in-school settings.<sup>51</sup> Thus, developing assessments that incorporate culturally responsive materials or scenarios may go further in eliciting mathematical learning and thinking from children of color, especially young learners who are just beginning to develop their mathematical knowledge and identity. And in the case of emergent bilingual children, measurements that factor in the role that language plays in math proficiency offer opportunities for these children to display their mathematical thinking via storytelling and other methods (such as drawing and gestures), rather than with isolated math vocabulary that they may not have learned yet in English.<sup>52</sup>

### **Curiosity**

Curiosity is a subdomain of approaches to learning and refers to a child's desire to know more or to learn something about the unfamiliar. It is key for sustained learning: When elementary school-aged children read about topics they have specific interests in, they learn more, discern more detail, and remember the details for longer.<sup>53</sup> Curiosity is closely related to agency. In the context of early learning, agency refers to being able to influence what and how something is learned, expanding children's capabilities as learners.<sup>54</sup> Yet many early learning settings focus on mastery rather than inquiry. The emphasis is on specific objectives and routines for children's learning, rather than on probing young children's natural curiosity, particularly as they advance into formal schooling when there is much less time given to examining content that is "off task."<sup>55</sup>

The importance of curiosity for schooling was demonstrated using a large, representative sample in the United States: Higher levels of curiosity were associated with greater reading and mathematics achievement in kindergarten.<sup>56</sup> For older children, curiosity was highlighted in the first-ever, large-scale international assessment of social-emotional skills of 3,000 school-aged children and teenagers in 11 countries (including in the United States). Curiosity was a consistent and strong predictor of academic success in both math and reading.<sup>57</sup> Research has also found that when children of color or from underfunded schools engage in projects that are student-led, they show more curiosity and exhibit greater understanding of mathematical concepts, science inquiry, social studies, and informational reading in early and late elementary school.<sup>58</sup> Yet even with this evidence, there is a dearth of literature that focuses on skills related to curiosity in young children of color.

### **Creativity**

During their early years, children are naturally and spontaneously creative; they sing, draw, tell stories, comment, and engage in pretend play.<sup>59</sup> The preschool years are a time to promote creativity—another subdomain of approaches to learning—because preschoolers often engage in pretend play, which enables them to understand the social and physical world around them.<sup>60</sup> To promote creativity in culturally responsive ways, educators and researchers can look beyond the classroom to understand how family, community, and culture shape the development of creativity for children of color, and Black children in particular.<sup>61</sup>





Creativity can also be examined as it relates to children's development in specific domains, to elevate children's strengths and competencies. For example, in a research study examining the effects of culture on the creative and stylistic features children use when producing narratives based on wordless picture books, Black children included more fantasy, suspense, and embellishments in their narratives.<sup>62</sup> Black children's creativity and brilliance can be further cultivated in settings that promote their positive self-identity, though much work remains to be done to examine the relationship between creativity and identity development for children of color.<sup>63</sup>

### ***Peer Collaboration***

Peer collaboration refers to the extent to which children work together toward a shared goal and is an indicator of children's social skills and emotional well-being. Collaboration requires taking turns, offering and seeking help, listening to each other, and other social skills. Communities may have different norms regarding collaboration, however. For example, collaboration is relevant for children from immigrant families that value interdependence, as compared with White, middle-class values of competition and individualism, which are commonplace in school settings.<sup>64</sup> Closer examinations of young Black students' profiles demonstrate positive social skills, peer relationships, prosocial behaviors, and emotional self-regulation exhibited among boys, and interpersonal skills and approaches to learning in a large percentage of girls.<sup>65</sup> Further, among older students, children of color and emergent bilingual children appear to benefit more from cooperative learning activities, which bring together students to work toward a shared group goal. When compared with their White, monolingual, English-speaking peers, these children show gains in peer relatedness, perceptions of academic support in the classroom, engagement in learning, and academic performance.<sup>66</sup> Measurement of children's social and emotional competencies can be strengthened to ensure that they capture the breadth of the ways these behaviors manifest for children of color and emergent bilingual children, both in individual assessments and group assessments, to account for the full pattern of interactions in the classroom.

### ***Self-Identity (Racial and Ethnic)***

Identity is integral to children's social and emotional well-being. It refers to one's sense of self and includes not only an awareness of group membership, but also the expectations, values, privileges, and social responsibilities that can be attributed to group membership. Additionally, the benefits and attitudes that one holds about one's particular racial or ethnic group contribute to one's own racial-ethnic identity.<sup>67</sup> It is important to acknowledge that race and ethnicity are social constructs, with the former based on skin color, hair texture, and other physical attributes, and the latter based on shared language, religious heritage, and geographic location.<sup>68</sup> Racial or ethnic self-identity, however, is based on the connection one has with one's own physical characteristics or cultural heritage (for example, language), which starts in the early childhood years.<sup>69</sup>

Developing a healthy racial and ethnic identity early on is important, given its association with academic achievement and social-emotional development among school-aged children and adolescents.<sup>70</sup> For example, in a study with 98 Black fourth graders that examined family, school and community factors, healthy racial-ethnic pride and attitudes, higher levels of racial-ethnic trust, and the perception of fewer barriers due to race or ethnicity were associated with higher reading and math scores on standardized tests.<sup>71</sup> Conversely, experiencing discrimination, real or perceived, by teachers and peers has been associated with reduced self-esteem and academic achievement and orientation, and higher levels of anger, depressive symptomatology, and involvement in problem behaviors.<sup>72</sup>

While most studies on the impact of racial-ethnic identity are focused on older youth, there are some examples of research examining this with younger children. For example, in one longitudinal study of children in early elementary school, a strong sense of racial-ethnic identity was positively related to children's social acceptance, acceptance of physical appearance, and behavioral conduct. Having a healthy racial-ethnic identity was also positively associated with higher levels of reading and listening comprehension (beyond sociodemographic factors such as age, education, or income) and positive self-esteem.<sup>73</sup> Still, racial-ethnic identity is rarely measured in young children and thus, it remains challenging to understand whether and how early learning settings support its development.

## Conclusion

Pre-K programs lack accurate and reliable data about the skills, competencies, and behaviors of children from historically marginalized backgrounds. This is in part due to how many current pre-K assessments are developed and validated with children from predominantly White, English-speaking, middle- to upper-income households, contributing to a deficit view of the capabilities of their peers of color.

This brief highlights opportunities for the field of early childhood measurement to improve existing tools and to develop new measures that elevate the assets and skills of children in pre-K from racially and linguistically marginalized backgrounds. Research shows they bring with them vast cultural, linguistic, and social capital that present in ways that promote their learning. Re-envisioning how to measure and elevate these strengths and competencies will help pre-K programs promote optimal learning opportunities for all children and will help guide decision-making at the local, state, and federal policy levels. ■

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