In response to Fuson et al.’s commentary on Litkowski et al. (2020), we clarify and expand on three areas: (1) the need for prekindergarten standards, (2) the value in developmental survey work, and (3) the importance of understanding curriculum translation and uptake. Specifically, we note that standards need to be appropriate for grade-level and it is time for more aligned prekindergarten standards. Developmental survey work is critical for ensuring that standards and expectations are accurate and adjusted to meet current needs and can be used address equity issues in instruction. Furthermore, we agree that intervention and curriculum work are needed, but there should be explicit emphasis on enhancing uptake and use of high-quality instruction. Ultimately, we need a system of assessment and instruction that is continually updated and improved, that integrates and modifies new evidence over time to ensure that we are striving for—and attaining—the best results for young children.

Keywords: prekindergarten, standards, common core, math, instruction

We agree with Fuson and colleagues on many of the broader points in our article and in their response—specifically in the need for clear standards that are accurate and linked to effective instruction. However, we diverge on the interpretations and implications. In particular, we want to clarify and expand on three areas: (1) the need for prekindergarten standards, (2) the value in developmental survey work, and (3) the importance of understanding curriculum translation and uptake.

The Need for Prekindergarten Standards

Fuson and colleagues acknowledge that one of the standards we highlight is too easy (cardinality: “How many?”) and is really a preschool standard (Litkowski et al., 2020; National Research Council, 2009), but maintain that it should remain as a kindergarten standard because it is foundational for early numeracy development. We were not intending to imply that it is not foundational; however, the standards outline end of kindergarten expectations. That standard (and others) should go where they are intended to go—as preschool standards. There is significant variability in state preschool standards (see Table 1 of Litkowski et al., 2020), which suggests a need for alignment across states and across the transition to kindergarten. When the Common Core State Standards—Mathematics (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010) were created, there were dramatic differences across states in their support for prekindergarten programs (Barnett & Carolan, 2013). Then, it was unlikely to advance a unified set of prekindergarten standards. Such an effort to use data-based methods for benchmarking early expectations is far more likely now given the substantial changes in the prekindergarten landscape over the past decade where nearly all states provide some form of state-funded prekindergarten (Barnett et al., 2009; Friedman-Krauss et al., 2021) and because there have been federal calls for universal prekindergarten (Biden, 2021).

The Value in Developmental Survey Work

Although Fuson and colleagues suggest that survey data are unnecessary and costly, we believe that it is absolutely necessary to ensure that the standards are aligned with what children can do and what they should be able to do. Stronger data-based approaches, delineating what children can do, to refine standards and expectations are likely critical for ensuring that kindergarten instruction is not substantially below
children’s ability level. Research has demonstrated that classroom mathematics instruction in early elementary school is below the majority of children’s ability (Engel et al., 2013), significantly overlaps with prekindergarten instruction (~62% overlap for numeracy; Cohen-Vogel et al., 2021) and that children benefit from more advanced instruction during these years regardless of their prior experiences ( Claessens et al., 2014). Standards should not be considered “set” but rather under regular evaluation and updating. If educational systems are improving and more children are being served in high-quality care settings, then the standards should reflect the changes in what children can successfully do. Clements et al. (2017) highlight the need for strong standards as “an equity issue that low expectations can unintentionally exacerbate” (p. 156). Specifically, by doing more large-scale developmental survey work on what children are capable of, we are actually increasing the likelihood that instruction could in fact be equitable and more responsive children’s needs.

As for cost, such studies could be embedded in future national data collections such as the Early Childhood Longitudinal Studies ( Najarian et al., 2011; Tourangeau et al., 2006, 2015) by attending to the specific items assessed at each grade level and ensuring that some items aligned with grade-specific standards are included and made available for analysis at the item level. Future studies should also span critical junctures in development such as the transition from preschool to kindergarten. These data would allow researchers, practitioners, and policy makers to regularly assess standards’ alignment and progress over time without substantially adding the cost of new studies. Moreover, ensuring these standards are aligned with what children can actually do enables teachers to better set appropriate instructional goals—a core component of the learning trajectories framework ( Clements & Sarama, 2021).

The Importance of Understanding Curriculum Translation and Uptake

Fuson and colleagues also recommend that more focus be placed on developing and evaluating high quality instructional programs, rather than on revising the standards. However, over the last two decades, the field has made substantial progress in the development and evaluation of early curricula ( Frye et al., 2013 ). There are a number of excellent, high-quality, and impactful curricula that have demonstrated strong impacts (e.g., What Works Clearinghouse, 2007, 2013a). Yet, the most commonly used curricula in settings such as Head Start ( Bernstein et al., 2018 ) are ones that the What Works Clearinghouse rate as having no discernable effects ( What Works Clearinghouse, 2013b ) or insufficient evidence to evaluate. There is a need to better understand why high-quality curricula are not utilized more frequently (e.g., cost, complexity of implementation, alignment with standards) and work to reduce or remove these barriers.

Conclusion

Ultimately, we recognize a lot of commonality in our goals with that of Fuson and colleagues but note that it is important for us to go beyond prior work, integrate instruction with high-quality data-based standards, and ensure instruction is more equitable. We need both developmental survey work and aligned intervention work to directly affect children’s learning—these are not siloed areas, but rather are necessarily integrative and foundational components to a learning system. We need a system that is continually updated and improved, that integrates and modifies new evidence over time to ensure that we are striving for—and attaining—the best results for young children.

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