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CALIFORNIA'S TRANSITIONAL KINDERGARTEN IS THE CONNECTIVE TISSUE BETWEEN PRESCHOOL AND KINDERGARTEN

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California's Transitional Kindergarten Is the Connective Tissue Between Preschool and Kindergarten

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Elementary schools in California are now serving younger children. As transitional kindergarten (TK) expands, most children will come to school at the age of 4 years. And preschools serving children as young as 3 years are increasingly connected to elementary schools, often under the principal's leadership.

Integrating early childhood education (ECE) into elementary schools offers the opportunity to create a coherent educational experience for young children. Heretofore, 5 year olds came to kindergarten from various early childhood programs (e.g., Head Start, state preschool, community programs) or without preschool experience at all. District leadership typically had very little decision-making power related to the quality or nature of education children received before entering kindergarten.

School districts new power over ECE raises new questions as well as new opportunities. As district and school leaders make decisions about TK curriculum, assessment, instruction, and teacher professional development, they are asking whether TK is more like preschool or kindergarten. Or is TK a completely new grade level that needs to be treated differently from both preschool and kindergarten?

TK Teachers are Preschool *and* Kindergarten Teachers

A better way to view TK is as the connective tissue *between* preschool and kindergarten. Educators naturally think in terms of grade levels corresponding to age. Grade levels are institutionalized in every aspect of schooling. We have grade-level standards, curricula, and assessments. Students are organized into classrooms and assigned to teachers by grade level. The reality, however, is that a group of similar-aged children in a particular grade typically possess a range of skill levels that transcend grades. A first-grade teacher, for example, is likely to be teaching some children who have not met the kindergarten standards and some children who mastered the standards before they entered her classroom. If she adjusts instruction to meet children where they are in their learning trajectory, she is effectively teaching kindergarten through second grade. Likewise, a TK teacher is functionally a preschool through kindergarten teacher, given the likely range of TK children's skills.

For practical reasons, we may need to continue to organize schooling around grades. But we will serve children's educational needs better if we understand learning to be on a continuum, and recognize that children don't always fit neatly into the grade segments we have invented. TK offers the perfect opportunity to overcome the limits of grade-level thinking by conceptualizing it as the middle of a continuous learning journey children take from preschool through kindergarten.

We are still left with decisions about TK curriculum and assessment, among other matters. How does thinking of teaching young children on a continuum rather than in grade-level chunks affect those decisions? This article offers suggestions. In addition to informing decisions about TK the recommendations have the added value of helping sustain the benefits of preschool and TK. Many studies have shown that the advantages of preschool attendance are sometimes eroded over the first few years of elementary school, referred to as “fade out” (Puma et al., 2012). This reduction in benefits is caused in part by the disconnect between preschool and the early elementary grades (Stipek, Clements, Coburn, Franke, & Farran, 2017). Curricula, teaching approaches, behavioral expectations, relationships with parents, assessments, and the amount and nature of teacher preparation are typically entirely different when children move from preschool to kindergarten. TK offers an opportunity to achieve the kind of seamless experience young children need to maximize and sustain the benefits of ECE.

Creating a Preschool-TK-Kindergarten Educational Continuum

Curriculum & Instruction

The ideal ECE curriculum spans preschool through kindergarten, with the kindergarten curriculum beginning where the preschool curriculum ended. Where in the curriculum teachers begin preschool or kindergarten instruction depends on their students’ skills, and teachers may not begin exactly in the same place for all children. TK teachers can start the year in the middle or toward the end of the preschool curriculum and switch to the kindergarten curriculum midyear. Kindergarten teachers can begin instruction where TK teachers left off -- at the place that will help children deepen their skills and understandings and move to the next level.

It is not easy to find commercially available preschool and kindergarten curricula that are so well aligned. But even if they are not from the same publisher, curricula should be chosen to make sure that kindergarten instruction extends what children learned prior to kindergarten. Research shows that kindergarten teachers nationally, and especially in schools serving low-income families, tend to spend a significant amount of time teaching skills that children mastered before they entered their classrooms (Cohen-Vogel, Little, Jang, Burchinal, & Bratsch-Hines, 2021; Engel, Claessens, & Finch, 2013). These findings suggest the importance of curricula that build on—rather than overlap with—the preschool curriculum. TK that repeats what children learned in preschool the year before will be a year wasted, just as kindergarten that does not build on and extend what children learned in TK would mean lost learning opportunities. Curricula that are continuous across preschool, TK, and kindergarten make it easier for teachers to ensure continued learning, no matter the child’s starting point.

The nature of instruction that the curriculum promotes is also important. There is confusion about whether TK should look like preschool or kindergarten. Many educators believe that preschool is for play and should focus on social emotional development, and elementary school is for learning subject matter. It is a false dichotomy. Children do not develop completely different educational needs when they walk into a kindergarten classroom. Opportunities to develop foundational subject matter skills are important in preschool, especially given the significant achievement gap that exists in California at kindergarten entry (Reardon, 2013). Also,

children do not enter kindergarten, or even first or second grade, with self-regulation and social skills fully developed. They need to have opportunities to build on the social-emotional development gained in preschool. And finally, young children throughout this age-span benefit from free play as well as guided, playful instruction.

Research suggests that effective teaching practices in preschool and the early grades are the same, although specific strategies and certainly the level of difficulty change. For example, manipulatives have been shown to be a very effective approach to teaching math (Franke, Kazemi, & Turrou, 2018). Young children can learn basic counting principles, such as one-to-one correspondence and cardinality, and the order of counting words while counting objects like beads, bears, or buttons. As children move through the early elementary grades and their knowledge advances, they can use manipulatives to develop a deep understanding of addition, subtraction, and grouping. Later, children can use objects to solve multiplication and division problems. The math becomes more advanced, but the instructional approach is similar.

Research on literacy teaching also demonstrates the effectiveness of practices that apply across preschool and the elementary grades, although they can differ in their implementation depending on children's age and skill levels. For example, reciprocal teaching—asking students to predict, summarize, clarify, and ask questions of a text—can apply to preschoolers who are being read to or older children who are reading to themselves (Pressley, 2006). The practice is the same; the specific form and difficulty level vary.

Curricula do not necessarily dictate instruction, but most imply specific approaches to instruction. Continuity in effective instructional approaches across the grades should be key considerations in selecting curricula. In addition to ensuring that effective practices are being implemented across this age span, continuity has the added value of reducing time students waste learning how to “do” math or literacy differently from what they are used to.

Student Assessments

If teachers need to build on what children know, they need to know what children know. Effective teachers notice and assess children's skills and knowledge during instruction and throughout the day and adjust instruction in the moment according to what they are learning about children's skills and understandings. Broad assessments that include only a few items in literacy and math, such as the DRDP, are not very helpful in guiding day-to-day instruction. Most useful for this purpose are formative assessments that are embedded in the curriculum or designed to assess how well children have mastered the skills they have just been working on. Teachers can use this information to ensure the validity and comprehensiveness of their perceptions and to make judgments about next steps for individuals, groups of children, or the whole class.

Broad assessments linked to standards are useful to district and school leaders. They enable them to determine the impact of policies and practices and make judgments about what kind of support teachers need. To effectively track children's progress from preschool through kindergarten the assessment instrument needs to be continuous, allowing a child to

demonstrate skills anywhere on the continuum. An assessment instrument that assesses only kindergarten standards will miss the progress made by kindergarteners who started the year significantly behind but made progress toward meeting the preschool standards. Likewise, an assessment that focuses only on preschool standards will not show the continued progress of children in preschool who had already met the preschool standards before they began preschool.

In addition to ensuring accurate measurement of all children's progress, assessments on the preschool through kindergarten continuum also address the issue of what to do with TK. Akin to the notion of a continuous curriculum that begins at different points based on student skills, children in TK can enter the assessment continuum at various levels. Using an assessment that includes items aligned with both the preschool and the kindergarten standards provides a more accurate picture of the progress of children in TK who may be working on skills at any point in this continuum.

Professional Development for Teachers

To address the needs of their students wherever they are in their learning trajectory, teachers in preschool through kindergarten need to know the standards, curriculum, and teaching practices from the level before and after the level they teach. Knowing what and how children were taught in the prior grade enables teachers to build on their skills using practices that are familiar to children. Knowing what children will be working on in the next grade helps teachers prepare students to succeed when they advance in grade.

These goals can be achieved by providing cross-grade professional development sessions, by having the same coach work with teachers across grades, and by giving teachers opportunities to meet and learn from one another. In addition to fostering continuity in the children's experiences as they move through the grades, researchers who have studied the effects of collective participation of teachers across grade levels find that it supports the professional culture and helps sustain the new practices teachers learn (Burchinal, Hyson, & Zaslow, 2008).

It is easy to underestimate the amount of professional learning and support teachers need to change and sustain their practices. Often professional development is divorced from everyday practice or worse, it conflicts with the current curriculum. Research on professional learning has demonstrated that to meaningfully improve teaching, support has to be focused, directly related to their practice, and ongoing (U.S. Department of Education, 2010). Unless the goal is to teach teachers a single specific activity or strategy, short-term workshops are only effective if they are coupled with ongoing support, such as coaching.

Educating School Leaders

Creating an effective and continuous preschool-TK-kindergarten experience for children requires the involvement of school leaders. Most elementary school principals do not have an ECE background and many feel ill-equipped to support instruction. An interview study of 25

California districts and a longitudinal study of two California districts endeavoring to improve preschool through Grade 3 continuity revealed that many principals limited their formal responsibility for preschool to administrative or operational oversight (Koppich & Stipek, 2020; Stipek, Borsato, & Coburn, 2022).

But there is also evidence that professional development for school leaders can reverse principals' reluctance to play an instructional leadership role. Four of the 25 districts in the interview study provided ECE training to help principals integrate preschool with elementary school. Interviewees commented that this training had a significant effect on principals' interest in and sense of ownership of the preschool program. One of the two districts that were studied in depth created its own school leader training program focused on preschool through kindergarten. The early childhood department offered five sessions of professional development drawing from the six competencies outlined by the National Association of Elementary School Principals' guide (NAESP, 2005). That training had a practicum component that required principals to teach lessons in an early childhood classroom and then reflect on the experience. Principals also did walk-throughs of preschool, TK, and kindergarten classrooms with the director of early learning. Interviews of the principals in this district revealed that they directly supported teachers in the preschool and TK classrooms and had a nuanced understanding of effective instruction for young children.

These studies suggest the value of making sure that school leaders are knowledgeable about effective and developmentally appropriate education for young children. With this professional development they will be more effective instructional leaders and positioned to support teachers to create coherence and continuity from preschool through kindergarten.

Conclusion

Because children's educational needs often do not fall neatly into their assigned grade, special care needs to be taken to avoid being blinded by these organizational structures: "You are 5 years old, therefore you must be given the kindergarten curriculum regardless of whether you have already mastered it or are still working on the preschool standards."

TK instruction can be the connective tissue between preschool through kindergarten, helping students advance in their learning trajectory from wherever they start. TK teachers should have the option of using the preschool or kindergarten curriculum from the beginning and throughout the year, and access to the assessment tools they need to make developmentally appropriate instructional decisions. Preschool, TK, and kindergarten teachers need to know the full range of standards and curriculum and collaborate on instructional strategies to provide young children with a seamless and effective educational experience. School leaders need to be sufficiently knowledgeable of effective early childhood education to support these efforts.

References

- Burchinal, M., Hyson, M., & Zaslow, M. (2008). Competencies and credentials for early childhood educators: What do we know and what do we need to know? *National Head Start Association Dialog Briefs* 11 (1).
- Carpenter, T., Fennema, E. Franke, M., Levi, L., & Empson, S. (2015). *Children's mathematics: Cognitively guided instruction* (2nd ed). Portsmouth NH: Heinemann.
- Cohen-Vogel, L., Little, M., Jang, W., Burchinal, M., & Bratsch-Hines, M. (2021). A missed opportunity? Instructional content redundancy in Pre-K and kindergarten. *AERA Open*, 7, 23328584211006163.
- Engel, M., Claessens, A., & Finch, M. (2013). Teaching students what they already know. The (mis)alignment between mathematics instructional content and student knowledge in kindergarten. *Educational Evaluation and Policy Analysis*, 35(2), 157–178.
- Franke, M., Kazemi, E., & Turrou, A. (2018). *Choral Counting & Counting Collections: Transforming the PreK-5 Math Classroom*. Stenhouse Publishers, Portsmouth, NH.
- Koppich, J., & Stipek, D. (2020). *PreK–3 alignment: Challenges and Opportunities*. California Policy Analysis for California Education: Stanford University.
- National Association for Elementary School Principals (2005) *Leading Pre-K-3 Learning Communities Competencies for Effective Principal Practice*. Washington DC (<https://www.naesp.org/sites/default/files/leading-pre-k-3-learning-communities-executive-summary.pdf>)
- Pressley, Michael (2006). *Reading instruction that works: the case for balanced teaching*. New York: Guilford Press.
- Puma, M., Bell, S., Cook, R., Heid, C., Broene, P., Jenkins, F., Mashburn, A., & Downer, J. (2012). *Third Grade Follow-up to the Head Start Impact Study Final Report*, OPRE Report # 2012-45, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Reardon, S. (2013). The widening income achievement gap. *Educational Leadership*, 70 (8), 10-16.
- Stipek, D., Borsato, G. & Coburn, C. (2002). *Bringing Early Childhood Education into Elementary School: School Leaders are Key*. Development and Research in Education (DREME). dreme.stanford.edu
- Stipek, D., Clements, D., Coburn, C., Franke, M., & Farran, D. (2017). PK–3: What does it mean for instruction? *Social Policy Report*, 30(2).
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, *Toward the Identification of Features of Effective Professional Development for Early Childhood Educators, Literature Review*. Washington, D.C., 2010.

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