Classroom Age Composition and Children’s Cognitive and Socio-Emotional Growth: The Implications of Classroom Quality and Teacher Qualifications
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Introduction

• Over 75% of children in Head Start are in mixed-age classrooms (e.g., 3- and 4-year olds) and the practice is common in many other types of center- and family-based care.
• Despite the widespread nature of this practice, we know little about its’ associations with preschool children’s development.
• Furthermore, these associations likely vary across classroom, but we do not know the role that classroom quality and teacher characteristics play in them.
• We investigated 3 questions:
  o What is the association between the age of classroom peers and children’s academic growth and social behavior development across one year of Head Start?
  o Are these associations moderated by classroom quality?
  o Are these associations moderated by teachers’ education and experience?

Methodology

• We used data from the Family and Child Experiences Survey (FACES 2009), a nationally representative sample of children in their first year of Head Start. Our sample included 2,829 children in 486 classrooms.
• This is the first national dataset to include information of the ages of all children in the classroom, which was reported by teachers (proportion age 3, age 4, age 5).
• Children were directly assessed using the Peabody Picture Vocabulary Test, Woodcock-Johnson Letter-Word Identification subtest, Woodcock-Johnson Spelling subtest Math: Woodcock-Johnson Applied Problems.
• Teachers reported on children’s behavior problems and social skills, as well as on their own education and experience.
• We also include a wealth of classroom- and child-level covariates in our models.
• Our focal models are regression-based with interaction terms for our moderators and sampling weights applied.

Findings: What We Have Learned

• When 4-year-old children were in classrooms with higher proportions of 3-year olds, they demonstrated less gains in literacy and math skills across the year. 3-year olds academic gains were unrelated to the age of their classmates, as was social behavioral development for both the older and younger children.
• When 4-year olds were in classrooms with a lower proportion of 3-years, high classroom quality was linked with greater gains in literacy. However, when 4-year olds were in classrooms with a higher proportion of 3-year olds, classroom
quality was unrelated to their gains in language and literacy. A similar pattern emerged for math.

- Teacher experience did not moderate relations between age composition and child outcomes.
- Teacher education did moderate relations between composition and literacy gains for 4-year olds, such that the negative associations between higher concentrations of 3-year olds in the classroom and 4-year olds’ literacy development was only present when the teacher did not have at least an associate’s degree. However, this pattern did not emerge for math.

**Implications for Policy and Research**

- Although mixed-age environments may have positive benefits for preschool-aged children, the current work shows that there are also potential negative consequences, especially for older children in the classroom.
- Future research needs to identify the factors within a mixed-age classroom that promote positive development for children of all ages.
- Future research should also incorporate a wider range of children’s outcomes to capture developmental processes that may be positively influenced by mixed-age peers, such as the development of leadership and empathy.
- Teachers may benefit from training or professional development that focuses specifically on how to navigate challenges associated with mixed-age classrooms.

**Publications:**


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