More challenging content in kindergarten boosts later performance

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Prof. Amy Claessens has found that children could score bigger gains in math and reading if teachers introduced more advanced content in kindergarten.

(Phys.org) —Children of all economic backgrounds could score bigger gains in math and reading if teachers introduced more advanced content in kindergarten, according to a new study from the Harris School of Public Policy Studies.

When kindergarten teachers neglect advanced content, children tend to stagnate in reading performance later in elementary school, said study co-author Amy Claessens, assistant professor of public policy at Chicago Harris. Those students also gain less in mathematics than students whose kindergarten experience included more advanced content.

According to Claessens, "basic content" is defined as skills that more than half of the children entering kindergarten have mastered. If the majority of children have not yet grasped it, the content is considered to be advanced.

"There have been many studies of the effects of full-day kindergarten and reduced class size on student learning during kindergarten," Claessens said. "But we know relatively little about the role of content coverage during the kindergarten years."

Using the Early Childhood Longitudinal Study–Kindergarten Cohort, a nationally representative sample of kindergarteners, Claessens and her co-authors, Mimi Engel and Chris Curran from Vanderbilt University, examined the reading and math content covered in kindergarten classrooms and how they relate to later changes in children's academic achievement.

The authors also looked at whether exposure to advanced content in reading and mathematics would enable kindergarten children to maintain and extend the advantages acquired from attending preschool programs.

The results indicate that adding four more days per month on advanced topics in reading or mathematics is associated with moderate increases of test score gains.

Claessens believes changing content coverage is a potentially easy and low-cost means to improve student achievement in kindergarten and

beyond, especially compared with options such as lengthening the school day or reducing class size.

"At a time when education programs are facing budget constraints, this is a more viable option," Claessens said. "Teachers could increase their time on advanced content while reducing time on basic content, without the need to increase overall instructional time, and do so in a developmentally appropriate way for young kids."

The paper, "Academic Content, Student Learning, and the Persistence of Preschool Effects," was published in the *American Educational Research Journal*.

More information: Amy Claessens, Mimi Engel, and F. Chris Curran. "Academic Content, Student Learning, and the Persistence of Preschool Effects." *American Educational Research Journal* 0002831213513634, first published on November 25, 2013 DOI: 10.3102/0002831213513634

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