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Emphasizing social play in kindergarten improves academics, reduces teacher burnout

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Source: University of British Columbia

Summary: Emphasizing more play, hands-on learning, and students helping one another in kindergarten improves academic outcomes, self-control and attention regulation, finds new UBC research.

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FULL STORY

Emphasizing more play, hands-on learning, and students helping one another in kindergarten improves academic outcomes, self-control and attention regulation, finds new UBC research.

The study, published today in the journal *PLoS One*, found this approach to kindergarten curriculum also enhanced children's joy in learning and teachers' enjoyment of teaching, and reduced bullying, peer ostracism, and teacher burnout.

"Before children have the ability to sit for long periods absorbing information the way it is traditionally presented in school through lectures, they need to be allowed to be active and encouraged to learn by doing," said Dr. Adele Diamond, the study's lead author, a professor in the UBC Department of Psychiatry and Canada Research Chair in Developmental Cognitive Neuroscience. "Indeed, people of all ages learn better by doing than by being told."

Through a randomized controlled trial, Diamond and her colleagues analyzed the effectiveness of a curriculum called Tools of the Mind (Tools). The curriculum was introduced to willing kindergarten teachers and 351 children with diverse socio-economic backgrounds in 18 public schools across the school districts of Vancouver and Surrey.

Tools was developed in 1993 by American researchers Drs. Elena Bodrova and Deborah Leong. Its foundational principle is that social-emotional development and improving self-control is as important as teaching academic skills and content. The program emphasizes the role of social dramatic play in building executive functions -- which includes skills such as self-control and selective attention, working memory, cognitive flexibility, reasoning, and planning.

"Executive functioning skills are necessary for learning, and are often more strongly associated with school readiness than intelligence quotient (IQ)," said Diamond. "This trial is the first to show benefits of a curriculum emphasizing social play to executive functioning in a real-world setting."

Previous studies had demonstrated that Tools produces better results for reading and math and on laboratory tests of executive functions. Diamond's new study demonstrates for the first time that Tools also dramatically improves writing (exceeding the top level on the provincial assessment scale), improves executive functions in the real world, and has a host of social and emotional benefits not previously documented.

Teachers reported more helping behavior and greater sense of community in Tools classes. Cliques developed in most control classes, but in few Tools classes. Late in the school year, Tools teachers reported still feeling energized and excited about teaching, while control teachers were exhausted.

"I have enjoyed seeing the enormous progress my students have made in writing and reading. I have never had so many students writing two or three sentences by the end of kindergarten," said Susan Kochan, a Tools teacher in Vancouver. "I have also enjoyed seeing the students get so excited about coming to school and learning. They loved all the activities we did so much that many students didn't want to miss school, even if they were sick."

Story Source:

Materials provided by **University of British Columbia**. *Note: Content may be edited for style and length.*

Journal Reference:

1. Adele Diamond, Chris Lee, Peter Senften, Andrea Lam, David Abbott. **Randomized control trial of Tools of the Mind: Marked benefits to kindergarten children and their teachers.** *PLOS ONE*, 2019; 14 (9): e0222447 DOI: 10.1371/journal.pone.0222447

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