

Experimental Validation of the *Tools of the Mind* Prekindergarten Curriculum

The Problem

Preschool attendance has increased rapidly in the past 20 years, and over three-fourths of the states have state-funded programs. With income requirements in over 70 percent of these state-funded programs, many more disadvantaged children have access to preschool than ever before. However, these children continue to enter kindergarten performing below their peers from middle income families in pre-academic skills such as early literacy and social skills.



School readiness – the idea that children enter kindergarten with the foundational skills that allow them to make progress in school – has emerged as central to the future success of students. However, despite the nation’s rising interest in preschool and the increase in preschool participation, we still do not know how to configure prekindergarten instruction to reliably promote both school readiness and long-term school success.

Tools of the Mind is a preschool curriculum first implemented in classrooms in 1993. *Tools* is both a curriculum and a professional development program for teachers. *Tools* teachers use mediators (guides such as symbols, clues, signs, etc.), language (both oral and written), and shared activity (play, buddy reading, etc.) to help preschoolers learn.

Though some evaluations of *Tools* have indicated a positive impact on student abilities, these studies have had various weaknesses and highlight the need for a rigorous, well-executed experimental study of the *Tools of the Mind* curriculum. PRI’s study addresses the weaknesses found in other studies of *Tools*, and will help define what types of prekindergarten instruction reliably promote students’ future success.

The Research Questions

PRI’s study seeks to answer the following questions:

1. Do children in *Tools of the Mind* classrooms improve more in literacy, math, social skills, and behavior problems during the preschool year

- than children in “business as usual” control classrooms? Are those gains sustained through kindergarten and first grade?
2. Do children in *Tools of the Mind* classrooms show greater gains in learning-related self-regulation (the ability to focus on the task at hand) than children in the control classrooms? Do those gains mediate the curriculum effects on literacy, math, and social skills outcomes?
 3. Are there differential effects of *Tools of the Mind* associated with characteristics of the children or the classrooms?

The Research Design

Six schools districts in Tennessee and North Carolina have agreed to be a part of PRI’s study. The research sample will be drawn from 40 schools representing a range of urban, rural, and suburban locations and serving demographically diverse children. Half the schools will be assigned to the *Tools* condition and half to the “practice as usual” control condition.

The teachers in the classrooms assigned to the control condition will continue to use whatever curriculum and professional development that is typical in their setting. The teachers in the *Tools* condition will begin the professional



development sequence for *Tools* and begin implementing the *Tools* curriculum the first year of the study. However, that first year will be a training and practice year for the teachers and no measures on curriculum effects will be taken.

After the training and practice year, *Tools* teachers will continue to implement the curriculum for at least two more years. Each year of the study, a sample of students for each classroom will be assessed on the outcome measures – direct assessments and teacher ratings for the children. The children will be individually tested by trained assessors at the beginning and end of the pre-kindergarten year.

For More Information

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[Tools of the Mind Preschool Brochure](#)
[Tools of the Mind article in USA Today](#)