

The Tools of the Mind curriculum improves self-regulation and academic skills in early childhood



What is the aim of this review?

This Campbell systematic review examines the evidence on the effectiveness of the Tools of the Mind curriculum in promoting children's self-regulation and academic skills, in order to inform its implementation in schools. The participants included students of all ages, gender, ethnicity, special education status, language-learning status, and socio-economic status. The review summarises findings from 14 records across 6 studies conducted in the USA.

The Tools of the Mind early childhood curriculum appears to improve children's self-regulation and academic skills. The assessment of the Tools curriculum is hampered by a lack of rigorous evidence and more research is necessary to corroborate this finding.

What did the review study?

Tools of the Mind (Tools) is an early childhood education curriculum, which involves structured make-believe play scenarios and a series of other curricular activities.

Tools aims to promote and improve children's self-regulation and academic skills by having a dual focus on self-regulation and other social-emotional skills in educational contexts. This review examines the evidence on the effectiveness of tools in promoting children's self-regulation and academic skills, in order to inform its implementation in schools.

The Tools curriculum improved children's math skills relative to comparison curricula

What studies are included?

Included studies had to have used randomized controlled trials or quasi-experimental studies and reported on one or more quantitative effect sizes regarding Tools' effectiveness in self-regulatory or academic domains.

A total of 14 records across 6 studies were included in the review. The participants included students of all ages, gender, ethnicity, special education status, language learning status, and socio-economic status. The studies included measured at least one of four primary outcomes and did not measure any secondary outcome. Studies that compared Tools with a business-as-usual or another intervention were included in the review.



How up-to-date is this review?

The review authors searched for studies published up to December 2016. This Campbell Systematic Review was published in October 2017.

What is the Campbell Collaboration?

The Campbell Collaboration is an international, voluntary, non-profit research network that publishes systematic reviews. We summarise and evaluate the quality of evidence about programmes in the social and behavioural sciences. Our aim is to help people make better choices and better policy decisions.

About this summary

This summary was prepared by Ada Chukwudozie (Campbell Collaboration) based on the Campbell Systematic Review 2017:10 The Tools of the Mind curriculum for improving self-regulation in early childhood: a systematic review by Alex Baron, Maria Evangelou, Lars-Erik Malmberg, and G.J. Melendez-Torres (10.4703/csr.2017.10). The summary was redesigned and proofread by Tanya Kristiansen (Campbell Collaboration). Financial support from the American Institutes for Research for the production of this summary is gratefully acknowledged.



All included studies were conducted in the USA.

What are the main results in this review?

The Tools curriculum significantly improved children's math skills relative to comparison curricula, but the effect size was small. There are also shortcomings in the quality of evidence.

Although the average effect sizes for self-regulation and literacy favoured tools compared to other approaches, the effect was not statistically significant. The evidence from the small number of included studies is mostly consistent with the evidence observed for other similar programs, but again the evidence is weak.

The results for the outcome measures were not statistically significant.

What do the findings in this review mean?

Generally, the Tools curriculum seems to improve children's self-regulation and academic skills. However, given the small number of included studies, as well as other methodological shortcomings, such as the high risk of bias in some of the included studies, this conclusion should be read with caution.

While there is doubt as to the validity of the findings, Tools' educational approach seems to be consistent with many child developmental theories and as such, should not be ruled out. There is a need to conduct more high quality research, especially about studies focused on demonstrating Tools' effectiveness in promoting children's self-regulation skills.