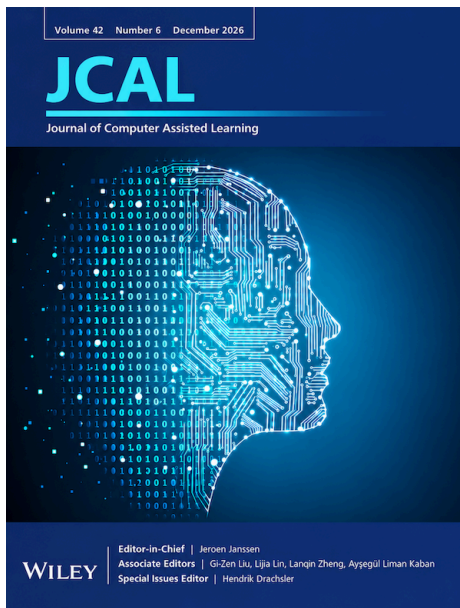


Assessing Computational Thinking in Early Childhood: New Systematic Review

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research team reviewed 30 studies from 28 articles that developed, validated, or adapted computational thinking assessments for children ages 3-8. They examined the computational thinking knowledge and skills being measured, how the assessments were implemented, and the psychometric evidence reported for reliability, validity, and fairness.

The review revealed several important patterns. Most assessments emphasized algorithmic thinking and sequences and often relied on paper-based, selected-response formats. The researchers also found that many studies provided evidence of content and construct validity, but evidence of criterion validity and fairness was substantially scarce. The study points to an important direction for the field: developing computational thinking assessments that are not only developmentally appropriate for young children, but also supported by strong psychometric evidence so that children can be assessed fairly and without bias.

Congratulations to Chungsoo and the research team on this important contribution at the intersection of computational thinking, assessment, and early childhood education.

How well do existing CT assessment tools measure young children's computational thinking? Do they do so reliably, validly, and fairly?

That question is at the center of a new systematic review by recent ITLS graduate Chungsoo Na, Dr. Jody Clarke-Midura, Wilhelmina van Dijk (Assistant Professor of the department of Special Education and Rehabilitation Counseling), and Lingna Xu, published in the *Journal of Computer Assisted Learning*, titled "Assessing Computational Thinking in Early Childhood: A Systematic Review of Instruments, Constructs and Psychometric Evidence"

As computational thinking becomes increasingly emphasized in early childhood education, researchers and educators need ways to understand what young children know and can do. But assessing computational thinking at this age comes with an important challenge: What skills should assessments measure, how should they measure them, and what evidence shows that the results are reliable, valid, and fair? To explore these questions, the