Integrating Computing into Literacy and Math

What's going on?

Computational skills are in increasing demand in today's world. It is imperative that the students learn Computer Science (CS) and Computational Thinking (CT) concepts. Researchers are investigating whether or not CS might have a positive impact on reading and math learning and scores to support the value of integrating CS.

What is it?

Multiple studies have shown the benefits of teaching integrated subjects in K-5. Integrating CS means integrating it into other subject areas, like math, literacy, science, and more. Early integrated CS research shows that certain pedagogies support learning in *both* subjects, making it a promising practice for teaching CS.

Why does it matter?

Interdisciplinary study is beneficial for student learning, especially in terms of engagement. Student's preconceptions on who learns CS are shown to solidify around 2nd and 3rd grade, making this time period critical to ensuring students feel comfortable pursuing these skills that are increasingly integral to society.

How to use it?

Some current promising practices in integrating CS include:

- Develop lesson plans that build on existing knowledge to reduce cognitive load
- Capitalize on connections between subjects
- Relate instruction to authentic scenarios

CS Integration

Resources **Research** **Podcasts**

ACE INSTITUTE for ADVANCING COMPUTING EDUCATION

SIGCSE Special Interest Group Computer Science Education

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