

Mathematical literacy for everyone using arithmetic games

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ABSTRACT

An innovative mathematics game shown to be effective for low-achieving mainstream students is tested in special education for learners with intellectual disabilities. The game relies on a graphical, intuitive representation for numbers and arithmetic operations to foster conceptual understanding and numbers sense, and provides a set of 2-player games to develop strategic thinking and reasoning skills. The game runs on computers and interactive white boards, and as an augmented reality application at a science centre. We compare its use in special education and mainstream education with respect to usage, performance levels and learning gain. The game has been used by teachers in special educations, with gains in mathematical understanding, strategic thinking and communication skills as effects.

Full papers will be published in the Conference Proceedings and will be available to delegates at the conference on Sept. 10.

Full papers will be released on-line in the ICDVRAT archive on March 15.