THE TRANSFORMATIVE PRACTICE OF MATHEMATICS LEARNING: USING TECHNOLOGY FEEDBACK FOR BLEND APPROACHES

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The dynamic area of mathematic education is seeing new technologies that enhance the learning outcomes and motivation of students. Tow new studies are discussed as follows to help understand and visualize how technology and advanced methodologies improve mathematics instruction.

The contributions of Whalen et al. (2023) address an important issue relevant to a student's learning: this is motivation and attribution. Traditional classroom settings often leave students explaining low performance in terms of a lack of ability, really discouraging learners. The promising intervention indicated from their field experiment with the high school students was through high school student digital re-attributional feedback after practice tasks. Thus, this kind of individualized digital feedback presented opportunities to assist students in reconfiguring their views about learning toward positive perceptions, especially beneficial to students who performed relatively poorly. To complement this digital approach, the work of Egara and Mosimege on blended learning (2024) presents another transformative perspective. From thorough research, it has been shown that blended learning methodologies can potentially increase the improvement of mathematics achievements and retention by significantly improving the performance of students in secondary school. Of interest in this work is how the gender dynamics presented whereby the female students showed a larger impact in terms of retention score improvement with blended learning methodologies.

These studies bring an important message for teachers: modern mathematics education must move out of the lecture method. Digital feedback mechanisms, integrated with blended learning strategies, can make teaching more engaging and personalized for learners. The digital re-attributional feedback may reshape the perceptions of students concerning their potential in math, while the blended learning approach shall provide the learners with different flexible opportunities of learning. Such findings imply the following practical implications for teachers and educational administrators: investment in professional development on understanding and implementing digital feedback strategies may be transformative, curriculum design incorporating both traditional and technological learning modes could serve to address diverse learning needs, and recognizing and addressing motivational aspects of learning can be as crucial as the mathematical content itself.

As mathematics education continues to change, these research-based strategies give promise of more inclusive, effective, and motivating learning environments. With technological innovations and student-centered approaches, we can support learners not only to understand mathematical concepts but to have a passion for mathematical thinking.

References:

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