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Integration in the curriculum as a factor in math-game effectiveness.

Torbeyns, Joke (ed.) et al., Describing and studying domain-specific serious games. Cham: Springer (ISBN 978-3-319-20275-4/hbk; 978-3-319-20276-1/ebook). Advances in Game-Based Learning, 133-153 (2015).

Summary: While numerous claims are made about the effectiveness of games, the studies that examine their educational effectiveness often contain flaws resulting in unclear conclusions. One possible solution for these shortcomings is to focus on separate game elements rather than on games as a whole. A second solution is to take into account students' perception as this is likely to affect students' interpretations and learning outcomes. This study investigated the effect of the integration of an educational game in the curriculum on students' motivation, perception, and learning outcomes. Forty-nine vocational track students participated, all working in a game-based learning environment for learning calculations with fractions. The results demonstrate that integrating the learning content in the game with the learning content in the classroom is related to students' in-game performance, but not to students' math performance on a paper-and-pencil test, postgame perception and postgame motivation. To conclude this chapter, practical and theoretical implications for the fields of instructional design and educational games research are discussed.

Classification: U70 D30 F40 A20 R80

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