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**Secondary students learning mathematics through digital game building: a study of the effects and students' perceptions.**

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Summary: This study explored secondary students' learning experiences in mathematics through digital game building. In this study, students were asked to become designers and builders in order to coauthor their own mathematics learning. Grounded in enactivism, this study examined the impact of game building on students' achievement. In addition, it explored students' perceptions about their game building experience. Forty secondary students participated either in a treatment or control group. Results showed that the treatment group experienced significant achievement gains. The analysis of the qualitative data revealed that the students perceived that game building experiences afforded them a chance to see math in a new light: math learning became fun, exciting, creative, and contextualized shared actions. Further discussion and implications are detailed. (ERIC)

*Classification:* D40 U70 C20 C30

*Keywords:* digital game building; learning; students' perception; activities