Educational Games in Practice: The Challenges Involved in Conducting a Game-Based Curriculum

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## Authors

Berg Marklund B.;Alklind Taylor A.-S.

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# Abstract

The task of integrating games into an educational setting is a demanding one, and integrating games as a harmonious part of a bigger ecosystem of learning requires teachers to orchestrate a myriad of complex organizational resources. Historically, research on digital game-based learning has focused heavily on the coupling between game designs, previously established learning principles, student engagement, and learning outcomes much to the expense of understanding how games function in their intended educational contexts and how they impact the working processes of teachers. Given the significant investments of time and resources teachers need to make in order to conduct game-based learning activities, the foci of past research is problematic as it obfuscates some of the pressing realities that highly affect games’ viability as tools for teaching and learning. This paper aims to highlight the demands that the implementation and use of an educational game in formal educational settings puts on teachers’ working processes and skillsets. The paper is based on two case studies in which a researcher collaborated with K-12 teachers to use MinecraftEdu (TeacherGaming LLC, 2012) as a classroom activity over a five-month long period. By documenting both the working processes involved in implementing the game into the classroom environment, as well as the execution of the actual game-based classroom activities, the studies identified a wide variety roles that a teacher needs to take on if they are to make games a central part of a school curriculum. Ultimately, the paper highlights the importance of understanding the constraints under which teachers work, and argues that a better understanding of the contexts in which games are to be used, and the roles teachers play during game-based learning scenarios, is a necessary foundation for improving games’ viability as educational tools.

# Outcome

"..teachers need to take on a wide variety of important roles when integrating and using games in their educational environment. The skill sets needed to perform the roles well were also found to be quite diverse as they involved technological know-how, gaming literacy, subject matter expertise, and naturally a strong pedagogical foundation.... Organizational support structures, availability of hardware and software, and the availability of other resources or obstacles, need to be considered before the game-based learning curriculum is designed.... These findings, in contrast to the ones made by Chee, Mehrotra and Ong (2014) whom suggests that 'the key challenges teachers face are not technology centric but practice centric, (p. 313), identify technology availability and literacy as a major bottleneck and guiding factor in the integration of digital game-based learning in schools.... On the topic of gaming literacy, the conducted case studies also clearly showed that individual proclivities, skills, and preferences vary dramatically even among students who are of similar ages and backgrounds." (Authors, 133-134)