Mobile game-based learning in the era of “shifting to digital”

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The interplay of game-based learning and going mobile is an area yet to unfold. Current evidence seems to suggest that the use of smartphones, tablets, sensors, games (e.g., location-based games), allow for just-in-time and just-in-place learning however, the important effect of mobile game-based learning on learners’ engagement and achievement is still to be documented in research. Review articles have, in general, great value in moving the field forward when research is inconclusive. What’s more, in the era of shifting to digital, a review of mobile game-based learning is of paramount importance in gathering relevant research evidence and triggering further discussions in the area.

Giannakas et al. (2018) conducted such a review of mobile game-based learning research published from 2004 to 2016 showing that the transition to mobile is not a simple and quick modification of existing game-based learning solutions, but rather requires well-designed solutions from a technological as well as pedagogical standpoint. In this special issue, we have gathered three scholarly responses to Giannakas et al. (2018) article, representing critical and forward-looking perspectives on mobile game-based learning in terms of research, theory, and practice. A brief synopsis of each response follows.

Louis Nisiotis focuses on the key ideas presented in Giannakas et al.’s (2018) review from a practical perspective, pointing to how practitioners, scholars and learning designers can use these findings to effectively utilise mobile game-based learning approaches to support and enhance learning. Nisiotis further discusses possible future directions relevant to the use of smartphone enabled virtual reality for mobile game-based learning.

Peter C. Honebein presents a theory-based critique as a response to Giannakas et al. (2018) from the perspective of an expert who has designed and consulted on instructional mobile games as well as from the lens of current instructional theories. The response discusses the impact of Giannakas et al.’s review but also limitations and constraints that future research should aim to address, such as providing foundational instructional theories, models, and methods as a design foundation for mobile game-based learning solutions.

By taking a research perspective on Giannakas et al. (2018), Lauren Eutsler summarizes key ideas relative to mobile game-based learning, value of the work, application to the educator context and limitations. With full awareness of the increasing need to connect teachers and students remotely and the fact that educators navigating the transition to remote learning need practical guidance, in her response, Eutsler provides a comprehensive list of recommendations

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to guide future research endeavours in the areas of design, pedagogy, and impact on student learning. A list of future suggestions provides a clear roadmap of ideas to support research and practice of mobile game-based learning solutions.

There is a lot of expectation around emerging technologies to continue to advance teaching and learning but at the same time, lack of research to inform teachers, learners, education managers and even parents on best technologies for specific learning tasks (Díaz and Ioannou 2019). Digital games are one such technology. Building on Lee's (2021) response to Fengeng Ke (as cited in Ioannou 2021), I would extend the argument that research games are very hard to find in general whilst this becomes even more difficult in time of quick transition to online learning. In this case, commercial games are more attractive and accessible by advocates of game-based learning; however, their pedagogical value is often not documented. In terms of supporting the educator in the era of shifting to digital, we must quickly move toward building a repository of applications for game-based learning. These applications should run on a variety of devices and platforms (Android, Windows, iOS) or as web-based applications, to accommodate all users and they should be customizable to meet the specific needs of the educator. As it stands, lots of such applications are available online, free or at low cost (Ioannou 2018), however few of them have been pedagogically evaluated; this should be the focus of future research in the area, to support the educator while bridging the gap between commercial and research-driven games.

The attention to mobile game-based learning is expected to increase in the era of shifting to digital. The three respondent authors to Giannakas et al. (2018) have taken a critical but also forward-looking view on the implications of the review on addressing current challenges. The ultimate goal is that of arousing educators and investigators to enact and benefit from mobile game-based learning as well as to contribute to the growing empirical research and development in the area. We think that the ideas included in the responses herein will serve this evolving dialog.

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