EJEL Editorial for Volume 18 Issue 3, July 2020
Special issue on Game-Based Learning

We all hoped for the best for later in 2021, but COVID-19 continues to show us it's cruel face this fall and winter 2020-21. Despite this we are pleased to complete this special Game Based Learning issue of the EJEL of the year 2020.

As an e-learning community, we have gained a lot of experience and knowledge in coping with the COVID epidemic. All educational institutions have, so to say, been ongoing living e-learning labs, for almost a year. In fact, it is true to say that in many countries or territories, online education has become more the rule than the exception. We have gained valuable experience doing online design workshops, group work and lecturing at universities, and we have executed education that we did not believe was possible using this medium. On the other hand, the circumstances have shown us that social differences among some school students have negatively influenced learning outcome, such as young students not having access to computers and not knowing how to handle online teaching services. Teachers have also been challenged on how to supervise young school students in using online learning services.
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Those already researching in the field of online learning and game-based learning have wasted no time in responding to the call for solutions to manage the change in teaching methods enforced upon many institutions as a result of the current pandemic and therefore I am pleased to present this special issue with five papers looking at blended learning and game-based learning from different societal perspectives.

1. Studying game-based training to educate media-induced anxiety in young children.
2. Developing VR learning environments for reducing alcohol drinking among young people.
3. Facilitating students' active learning through developing a question bank for a peer-quizzing game.
4. Developing and using a pre-MOOC for introducing computer science from a gender perspective for higher education students.
5. Studying math in Minecraft looking at the mathematical experiences across game and school domains.

The papers' collection demonstrates the complexity that researchers, e-learning developers, and game-based learning designers are faced with developing or implementing e-learning solutions.

The first paper by Tanja Heumos and Michal D. Kickmaier-Rust discusses how different games have been applied to treat different psychological disorders, especially phobias of anxiety and how media-induced disorders have recently increased. The study develops a tailored and theoretically sound application for young children with media-induced phobias of anxiety. The research group introduces a game-based training app (MARTY), teaching young children to cope with their fears. Physiological data such as heart rate and skin resistance were analysed as well as qualitative elements. For the four- to a six-year-old group of users, significant key data measures were positively correlated with the children's general anxiety level. The MARTY app is suggested as a promising tool for parents and children, reducing fear and anxiety.

The VR paper by Patricia Bianca Lyk et al., introduces the co-design of a VR-tool for alcohol prevention. As Denmark is a country with one of the highest alcohol consumptions among young people, there is a need for different tools to reduce this pattern of abuse. The application offers an immersive first-person approach to understanding decision-making in different youth environments such as youth-party settings in which alcohol consumption takes place. The application consists of 125 360-degree movie sequences, and users choose how to handle and act, e.g., concerning peer pressure in the VR-game. The iterative process of developing the application focused on concept, prototype design, pre-usability testing, innovation design and usability test. The co-design process was accomplished with students from a folk high school and a boarding school. Developing the large-scale multi-narrative application flowcharts was a design learning emphasising the great help of using flowcharts in organising filming and structuring the footage in the UNITY develop-kit.

The third paper by Nafisul et al., is focused on one of the game-based learning community's very basic elements, namely quizzing, as they consider how to motivate and engage people. The research group used a peer-quizzing game named "Tower of Questions" (ToQ). Students anonymously receive points for posing and answering the

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question of in the game. During a 3-month long study for two consecutive years, the research group found, based on the feedback, that students enjoyed collecting points, and they preferred to have ready-made questions in the bank for practising. It also seems that students were concerned about the quality of the crowdsourced questions, and they enjoyed learning their course material through this game approach and found the tool useful.

Bernadette Spieler, et al state in their paper that computer science knowledge (CS) is essential for many companies. Furthermore, computational thinking (CT) skills are required in all contexts of problem-solving. This is combined with a serious problem of gender disparity in technology-related fields. Consequently, many teenagers (girls) exclude computing from their career path. In January 2019, a MOOC (Massive Open Online Course) entitled "Get FIT in Computer Science" was introduced to provide a basic introduction to different CS concepts. Data were collected at three stages for evaluation purposes: 1) during the MOOC, 2) during the offline lecture, and 3) two months after the lecture. The results showed that the MOOC framework was a promising approach to support and motivate at least a certain group of first-semester students, especially those who had no prior knowledge in CS and therefore, particularly female students.

The last paper by Erik Ottar Jensen and Thorkild Hanghøj presents qualitative empirical findings from a study on Minecraft as a mathematical tool and a learning environment in a teaching unit for 5th grade students. They used the coordinate system embedded in Minecraft to navigate and explore the game to solve mathematical problems. The data coding was based on domain theory and an interpretive framework for understanding students' mathematical identity. Key findings look at the students' experience of the coordinate system as both part of the mathematical academic domain and students' daily playing of Minecraft. Students actively applied the coordinate system in playing Minecraft and experienced new ways of doing mathematics. The paper is offering design guidelines for the future use of games in mathematics education.

Concluding, I hope you find useful insights from reading the paper in this issue of EJEL. I am sure in the future we will see an increased number of e-learning research papers related to online teaching and hopefully also a more human and immersive, blended learning approach.

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Editor Biography

Lars Elbæk is an associate professor and researcher in the unit Learning and Talent in Sport (LET'S), SDU. Lars lecturer and do research in movement interaction and design research and has several years of experience in sport, physical movement, learning, and sport pedagogy. His special interest is value stances in sport and movement sport entrepreneurship.