

Gaming in education: a digital game-based learning example

Review: Tak-Yan, L., Shek, D. T. L., Merrick, J., Lee, S. S. W. and Merrick, J. (Eds.) (2020). *Positive Youth Development: Digital Game-Based Learning*. Nova Science Publishers.

Children and adolescents spend a lot of time online and grow up in a digital environment that both promotes and at the same time threatens the development of their bio-psycho-social well-being. Amidst the flood of commercial computer games available on the market, some of the most successful typically involve violence and adult content. As such, adolescents using them are at higher risk of addiction, violence, sexual exploitation, exposure to hateful or discriminatory content, online and offline victimization, and social isolation. This book explores the potential of gamification, that is, the application of game-design elements in an education context. It aims to improve student engagement and learning while providing in-depth feedback allowing students, teachers, parents, and youth workers to explore different topics relevant for older children and adolescents. Using educational games as effective, efficient, and motivational alternatives to other entertainment games available on the market, the book guides the reader through the results of the positive youth development program called the project P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme, originally designed to nurture holistic youth development among Chinese junior secondary school students.

The project produced seven digital positive youth development (DPYD) games, with the intent of promoting five core competencies (social, cognitive, emotional, moral, and behavioural), as defined by Catalano et al. (Tak-Yan et al. 2020, p. 8), while also helping construct a clear and positive identity, self-determination, self-efficacy, bonding, resilience, spirituality, and prosocial norms among adolescent users of these games. The book thoroughly explores the theoretical background of the games, their structure, the qualitative results of their testing, current setbacks, and future possibilities. The games are entitled *The Digital Age* (teaching respect for privacy), *The Integrity Crisis* (teaching integrity), *The Bullying Storm* (addressing bullying and cyberbullying), *The Male–Female Dichotomy* (addressing gender stereotypes and biases), *The Great Thinking Adventure* (addressing cognitive traps), *A Journey to Somewhere, to Someone* (addressing friendship and love), and *Live a Meaningful Life* (addressing materialism and success as perceived by society).

The book is divided into three parts. The introductory chapter presents the core concepts used in the development of the DPYD games and introduces the chapters. The second and main section of the book addresses each game individually. The chapters are clearly divided into sections that are repeated for each game. This makes it easier to follow and connect the theory through a literature review, the game design itself, and the results of the games, with teaching recommenda-

tions for each game, both individually and in comparison, to the other games. The teaching recommendations, in particular, give useful contextualizations of the games in educational settings. The book concludes with a section of acknowledgments, introducing the editors and all the participating parties.

The core chapters can be further divided into three rough categories according to the type of game. The first type comprises role-playing games, where the student plays a character in the game and can decide which of the six answers offered best suits them (*The Digital Age*, *The Integrity Crisis*, and *The Bullying Storm*). Based on the chosen answers, the games offer different scenarios and conclude by presenting the students with a personality score, which they then discuss in class or other educational settings. This helps students understand their character strengths and work towards improving their desirable traits while playing the games. A strong benefit of playing these games is that they offer various choices so that players can learn vicariously and use a trial-and-error strategy in a simulation, creating a solid environment for cooperative learning that encourages support and open discussion rather than only transmissive knowledge on topics such as personal and interpersonal relationships, communication, and self. The games also discourage competition and instead promote reciprocal relationships among peers, offering a safe space for the players to experience the consequences of their actions and practise critical thinking, which is especially important for sensitive topics such as bullying.

The second category consists of games that are essentially a test of knowledge (*The Male–Female Dichotomy* and *The Great Thinking Adventure*). The games were designed to introduce topics in an interactive manner and then test the participants on the knowledge they have retained from playing them. An extremely insightful aspect of these chapters is the qualitative feedback provided by two participants who play-tested the games, which is wonderful for the further development of the games. For example, for the game exploring gender differences, they pointed out repetitive portions of the games and unclear sections where the answers had unintended double meanings. Although this category focuses on games that test knowledge, the teacher's instruction in the book suggests that the game environment must create a comfortable atmosphere and space for interaction and classroom participation as well as encourage participants to express how they think and understand their rights and responsibilities, which is an excellent expansion beyond the materials provided by the game itself.

The last category can be described as games in board game form. *Live a Meaningful Life*, with its Monopoly-like setting, embodies the relationship between money and elements such as family, social organization, cultural practices, society, moral values, and value judgments, encouraging the discussion and learning of financial responsibilities. *A Journey to Somewhere, to Someone*, by contrast, incorporates a literary lesson alongside teaching perspectives regarding the different shapes that friendships can take, which is a great motivational factor that encourages students to develop reading habits. An interesting tidbit for this last category is the cultural exchange that the game provides, as it is designed to enhance exposure to traditional Chinese values and classics from Chinese and Western literature.

To conclude, the book is particularly interesting for teachers and others working in education, (mental) healthcare practitioners, and parents with older children or adolescents. The authors also recommend it for working with children with attention-deficit/hyperactivity disorder. The in-depth explanation of each individual game offers a perfect resource for game developers, and the up-to-date qualitative review provides an excellent springboard for researchers to collect more data on the effects of DPYD games and their continued contribution to preventative work with children, adolescents, and other potential future target groups.

Leopold Štefanič