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Changing the Games: The Benefits of Video Games

In 1962, the very first video game was born in the computer lab of the Massachusetts Institute of Technology. Since then, these electronic games which involve interaction between players and an input device have gradually become one of the major forms of entertainment (Kowert & Quandt, 2015). In 2011, 99% of boys between the ages of 2 and 17 play video games in the United States (NPD group, 2011); in 2014, 97% of American adolescents and children play at least one hour of video games per day (Granic et al., 2014). Despite their popularity, video games have been criticized by parents for their negative effects such as lowering psychological capabilities, diminishing social competences, and leading to aggressive behaviours. However, to fully understand the impact of video games on a player's behaviour and mental health, it is important to also consider the benefits of these electronic games. In fact, they evolved drastically in the last decade, becoming more sophisticated, realistic, and social in nature. Despite prejudices among parents, current research shows that the emotional and cognitive benefits of video games outweigh their negative effects on players. These games also create an environment conducive to situated learning.

To begin, video games can provide emotional benefits to those who play. According to Durkin and Barber (2002), video games are associated with positive features of mental development, and they are likely to be harmless. They examined the relationship between game play and personal well-being for 1304 high school students. Students who played computer

games scored favourably compared to students who have never played video games on several measurements such as positive mental health, self-esteem, depression, and activity involvement (Durkin & Barber, 2002). As working towards goals and accomplishing objectives can contribute to feelings of competence and well-being, students become more motivated. Jones et al. (2014) suggest that, during gameplay, players tend to relax and forget their problems, and the feeling of loneliness disappears. Moreover, online video games play an important role in connecting players together, allowing them to "interact, share, and be social" (Jones et al., 2014), especially when family and friends are far way. Thus, by being a great tool for emotional regulation, computer games can contribute to our flourishing mental health.

Contrary to conventional beliefs that computer games lead to laziness, they can improve a wide range of cognitive skills. For instance, shooter games are video games with the main objective of defeating the player's enemies by using the given weapons. They can enhance our cognitive abilities as players of those games have shown faster and more accurate attention allocation, higher spatial skills, and improved mental rotation abilities (Green & Bavelier, 2012). Spatial skills refer to the capacity to understand and memorize the spatial relation between objects or space. Mental rotation abilities are defined as the ability to rotate mental structures of three-dimensional and two-dimensional objects within our mind (Johnson & Moore, 2020) During the gameplay of a shooter game, players' senses are stimulated and sharpened as they find, locate, and aim enemies in their surroundings (Gray, 2015). Outside of the video games context, cognitive skills can have implications for education and career development as those skills are essential to our learning process, especially in the STEM (science, technology, engineering, and mathematics) areas (Wai et al., 2010). Hence, video games present great educational values for professions that require applying knowledge in different contexts.

Video games are a powerful tool for learning because they are an ideal platform for situated learning. Situated learning is an instructional model which promotes the acquisition of knowledge by actively participating in activities based on real-life experiences. For instance, Maddison 2200 is an epistemic game that allows players to inhabit the role of an urban planner (Granic & Lobel, 2014). In this game, players are asked to redesign a downtown pedestrian mall for local teenagers. By taking into consideration the city's budget, crime rate, revenue of the citizens, traffics, and affordable housing, players learn about the responsibilities of an urban planner. Furthermore, a study of Schlickum et al. (2020) showed that surgical novices who have been trained by a virtual reality endoscopic surgical simulator outperformed the control group of novices who have not been exposed to such training. Hence, video games present great educational values for students and learners who seek practice.

Nevertheless, some scientists believe that aggressive behaviour is associated with violent game play. According to Jordan & Romer's (2014) experiment, even a short episode of violent game play can increase aggressive thoughts and physiological arousal. A survey conducted by Exelmans et al. (2015) on a sample of 3,372 adolescents demonstrated that violent game play leads to violence and delinquency. However, a later study by Kühn et al. (2019) showed that the increase of aggressive thoughts is - if present at all - momentary. They argue that the effects of violent video games on aggressiveness is a short-life phenomenon that usually lasts under 15 minutes. Furthermore, these effects are strongly inconsistent as numerous studies fail to obtain the same results (Kühn et al., 2019). Even for a longer exposure to violent video games and a larger group sample, aggressive behaviour has not been observed. In an online study, a group of volunteers aged between 14 and 68 years old have been exposed to violent games for 4 weeks, but no increase of aggression-related and aggressive social behaviour has been observed

(Williams & Skoric, 2005). Thus, video games cannot be identified as one of the causes of aggressive behaviours among players.

In sum, computer games have positive effects on our mental health because they promote emotional stability, improve our ability to think, and enhance active learning. Although some opponents argue that video games lead to aggressive behaviours, the effects of violent games are short-lasting. Video games might not be a miracle ingredient, but they can be a great tool towards active learning and a positive feature of flourishing mental health.

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