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E-Sport and flipped inclusion between gamification and system learning: research guidelines.

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Abstract: e-Sports are generically defined as competitive video games, but also "a form of sport in which the primary aspects of sport are facilitated by electronic systems; player and team inputs as well as eSport system outputs are mediated by human-computer interfaces" (Hamari & Sjoblom, 2017, p. 213). Cross-media technologies, which externalize and accelerate cognitive abilities through social networks and gaming platforms, contribute to the co-generation of complex forms of exchange, interaction, collaboration, and co-production of thoughts in action (De Giuseppe, T., Delello, J., & Corona, F., 2020). This immersive approach has underscored the educational need to reconsider the use of shared play spaces, including reflecting on eco-sustainability with regard to the mass application of ludic media and typologies such as eSports. These have great potential to impact life patterns and require careful reinvestment in an authentic time pedagogy. Flipped inclusion for its mission of systemic inclusion, represents a possible model of application and amplification of the logic of gamification in academic teaching (Di Tore, S., 2023) also through the dimension of eSports.

Keywords: Gamification, Inclusion, Education, e-Sport, Flipped Inclusion.

1. Introduction

The growth of eSports in Italy and around the world has occurred hand in hand with the increasingly pervasive spread of the Internet and the technological advances that have affected and are still affecting the world of video games. One trend affecting aspects from an educational perspective is connected to accessibility in the way events are also enjoyed, linked for example to the opportunity for live video streaming.

Historically, prior to the 1960s, digital games were used primarily for demonstration purposes, as computers were large and too expensive for families (Monnens & Goldberg, 2015). In the late 1970s and 1980s, arcade games that used an electronic board included popular games such as Space Invaders (released in 1979), PacMan (in 1980), and Defender (in 1981). These arcade games helped create a culture that defined a generation "in which children and teenagers could go out and, with a reasonable amount of money, spend hours without their parents" (June, 2013, para. 18). In addition, one of the first generation of game consoles was Atari, which allowed people to play games such as Pong (1975), a type of virtual "pingpong" on their home television sets (June, 2013). E-Sports, also known as competitive gaming, is a form of

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organized electronic competition that takes place through and thanks to video games. The prefix "e" stands for "electronic" and emphasizes the digital nature of this new phenomenon. A video game competition can take place on any platform: PC, console or mobile. Esports involve professional, semi-professional or amateur video gamers who compete, as individuals or as part of a team, in order to overcome the competition of their opponents. They are an inclusive phenomenon, accessible to everyone, regardless of gender, race or personal physical ability.

The global COVID-19 pandemic has led to disruptions in traditional sports activities, but has offered a great opportunity for the eSports industry through live streaming of eSports events (Chan, et al., 2022; Italian Interactive Digital Entertainment Association, IIDEA, 2021). Despite the numerous benefits, eSports also entail psychological risks that cannot be ignored (Bànyai et al., 2019). One of the most discussed problems is video game addiction, a condition caused by intense involvement that can have significant negative effects on the daily life of players. This addiction is characterized by a loss of control over the time spent playing, with negative consequences on social relationships, school or work performance and physical and mental health. Gaming addiction can also lead to problems such as social isolation and depression. An additional risk factor is performance anxiety and stress: professional players, in particular, are subject to strong pressure to maintain high performance in every match, all aggravated by the unpredictable nature of competitions, where even small mistakes can lead to defeat. Competing in these conditions without the correct management of emotions and stress can cause chronic stress and symptoms of burnout. This is a common phenomenon among players who spend many hours playing or preparing for competitions, and manifests itself with physical and mental exhaustion, loss of interest in the game and a decline in performance. Long training sessions (some world-class players train up to ten hours a day, broadcasting the whole thing on streaming services), the pressure to achieve results and the lack of balance between private and professional life can contribute to this phenomenon.

In this contribution, through a review of the scientific literature, the coordinates of pilot studies will be outlined, starting from the focus on the risks and benefits of eSports and the systemic cooperative methods of learning by doing, present in the simple Flipped Inclusion model. The two research hypotheses proposed in this contribution start from the investment in the promotion of prosocial educational processes of systemic learning on which the Flipped Inclusion model invests and on the potential offered by eSports, organized in gamification practices and game-based learning practices to promote inclusion in non-formal and informal learning contexts such as corporate governance and territorial communities.

2. Esports: a historical-evolutionary framework

In recent years, eSports have evolved and have begun to involve numerous and different players, establishing themselves as an international phenomenon through the organization of championships or tournaments and dramatically increasing the number of fans. Among the most famous international competitions are the World Cyber Games, the E-lectronic Sports World Cup, DreamHack and the various annual tournaments organized by ESL (originally Electronic Sports League) and MLG (Major League Gaming). In 2016, the Italian e-Sports Association created the area dedicated to competitive gaming called Sport Elettronici thanks to the agreement with the Ente di Promozione Sportiva – Movimento Sportivo Popolare Italia recognized

by the Italian National Olympic Committee (CONI) and this has allowed Italy to participate every year in the eSports World Championship organized by the International e-Sports Federation thanks to the work of the Italian e-Sports Association. In this same year, the Trofeo Motor Show was born, organized by Expo TV, which from 2017 becomes itinerant. In 2018, the Italian Taekwondo Federation was the first official Italian sports federation to recognize electronic sports as a real sporting activity. The combination of eSports and gaming competitions in higher education is not new. However, it was not until the early 1970s that gaming competitions began to grow. Rather than being a deterrent, the COVID-19 pandemic fueled the growth of eSports worldwide due to online streaming options during quarantine (Clement, 2022; Perkins, 2020). In fact, quarantine measures not only increased the amount of time consumers played, but also the amount of money spent (Jackson, 2020). For example, a study on the successful Italian eSports team, Dropz, found that the COVID-19 period positively affected both player engagement and sentiment (Di Virgilio, et al., 2022). Live-streamed games include multiplayer online battle arena (MOBA) games such as League of Legends and Dota 2; first-person shooter (FPS) games like Call of Duty and Overwatch; a free-to-play battle royale game, Fortnite; and real-time strategy (RTS) games like StarCraft II and Supreme Commander (Pursey, 2021). Additionally, the COVID-19 pandemic has led to an increase in eSports viewership and gaming across all live streaming platforms during lockdowns (Clement, 2021; Larson, 2022). In fact, Time Magazine's headline for 2020 was "'Something Needs to Fill That Void' As Stadiums Go Quiet, Esports Are Having a Moment" (Gault, 2020, par. 1).

There are 1.62 million eSports enthusiasts in Italy, i.e. people between the ages of 14 and 40 who watch eSports events more than once a week, with a 15% increase over the course of a year. If we then talk about the "avid fans", those who follow eSports events every day, the audience is reduced to 475 thousand people. To support the exponential growth of eSports, we refer to the numbers of the Olympic eSports Week in Singapore (2023), where over 130 players from all over the world came together to compete in ten mixed-gender events, cheered by a sold-out audience, attracting over 500,000 participants and generating more than 6 million live views across all channels, with 75% of views from people aged between 13 and 34 (sky sport). "It was a promising start. But it is just that: a start - commented Thomas Bach, President of the IOC - It's like in every sport: even after a promising start, the real race is still ahead. The younger generation has a completely new way of thinking. They are living a digital life at the moment". Bach himself, during the opening ceremony of the 141st session held in Mumbai in the presence of the Indian Prime Minister, announced a plan for the creation of an eSports Olympics, stressing that there are "three billion people who practice eSports and video games around the world". All this clearly indicates a perspective that involves interests and themes of different nature: economic, sociological and pedagogical. In 2022, the global eSports market was valued at just over 1.38 billion dollars. Furthermore, the global eSports market revenue is expected to grow to 1.87 billion dollars in 2025. Asia and North America currently represent the largest eSports markets in terms of revenue, with China alone accounting for almost a fifth of the market.

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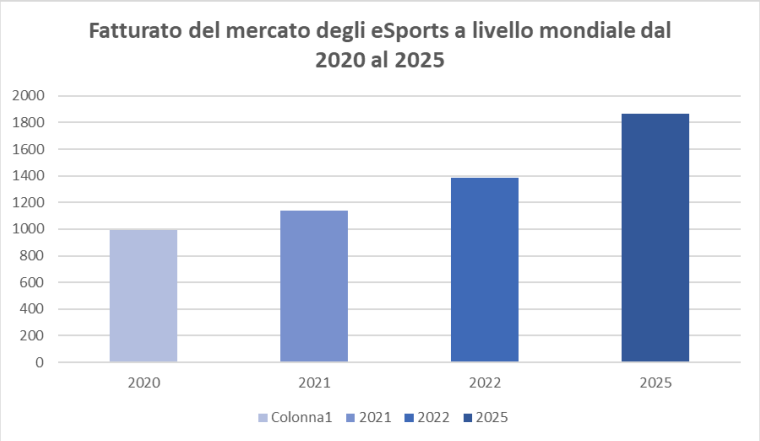
Fig.1. www.statista.com



3. Gamification and Esports Relationship

There are numerous definitions of eSports including Weiss (2008) who defined it as "playing competitive games according to the generally accepted rules of leagues and tournaments on the Internet" (p. 572). Jenny et al. (2016) defined eSports simply as "organized video game competitions" (p. 35). The definition of electronic sport or eSports is complex and encompasses sport, culture, technology, and business (Jin, 2010). For example, Hamari and Sjöblom (2017) defined eSports as "a form of sport in which the primary aspects of the sport are facilitated by electronic systems; the input of players and teams and the output of the eSports system are mediated by human-computer interfaces" (p. 211). Many other researchers have simply described eSports as competitive and/or organized play. Indeed, according to Engerman and Hein (2017), "the eSports community has progressed significantly and represents the highest form of online competitive gaming for digital gaming environments" (p. 62). For the purpose of this research paper, we will use a recent definition of eSports as "a form of computer-mediated competitive gaming in a multiplayer environment" (Delello et al., 2021, p. 3). Personal computing devices and fast internet have replaced traditional video games, which were previously played in front of the television on home consoles (Lantano et al., 2022; Marchand & Hennig-Thurau, 2013). Video game playing has become pervasive among young adults around the world (Delello et al., 2021; Ludwig et al., 2021), as there are many free-to-play (F2P) games that they can play; It is also noteworthy that these F2P games generated the most digital revenue, with almost $100 billion in 2020, which shows that users are much more willing to purchase additional content rather than paying for the game up front or waiting for further expansions (Gamespot, 2021). Furthermore, TechJury (2021) found that free-to-play games generated the most revenue across all platforms: mobile, console, and desktop. The phenomenon of eSports inevitably brings to mind another phenomenon, called Gamification. The concept of gamification became known to the general public in February 2010 thanks to the talk titled "design outside the box" that Jesse Schell held at the "D.I.C.E. Summit" in Las Vegas, even though the term was never used in that speech. Jesse was a professor at Carnegie Mellon University in

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Pittsburgh and a game designer. An eccentric character, in his 30-minute speech he described a new scenario: a world in which many aspects of daily life would be managed differently. In that presentation he outlined a future in which gaming would go beyond consoles and become part of everyday life. According to Schell's 2010 vision, each person would become part of a game in which actions would be tracked and rewarded with prizes and points. Shortly thereafter, the term "Gamification" began to acquire a certain popularity. Gamification is an extremely effective tool: it can convey messages of various types, depending on the needs, and induce active behaviors by the users, allowing them to reach specific goals, whether personal or business. The user and their active involvement must always be placed at the center of this approach. The principle behind gamification is to use the dynamics and mechanics of the game to stimulate some primary instincts of a human being: competition, social status, rewards and success. It has been proven that the use of game methodologies stimulates active behavior, which can be found through the analysis of data on the choices made within the game. A recent study on the influence of games and gamification on society was done by Jane Mcgonigal (2011), according to whom the game component can facilitate the understanding of the current world and stimulate virtuous social behaviors. Games can also serve to make those experiences that normally do not sufficiently gratify a person better or more bearable, giving a more epic meaning to the actions performed. Gamification can be applied in many fields. It is not limited only to social business or online engagement, but can be applied in all those occasions where the final goal is to communicate, spread, make people understand, explain messages of various types. In training and learning paths, especially in experiential learning, playful learning can be an element that greatly helps the transmission of content, with its associated advantages and critical issues. Gamification is used mainly in relation to the pervasiveness and ubiquity of computer games and video games in everyday life and the need to arouse and maintain the interest of users with the aim of involving them and encouraging them to reach more ambitious goals, following rules and having fun. Therefore, it is recommended to be applied in those areas of daily life where boredom, repetition and passivity are prevalent, in order to stimulate the desired type of behavior. The implementation of playful mechanics can produce significant changes in individual behavior and performance. Neuroscientific evidence clarifies, in fact, that the practice of gaming directly involves some primary human instincts, such as the need for self-expression or the desire to set new challenges, allowing for the creation of involvement, motivation and loyalty. Therefore, from the analysis of scientific literature, a relationship between Gamification and eSports clearly emerges: almost as if the former, even if coined later, includes within it all those practices that have to do with the use of elements borrowed from games and game creation techniques even in non-game contexts.

4. From the examination of scientific literature to integrated research perspectives: Flipped Inclusion & eSport in territorial contexts and in corporate contexts.

College eSports promote social-emotional learning (World Economic Forum, 2016), college readiness skills (Common Sense Education, 2020), academic motivation (Anykey, 2019), and increase science, technology, engineering, and mathematics (STEM) majors (NASEF, 2020); while also increasing student enrollment (McAllister,

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2018), attendance rates, overall grade point averages (GPAs) (Kobek, 2019), and student retention (Turner, et al., 2018). According to Yates (2018), higher education should embrace and invest in eSports because of the potential for an eSports program to become a "high-margin sport" (par. 3).

The mixed-methods pilot study entitled "The Rise of eSports: Insights Into the Perceived Benefits and Risks for College Students" (Delello et al., 2021) promoted by Tyler University of Texas, which also involved the University of Salerno, provides insights into students' eSports usage habits. The interesting aspect of this study, and the reason why it is the starting point as a focus of reflection today, concerns the first phase in which an intense review of the scientific literature was started from which positive aspects emerged, according to which eSports foster critical thinking; teamwork; innovation; self-directed learning (McKenzie (2019); problem solving, leadership and soft skills (Adachi and Willoughby, 2013); improve spatial cognition and multitasking skills (Bediou al., 2018). At the same time, the study highlights the risks associated with an inappropriate use of eSports, which determines:

- increased addiction, aggression and violence (Anderson et al, 2010);
- addictive gaming disorders (Griffiths et al. (2019) according to the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association - DSM-5, 2013);
- increased gambling activity with actual exchanges of "real" currencies (Maci and Amari, 2019);
- correlation between social factors and spending by players (Wohn, 2014).

The Flipped Inclusion model (Corona & De Giuseppe, 2017), in experimentation since 2014, aims to promote personalities with prosocial skills and inclusive communities (De Giuseppe, 2016), thanks to simple paths (Sibilio, 2014) modular and recursive, organized by levels of intervention of increasing complexity as evidenced by the data emerging from educational research and scientific literature. The pedagogical intent, in retracing the logic of computational thinking, provides for an algorithmic type of procedure anchored to the semantic selection of prompting, cognitive, emotional, motivational through an education by levels focused on:

1. a decomposition of general problems into specific sub-problems
2. discovery of resolutions located by levels of increasing complexity,
3. significantly contextualized planning
4. management of problems/conflicts.

The phases of the model, therefore, take into account the learning principles of Gee (2005) in the four EIPS phases (Corina, De Giuseppe, 2016):

1. the Exploring phase focuses on the investigative identification of problems (Kuhn, et al., 2000);
2. the Ideating phase is based on the structured analysis of the context, through processes of disaggregation of the problems to be managed into main and secondary ones (Bruner, 1960);

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3. the Designing phase allows the conceptualization of problem-solving models (Bloom, 1994).
4. the Experimenting phase, through the practice of experiential learning, intends to subject something to an experiment, in order to evaluate its quality, properties and capabilities, to implement the final model (Kolb, 2014).

These processes, which integrate aspects of simple teaching with the logic of Flipped Learning, represent the modular and recursively applied matrix for cooperative levels, with the aim of educating, not only for the co-construction of knowledge, but for an inclusive mission, guaranteeing well-being and quality of life, with a management of the continuous co-generative transformation processes that characterize the liquidity of cross-media society. This is the reason why the model provides continuous forms of reversal, in terms of perspectives and means to deal with contingencies located in relation, and co-generate adaptive paths (Alberici, 2002), capable of activating inclusive modeling through systemic processes of empowerment.

Flipped Inclusion for its mission, aimed at a permanent education in systemic inclusiveness for contexts, represents a possible model of application of gamification in teaching (Di Tore, S., 2023) also through the dimension of eSports.

The data emerging from the research of Flipped Inclusion- FI (Corona De Giuseppe, 2015) highlight the peculiarity of the object of study of a FI model, as a model of existential planning that invests in the transformation of inclusive prosocial personalities and quality communities.

The integration between aspects explained by the different researches opens up new perspectives that foresee the use of eSports to create inclusive contexts in areas such as companies and more specifically in territorial contexts and companies.

4.1 Flipped Inclusion and eSports in territorial contexts.

The research hypothesis in territorial communities, the use of eSports applied following the structure of the Flipped inclusion model can serve to promote an integrated system empowerment, an integration of services between local authorities, social spheres and territorial associations through gamification practices in which the game plays an 'active' role as an intrinsically interactive medium. The objective is to create educational communities through complex paths (Sibilio, 2014) with interventions of increasing complexity that take into account the learning principles of Gee (2005) in the four EIPS phases. As a preliminary step, the project involves the identification of a reference sample within the marginal territorial community. A cluster sampling is being evaluated, in order to have pre-formed groups of small units in number of three: micro, macro, meso. Within each group, composed of four units, each of the members will alternately cover the 4 roles of leader, facilitator, controller and processor. These are precisely interchangeable roles that will be taken in turn by the various units of each group. The groups will be identified within the governance of the institution, the most representative territorial association, the social sphere. The first phase involves the administration of an anonymous online questionnaire that includes open and closed questions. Some questions include demographic information such as age, gender, disability, ethnicity, religion, language and geographical location of origin. The survey continues with multiple choice questions and

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open-ended questions aimed at assessing knowledge and skills, communication, cognitive and metacognitive skills, social and prosocial skills.

It is therefore the administration of a PreTest for the evaluation of the incoming group to also measure the level of inclusiveness of the reference territorial community with the application of the Index for inclusion (Booth, T., Ainscow, M., 2008). After the first evaluation assessment, we will move on to a cognitive stimulation in order to design, and involve in the field design, also the actors who are the object and subject of the investigation, according to the existential design model of Flipped inclusion. The project experimentation phase will then begin in which the groups will start playing eSports. At the end of the experimentation phase, the Index for Inclusion will be administered again to evaluate any changes in terms of prosociality and inclusiveness, in order to process the positive effects and impacts of the use of ESports from an FI perspective in marginal territorial contexts. The data analysis will be carried out following a mixed methods approach combiningquantitative and qualitative data. Descriptive statistics will be used, before and after the use of eSports regardless of gender, education and cultural contexts. Furthermore, different statistical data will be used as analysis of variance to study additional variables of interest. The members of the research group will independently compare and analyze the data and results. It is clear that the project reflects exactly the cross-structural design architecture of the Flipped Inclusion model, organized by EIPS phases (Explore, Ideate, Design, Experiment), providing for the intersection of horizontal, bottom-up, micro-exo-meso and macro-systemic logics (reworked from the perspective of ecological development (Bronfenbrenner U., 2002).

4.2 Flipped Inclusion and eSports in companies.

In companies, in the face of the entry of artificial intelligence also in the corporate the organization and management of the modern company are undergoing a metamorphosis (Rossi, 2012) from which a modified genetic code of corporate governance emerges, (Falce, et al. 2018): companies do not use new technologies only for production and distribution but also for management and control, to improve performance on the market and to improve decision-making processes and mechanisms within them.

A widespread development of artificial intelligence systems is plausible with the aim of assisting the administrative body through the processing of increasingly relevant quantities of data and information (Hilb, 2020). At this precise moment in history, we want to create work groups also within corporate governance based on cooperation and interaction between men and machines capable of interacting with each other, each making their own skills and potential available to the other with the aim of achieving that system learning according to which everyone works to achieve a single goal, each, however, carrying out their own task.

The exploratory-descriptive, multi-method research project being tested at the "Giustino Fortunato" Telematic University is proposed as a pilot study to investigate whether, within a well-defined reference context, namely the corporate governance of small and medium-sized enterprises, it is possible to act pedagogically to form an organizational culture aimed at inclusion.

More specifically, the project aims to apply cooperative learning methodologies within companies aimed at obtaining a greater degree of inclusiveness among the subjects who work there by acting on the company's organizational culture. Among

the various cooperation methodologies, the project proposes to apply Flipped inclusion and eSports to enhance the resources of all members and create inclusive groups.

Specifically, the project involves the administration of an anonymous questionnaire that includes open and closed questions addressed to employees and members of corporate governance. Seven of these questions include demographic information such as age, gender, disability, ethnicity, religion, language and geographical location. The survey continues with nine multiple-choice questions and three open-ended questions that determine the experiences and perceptions regarding the practice of eSports. An invitation to participate will be published on the corporate social media communities (e.g., Twitter, Facebook) to encourage everyone to participate. The Inclusion Complex Index Plus will be applied to measure the level of inclusiveness of companies. Then the pilot phase of the project will begin in which employees will start playing eSports. Afterwards, the Inclusion Complex Index Plus will be administered again. The data analysis will be carried out following a mixed methods approach combining quantitative and qualitative data. Descriptive statistics will be used to examine and summarize the habits of employees, before and after the use of eSports regardless of gender, education and cultural contexts. In addition, various statistical data such as analysis of variance will be used to study additional variables of interest. The members of the research group will independently compare and analyze the data and results.

5. Conclusions

Like any sport, eSports also allow players to hone some technical and cognitive skills that are useful both in the game and in everyday life (Bonilla et al., 2022). The first of all is problem solving skills: competitive video games require rapid problem solving, as players must make decisions in real time and quickly adapt to new situations. This skill is particularly important especially in strategic games, where quick and accurate decisions can make the difference between winning and losing. Another skill that is useful especially in team or strategy games is strategic thinking, as players must plan ahead, coordinate actions with other team members and make strategic decisions under conditions of uncertainty. Critical thinking and the ability to predict opponents' moves are therefore essential components of success in eSports. In competitive contexts, defeat is inevitable and, consequently, the ability to recover quickly is crucial: psychological resilience allows players to face losses without becoming discouraged, instead using mistakes as learning opportunities to improve their future performance. Along with resilience, emotional self-regulation is also of great value, as players are exposed to situations of high tension and continuous stress. Correctly managing their emotions would allow players to remain calm even when they are at a disadvantage, avoiding impulsive reactions that could further compromise their performance. Finally, eSports allow players to refine their hand-eye coordination, as games require speed and precision in movements.

Although there is still a lot to learn about the interconnected world in which we live and play, there is no doubt that eSports can foster and enable collaboration between players regardless of their background or geographical location.

In fact, eSports, with the exception of a few, promote inclusion, solidarity, cooperation, competition, technical ability, a sense of the future and contemporaneity and therefore their transversal success, especially in a "flipped inclusion" perspective, can be the prospect of a renewed innovative and attentive look at generational flows.

The expected results will tend to demonstrate the value of applying the Flipped Inclusion model to promote learning and knowledge using eSports as a learning tool (Clark et al., 2013), while at the same time promoting the formation of inclusive personalities.

References

Adachi, P. J. C., & Willoughby, T. (2013). Do video games promote positive youth development? Journal of Adolescent Research, 28(2), 155–165. doi:10.1177/0743558412464522

American Psychiatric Association. (2022). *Internet gaming*. https://www.psychiatry.org/patients-families/internet-gaming

Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. *Psychological Bulletin*, *136*(2), 151–173. doi:10.1037/a0018251 PMID:20192553

Anderson, G. (2020). *Colleges explore esports opportunities and others face budget cuts*. https://www.insidehighered.com/news/2020/07/31/colleges-explore-esports-opportunities-and-others-face-budget-cuts

Aviles, C. (2021). *Scholastic esports: Current trends and the future*. https://www.techlearning.com/news/scholastic-esports-current-trends-and-the-future

Baker, C. (2016). *Stewart Brand recalls first 'Spacewar' video game tournament*. https://www.rollingstone.com/culture/culture-news/stewart-brand-recalls-first-spacewar-video-game-tournament-187669/

Banyai, F., Griffiths, M. D., Demetrovics, Z., & Kiraly, O. (2019). The mediating effect of motivations between psychiatric distress and gaming disorder among esport gamers and recreational gamers. *ComprehensivePsychiatry*, *94*, 152117. Advance online publication. doi:10.1016/j.comppsych.2019.152117 PMID:31422185

Bányai, F., Griffiths, M. D., Király, O., & Demetrovics, Z. (2019). The psychology of esports: A systematic literature review. Journal of gambling studies, 35, 351-365.

Bediou, B., Adams, D. M., Mayer, R. E., Tipton, E., Green, C. S., & Bavelier, D. (2018). Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills. *Psychological Bulletin*, *144*(1), 77–110. doi:10.1037/bul0000130 PMID:29172564

Bergmann J., Sams, A. (2012). Flip Your Classroom. Reach Every Student in Every Class

Black, W. L., & Gray, K. L. (2022). Using esports to amplify historically black colleges and universities: Shifting the narrative. In J. L. Hoffman, R. Pauketat, & K. A. Varzeas (Eds.), *Understanding Collegiate Esports* (pp. 21–32). Routledge. doi:10.4324/9781003271772-2

Bloom B. S. (1973). Individual differences in school achievement: A vanishing point? In L. J. Rubin (Ed.) Facts and feelings in the classroom. New York: Walker and Company.

Bonilla, I., Chamarro, A., & Ventura, C. (2022). Psychological skills in esports: Qualitative study of individual and team players. Aloma, 40(1), 35-41.

Booth, T., Ainscow, M., (2008). L'Index per l'inclusione. Trento: Erickson.

Bryman, A., & Bell, E. (2011). *Business research methods* (3rd ed.). Oxford University Press.

Burns, S. (2021). *Expanding esports in higher ed: Benefits and guidance for new esports prgrams*https://www.educause.edu/ecar/research-publications/2021/expanding-esports-in-higher-ed-benefits-and-guidance-fornew-esports-programs/esports-and-student-success

Buzzelli, A., & Draper, J. (2021). Are they athletes? A self-assessment of athletic identity measurement and perceived benefits of collegiate Esports participants. *Recreational Sports Journal*, *45*(2), 117–130.doi:10.1177/15588661211033252

Bronfenbrenner U. (2002), Ecology of human development, Bologna, il Mulino

Chan, G., Hun, Y., Kelly, S., Tisdale, C., & Gullo, M. (2022). The impact of esports and online video gaming on lifestyle behaviours in youth: A systematic review. *Computers in Human Behavior*, *126*, 106974. Advance online publication. doi:10.1016/j.chb.2021.106974

Clement, J. (2021). *COVID-19 impact on the gaming industry worldwide – statistics & facts*.https://www.statista.com/topics/8016/covid-19-impact-on-the-gaming-industry-worldwide/#dossierKeyfigures

Clement, J. (2022, November). *Number of video game users in the U.S. 2017-2027*. Statista. https://www.statista.com/forecasts/1277728/physical-or-digital-core-gamers-in-the-us

Corona F. and De Giuseppe T. (2016), Mutism between electivity and selectivity in an etiological process of inclusive recognition, "Italian Journal of Special Education for Inclusion", vol. 4, no. 1.

Corona F. & De Giuseppe T. (2017) Flipped inclusion, between theoretical framework and experimental augmented classroom teaching for inclusive teaching, in Pedagogy more didactics, Vol III, Trento: Erickson

Cote, A. C., Can, O., Foxman, M., Harris, B. C., Hansen, J., Rahman, M. W. U., & Fickle, T. (2022). The COVID season: U.S. collegiate esports programs' material challenges and opportunities during the 2020-21 pandemic. *Games and Culture*. Advance online publication. doi:10.1177/15554120221088116

Cranmer, E. E., Han, D.-I. D., van Gisbergen, M., & Jung, T. (2021). Esports matrix: Structuring the esports agenda. *Computers in Human Behavior*, *117*, 1–13. doi:10.1016/j.chb.2020.106671

Cullen, A. L. L., Ringland, K. E., & Wolf, C. T. (2018, March 28). A better world: Examples of disability in Overwatch. *First Person Scholar*. http://www.firstpersonscholar.com/a-better-world/

Darvin, L., Holden, J., Wells, J., & Baker, T. (2021). Breaking the glass monitor: Examining the underrepresentation of women in esports environments. *Sport Management Review*, *24*(3), 475–499. doi:10.1080/14413523.2021.1891746

Delello, J. A., McWhorter, R. R., Roberts, P., Dockery, H. S., De Giuseppe, T., & Corona, F. (2021). The rise of esports: Insights into the perceived benefits and risks for college students. *International Journal of eSports Research*, *1*(5), 1–19. doi:10.4018/IJER.20210101.oa5

De Giuseppe T. (2016), Selective mutism and flipped inclusion, between ecological-systemic perspectives and modeling inclusive reversals, "Italian Journal of Special Education for Inclusion", vol. 4, no. 1.

De Giuseppe T. (2020). Flipped Inclusion Computational Thinking and transformative phenomenologies in the Society of Knowledge. Avellino: The Poppy.

Dewey J. (2014). Experience and education. Milan: Raffaello Cortina.

Di Tore P.A., Schiavo R., (2016) Physical education, motor control and motor learning: Theoretical paradigms and teaching practices from kindergarten to high school- Journal of physical education and sport

Di Tore, P. A., Di Tore, S., Mangione, G. R., Corona, F., & Caralt, J. C. (2014, 2014). IKeWYSe - I know what you see: An educational ontology-driven simulation game to foster perspective-taking skills. Paper presented at the Proceedings - 2014 International Conference on Intelligent Networking and Collaborative Systems, IEEE INCoS 2014.

Di Tore, P.A. (2023), Artificial Intelligence and educational processes according to Intelligence.

Di Virgilio, F., Soliman, M., Anwar ul Haq, M., & Fantini, S. (2022). Analysing users' engagement with esports team: Does COVID-19 matter? In HR Analytics and Digital HR Practices. Palgrave Macmillan. doi:10.1007/978-981-16-7099-2_10

Dooley, B. D. (2021). College eSports: Challenges in regulating a new league. In *SAGE Business Cases*. SAGEPublications, Ltd., doi:10.4135/9781529759594

FinancesOnline.com. (2021). *Number of gamers worldwide 2021/2022: Demographics, statistics, and predictions*. https://financesonline.com/number-of-gamers-worldwide/

Engerman, J., & Hein, R. (2017). Esports gaming and you. Educational Technology, 57(2), 62–64.

Gamespot. (2021). *Best free PC games: 20 great free-to-play games*. https://www.gamespot.com/articles/bestfree-pc-games/1100-6497106/

Gault, M. (2020, March). Something needs to fill that void. As stadiums go quiet, esports are having a moment. *Time Magazine*. https://time.com/5812633/esports-coronavirus/

Gee, J.P.(2008), What Video Games Have to Teach Us About Learning and Literacy

Gee, JP (2005). Videogiochi, mente e apprendimento. The International Digital Media & Arts Association Journal , 2, 37-42.

Geyser, W. (2021). *The incredible growth of esports [+ esports Statistics]*. https://influencermarketinghub.com/esports-stats/

Gharawi, M. A., Pardo, T. A., & Guerrero, S. (2009). Issues and strategies for conducting cross-national e-government comparative research. In *Proceedings of the 3rd international conference on theory and practice of electronic governance (ICEGOV '09)*. Association for Computing Machinery. doi:10.1145/1693042.1693076

Goslin, A. (2019). *Rocket League's latest patch finally removes loot boxes*. https://www.polygon.com/2019/12/4/20995472/rocket-league-patch-1-7-notes-loot-boxes-crates-blueprints-rocket-pass-5

Gough, C. (2021). *Esports market in Italy: Statistics & facts*. https://www.statista.com/topics/5843/esportsmarket-in-italy/#dossierKeyfigures

Gough, C. (2022). *ESports market revenue worldwide from 2019 to 2024*. https://www.statista.com/statistics/490522/global-esports-market-revenue

Hamari, J., & Sjöblom, M. (2017). What is eSports and why do people watch it? Internet Research, 27(2), 211–232. https://doi.org/10.1108/IntR0420160085

Heilmann, T. A. (2014). "Tap, tap, flap, flap": Ludic, seriality, digitality and the finger. *Journal for Computer Game Culture*, *8*(1), 33–46. doi:10.7557/23.6154

Hoang, N., Villagomez, R. A., Clay, Z., Ford, M. K., & Gaeddert, B. (2021). Esports involvement and its effect on student college and career readiness factors. In M. Harvey & R. Marlatt (Eds.), *Esports Research and Its Integration in Education* (pp. 14–29). IGI Global. doi:10.4018/978-1-7998-7069-2.ch002

Hood, V. (2017). Are loot boxes gambling? *Eurogamer, 12*. https://www.eurogamer.net/are-loot-boxes-gambling

Hughes, I. (2018). Intelligent gaming. *ITNOW*, *60*(1), 14–15. doi:10.1093/itnow/bwy005 International Electronic Sports Federation. (2019). *About us*. https://ie-sf.org/Italian Interactive Digital Entertainment Association. (2021). *2021 Italian esports report.* https://www2.deloitte.com/it/it/pages/technology-media-and-telecommunications/articles/the-italian-esports-market--let-s-play--2021---deloitte-italy.html

Jackson, J. (2020). *What Gamers are playing & watching during the coronavirus lockdown: player share & viewership spikes for games & genres*. Newzoo. https://newzoo.com/insights/articles/games-gamers-are-playingwatching-during-coronaviruscovid19-lockdown-quarantine/

Javad, J. (2020). *Esports, gaming industry thriving as video games provide escape from reality during coronavirus pandemic.* https://www.bizjournals.com/dallas/news/2020/03/28/esports-gaming-industry-coronavirus.html

Jenny, S. E., Manning, R. D., Keiper, M. C., & Olrich, T. W. (2016). Virtual(ly) athletes: Where esports fit within the definition of "sport". *Quest*, *69*(1), 1–18. doi:10.1080/00336297.2016.1144517

June, L. (2013). For amusement only: The life and death of the American arcade https://www.theverge.com/2013/1/16/3740422/thelifeanddeathoftheamericanarcadeforamusementonly

King, M. R., Conner, K. G., Johnson, L. L., Trojak, T., & Cho, T. (2021). The implementation of an academic and applied esports program in higher education: A case of diversity, inclusion, and building community.

M. Harvey & R. Marlatt (Eds.), *Esports Research and Its Integration in Education* (pp. 186–209). IGI Global.doi:10.4018/978-1-7998-7069-2.ch011

Knight, C. G. (2001). Human-Environment relationship: Comparative case studies. In International Encyclopedia of the Social & Behavioral Sciences (pp. 7039-7045). doi:10.1016/B0-08-043076-7/04195-4

Koczera, P. (2019). *Esports can increase STEM equity in higher education.* https://edtechmagazine.com/higher/article/2019/06/esports-can-increase-stem-equity-higher-education

Kolb, D.A. (2014), Experiential learning. Experience as the Source of Learning and Development

Landis, R. (2021). The importance of diversity and inclusion in esports. *College News*.https://checkpointxp.com/2021/05/27/the-importance-of-diversity-and-inclusion-in-esports/

Lantano, F., Petruzzelli, A. M., & Panniello, U. (2022). Business model innovation in video-game consoles to face the threats of mobile gaming: Evidence from the case of Sony PlayStation. *Technological Forecasting and Social Change*, *174*, 121210. Advance online publication. doi:10.1016/j.techfore.2021.121210

Larson, K. (2022). *The surprising benefits of esports for students.* https://ideas.demco.com/blog/the-benefitsof-

esports

Lendino, J. (2017). *Breakout: How Atari 8-bit computers defined a generation.* Ziff Davis.

Ludwig, S., Lachmann, K., Papenbrock, J., & Mesonero, S. (2021). *Let's play! 2021: The European esports market.* https://www.deloitte.com/global/en/our-thinking/insights/industry/media-telecom/esports-in-europe.html

Macey, J., & Hamari, J. (2018). Investigating relationships between video gaming, spectating esports, and gambling. *Computers in Human Behavior*, *80*, 344–353. doi:10.1016/j.chb.2017.11.027

MacQueen, K. M., McLellan, E., Kay, K., & Milstein, B. (1998). Codebook development for team-based qualitative analysis. *CAM Journal*, *10*(2), 31–36. doi:10.1177/1525822X980100020301

Marchand, A., & Hennig-Thurau, T. (2013). Value creation in the video game industry: Industry economics, consumer benefits, and research opportunities. *Journal of Interactive Marketing*, *27*(3), 141–157. doi:10.1016/j.intmar.2013.05.001

Marsh, B. A., Andre, T. L., & Payton, S. L. (2020). Esports on campus: Challenges, considerations, and opportunities. In *Higher Education Response to Exponential Societal Shifts* (pp. 330-355). https://www.igiglobal.com/chapter/esports-on-campus/259035

McAllister, J. (2018). Why Esports should be on your IT team's radar. Ed Tech Magazine. https://edtechmagazine.

McKenzie, J. (2019). Leveling up esports on campus. https://www.insidehighered.com/news/2019/10/16/bringingesportscampus.com/higher/article/2018/11/whyeSportsshouldbeyouritteamsradar

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey Bass.

Mills, C. (2021). *A brief history of esports*. https://supernyx.com/articles/a-brief-history-of-esports

Mitova, T. (2021). *Esports growth: How gamers conquered a multi-billion market.* https://techjury.net/blog/esports-growth/#gref

Monnens, D., & Goldberg, M. (2015, June). Space odyssey: The long journey of spacewar! From MIT to computer labs around the world. Cultural History of Video Games. https://www.kinephanos.ca/Revue_files/2015_Monnens_Goldberg.pdf

Mokhtari, K., Delello, J. A., & Reichard, C. (2015). Connected yet distracted: Multitasking among college students. *Journal of College Reading and Learning*, *45*(2), 164–180. doi:10.1080/10790195.2015.1021880

Murray, J., Pricci, E. B., & Decker, S. (2021). *The mission value of collegiate esports.* https://thesportjournal.org/article/the-mission-value-of-collegiate-esports/

Museum of the Game. (2021). T*he top coin-operated videogames of the first 3 decades (1971-2001).* https://www.arcade-museum.com/TOP100.php

Newbury, E. M. H. (2021). *Esports: Health and safety at the collegiate level.* https://www.wilsoncenter.org/article/esports-health-and-safety-collegiate-level

Newzoo. (2020). *Global esports market report 2020.* https://newzoo.com/insights/trend-reports/newzoo-globalmobile-market-report-2020-free-version

Nordmark, S., & Heath, J. (2021). *The top 10 highest prize pools in esports*. https://dotesports.com/general/news/biggest-prize-pools-esports-14605

O'Donnell, J. (2022). Changes following gamergate. In *Gamergate and Anti-Feminism in the Digital Age*. Palgrave Macmillan. doi:10.1007/978-3-031-14057-0_6

Orland, K. (2019). *Fortnite puts an end to random loot box purchases*. ARS Technica. https://arstechnica.com/gaming/2019/01/fortnite-putsan-end-to-random-loot-boxes-purchases/

People's Republic of China. (2020). *China's live-streaming service users reach 560m.* http://english.www.gov.cn/news/topnews/202005/03/content_WS5eae28f9c6d0b3f0e9496ed2.html

Perkins, M. (2020). *How Has COVID-19 Impacted Esports and Its Technology Needs?* https://www.livedesignonline.com/esports/how-has-covid-19-impacted-esports-and-its-technology-needs

PRNewswire. (2020). *PubNub survey finds that chatting during gaming leads to development of deep humanrelatships.*https://www.prnewswire.com/in/news-releases/pubnub-survey-finds-that-chatting-during-gamingleads-to-development-of-deep-human-relationships-875468126.html

Pursey, J. (2021). *The best RTS games to play if you love Starcraft*. https://gamerant.com/rts-games-similarstarcraft/

Reitman, J. G., Anderson-Coto, M. J., Wu, M., Lee, J. S., & Steinkuehler, C. (2020). Esports research: A literature review. *Games and Culture*, *15*(1), 32–50. doi:10.1177/1555412019840892

Riedel, J. (2016). *Video game usage and academic success.* https://digital.library.txstate.edu/bitstream/handle/10877/6126/RIEDEL-THESIS-2016.pdf?sequence=1&isAllowed=y

Riot. (2021). *League of legends esports breaks world championship viewership record.* https://www.lolesportsmedia.com/League-of-Legends-Esports-Breaks-World-Championship-Viewership-Record

Scholz, T. M., & Nothelfer, N. (2022). *Research for CULT committee – Esports, European parliament*. Policy Department for Structural and Cohesion Policies. https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2022)699635

Seiner, J. (2021). *AP study: Nearly 90% of esports scholarships going to men.* https://apnews.com/article/esportsgender-inequality-scholarships-men-1823321276db40fea37dc8d9e5410643

Sibilio, M. (2014). La didattica semplessa. Napoli: Liguori.

Smith, N. (2021). *How esports increases enrollment and funding for HBCUs.* https://edtechmagazine.com/higher/article/2021/01/how-esports-increases-enrollment-and-funding-hbcus

Sousa, A., Ahmad, S. L., Hassan, T., Yuen, K., Douris, P., Zwibel, H., & DiFrancisco-Donoghue, J. (2020). Physiological and cognitive functions following a discrete session of competitive esports gaming. *Frontiers in Psychology*, *11*, 1030. doi:10.3389/fpsyg.2020.01030 PMID:32547452

Stake, R. E. (2006). *Multiple case study analysis*. The Guilford Press.

Te, Z. (2021). *In esports, the U.S. still lags the rest of the world. Why?* https://globalsportmatters.com/culture/2021/08/18/united-states-lags-world-esports-why-culture-infrastructure-finances/

TechJury. (2021). *45+ out of this world video games industry statistics in 2021.* https://techjury.net/blog/videogames-industry-statistics/#gref

Turner, P. E., Johnston, E., Kebritchi, M., Evans, S., & Heflich, D. A. (2018). Influence of online computer games on the academic achievement of nontraditional undergraduate students. Cogent Education, 5(1). 10.1080/2331186X.2018.1437671

Wang, M. (2021). *Why educational institutions should develop Esports programs-and how to start.* https://acerforeduction.acer.com/education-trends/esports-in-education/educational-institutions-develop-esportsprograms-how-to-start/

Webbspy. (2021). *How much does Esports make in 2021?* Esports Grizzly. https://www.esportsgrizzly.com/blog/how-much-do-esports-players-make/

Weiss, T. (2008). Cultural influences on hedonic adoption behavior: Propositions regarding the adoption of competitive video and computer online gaming. *DIGIT 2008 Proceedings*, paper 7. https://aisel.aisnet.org/digit2008/7

Wolf, M. J. P. (2012). *Encyclopedia of video games: M-Z: The culture, technology, and art of gaming* (Vol. 1).Greenwood.

World Health Organization. (2022). 6C51 gaming disorder. ICD-11 for mortality and morbidity statistics. In *International Statistical Classification of Diseases and Related Health Problems* (11th ed.). https://icd.who.int/

Yates, J. (2018). *Ten reasons your department should embrace eSports*. https://collegead.com/ten-reasonsembrace- esports/

Ye, J. N., Ye, J. H., Wang, C. M., & Hong, J. C. (2021). Development of 5 Cs educational value scale for eSport games. *International Journal of Technology in Education and Science*, *5*(3), 362–374. doi:10.46328/ijtes.215

Zuckerman, A. (2020). *Esports statistics you must read: 2020/2021 data, trends & predictions.* https://comparecamp.com/esports-statistics/