



THE ESPORTS ECOSYSTEM

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Abstract:

Esports constitute an organized competitive human activity involving video games using either the internet or a local area network (LAN). Notably, esports follow a distinct historical trajectory, which has resulted in their present characteristics, including competition, social interaction, economic-cultural elements, entertainment, popularity, and professionalism. The ecosystem of esports includes video games, players, teams, viewers, game communities, institutions, publishers, and any sponsors associated with them. This paper aims to describe the esports ecosystem and its elements. The argument put forth is that esports possess all the extrinsic elements that are characteristic of conventional sports. This is a theoretical article based on pertinent information and data from the relevant literature. The characteristics of esports can be categorised into four dimensions: the gaming dimension, the governance dimension, the social dimension, and the dimension of esports as an entertainment industry. This suggests that esports are becoming more similar to conventional sports. However, the question remains as to whether esports can really be considered as sports.

Keywords: sports, gaming, social play, entertainment industry

1. Introduction

Sport is a constantly developing cultural phenomenon that evolves with the advent of new technologies. Modern digital technologies have revolutionized sports cultures themselves, largely eliminating gaps between physical and virtual sports experiences (Miah, 2017). The emergence of esports, a type of sport based on specific video games, has raised philosophical concerns about the impact of technology on sport and the distinction between play, game, and sport (Edgar, 2019; Miah, 2017).

Esports, although based on video games, are distinct from them. Esports centre on human activity and have become a new cultural and social-economic phenomenon. An ecosystem is formed, which comprises video games, their publishers and designers,

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players, spectators, tournament organisers and sponsors. The participation of these stakeholders relies on an interdependent and dynamic relationship that has the potential to either foster growth or damage it.

The purpose of this paper is to describe and present the elements that constitute this ecosystem of esports. The argument put forth is that esports possess all the extrinsic elements that are characteristic of conventional sports. To substantiate this argument, pertinent information and data from the relevant literature is drawn upon. This is a theoretical article which is based on the existing literature.

The paper addresses the dimensions (or domains) of the esports ecosystem that encompass the extrinsic characteristics describing it. Extrinsic characteristics refer to elements that do not concern the internal operations of the sport, such as its goal, means and rules. Although the intrinsic elements of a sport are crucial in defining it, their examination goes beyond this paper's aim. Furthermore, as research into esports is still in its infancy, shedding light on the extrinsic elements of this phenomenon could prove beneficial to the ongoing discussion concerning whether esports can be considered legitimate sports as conventional ones.

Additionally, this discussion may extend to examining the connections between digital technology, video games, virtual worlds, and conventional sports. The significance of this article lies in its examination of the increasingly popular phenomenon of esports, which has attracted considerable interest from both the general public and the International Olympic Committee (IOC). It describes the various aspects of esports as a whole, rather than in isolation. In the coming years, esports will be a topic of philosophical and scientific discourse in the field of sport, not just as a form of entertainment. The paper offers insights into new technologies and the digital transformation of sporting practices.

2. Esports: definition and history

Esports are extremely popular and are recognised as a sport in approximately 60 countries (Van Hilvoorde & Pot, 2016). Jenny *et al.* (2017) argue that their popularity is due to the increased accessibility of technology and the provision of high-quality competition for players, which is relevant to both players and spectators.

Esports can be similar to, or combined with, traditional sporting events. They will be medal events at the 2022 Asian Games (postponed to 2023 due to the COVID-19 pandemic) (*Esports. The 19th Asian Games Hangzhou 2022*, 2022) which are the most popular sporting event after the Olympic Games (Coble *et al.*, 2019). However, there is also a specific debate about their inclusion in the Olympic Games as an exhibition and/or medal event (Billings & Billings Hou, 2019; *IOC Announces Olympic Esports Series 2023 with Winners to be Crowned at Live Finals in Singapore from 22 to 25 June, 2023*; Palar, 2021). It is true that there does not seem to be a generally accepted definition of esports in the literature. Their definition should reflect the role of interactivity, the general characteristics of the culture of recreational engagement with video games, i.e., gaming, but also the existence of human activity mediated by technology (Adams *et al.*, 2019).

From the relevant literature discussion that has been developed (Adams *et al.*, 2019; Hamari & Sjöblom, 2017; Hemphill, 2005; Jenny *et al.*, 2017; Segal, 2014; Wagner, 2006; Whalen, 2013), in conclusion, and synthetically, perhaps the most appropriate definition of esports is that it is an organised competitive human activity involving video games, via the internet or local area network (LAN).

The beginnings of esports can be traced back to the beginnings of video games in the 1970s (Billings & Hou, 2019). The early 1980s saw the beginning of a golden age of competitive arcade video games (Donkey Kong, Pac-Man, Asteroids, Centipede, etc.), which lasted until the early 1990s when home game consoles came on the market. This also led to a change in the way video game competitions and championships were organised (Provenzo, 1991).

The next step in the historical journey of esports was online video games, where the internet changed not only the way players competed, but also the way games were viewed (Billings & Hou, 2019). With the Asian economic crisis in 1997, the development of professional esports began with a focus on South Korea (T. L. Taylor, 2012). In the 2000s, the growth of esports in South Korea also sparked the interest of the rest of the world, with their popularity increasing even more after 2010 (Billings & Hou, 2019). After 2010, the existence of a large number of online streaming channels on the internet, such as Facebook Live, YouTube Live and Twitch.tv, contributed to the creation of a new market in the so-called entertainment industry (Seo, 2013; T. L. Taylor, 2012). Today, esports are the fourth largest source of online streaming, after Netflix, Google and Apple TV channels (Billings & Hou, 2019). Their transformation over time explains their current characteristics.

Therefore, it is evident that esports did not emerge and become popular overnight. They have a history, just like conventional sports. Furthermore, they share similar extrinsic characteristics to conventional sports. They are competitive games, they are institutionalised, even if only partially, they are based on the socio-emotional commitment of players and spectators, and they are a form of entertainment and a business activity. These characteristics will be elucidated in greater detail in the subsequent sections.

3. The *game* dimension

Esports have extrinsic characteristics related to the *game* that are fundamental to them, as in conventional sports. More specifically, esports are divided into categories based on the video games in which players compete (conventional sports also have categories, such as swimming, running, motor sports, etc.) and have specific competitive processes and major sporting events. These competitive processes involve professional players, teams, and coaches, and require physical training and the implementation of specific strategies to achieve victory (Şentuna & Kanbur, 2016).

The division of e-sports into categories is a feature related to the *game*, as it is related to the way of playing, performance, and activity of the players, as is the case with games in the different categories of conventional sports. According to the literature

(Farquhar, 2019; Funk *et al.*, 2018; Hemmingsen, 2021; Jonasson & Thiborg, 2010; Llorens, 2017; Mirabito & Kucek, 2019; Sturm, 2019; Young & Strait, 2019), the categories of esports are listed in Figure 1, which also lists some indicative video game titles in each category. Esports can be individual games, massive multiplayer online games (MMOGs) or massively multiplayer online role-playing games (MMORPGs) (Jenny *et al.*, 2017; Koo, 2009). As for metagames, which are the least well-known, according to Hemmingsen (2021), they are video games created on the basis of existing video games and reconfigured with rules and objectives designed by the players and the community of the game.

Although esports refers to a sporting activity, it does not only refer to video games based on real sports. However, it is interesting to see how professional championships of conventional sports are being linked to esports by the organisers of professional sports leagues in order to attract more fans and spectators to their real sports counterparts. (Mirabito & Kucek, 2019). However, the most popular esports are not related to real sports but focus on war strategy and take place in fictional worlds (Jenny *et al.*, 2017).

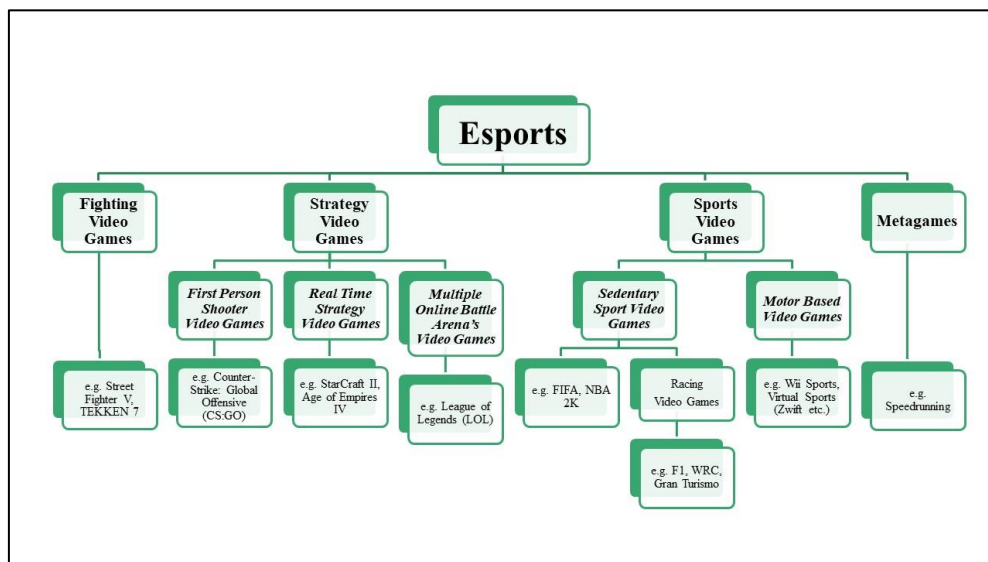


Figure 1: Categories of esports

A second feature of esports that relates to the *game* is the institutional nature of competition between players. Esports have competitive events that can be small, local, in internet cafes or as part of a digital technology festival (T. L. Taylor, 2012). However, there are also formal national and international events with large cash prizes. According to George and Sherrick (2019), three types of player competition dominate tournaments, relegation leagues and franchise leagues. Tournaments are the simplest way to organise matches for specific video games. They are usually of short duration with one-on-one group matches (round-robin play) and with or without categories (teams).

Relegation eSports leagues are the second type of competition, and their organisation is based on the ranking order of the players (or teams), as in similar competitions in European football leagues. These leagues are characterised by the promotion and relegation of players (or teams) to different categories (George & Sherrick,

2019). The franchise league is a category of league in which teams are guaranteed (by the organising authority) against any financial losses each year, so that there is no risk involved in investing. However, in this type of league, there is also a system of relegation and promotion of teams in different divisions.

Esports world championships are organised in both relegation and franchise leagues. For George and Sherrick (2019), relegation leagues are a fairer model for up-and-coming teams and more interesting for esports fans but lead to lower returns for investors due to the uncertainty of teams staying in the major leagues. For them, franchise leagues may be the best model if the goal is more profit for investors, secure contracts for players, and enjoyment for spectators and fans supporting teams in their city.

4. The governance dimension of esports

In addition to the competitive aspect that esports share with conventional sports, it is also important to note that they have a certain degree of institutionalisation. One of the first official organizations established in South Korea was the Korea eSports Association (KeSpa) (KeSPA, 2022), which was formed in 2000 with the approval of the country's Ministry of Culture and Tourism (T. L. Taylor, 2012). It is an association that regulates administrative matters (contracts, salaries, regulations, rankings, league types) in 25 different types of e-sports. However, similar organisations have been created in Europe and America, such as the United Kingdom eSports Association (T. L. Taylor, 2012) or the Esports Integrity Coalition (ESIC) in the USA (Grabowski, 2019). The creation of such institutions has raised some concerns in the esports world, such as whether collegiate esports leagues in the USA should join the National Collegiate Athletic Association (NACA), which deals with conventional college sports (Blum, 2017).

In 2008, the International eSports Federation (IeSF, 2023) was founded, which started to cooperate with the already established associations in Asian and European countries with the common goal of stabilising esports (T. L. Taylor, 2012). On the other hand, players' associations were also created, such as the G7, founded in 2006 by seven professional teams, in an attempt to defend the interests of players beyond the national associations that had been created (T. L. Taylor, 2012).

From the above, it is clear that there is no one fixed organisational structure that governs esports. Instead, there are different organisational structures with different rules and regulations for the different types of championships that are organised (Hollist, 2015; NSLI, 2018). The governance of esports depends on the video game publishing companies or the different organising bodies that adapt it in a way that promotes and advertises their products and services and, of course, increases their profits (Koot, 2017; T. L. Taylor, 2012). The issue of good governance is important because it is linked to solving many of the problems that exist in them, mainly due to the lack of clear and international legislation (Ifrah, 2016). The main issues related to e-sports are described below.

4.1 The issues of esports

The problems arising from the lack of a centralised administrative organisation and therefore its insufficient legalisation, even though esports is a global activity, relate to professional players' contracts, social discrimination, betting, match-fixing scandals, the issuing of residence permits abroad and also copyright (Grabowski, 2019; T. L. Taylor, 2012).

Professional players often do not bother to read the contracts they sign because they are very long (Grabowski, 2019). Also, young players, who can be as young as 13 years old (Limitone, 2018), may not understand the terms of the contracts even if they read them. However, there are also partnerships based on simple verbal agreements, which are always precarious.

Many countries also allow betting on esports. The profits from betting in general can be huge, but there are many risks involved, such as underage betting, match-fixing or even addiction problems (Conditt, 2018). Linked to betting is the cheating that can occur in esports, just as it does in conventional sports.

For Grabowski (2019), cheating practices in esports include enhancing players' performance using neuro-improving drugs or e-doping through technological interference with players' equipment. Also, match-fixing, either by the players themselves or when multiple teams are allowed to participate in some events by the same video game publisher. Other cheating practices include stream sniping during the game, hacking the video game software, and distributed denial of service (DDoS) attacks (Grabowski, 2019).

Another problem encountered in esports is social discrimination, especially along ethnic and gender lines. Although many countries from all over the world participate in esports competitions, there are also several that cannot participate due to economic, political, social, and technological barriers. (Young & Strait, 2019). In addition, most players and coaches are white and male, which reinforces the gender bias against female players (T. L. Taylor, 2012). T. L. Taylor (2012) even argues for the existence of homophobic characteristics in the esports environment.

Apart from social discrimination, another issue that needs to be addressed in esports is the movement of players to certain countries. Esports players either compete from home or in events held in large stadiums in different countries around the world. However, the second way leads to issues regarding travel and residence permits for some countries, as sometimes players from different countries cannot obtain the necessary permission (visa) to enter other countries, such as the US (Grabowski, 2019).

Apart from the above, esports also raise intellectual property issues related to copyrights, trademarks, patents, etc. (Grabowski, 2019). Indicative issues may include the degree of legal control over the exploitation of a video game as an esports by the game developer, or whether players and league organisers are allowed to earn money from video games they do not own (T. L. Taylor, 2012). Can players have copyright protection for their gameplay, as artists do? Can the organisers of esports leagues have the right to control (e.g., by banning) the domestic behaviour of spectators, such as taking pictures of

the webcast of a match, by analogy with a possible similar ban at conventional sports matches (Grabowski, 2019)?

Grabowski (2019) suggests that the problems related to copyright and other challenges within esports could be resolved by developing a global governance structure, organizational framework, and legislative framework to establish the necessary protocols for operating esports. A possible solution might be to adopt the governance and regulations that currently exist for conventional sports.

5. The social dimension of esports

Another aspect of esports that is comparable to that of conventional sports is the social element. The social aspect of esports pertains to their respective communities, primarily comprised of players and spectators. The distinction between the two roles is minimal, as they are intimately intertwined and interchangeable. These groups are identified by shared characteristics of engaging, interacting, socialising and, most importantly, enjoying (Naraine & Wear, 2019). This applies equally to both participants and spectators of conventional sports.

The primary characteristic of esports players is their youthful age and predominately male and white demographics, aligning with conventional sports (T. L. Taylor, 2012). Initially, players engage in video games recreationally and also as online esports broadcasters (streamers), before aspiring to excel in the genre and achieve professional player status (Adams *et al.*, 2019; T. L. Taylor, 2012). Professional esports players often train diligently for up to ten hours a day, adhering to a strict dietary and physical regime to enhance their performance (Coble *et al.*, 2019).

According to Hedlund (2019), the motivations of esports players as discussed in literature are socialization, competition, and winning, as well as escapism, emotional catharsis, stress management, and passing time. The enjoyable aspects of esports, including amusement, satisfaction, stimulation, relaxation, identification with the game setting, game structure, and visual environment, also serve as motivations for players. Nonetheless, Hedland (2019) contends that negatively linked factors motivate esports players to a greater extent. For instance, losing the game or experiencing poor psychological well-being leads them to play for extended periods than if the game were easier for them.

In addition, esports viewing is a crucial aspect of the gaming community. Over the years, esports have been aired on cable and broadband sports channels, including TBS and ESPN (Adams *et al.*, 2019), as well as on online platforms like Twitch and YouTube (Popper, 2013), which stress social interaction. Due to this, esports viewing has significantly increased. In 2013, there were 70 million esports viewers worldwide (Parshakov & Zavertiaeva, 2015), but according to Billings and Hou (2019), the number of viewers in 2019 rose to 427 million.

Esports spectators have a personal involvement with esports, unlike conventional sports viewers who may never have played the sport they watch and enjoy, according to T. L. Taylor (2012). Wittkowski (2010) argues that esports spectators can be classified as

mere bystanders or observer spectators. However, T. L. Taylor (2012) suggests that the majority of spectators are spectator-fans. Some individuals have been devotedly following a specific video game title for years, whilst others prefer to watch particular video game categories (such as war strategy), specific players, teams, national identities, or tournaments.

The literature contains fascinating data regarding the motives behind an individual's decision to spend their leisure time watching esports. The primary driving factors behind the engagement of esports spectators are their attraction towards witnessing a highly competitive process, displaying great enthusiasm and commitment towards the esports they observe, interacting socially with other viewers, and acquiring valuable skills for the game (Naraine & Wear, 2019; Shaw *et al.*, 2019). For Shaw *et al.* (2019), spectators who often double as players are driven by their desire to gain knowledge and improve their skills, the enjoyment of the spectacle and aesthetic appeal of esports, the opportunity to interact with professional players, and their commitment to certain teams.

From the preceding analysis, it is apparent that the motivations of esports spectators are somewhat akin to those of conventional sports enthusiasts. Crucially, however, spectators form a community with the players, whereby they express their emotions and reactions (Shaw *et al.*, 2019). In effect, this co-creation engenders a symbiotic relationship between players and spectators in esports, as live interactions can influence players (Gommersen, 2012; N. Taylor, 2016).

Esports entail significant social interaction and emotional engagement of participants with the video game. The experiences lived through gameplay hold particular value. The esports and games involved generate a broader social discourse, with players, winners, and losers becoming a part of it (Consalvo, 2007; Farquhar, 2019). This dynamic constitutes a social play (Farquhar, 2019; Granic *et al.*, 2014), thus exemplifying the game's social significance.

However, how is the element of socio-emotional engagement in esports ensured? The designers of the video games and the organisers of the championships are primarily responsible for this. It is important to note that emotional engagement in the esports industry is largely influenced by the game's technical design and storytelling capabilities. The scripts, characters (which may be based on comic books or film heroes, or popular athletes) and virtual environment of video games contribute to this form of engagement (Edgar, 2016; Farquhar, 2019; Mirabito & Kucek, 2019). The implementation of vast stadiums for live esports events, displaying the audience reactions on enormous screens, and collaborating with established sports teams and official organizing institutions (e.g., FIFA, NBA, etc.) are also measures taken towards this goal (Mirabito & Kucek, 2019; Young & Strait, 2019).

Socio-emotional engagement is elevated by players' participation and interaction within game communities (Ashcraft & Snow, 2008; Consalvo, 2007; Granic *et al.*, 2014; Lenhart *et al.*, 2008). Online games' social interaction is facilitated through chat rooms and forums. Live esports events enhance spectator experience by allowing them to watch, react and discuss the content, results, and performance of the teams they support, as well

as the video games themselves, both before, during and after a match. This is similar to the experience of conventional sports such as football and basketball. (Consalvo, 2007; Harper, 2014). The relationship between players, spectators, and game designers impacts the emotional and social involvement of individuals with video games. Game designers are members of the esports community together with players and spectators, as they also strive to heighten engagement.

Social interaction contributes to the ethos of the game, which relies on video game community interactions, as in any society influenced by its sociocultural characteristics (Farquhar, 2019). Positive social interaction can lead to high levels of confidence and self-esteem for e-sports players, but it can also have a negative impact on their real-life careers (Shaw *et al.*, 2019). It seems that, in the end, the social features of esports watching, and participation are analogous to those of conventional sports (Shaw *et al.*, 2019).

5.1 Esports and education

Esports' social dimension includes their use in education, too. Its popularity in education has grown over the last decade. In the US, it now spans primary, secondary, and tertiary education. The inter-school High School Esports League, for instance, has over 15,000 students and 800 schools participating in the US (McGrath, 2019). Furthermore, 600 universities in the UK have established over 1600 esports clubs, indicating a growing trend (McGrath, 2019). British Esports, a not-for-profit national organisation established in 2016, organises such events so that schools and colleges in the UK can participate in sporting competitions (British Esports Federation, 2023).

It remains to be asked why esports have been integrated into the educational framework. According to McGrath (2019), universities can reach a new student audience and increase their income by incorporating esports. Additionally, this can prepare students for careers in the 21st century and beyond and address the issue of student drop-out rates through innovative and creative non-academic activities. Indeed, esports have a significantly lower cost compared to conventional sports and offer many opportunities for research and study.

Esports offer equal opportunities for participation for both genders irrespective of educational level. Additionally, they aid in the socialization of pupils and students and contribute to the social-emotional development of individuals with psycho-emotional disorders like being on the autism spectrum or having Asperger's syndrome (McGrath, 2019; *Why Esports in Schools Is a Good Thing*, 2021). Esports, which employs both face-to-face and computer-mediated communication (Passmore & Holder, 2014), has the potential to enhance active listening, speaking, and writing (i.e., soft skills), as well as reduce distractions for young people in the contemporary digital era (McGrath, 2019). They additionally improve the critical thinking, collaboration, and creativity of pupils and students, while contributing to Digital Literacy and the acquisition of skills and new knowledge related to technological development (McGrath, 2019).

However, objections have been raised regarding the suitability of esports for education or whether it has any future as an activity (Wingfield, 2014). Several perspectives centre on the potential loss of soft skills amongst players (Bauer-Wolf, 2019),

the impact on students' daily schedules, gender-related competition issues (Doran, 2017), and even associated betting (Meola, 2018; Smith, 2018). However, the involvement of the human body in these activities can still apply to education within the context of physical education (Kanellopoulos & Giossos, 2022). Considerable critique has been raised regarding the physical and mental health of individuals engaged in gaming, as well as the controlled use of drugs by players, which can be seen as a form of doping (McGrath, 2019). Additionally, concerns have been raised regarding the possibility of the occurrence of a disorder recognised by the World Health Organization as "*gaming disorder*" (Scutti, 2018).

While there are conflicting views on the educational value of esports, it is important that the debate continues and that uncritical rejection of esports due to biased viewpoints and negative attitudes towards video games is avoided. It is essential to establish ethical standards for students' engagement in esports and implement policies and tactics to deal with their shortcomings (McGrath, 2019).

6. The dimension of esports as an entertainment industry

Esports are closely associated with the entertainment industry and are considered a form of business activity in addition to entertainment. The economic stakes for individuals involved with esports are considerable, given that the revenues derived from viewing and participating in esports can be enormous. The popularity of esports as a source of entertainment serves to underscore the value of investing in them. According to Pannekeet (2018), Newzoo, the leading provider of worldwide coverage for the video game and esports market, estimated that in 2019, there would be 427 million viewers and generated revenue of one billion pounds. Winners of esports competitions could also receive financial prizes ranging from 15 to 25 million dollars (Şentuna & Kanbur, 2016).

The rationale for their business model is bolstered by the way esports tournaments are conducted. These events are typically organised by video game publishers in an effort to publicise their products and draw in new purchasers, either independently or in collaboration with others. In addition, income is derived from broadcasting rights sold to sports media outlets, sponsorships, and advertising, as well as the sale of merchandise, promotional items, and technology products at live esports contests. (Adams *et al.*, 2019; Naraine & Wear, 2019). It is evident that the esports industry demands the right professionals to deliver entertainment. Their contribution is significant, much like any other traditional entertainment industry. Video game designers, broadcasters, announcers, commentators, expert analysts, and esports game webcasters (streamers) play a crucial role in the esports industry (Adams *et al.*, 2019; Chaloner, 2014).

On the basis of the preceding discussion, it begs the question of whether the worth of the recreational elements of esports players is being diminished in comparison to monetary profit and rewards (Crawford, 2015; Crawford *et al.*, 2018). Similar concerns apply, of course, to contemporary conventional sports that are also linked to recreation and commercialism.

7. Conclusions

Esports comprises an organised, competitive human activity conducted over the internet or a local area network (LAN), using video games. It forms an ecosystem of interdependent factors and parameters. The video games themselves, as well as their respective publishers and designers, players, viewers, tournament organisers and sponsors all contribute to the esports phenomenon. Esports have a distinct historical trajectory that can be traced back to the evolution of video games. This path elucidates their prevailing traits: social interactivity, competitive spirit, economic and cultural impacts, entertainment factor, popular appeal, and professionalization.

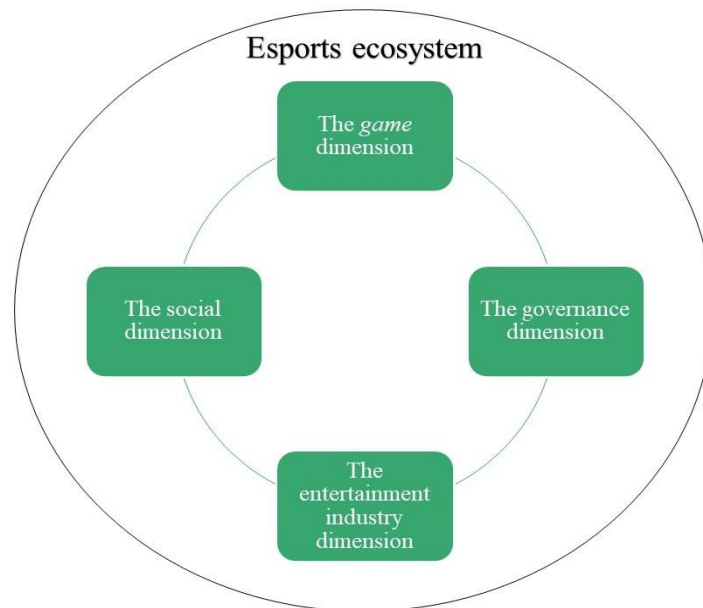


Figure 2: The dimensions of esports ecosystem

The noteworthy features of the esports ecosystem can be classified into four dimensions: the game dimension, the governance dimension, the social dimension, and the entertainment industry dimension (Figure 2). These dimensions are also found in conventional sports, as the elements included in them are similar. It should be noted that these dimensions include extrinsic characteristics of esports (and therefore of conventional sports) and not the internal characteristics that define a sport, such as its rules, means and goal.

These dimensions, inclusive of their elements (Table 1), cannot illuminate the esports ecosystem in isolation, but only through their interdependence and interaction. The various types of esports and noteworthy championship events seem to associate them with modern conventional sports. Several of these esports simulate traditional sporting activities, and their events are modelled on real sports leagues such as football or basketball. Additionally, they are linked with significant sporting events, for instance, the Olympic Games. There are teams, players, and coaches involved in esports, which resemble those in conventional sports. Although esports have some institutionalisation,

they lack a unified, international administrative structure to legitimise and address legal and organisational issues.

Esports contain structural components which pertain to the gaming community, including socio-emotional involvement and social interaction between both players and spectators. These same elements are also present in conventional sports; however, the distinction lies in the fact that in esports, players and spectators collaborate to develop the game and its ethos. Due to their popularity and the social nature of esports, they are beginning to be integrated into the educational system. While educational inclusion is subject to objections, it can foster the creation of a shared moral code for individuals and address potential disadvantages they might have.

Table 1: The extrinsic elements of esports ecosystem's dimensions

The <i>game</i> dimension <ul style="list-style-type: none">• Categories of esports• Institutional competitive processes
The governance dimension <ul style="list-style-type: none">• Institutionalization• Legitimation
The social dimension <ul style="list-style-type: none">• Socio-emotional engagement• Social interaction• Educational practice
The entertainment industry dimension <ul style="list-style-type: none">• Business activity• Occupational employment

Additionally, esports have become a widely popular form of entertainment and a lucrative business activity. This is because these entities, including sports media and entertainment, video game publishing companies, championship organizers, team owners, and conventional sports teams, seek to profit from their increasing popularity and expansion. In essence, they function as socio-economic activities, much like contemporary conventional sports.

Esports are becoming more like conventional sports for a variety of reasons, not only because of the inclusion of sports elements in the virtual environments of video games. This raises important questions for exploration and thought. Do esports constitute a sporting activity, and can they be considered true sports? Are esports athletes' legitimate athletes? What sporting values do esports promote, and what are the benefits to society from such an activity?

These and other unrelated questions need to be addressed. As this paper is limited by its theoretical nature, further exploration of esports is recommended. This can be

achieved through studying esports philosophically in the field of the Philosophy of Sport, and empirically in the wider area of Physical Education and Sports Science. It is necessary to examine their internal elements to establish whether they meet the criteria of a sporting activity.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Authors

Athanasios Kanellopoulos is a PhD Candidate of the Philosophy of Sport at the School of Physical Education and Sport Science of the National and Kapodistrian University of Athens in Greece. After receiving his master's degree in Education Studies, Athanasios decided to research how video games through esports are involved with Physical Education and Sport Science and if they can be considered as a kind of sport. His scientific and research interests are in the Philosophy of Sport, Open and Distance Education and educational technology. He has participated as a speaker in conferences on Open and Distance Education, on Sport Science and has publications in scientific journals and conference proceedings volumes.

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References

- Adams, K. L., Devia-Allen, G. Le T., & Moore, M. A. (2019). What Is Esports? In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 3–13). Lexington Books.
- Ashcraft, B., & Snow, Jean. (2008). *Arcade mania!: the turbo-charged world of Japan's game centres*. Kodansha International.
- Bauer-Wolf, J. (2019, January 17). *Survey: Employers Want "Soft Skills" From Graduates*. Inside Higher Ed. <https://www.insidehighered.com/quicktakes/2019/01/17/survey-employers-want-soft-skills-graduates>
- Billings, A. C., & Hou, J. (2019). The Origins of Esports: A Half-Century History of an "Overnight" Success. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 31–44). Lexington Books.

- Blum, B. (2017, October 23). *The NCAA and esports don't mix -- but soon, they might have to*. ESPN. https://www.espn.com/college-sports/story/_/id/21121852/the-ncaa-esports-mix-soon-to
- British Esports Federation. (2023). *British Esports*. <https://britishesports.org/>
- Chaloner, P. (2014). *Talking Esports A guide to becoming a world-class esports broadcaster* (Cancel ed). eslgaming.com. <https://coderedesports.com/wp-content/uploads/sites/16/Talking-Esports-FINAL-2.pdf>
- Coble, J., Einstein, C., Keene, K., Lanier, M., Purcell, L., & Ivory, J. D. (2019). No Time for Lag: Newspaper Coverage of Esports, 2000-2018. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 57–70). Lexington Books.
- Conditt, J. (2018, May 31). *Esports betting just got a whole lot easier. Now what?* Engadget. https://www.engadget.com/2018-05-31-esports-betting-gambling-legal-supreme-court-sportsbooks.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xILmNvbS8&guce_referrer_sig=AQAAADsLW4riePf4rmDyyI3VND85rfwy_3OeO0ZEXOnEpgk2chBSCHKGuvqXJ7Pvb0Ojm01fgqQfpqTW
- Consalvo, M. (2007). *Cheating: Gaining Advantage in Videogames*. The MIT Press. <https://doi.org/10.7551/MITPRESS/1802.001.0001>
- Crawford, G. (2015). Is it in the Game? Reconsidering Play Spaces, Game Definitions, Theming, and Sports Videogames: *Games and Culture*, 10(6), 571–592. <https://doi.org/10.1177/1555412014566235>
- Crawford, G., Muriel, D., & Conway, S. (2018). A feel for the game: Exploring gaming 'experience' through the case of sports-themed video games. *Convergence: The International Journal of Research into New Media Technologies*, 25(5–6), 937–952. <https://doi.org/10.1177/1354856518772027>
- Doran, L. (2017, February 27). *How "eSports" Is Changing the College Sports Scene*. InsideSources. <https://insidesources.com/gamers-receive-college-scholarships-esports-culture-scrutiny/>
- Edgar, A. (2016). Personal identity and the massively multiplayer online world. *Sport, Ethics and Philosophy*, 10(1), 51–66. <https://doi.org/10.1080/17511321.2016.1168478>
- Edgar, A. (2019). Esport. *Sport, Ethics and Philosophy*, 13(1), 1–2. <https://doi.org/10.1080/17511321.2019.1558558>
- Esports. *The 19th Asian Games Hangzhou 2022*. (2022). https://www.hangzhou2022.cn/En/competitions/sports/competitive/202204/t20220410_47302.shtml
- Farquhar, L. K. (2019). Fighting Games and Social Play. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 117–133). Lexington Books.
- Funk, D. C., Pizzo, A. D., & Baker, B. J. (2018). eSport management: Embracing eSport education and research opportunities. *Sport Management Review*, 21(1), 7–13. <https://doi.org/10.1016/j.SMR.2017.07.008>
- George, J., & Sherrick, B. (2019). Competition Formats in Esports. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 45–56). Lexington Books.

- Gommersen, N. J. (2012). *The Affective Audience in Professional E-sport: An exploration of spectators, and their impact on video game playing* [Roskilde University]. <https://forskning.ruc.dk/en/publications/the-affective-audience-in-professional-e-sport-an-exploration-of->
- Grabowski, M. (2019). The Law of Esports. In Roger Ryan (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 185–199). Lexington Books.
- Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78. <https://doi.org/10.1037/A0034857>
- 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/INTR-04-2016-0085/FULL/XML>
- Harper, T. (2014). *The Culture of Digital Fighting Games: Performance and Practice*. Routledge.
- Hedlund, D. P. (2019). The Motivations of Esports Players. In *Understanding esports: An introduction to the global phenomenon* (pp. 95–114). Lexington Books.
- Hemmingsen, M. (2021). Code is Law: Subversion and Collective Knowledge in the Ethos of Video Game Speedrunning. *Sport, Ethics and Philosophy*, 15(3), 435–460. <https://doi.org/10.1080/17511321.2020.1796773>
- Hemphill, D. (2005). Cybersport. *Journal of the Philosophy of Sport*, 32(2), 195–207. <https://doi.org/10.1080/00948705.2005.9714682>
- Hollist, K. E. (2015). Time to be Grown-Ups About Video Gaming: The Rising eSports Industry and the Need for Regulation. *Arizona Law Review*, 57(823), 823–847. <https://arizonalawreview.org/pdf/57-3/57arizrev823.pdf>
- IeSF. (2023). *International Esports Federation*. World Esports IeSF. <https://iesf.org/>
- Ifrah, J. (2016). *The Ifrah Guide to Esports Law. An Excerpt from The Definitive Guide to iGaming in the United States*. Kisaco Research. https://kisacoresearch.com/sites/default/files/documents/esports-download_ifrah.pdf
- IOC announces Olympic Esports Series 2023 with winners to be crowned at live finals in Singapore from 22 to 25 June. (2023, March 1). International Olympic Committee. <https://olympics.com/ioc/news/ioc-announces-olympic-esports-series-2023>
- Jenny, S. E., Manning, R. D., Keiper, M. C., & Olrich, T. W. (2017). Virtual(ly) Athletes: Where eSports Fit Within the Definition of “Sport.” *Quest*, 69(1), 1–18. <https://doi.org/10.1080/00336297.2016.1144517>
- Jonasson, K., & Thiborg, J. (2010). Electronic sport and its impact on future sport. *Sport in Society*, 13(2), 287–299. <https://doi.org/10.1080/17430430903522996>
- Kanellopoulos, A., & Giossos, Y. (2022). A discussion on the physicality of esports regarding their potential inclusion in education within the context of Physical Education. In C. Panagiotakopoulos, A. Karatrantou, & S. Armakolas (Eds.), *Proceedings of the 7th Panhellenic Conference “Integration and Use of ICT in the Educational Process”* (pp. 377–390). CETL Department of Education and Social Work Sciences – University of Patras & Hellenic Association of ICT in Education. <https://www.ocean.upatras.gr/7c/files/7C-Proceedings-full.pdf>
- KeSPA. (2022). *Korea e-Sports Association*. <http://www.e-sports.or.kr/>

- Koo, D. M. (2009). The moderating role of locus of control on the links between experiential motives and intention to play online games. *Computers in Human Behavior*, 25(2), 466–474. <https://doi.org/10.1016/J.CHB.2008.10.010>
- Koot, J. (2017, October 16). *Esports Governance and its Failures*. Medium. <https://medium.com/@heyimJoost/esports-governance-and-its-failures-9ac7b3ec37ea>
- Lenhart, A., Kahne, J., Middaugh, E., Macgill, A. R., Evans, C., & Vitak, J. (2008). *Teens, Video Games, and Civics* Teens' gaming experiences are diverse and include significant social interaction and civic engagement. https://www.pewresearch.org/internet/wp-content/uploads/sites/9/media/Files/Reports/2008/PIP_Teens_Games_and_Civics_Report_FINAL.pdf
- Limitone, J. (2018, May 2). *Pro-gamer team recruits youngest-ever 13-year-old 'Fortnite' player*. Fox Business. <https://www.foxbusiness.com/features/pro-gamer-team-recruits-youngest-ever-13-year-old-fortnite-player>
- Llorens, M. R. (2017). eSport Gaming: The Rise of a New Sports Practice. *Sport, Ethics and Philosophy*, 11(4), 464–476. <https://doi.org/10.1080/17511321.2017.1318947>
- McGrath, K. (2019). Leveraging Esports in Higher Education. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 201–217). Lexington Books.
- Meola, A. (2018, January 9). *How eSports has given rise to competitive gaming betting and gambling – with skins and real money*. Insider. <https://www.businessinsider.com/the-rise-of-esports-betting-and-gambling-2018-1>
- Miah, A. (2017). *Sport 2.0: Transforming sports for a digital world*. The MIT Press.
- Mirabito, T., & Kucek, J. (2019). Sports Video Games (SVGs) in the Esports Landscape. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 135–151). Lexington Books.
- Naraine, M. L., & Wear, H. (2019). The Esports Consumer Experience. In *Understanding esports: An introduction to the global phenomenon* (pp. 85–93). Lexington Books.
- NSLI. (2018). *Emerging Legal Issues in Esports (Conference Materials 2018)*. National Sports Law Institute. Marquette University Law School. <https://law.marquette.edu/node/200424>
- Palar, S. (2021, June 22). *Olympic Virtual Series - Things you need to know and how to watch*. International Olympic Committee. <https://olympics.com/en/news/olympic-virtual-series-everything-you-need-to-know>
- Pannekeet, J. (2018, February 21). *Newzoo: Global Esports Economy Will Reach \$905.6 Million in 2018 as Brand Investment Grows by 48%*. Newzoo. <https://newzoo.com/insights/articles/newzoo-global-esports-economy-will-reach-905-6-million-2018-brand-investment-grows-48>
- Parshakov, P., & Zavertiaeva, M. (2015). Success in eSports: Does Country Matter? *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.2662343>
- Passmore, H.-A., & Holder, M. (2014). Gaming for good: Video games and enhancing prosocial behaviour. In J. Graham (Ed.), *Video Games: Parents' Perceptions, Role of*

- Social Media and Effects on Behavior (Media and Communications-technologies, Policies and Challenges)* (pp. 141–166). Nova Science Pub Inc.
- Popper, B. (2013, September 30). *Field of streams: how Twitch made video games a spectator sport*. The Verge. <https://www.theverge.com/2013/9/30/4719766/twitch-raises-20-million-esports-market-booming>
- Provenzo, Jr., E. F. (1991). *Video Kids: Making Sense of Nintendo*. In *Video Kids*. Harvard University Press.
- Scutti, S. (2018, June 18). *WHO classifies “gaming disorder” as mental health condition*. CNN. <https://edition.cnn.com/2018/06/18/health/video-game-disorder-who/index.html>
- Segal, D. (2014, October 10). *Behind League of Legends, E-Sports’s Main Attraction - The New York Times*. The New York Times. <https://www.nytimes.com/2014/10/12/technology/riot-games-league-of-legends-main-attraction-esports.html>
- Şentuna, B., & Kanbur, D. (2016). What kind of an activity is a virtual game? A postmodern approach in relation to the concept of phantasm by Deleuze and the philosophy of Huizinga. *Sport, Ethics and Philosophy*, 10(1), 42–50. <https://doi.org/10.1080/17511321.2016.1177581>
- Seo, Y. (2013). Electronic sports: A new marketing landscape of the experience economy. *Journal of Marketing Management*, 29(13–14), 1542–1560. <https://doi.org/10.1080/0267257X.2013.822906>
- Shaw, A., Drogin Rodgers, E. B., Rodgers, R. P., & Wiggins, B. P. (2019). *Esport Spectator Motivation*. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 73–84). Lexington Books.
- Smith, N. (2018, April 6). *Esports bookmaking? Globally, it’s already a billion-dollar gambling industry*. The Washington Post. https://www.washingtonpost.com/sports/esports-bookmaking-globally-its-already-a-billion-dollar-gambling-industry/2018/04/06/be89c282-2b99-11e8-8688-e053ba58f1e4_story.html
- Sturm, D. (2019). *Not Your Average Sunday Driver: The Formula 1 Esports Series World Championship*. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 153–165). Lexington Books.
- Taylor, N. (2016). *Play to the camera: Video ethnography, spectatorship, and e-sports*. *Convergence: The International Journal of Research into New Media Technologies*, 22(2), 115–130. <https://doi.org/10.1177/1354856515580282>
- Taylor, T. L. (2012). *Raising the stakes: E-sports and the professionalization of computer gaming*. MIT Press.
- Van Hilvoorde, I., & Pot, N. (2016). *Embodiment and fundamental motor skills in eSports*. *Sport, Ethics and Philosophy*, 10(1), 14–27. <https://doi.org/10.1080/17511321.2016.1159246>
- Wagner, M. G. (2006). *On the Scientific Relevance of eSports*. Paper Presented at the Symposium Conducted at 2006 International Conference on Internet Computing & Conference on Computer Games Development.
- Whalen, S. J. (2013). *Cyberathletes’ Lived Experience of Video Game Tournaments* [University of Tennessee].

https://trace.tennessee.edu/cgi/viewcontent.cgi?article=2883&context=utk_graddi_ss

Why Esports in Schools Is a Good Thing. (2021, January 15). ViewSonic Library.

<https://www.viewsonic.com/library/education/esports-schools-good/#Reference>

Wingfield, N. (2014, December 8). *E-Sports at College, With Stars and Scholarships*. The New York Times. <https://www.nytimes.com/2014/12/09/technology/esports-colleges-breeding-grounds-professional-gaming.html>

Young, S., & Strait, L. P. (2019). Counter-Strike or Counterpublic? Audience Creation, Transnational Discourses, and the Rhetorical Legitimation of Esports in TBS's ELEAGUE. In R. Rogers (Ed.), *Understanding esports: An introduction to the global phenomenon* (pp. 167–182). Lexington Books.

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