

# E-Sports Components Compilation Study: Systematic Review

## E-Spor Bileşenleri Derleme Çalışması: Sistematiik Derleme

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**ABSTRACT** The rapid development of technology news has affected all areas as well as sports news and has caused new arrival. Both playing and watching competitive video games and computer games have created the concept of electronic sports. One of the most important features is to play individually and as a team and to require natural sports. At least 400 million people in the world are e-sports viewers, more than 100 million people are e-sports players and at least 7 million people in our country are e-sports players and viewers. With the development of technology, we see the effect of this development in sports and sports branches. With the improvements made in the field of internet and technology and the expansion of the current network platform, the name E-Sports (electronic sports), which has emerged as a new sports field, has now become a profession, and invested in countries. It also appears as one of the investment channels. In this field, which is based on games and develops such a global impact from day to day, the age of the individuals who are interested in the professional framework is one of the areas that should be considered. Big companies making sponsorship agreements with serious expenditures, called the game framework of this field, and revealing the conceptual information of this field, which continues to be influential today. To the literature to guide academic studies in the field of e-sports.

**Keywords:** Gaming; digital gaming; e-sports; e-sports industry; e-sports dynamics

**ÖZET** Teknoloji haberlerinin hızlı gelişimi, spor haberlerinin yanı sıra tüm alanları etkilemiş ve yeni haberlerin gelmesine neden olmuştur. Rekabetçi video oyunlarını ve bilgisayar oyunlarını hem oynamak hem de izlemek elektronik spor kavramını yarattı. En önemli özelliklerinden biri, bireysel ve takım hâlinde oynaması ve doğa sporlarını gerektirmesidir. Dünyada en az 400 milyon kişi e-spor izleyicisi, 100 milyondan fazla kişi e-spor oyuncusu ve ülkemizde en az 7 milyon kişi e-spor oyuncusu ve izleyicisidir. Teknolojinin gelişmesiyle birlikte bu gelişimin etkisini spor ve spor dallarında da görmekteyiz. İnternet ve teknoloji alanında yapılan iyileştirmeler ve mevcut network platformunun yaygınlaşması ile birlikte yeni bir spor dalı olarak ortaya çıkan E-Spor (elektronik sporlar) adı, artık bir meslek hâline gelmiş ve ülkelere yatırımlar yapılmıştır. Yatırım kanallarından biri olarak da karşımıza çıkmaktadır. Temeli oyunlara dayanan ve günden güne böylesine küresel bir etki geliştiren bu alanda, mesleki çerçeveye ilgi duyan bireylerin yaşı da dikkat edilmesi gereken alanların başında gelmektedir. Ciddi harcamalar ile sponsorluk anlaşmaları yapan büyük firmalar, bu alanın oyun çatısı olarak adlandırılmakta ve günümüzde de etkisini sürdüren bu alanın kavramsal bilgilerinin ortaya koymaktadır. E-spor alanında akademik çalışmalara yol gösterecek literatüre olumlu katkıda bulunacağı düşünülmektedir.

**Anahtar Kelimeler:** Oyun; dijital oyun; e-spor; e-spor endüstrisi; e-spor dinamikleri

E-sports is a sport based on online games. Electronic sports can be defined as a sport people from the world can make acquainted with and play games the internet or some people international electronic sports organizations organized. As in other sports competitions, individuals or teams are brought face to face in e-sports competitions and a pleasant environment is created where various talents can talk and watch and play the game. Like other sports, it requires both physical and mental effort and skill.”<sup>1</sup> After this effort, it brings with it the effect of motivation and continuity on individuals, both materially

and spiritually, on the gains that individuals have achieved.

Today, this area, which is almost a new trend and is frequently mentioned, appears as an area where the diversity of activities and the participation and continuity of individuals for their own personal interest and continues in this direction. Although it appeals to almost every age group due to its diversity, although the age ratio and range in its audience differ, we can say that the average age group is generally 21-35, as a result of the research.

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Peer review under responsibility of Türkiye Klinikleri Journal of Sports Sciences.

**Received:** 17 Jan 2023

**Received in revised form:** 15 Feb 2023

**Accepted:** 16 Feb 2023

**Available online:** 27 Feb 2023

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We see that current and popular games generally have a point that intersects with real life, the reason why this effect is played more frequently by individuals and games is that this status, property, valuables, prestige, etc. We can say that the games that they want to achieve in matters and that are built on the share of reality in this direction are more remarkable. These features can also have an impact on individuals' tendency to play digital games. Therefore, it is objected to reveal the influences of this field, which has such a contemporary and global impact, to examine its components, to evaluate its features within the framework of conceptual knowledge, and to bring the findings to the literature.

## DIGITAL GAME

Digital games which were called computer games or video games in their early stages, dates to the 1940s. The original developer of the game is Steve Russell. The game was released in February 1962.<sup>2</sup>

If we briefly define digital games; digital games are computer and video-assisted games that are widely played in virtual space as console games, personal computer games, and online games. Digital games are network, adventure, action, sports and racing strategy games to their thematib-c and technological features.<sup>3</sup>

## DIGITAL GAME INDUSTRY

It indicates an increase in body movement enforced or allowed by game controller leads to the increase in the player's level of commitment. Moreover, they lead to the assumption greater involvement of the body can provide the player with a stronger emotional experience.<sup>4</sup>

The digital game industry, with its interactive structure, forms an important part of the knowledge-based economy today. It also sets an example for the current transnational logic of globalization and capital.<sup>5</sup>

The digital game industry represents a rapidly developing and growing sector all over the world. Although it has a history of about 40 years, it is seen that it is frequently compared with the film industry. The rapid development of communication tech-

nologies and technological initiatives also supports the rise of the digital game industry in such a short time.<sup>6</sup>

The digital gaming knowledge is not a unidimensional notion. There is major diversity in game types and game players and game experiences vary accordingly.<sup>7</sup>

An important difference that separates the digital game from the classical game is that the digital game emerges with an industrial design. "Digital gaming emerges as a result of industrial production, and the game itself has a commodity value."<sup>8</sup>

## E-SPORTS CONCEPT

The great development of technology with each passing day continues to affect sports directly or indirectly. The point that popular video games have reached today has led to the formation of a new industry. The concept of e-sports known competitive e-sports or video gaming emerges because of these developments.<sup>9</sup>

According to Argan et al., e-sports is a place that requires both physical and mental effort, where people meet and play games with people from the other end of the world internet or where people play games through major e-sports organizations.<sup>10</sup> On the other hand, e-sports is a form of sport in which the primary aspects of sport are facilitated by electronic systems, mediating e-sports.

E-sport is a genre games, also known as professional or competitive video games, and is growing rapidly around the world. More than 40 US college formed varsity. E-sports grants as in sports.<sup>11</sup>

Playing the match-based (computer) game in an organized manner; it is the meeting of players or teams that are clearly different from each other in 3. parties to achieve a certain goal (such as winning monetary prize, a tournament)."<sup>12</sup>

## A BRIEF HISTORY OF E-SPORTS AND IMPORTANT DEVELOPMENTS

The production of games played through electronic systems dates to the 1950s. The first known competitive video game tournament was held on with the game called 'Spacewar.'<sup>13</sup>

Although video games were played in the 1970s, we can say that there were 2 important turning points in terms of esports. In the 1980s and 1990s, the first period was the great interest of home consoles as well as the arcades known as ‘Arcade’, while the spread of the internet from the 2000s constitutes the 2<sup>nd</sup> period. In the early 1980s, when arcades were booming, games relied on simple score tracking mechanisms, progressing through the game against the computerized machine, beating the previous score to measure single-player success.<sup>14</sup>

Increase gaming sector, gaming career has emerged. Professional esports players have the same athlete status as people in other sports. The fact that the gaming industry is now a sports branch, and the awards reach incredible dimensions have made the professional gaming career even more attractive. Students increased to e-sports. Today, some of the students think to earn their living by playing games or publishing their games.<sup>15</sup>

## POSITIVE AND NEGATIVE EFFECTS OF E-SPORTS

Play environments can help create a persistent, optimistic motivational style. This motivation style can also be reflected in school and work. Some types of games can create this type of motivational style, and some cannot. Instant feedback in the game encourages players to concentrate and makes them insist on the continuation of success. As the level gets harder, players continue to stay in the struggle. In this way, video games encourage children to be determined and chase success.<sup>16</sup>

It has been reported that people gain skills such as team building, negotiation, cooperation, strategic thinking, planning and execution, executing multiple tasks together, leading, and making quick decisions in multiplayer games.<sup>17</sup>

## TYPES OF E-SPORTS

Although a clear classification is valid today, e-sports types with new player classes are emerging with new developments. There are 6 types of e-sports that are valid today.

These;

- **Massive online battle area (MOBA):** Two opposing teams of 5 players energies sources by moving across the map in 3 different ways.

- **First person shot (FPS):** The player who understand game of the eyes character he tries to achieve success in games, especially with skills such as reflex, quick decision making and team management.

- **Real time strategy (RTS):** In this type of games, the player tries to defeat the opponent’s armies by establishing an army by correctly managing the resources in his hand.

- **Fighter:** With the player who chooses one of the virtual characters representing a certain fighting discipline, he tries to outdo the virtual character chosen by the other players.

- **Sports:** Traditional sports branches are transcribe game of environmental.

- **Massive multiplayer online role-playing game (MMORPG):** They are role-playing games played by connecting to any server.<sup>18</sup>

## E-SPORTS AUDIENCES, FANBASE AND ECONOMIC INDICATORS

Considering the limited or limited number of traditional sports spectators going to the venue of the competition; Those who cannot attend the competition for various reasons have to pay certain amounts to encrypted channels so that they can watch the sports organization in question, which both strains the economy of the viewers and reduces the number of viewers. On the other hand, they lose an average of 40% of their league revenues to certain channels as television rights. In the world of e-sports, there is currently no restriction on the income distribution and number of views of traditional sports spectators and teams.<sup>19</sup>

In addition to the players, e-sports’ fans and audience are also important elements of this field. The e-sports platform, which has been increasing in the number of fans and viewers day by day, has also attracted the attention of important companies and organizations in terms of brand and sponsorship. Leading companies such as Vodafone (UK.), Turk-

cell (Turkey), Vestel (Turkey), Media Markt (Germany) Ulker (Turkey) and Redbull (Austria) are important sponsorships of e-sports. The increase in the number of viewers and fans has enabled many brands to enter the sponsorship race in this field. On the other hand, in addition to platforms that broadcast live e-sports competitions, television channels on e-sports are also established in some countries.<sup>9</sup>

## E-SPORTS EVENTS AND PRIZE POOL

The world of e-sports, which distributed more than 110 million dollars in prizes in 2017, awarded over 150 million dollars in 2018. Approximately 80% of the total money distributed is the prize money of 10 games. The top 10 games with the most prizes are as follows. Dota (Alve Corporation) 2-41 million dollars, Counter Strike (Valve/ABD) global offensive-22 million dollars, League of legends (California/Riot Games)-15 million dollars, Player Unknown Battlegrounds (China / FPS )-7 million dollars, Overwatch (Blizzard Entertainment/ABD )-6.7 million dollars, Heroes of Storm (Blizzard/ABD)-6.2 million dollars, StarCraft 2 (Blizzard/ABD)-4.53 million dollars, Call of Duty-(Activision/ABD) 4.17 million dollars (Balkan T, 2018).<sup>20</sup>

E-sports it is a growing industry in terms of players, spectators and economic value and will be included in 2024. E-sports was primarily related to young men, e-sports has the potential to bring about health behavior modify in larger user residents.<sup>21</sup> The total number of games played and the amount of awards won in e-sports events in 2017 are shown in Figure 1.



FIGURE 1: E-sports events (2017).

## DISCUSSION

With the development of technology, we see the effect of this development in sports and sports branches. With the improvements made in the field of internet and technology and the expansion of the current network platform, the name e-sports (electronic sports), which has emerged as a new sports field, has now become a profession and countries invest and invest. As one of its channels, to examine the components of such a field and to be a guide for the next studies, it is necessary to determine the components of understanding e-sports and academic studies should be carried out accordingly.

Considering the concept of game; in the scientific world, there are assumptions that such games have great effects sociability of the youth. Game-based assumptions are included in the term digital game-based learning. It is possible to see the effects of e-sports not only in the professional field but also in the field of education.

As Papastergiou stated in his research; game suggestionsbased learning game-based learning is taken into account in education. Learning effective students their problem-solving critical reviewing content knowledge.<sup>22</sup> Permanence of education, problem solving ability, etc. to possible to say that it has a positive effect on individuals.

As stated by Argan et al., of e-sports, a place where people from one end of the world can meet and play games with people from the other end of the world sport organizations.<sup>10</sup> It is a sport that requires both physical and mental effort. As a result of this effort, the aim of individuals is to obtain a positive result in their own interests, for example: victory, weapons, etc. Examples include developing tools, competing with other groups, and winning the grand prize. E-sports game types are divided into 6 types. These; it appears as MOBA, FPS, RTS, FIGHTER, SPORTS, MMORPG.

According to the research conducted in 2017, the most played game in the popular game ranking is LOL (League of Legends, California/Riot Games) with+100 million players. Call of Duty, which is the

closest popular game following it, is followed by 28.1 million, Heartstone with 23.9 million.

## CONCLUSION

We can say that the global e-sports revenue in the online game platform made in 2018 contributed significantly to the country's income in the \$908 (USD) revenue pool, with 38% in North America, 18% in China, 6% in South Korea and 38% in other countries.

When the average age of e-sport followers in 2018 is examined, we see that the highest follow-up rate is between the ages of 21-35 in both women and men. We can say that the lowest average is the individuals with an average age of 51-65, which again shows similarity in men and women.

We see that there are broadcasts made on the online platform related to another e-sports and investment studies made with e-sports teams. We can understand the economic return of this area from the amount of the 970 million dollars agreement, which is the agreement of the "Amazon (Jeff Bezos/ABD)" company with the "Twitch TV (Amazon/ABD)" broadcast platform, of these investment agreements. Other companies following this investment are USM Holding's investment in Virtus Pro team comes with an investment of 100 million dollars, and an investment of 87 million dollars by Modern Times Group, which invests in Turtle Entertainment.

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Most of his days in front of the computer e-athletes who spend playing video games the means they use to prevent health risks and materials should be evaluated ergonomically and play athletes to main-

tain the correct posture during should be made aware.<sup>23</sup>

We see the impact of e-sports and its components discussed in the research on the economies of the countries, the activities to be held, sponsorship agreements, e-sports player transfer fees etc. Considering the effects on its components, investments and e-sports studies should be organized accordingly. For the next studies, the impulse people engaged can be brought literature by drawing attention to extensive research on e-sports economy.

## SUGGESTIONS

It is strongly recommended that the academic studies and activities to be carried out in the field of e-sports, which issues should be paid attention to and carried out in the light of up-to-date esports information. In suggestions for future research, a negative perception has emerged on e-sports, as the negative elements of e-sports have been handled by researchers in recent years. However, it is thought that the impact of researches in the field of e-sports on individuals and how they integrate this effect into their real lives will contribute positively to the literature.

### *Source of Finance*

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*

### *Conflict of Interest*

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### *Authorship Contributions*

*All authors contributed equally while this study preparing.*

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