Esports as a Sportive Reflection of Information Society and Its Interaction with Modern Sports

Mertkan ÜÇÜNCÜOĞLU[1]* (iD)   Selçuk Bora ÇAVUŞOĞLU[1] (iD)

[1] Istanbul University – Cerrahpasa Faculty of Sports Sciences, *İSTANBUL*

Abstract

Each passing day with technological developments, there have been some important changes in social structure and people have been started to interest in information and communication technologies. As a result of that, digital games have evolved as a new entertainment area. The concept of competitive digital gaming has shown a significant development since the 1970s and brought a strong concept of esports. With this study, it is aimed to describe the new activity of today's society, to explain how it's rapid growth and how it started to become a part of modern sports. This study was conducted by using descriptive research method and literature review as data collection technique. Although esport is a competitive area which it seems to belong this century, it has been reached to today's point as a result of two transformations. The competitive digital gaming that comes with the commercialization of digital games, has been became international area with the technological developments. As a result of these two transformations, esport has been reached an important audience and lots of important developments about its professionalization have taken place. In recent years, esport has become a part of modern sport, reaching a remarkable point by showing great improvement. Esport, which young population has shown great interest especially, has become one of the important parts of modern sports by taking part in digital world as providing interactions with new generations. Esports have become a subject of Sport Management Science as a result of the interaction with the components of modern sports.

Keywords: Electronic Sports, Esports, Sports Communication

* **Sorumlu Yazar:** Mertkan ÜÇÜNCÜOĞLU   **E-mail:** mertkanucuncuoglu@gmail.com
*This study adopted from a master thesis.

Introduction

Along with the rapidly changing technology, important transformations have occurred in the social structure. According to Birsen (2013), the 21st century has brought the humanity to a new civilization and social structures which can be named as society after industry, post-modern society and information society. In this new era, producing information has gained importance instead of material production in the industry society. As a result of this change, the importance of the technology in people's daily life has increased and brought new habits along with it. Among these changes, video games taking its place in society and drawing a huge interest could be named. Especially, at the beginning of 1990's personal computers regarded as an instrument of work have become an entertainment platform rapidly thanks to newer and stronger multimedia software and interesting games which can compete against any other system (Dillion, 2011).

While the concept of competitive digital gaming emerged approximately 50 years ago experiencing various changes in itself as a result of the technological advancements, it has taken an important place within the social structure that is being shaped by itself at the same time. Digital games which are started to be developed in North America and Asia spread to the whole world in a short time. While the digital gaming tournaments used to give opportunity for local competitions at first, they have become international with the advancement in the Internet technologies. Thus, digital gaming tournaments which have succeeded in getting the attention of large masses have started to be professional and it has brought the concept of esports with itself. While Wagner (2006) acknowledges that the activities we consider as sports disciplines would change as our moral system changes, he says "it is a sportive activity field in which people enhance and train their physical and cognitive skills by using information and communication technologies." about esports.

Whereas Hamari and Sjöblom (2017) say *"It is a kind of sports which mediates the outcome of esport system via human-computer interfaces as well as inputs of teams and players, the primary aspects of sports, which are facilitated by electronic systems"* about esports, International eSport Federation IeSF (2017) regards it as *"it is a broad term that is used to identify a competitive sport performed by using information and communication technologies such as Pc, screen, web and other electronic devices"*.

There is also a group saying that E-Sport should be thought independent of sports. Super Data Research (2015), a company conducting research on games and interactive media, comments on this as "*Games competitive in many ways resemble to traditional sports at first sight. However, considering that comparing such a new phenomenon like e-sport with the old ones is a misunderstanding. Technology, intersection between fan community and interactive fun, offers the new ways of sharing the big experiences in a global scale.*"

Ólafsson (2012) expresses that the fact that esport has become so popular cannot be explained with one reason but highlights three main reasons as follows:

1. The availability of technology for such a growth

2. The fact that the games are being designed in a viewer-friendly way

3. The fact that gaming has become a wide-spread phenomena.

While producing games for modern sports branches provides new markets for digital game productions, it also offers the opportunity of franchising contracts for sports clubs and organisations. However, it should be noted that e-sports contain a large number of digital games not having sports related content. According to Crawford and Gosling (2009), although there is a complicated connection between digital games and sports, these two activities are not so distant to each other, and can often be used together in five different perspectives;

1. Digital games lead to asocial, overweight, unhealthy and aggressive generations.

2. There are arguments regarding digital games as sports mostly.

3. Sport themed games are one of the most-selling types of video games.

4. Digital games have proven itself as a lucrative partner to sports industry.

Digital gaming technologies enhance the opportunity of sports display and participation to sports.

Purpose and Importance

Esports has emerged as a new field of competition and a new work place for sports clubs.This study has aimed to define esports which is a new activity of today's society, to explain the rapid growth it has experienced and how it has become a part

of modern sports.It is another aim to contribute to the Turkish literature by creating a theoretical framework for the Esports fact.

Method

We aim to identify esports which is a new activity in modern society, to explain its fast growth and how it has become a piece of the modern sports. The research focuses on digital games and what e-sport is, its historical development and its interaction with modern sports: whether esport can be regarded as sports or not, details of its ecosystem and potential changes that can be encountered in the future take place in the survey.

Model of the Survey

Survey will be performed by using the descriptive research way within the qualitative survey pattern. Descriptive surveys are done with the aim of answering what and how questions systematically and describing the incidents and conditions in detail (Başol, 2008). It is aimed to explain the relation between esport and modern sport as a contemporary concept in a more detailed way.

Model of Gathering Data, Collecting Data and Analysing Data

Data of the survey has been collected by using literature research and firstly Turkish literature has been researched.It can be acknowledged that Esport was examined by Arganet al.(2006) for the first time. However, both the fact that esport cannot be interpreted certainly in that time and the fact that it grows rapidly each passing day make the research done until recently limited. For example; most of the games which have a great share in esport to become an industry were not released in that time. As in today, federation structures in many countries were not installed in that time. It can be seen that there are only two Master's thesis regarding Esports in Higher Education Council's database in 2018 when it is examined in terms of Turkish literature. Moreover, apart from academic articles there has been an improvement in Internet journals especially in recent years.

Since Turkish literature is very limited, the sources in other languages were also examined. In this point, especially the surveys ofWagner (2006), Crawford (2008), Borowy (2012),Jin (2010), Hallmann and Giel (2017) can be named as the main sources. Because of its constantly growing structure, apart from academic surveys,

Internet resources were also benefitted. In this point, the selection of Internet sources were meticulously done and the sources used in the survey were the official internet websites of the institutions. The surveys are generally based on assessing the skills of esport players or the reasons of the viewer's participation, and mostly consisted of statistical studies. The lack of conceptual studies about the combination of modern sport and esport can be highlighted. For this reason, a comparative discourse on the ideas expressed by the researchers was used which fits the study. Then, we followed a descriptive way in accordance with the relation of the research with the other studies in the literature. The data obtained are completed by processing with the theme determined and certain findings are reached.

The Limits of Study

While this study is being conducted, the data obtained are collected via literature review. That is why, the study is limited to the sources available reached via literature review. The difficulty that is encountered in this stage is the fact that the Turkish literature is limited, for this reason the sources in other languages are benefitted. Most of the times, it is not easy to reach the sources in the other languages so the study is limited to the ones that can be reached.

Findings

Esports is a New Competition Field and It is Related to Modern Sports

It is known that the facts largely debated in its contemporary period like E-sport emerged as a result of transformations taking place in social structures. The concept of modern sport emerged as a result of transformations in the practices of traditional sports along with the developments experienced in especially England after "Industrial Revolution". Similarly, e-sport phenomenon belongs to the society named as "Information society" or "Post-Industrial Society" in which we live.

Technological developments affected the structure of the societies and the lifestyle on a great scale. Accordingly, the people showed effort to keep up with the technological developments emerged in the era they live in. In this new society order names as "Information Society", the information and communication technologies increased their place in daily life. In addition to the use of personal computers starting as of 1990's, the use of mobile phones in our lives is obvious. In this societal order which starts to intertwine with the technology, digital games appear as social activity

at first, then they become a new competition field. Similar to modern sports emerged from the modern society order having reached a state that affects the masses, e-sport within the information society as a technological competitive field is advancing a similar state. E-sport tournaments organized in various parts of the word in 2013 and 2016 during which the spectators filled the gigantic halls take place among the main examples of it (Table 1).

Table 1: Some Certain Sport Halls held Esport Organizations

Hall	Capacity	Organization
Air Canada Centre	19.800	LoL North America Finals (2016)
Madison Square Garden	19.830	LoL World Championship Semi-Finals (2016)
Commerzbank Arena	55.000	ESL One Frankfurt Dota 2 (2016)
Pekin National Stadium	80.000	LoL World Championship Final (2017)
Staples Centre	21.000	LoL World Championship Final (2013)

Source: Jenny, S. E., Keiper, M. C., Taylor, B. J., Williams, D. P., Gawrysiak, J., Manning, R. D., andTutka, P. M.(2018). eSports Venues A New Sport Business Opportunity.Journal of Applied Sport Management, 10(1).

Esport, a sportive reflection of the new society structure, is an intertwined state with the modern sports. Nowadays, many modern sports club and organization accepted e-sports as a branch and continues the activities, like in the other branches, in a serious way. In our country, a lot of club including "the three big clubs" continue their activities in the field of e-sport (Table 2). The practices that IOC conducts to recognize esport can be highlighted as a different example of this case. That is why, saying that e-sport has nothing to do with modern sports would not be a correct approach.

Table 2: The Sports Clubs having Esport Branch in Turkey (23.10.2018)

Club	Games
Beşiktaş	LoL, FIFA, PUBG, CS:GO, Street Fighter
Fenerbahçe	LoL, Zula,
Galatasaray	LoL, Zula, WolfTeam
Bursaspor	LoL, Zula, Dota 2, FIFA, CS: GO
Başakşehir	FIFA

Commercialisation of Digital Games

There are two important transformations that helped Esport to reach its place nowadays. The first one is commercialisation of digital games. The first digital game studies starting to emerge as of 1950's was generally conducted in research labs. Although the games emerging after the 2nd World War were limited a lot both in content and in the effect field, they were among the pioneers of the sector which will be developed in the future. As of the beginning of 1970s, the digital games started to take their place by expanding the outside of the public arena in our daily lives.

These games attracted great interest in the gaming saloons at first have taken their place at home as game consoles after the improvements in technology. As a result of this commercialisation process, the first competitive tournaments have emerged. The pioneers, within the transforming society structure at the same time, were accepted as a new way of socialization. While especially the digital gaming trend starting in North America had its golden era between the late 1970's and the beginning of the 1980's (Kirriemuir, 2006: 24), after that the turning point known as "North American Digital Game Crash" was experienced in 1983 (Wolf, 2012: 148). As of 1985 the sector has changed its course towards Asia. With the great interest that the digital games drawn during the commercialisation process and that the Asian countries have joined the sector completely, the professionalization has started. (Figure 1).
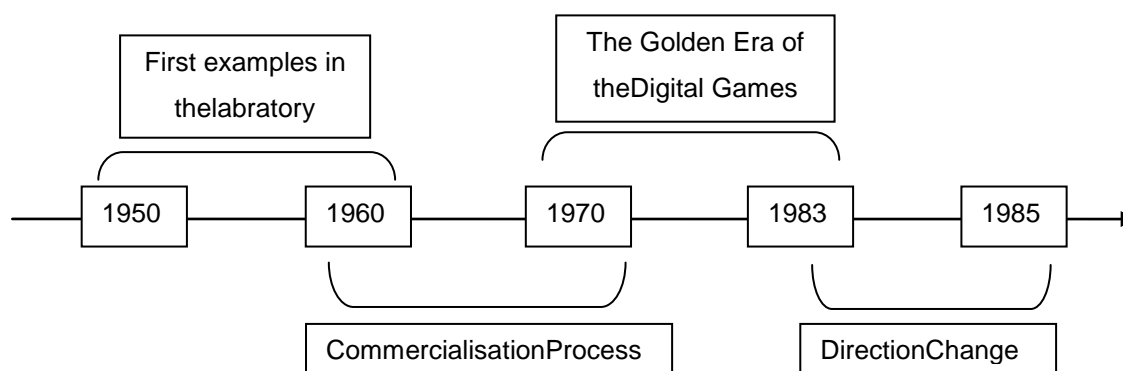

Figure 1: Commercialisation of the Digital Games

Competitive Gaming's Becoming International and Professionalization

Another important transformation about the Esport is that the competitive gaming has become international thanks to the improvements in the Internet technology and the professionalization process it brought. As it is stated in the study,

the use of personal computers have increased starting from the 1990's. Although this usage, at first, was to meet certain basic needs; in time, thanks to the advancing technology, personal computers are not used only for work. Computers also transforming into entertainment device (Dillion, 2011: 135)especially with the advancing Internet technology has enabled the digital games to become international. While this competition type emerging on online platforms draws attention, it has provided an opportunity for a lot of international tournaments in time. As of the end of 1990's competitive digital gaming has brought professional management structures, teams and organisations thanks to the attention it has drawn. In 2000, with the consent of Ministry of Culture, Tourism and Sports, KeSPA (Korean Esports Association) (Jin, 2010: 67) appears as one of the first examples.

With the emergence of Esports concept in 2000's, international organizations on a large scale are started to be held. In this era which could be named as "preparation", the improvements in technology and the production of many popular games have steered esport in a different way. Between 2010-2015 during which Esports experienced its growth era and drew the attention of masses, it still continues the professionalism process by increasing the number of its audience, economy, and institutional structures. (Figure 2).
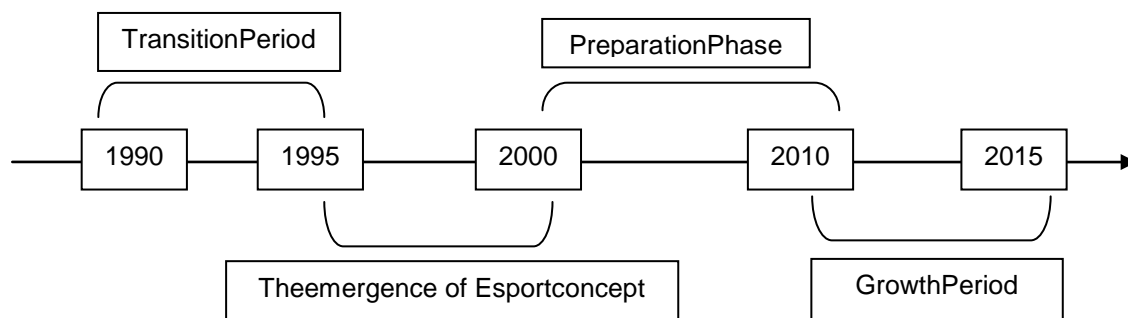

Figure 2: Competitive Gaming's becoming International and Professionalization

The Lack of Institutional Structre

No matter how esport meets the eye as a product of the era which we live in, the lack of the institutional structure is obvious in terms of admitting it as a sport. Esport, unlike modern sports, was not emerged in Europe. When the development of the digital gaming industry is examined, esports culture emerging in Asia and North America has expanded to Europe and the world in a short time. Along with the

acceptance of Esports globally, institutionalisation process has gained pace. Emergence of team structures, player contracts, and organized tournaments are seen as a natural part of the process. The fact that there is no certain mechanism to execute the processes and to provide the necessary assurance to modern sport clubs and organizations is the most crucial point that is discussed even by the IOC. In spite of pioneering team management organizations, there is no certain management mechanism that is accepted in reality by the worldwide. However; like the modern sports, it is not easy in short term for esport to have a proper federation structures to cover the whole world. Nevertheless, it will not be wrong to say that it will be major one among the changes to occur in the near future.

One of the pioneering improvements in this sense is setting up national esport federations, especially. International Esport Federation becomes prominent with the number of member countries as well as its services (Table 3). Esport federations emerging in many countries like Turkey, North Korea, Germany, and Russia have carried out lots of practices in order for this new concept to find a sportive place in official sense. It is expected that esport world to have a higher quality organization structure and to fasten the necessary processes of recognition thanks to regular and continuous practices of these foundations.

Table 3: Member Countries of International Esport Federation (21.05.2020)

Continent	Countries
Africa (4)	Egypt, Namibia, South Africa, Tunusia
America (10)	Argentina, Costa Rica, Mexico, Bahamas, Brazil, Colombia, Dominic, Jamaica, Panama, USA
Asia (25)	China, Taiwan, India, Indonesia, Korea, Iran, Japan, Kazakhstan, Lebanon, Macau, Malaysia, Maldives, Myanmar, Mongolia, Nepal, Philippines, Saudi Arabia, Sierra Leon, Syria, Thailand, United Arab Emirates, Uzbekistan, Vietnam, Kyrgyzstan, Hong Kong
Europa (22)	Austria, Azerbaijan, Belarus, Belgium, Denmark, Finland, Georgia, Germany, Israel, Italy, Macedonia, Holland, Portugal, Romania, Russia, Serbia, Slovakia, Sweden, Switzerland, Turkey, Ukraine, Czech Republic
Oceania (2)	Australia, New Zealand

Source:https://ie-sf.org/about/members

Esports is a Subject of Sports Management Sciences

Esport, which is a study field of many disciplines until today, is a study subject of Sports Management Sciences, as well. Especially, the increase in the number of the recent studies has shown this in a certain way. Esport drawing attention with the substantial growth it experienced in a short time, has taken a great deal of interest by the components of modern sport. Turkish E-sport Federation which was founded by the consent of the Ministry of Youth and Sports, that the sport clubs are to give place to esport as a branch and finally the effort that IOC has shown in order to recognize esport (IOC, 2017)have been regarded as the most certain indicator of this situation. It will not be wrong to say that Esports has emerged as a new study field of Sports Management Sciences which is a related to many different disciplines.

As a matter of fact, espor makes up the subject of many studies in the field of Sports Management Sciences recently. There were 3 papers regarding esport in International Sport Sciences Congress (in Turkey) on 15-18 November 2017 and 4 papers regarding esport in International Sport Sciences Congress (in Turkey) on 31 October- 3 November 2018. Finally, Sports Sciences Federal Institution (Germany) has compiled the studies in this field by publishing a bibliography named as "Esport and serious games: Video games in context of sports"

Discussion and Results

The emerging process of esports, which has become a part of modern sport in short term and has drawn a lot of interest in today's world, and its relation with modern sport were tried to be evaluated in this study.

Modern sports sources are attributed to industrialisation experienced at the beginning of the 19th century and the production as well as the changes in class relationships depending on it. (Çakır 2014: 4). As it is mentioned in the first part of the study, the era that we live in is called "information era" and the society along with the changes it brought is called as "information society". It is not surprising that e-sport has grown as a competitive field and that it draws interest within the society structure in which information and communication technologies stand out. Wagner's (2006) explanation about this case *"It may be interpreted as an irreversible and rational result of the transition from industrial society to information and communication based society."* is a kind of support to this idea. Even though esport is a concept that exists in various forms for many years, it has become a crucial part of the culture and sports

within the ten years period that we live in. According to Çakır (2014: 193), the fact that sports concept which can be watched is progressed is a result of the progress in the media field. In this sense, esport has benefited from especially the potential that the online media bears in modern times. Esport has succeeded in reaching the big masses in short time thanks to especially social media and online video sharing websites.

Both the fact that it bears the sports concept in it and the fact that it has a substantial interaction with modern sports have brought arguments with itself. As it is mentioned in the third part of the study, these arguments are among the most researched subjects of esports in academic sense. Although esport offers a limited content in terms of physical activities, it shows great similarities with modern sports. The fact that the players train regularly, that they compete in tournaments having certain rules, that there is a competitiveness, that it drags outstanding masses with itself stand out as prominent aspects. Apart from this, although the professional esport players have limited physical activity obviously, the reactions that they show draw attention. Ingo Froböse (2016) says "*The quantity of the cortisol produced is the same as the race car driver. This, sometimes equals to a runner's level racing rapidly in a marathon, can be seen with a high pulse between 160 and 180 in a minute.*" about the cortisol hormonal (stress hormone) test conducted on the esport players by the German Sports University. In this point, it will not be wrong to say that esport is a new sportive concept in the era that we live in.GAISF President Patrick Baumann (2018) says "*We know that sport never stops and the fact that esport with digital games have grown remarkably is a part of the continuous evolution of sports.*" about the point that esport has reached.

As a result of rapid developments experienced in technology, digitalisation process has appeared. In this process, it can be seen that modern sport clubs and organisations that want to increase the number of their supporters in the global world and that follow the advancements in almost every field accordingly interacted with digital gaming industry first rather than e-sport.

While software and hardware companies are advertising on billboards in the stadiums or around them, gaming companies have made critical sponsorship agreements with both teams and organisations (Crawford and Gosling, 2009: 53). Along with the emergence of esport and the fact that it has a great potential have carried this interaction in a different dimension. Especially in the last few years, sport

clubs have accepted esport as a new branch and a way of reaching the new generation. President of Paris Saint-Germain Clubs, France, Nasser Al-Khelaifiexpressed "*We have decided to invest money in esport and to include our teams in the two most iconic games of the sector. This decision makes up a part of the digitalisation project and the club's international development strategy.*" (PSG, 2016). Because of the demographic structure that the target group have and that esport draws a great interest of the brands, it is exposed to the interest of modern sport clubs and organisations which are in search of the new field in digitalisation process.

Competitive digital gaming has experienced many drastic transformations until it reached this point and finally it has brought up the birth of e-sport concept. While the first of thistransformations was emerging with the transition of digital games appeared in public arena into gaming machines named as arcade, the other transformation was competitive tournaments becoming international thanks to the advancements in the Internet technology. As it was mentioned in the first part of the study, especially the advancements in the Internet technologies and the increase in usage of technological devices such as personal computers and mobile phones due to the changes in societal structure have resulted in e-sports' advancement. As a result, people have started to consume digital games both as a player and as a viewer.

The biggest deficit of esport which stands out is lack of corporate structure. This subject was dwelled on in the workshop named as "Esport in Digital World" which was held in Ankara on 10th October 2017 and it was pointed out that there is a lack of regulations and organization in our country in terms of esport. However; shortly after this workshop, the foundation of Turkey E-sport Federation shows the development that we have experienced. As it was mentioned in the study, there are many different structuring in this direction. Especially the foundation of national esport federation has an importance in terms of the acceleration of this process. International E-sport Federation, IeSF, stands out with the number of 48 member countries which is a great step in forming a possible organisation structure in global sense. Esport which is growing at a regular pace will control this great growth in the whole world in the near future and it is obvious that it will have structures to help continue the development. Yet, esport needs to regulate the complex structure that it has while it is advancing to this point. The different dynamics that esport has (for example; the effective role of gaming companies) stand out as an interesting point during the

institutionalisation process. It is expected that esport makes up a unique management model due to this and many different aspects alike. It will not be surprising that the corporate structure which is going to emerge will be accepted as a new field of esport which is started to be accepted as an official branch by many countries in the period that we live in.

It is known that the world we live in has gone through various phases and as a result it has brought many changes with it. The digital games which are one of the novelties that are brought into the entertainment concept by this era which is called as information society has evolved largely in time. As a result of the evolution, competitive digital gaming has taken its place in our lives in different forms since 1980s. A strong esport concept has appeared at the end of this process. Esport which can be defined as competitive sports branch in which physical and/or cognitive activities are carried out via information and communication technologies on online platforms has made a great progress especially in the last 10 years period. Esport which has succeeded in increasing its followers and it economy on a regular fashion has also strengthened its relation with modern sports. The components of the modern sport which are in a digitalisation process as a result have started to recognize esport as a new branch. Olympic Movement's interest in this new competitive field and effort to understand it reveals how serious a concept esport is in an explicit way. It is acknowledged that the most important limitation that the study has is it is just the literature review and the sources that are reached through the theme set. It is thought that this study would be a basis for the studies which will use different methods.

It might be thought that Esport would be a field to be taken into consideration in terms of Sports Management Sciences when it is taken account that Sports and Youth Ministry has accepted it. It would be very beneficial to start the necessary trainings in Turkey about esport which is currently integrated as a course into the curriculum in many countries and is taught in undergraduate programs in countries such as; Germany, England and Finland. In order to eliminate the information deficit, trainings in undergraduate and master programs could be given in this field, an academic language could be developed, studies to encourage the development of esport could be done and competent people could be raised at the same time.

Future studies can be done by using the other scientific methods and the conceptual basis that this study provides. Esport could reflect the demographic

status, attitude and behaviours of the players and the audiences as well as the situation of the sector. In addition to behaviours of the viewers as a consumer, investments by both clubs and brands could be examined. Along with the data to be obtained from the studies, the ways to be followed in terms of esport marketing can be concluded. Moreover, with the future studies on awareness level of the society about esport, the information deficit in society could be presented and in order to resolve these deficits institution based studies could be conducted.

New studies could be done in terms of "organizational structure deficit" which is among the findings of this study. It is thought that esport needs to form a unique way of management model since it has various dynamics as it was mentioned. In this sense, academic studies on forming a new management model for federation structures could be supported, especially by taking subtle position of gaming companies in esports into consideration.

References

Argan M, Özer A, Akın E. (2006). Elektronik Spor: Türkiye' de Siber Sporcuların Tutum ve Davranışları. Spor Yönetimi ve Bilgi Teknolojileri Dergisi. Cilt: 1 Sayı:2.

Başol, G. (2008). Bilimsel araştırma süreci ve yöntem. In: Kılıç, O. & Cinoğlu M. (Ed.), Bilimsel araştırma yöntemleri, Chapter 5, İstanbul: Lisans Publishing.

Baumann, P. (2018). IOC and GAISF to host Esports Forum. Erişim Tarihi; 24.10.2018https://www.olympic. org/news/ioc- and-gaisf-to-host-esports-forum

Birsen, H. (2013). Değişim Aracı Olarak Yeni Medya. In: M.C. Öztürk (Ed.), Dijital İletişim ve Yeni Medya. Eskişehir: Anadolu University Açıköğretim Yayınlar. 27.

Borowy, M. (2012). Public Gaming: eSport and Event Marketing in the Experience Economy. Master Thesis. Simon Fraser University. Canada.

Crawford, G. (2008). "It's in the game": Sport fans, film & digital gaming. Sport in Society, 11(2/3), 130–145.

Crawford G, Gosling V. (2009). More Than a Game: Sports-Themed Video Games and Player Narratives. Sociology of Sport Journal, 2009, 26, 50-66.

Çakır, V.O. (2014). Spor Sosyolojisinin Doğuşu; Geleneksel Beden Eğitimi Usul ve Yaklaşımlarında Dönüşüm. (Yayımlanmamış Yüksek Lisans Tezi). İstanbul Üniversitesi. İstanbul.

Dillon, R. (2011). The golden age of video games: The birth of a multibillion dollar industry. AK Peters/CRC Press.

Froböse, I. (2016). Science shows that eSports professionals are real athletes. Access Date: 23.09.2018. https://www.dw.com/en/science-shows-that-esports-professionals-are-real-athletes/a-19084993.

Hallmann, K. ve Giel, T. (2017). eSports–Competitive sports or recreational activity?. Sport Management Review.

Hamari J, ve Sjöblom, M. (2017). What is eSports and why do people watch it?. Internet research, 27(2), 211-232.,

IOC, (2017). Communique of the Olympic summit. ErişimTarihi: 04.04.2018. https://www.olympic. org/news/communique-of-the-olympic-summit.

Jenny, S. E., Keiper, M. C., Taylor, B. J., Williams, D. P., Gawrysiak, J., Manning, R. D., andTutka, P. M. (2018). eSports Venues A New Sport Business Opportunity.Journal of Applied Sport Management, 10(1).

Jin, D. Y. (2010). Korea's online gaming empire. The MIT Press.

Kirriemuir, J. (2006). A history of digital games. İçinde Rutter, J., ve Bryce, J. (Ed.) Understanding digital games. Sage Publications Ltd, pp. 22- 35

Ólafsson, G. (2012). The Future of Electronic Sports. ReykjavíK: University of ReykjavíK.

PSG (2016). Paris Saint-Germain enters eSports. Access Date: 24.10.2018, http:// psgesports .com/psg- enters-esports-2/

Super Data Research (2015). The worldwide eSports market reaches 134 million viewers. Access Date: 04.04.2018. https://www.superdataresearch. com/ esports- brief/

Wagner, MG. (2006). On the Scientific Relevance of eSports. In International Conference on Internet Computing (pp. 437-442).

Wolf MJ. (Ed.). (2012). Encyclopedia of video games: the culture, technology and art of gaming. ABC-CLIO.