
eSports as An Emerging Research Context at CHI: Diverse Perspectives on Definitions

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Abstract

This paper represents our first endeavor to explore how to better understand the complex nature, scope, and practices of eSports. Our goal is to explore diverse perspectives on what defines eSports as a starting point for further research. Specifically, we critically reviewed existing definitions/understandings of eSports in different disciplines. We then interviewed 26 eSports players and qualitatively analyzed their own perceptions of eSports. We contribute to further exploring definitions and theories of eSports for CHI researchers who have considered online gaming a serious and important area of research, and highlight opportunities for new avenues of inquiry for researchers who are interested in designing technologies for this unique genre.

Author Keywords

eSports; computer-mediated competition; virtual teams; professional gaming.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous



All Midwest eSports Gaming,
University of Cincinnati, 2015



World Cyber Games, 2004. Photo
by Peter Kaminski

Fig. 1. Local (top) and
international (bottom)
eSports tournaments

Introduction

Over the past 20-some years we have witnessed the increasing popularity of Electronic Sports (eSports) through competitions and events that attract up to millions of worldwide participants and online/offline spectators (Fig 1). It has also drawn research attention in the HCI and CSCW community regarding live streaming technologies and communication strategies of eSports (e.g., [11, 13, 14, 16]) as well as new interaction modality designs for such highly competitive contexts (e.g., [8, 9]).

Compared to the size of the industry, eSports scholarship is at an infant stage. While the term of eSports is widely used, researchers do not have consensus with regard to its definition other than a high level understanding that eSports usually refers to competitive multiplayer gaming that involves spectating. With constantly evolving gaming genres, growing participation in livestreaming, and the fact that eSports has pervaded into the youth culture, it is necessary and important to evaluate the multi-dimensions of eSports as well as the sociotechnical implications that it embodies.

Building on our prior work on social/collaborative game play (e.g., [3, 4, 5, 24, 25, 26]), this study represents our first endeavor to explore how to better understand the complex nature, scope, and practices of eSports. Our goal is to investigate diverse perspectives on what defines eSports as a starting point for further research. In doing so, we critically reviewed existing definitions/understandings of eSports in a variety of disciplines. We then interviewed 26 eSports players and qualitatively analyzed their own perceptions of what eSports means for them.

Defining eSports

eSports is situated at a unique intersection that combines recreation, interaction, task, competition, and collaboration: It is task-based with serious purposes (e.g., collaborate to complete tasks and win); it also happens in an intense fictional virtual environment that requires fast decision-making and response rate. Furthermore, many players are still amateur, practicing skills at home, without pay, for fun and challenge [8]. Yet one of the main challenges to study eSports is the lack of understanding of its scope, connotation, boundary conditions, and context, which leads to the difficulties to perceive and approach eSports as a distinct research topic in our field. For example, what are the theories that we can apply to study eSports? Does studying eSports require a different approach than gaming studies? What would be the most appropriate methodologies to study eSports? As a first step to address these questions, we critically reviewed existing definitions of eSports in a variety of disciplines, including Sports Studies, Management and Marketing, and Communication.

1) eSports as a computer-mediated "sport." A common interpretation of eSports is to view it in light of qualities of traditional sports. Wagner [23] first formally defined eSports as "an area of sport activities in which people develop and train mental or physical abilities in the use of information and communication technologies" (p. 440). According to him, such a definition represents a paradigm transition of sports (i.e., a culture of human motion) from an industrial society to today's digital era. Following this trend, a few studies investigated the "sport-like" qualities of eSports. For example, [15] analyzed the correlation between eSports game patterns and traditional sports

Interviewee demographics

Gender: Male - 22;
Female - 4

Average age: 21.5

Professional players

(e.g., in a professional team playing for tournaments, eSports-related business, and streaming to make income): 5

Amateur players: 21

eSports games

played: mainly *LoL*, but interviewees had also played other games such as *Dota*, *StarCraft*, *Counter Strike*, *Super Smash Bros*, *Overwatch*, *SMITE*, *Hearthstone*, *Guild Wars*, *Halo*, *World of Tanks*, and *Rocket League*.

Experiences of

playing eSports: 3 years on average (max. = 15 years)

involvements. [7] characterized eSports as 1) sports activities mediated by computing systems (e.g., online gaming); and 2) sports content broadcasted and spread via computing systems (e.g., live streaming). Yet people still question the legitimacy of defining eSports in light of traditional sports [10, 23], suggesting that whether eSports “is a sport or not is to some extent irrelevant for the academic discussion of eSports” [23, p. 440].

2) eSports as competitive computer gaming.

eSports as competitive computer gaming seems to be a practical and pertinent interpretation, which highlights the core gaming mechanism and play experience. This is especially true in our field: in the small body of prior work in HCI and CSCW that involves eSports (e.g., [8, 9, 11, 13, 14, 16]), most of them described eSports as competitive computer/online/video gaming. Such competitions can be held at various levels and scopes, ranging from a small local match using LAN (Local Area Networks) to national and international tournaments. In sum, competition directly motivates players to win and improves their speed and accuracy; skills in gameplay [15] are also closely associated with players’ fame, revenue, and reputation out of the game.

3) **eSports as a spectatorship.** Spectatorship has been considered one of the primary distinctions between eSports and other forms of gameplay. In the realm of eSports, gaming activities have evolved from individual experiences in computer-generated environments to public experiences. The improvement of Internet bandwidth and the popularity of live streaming sites (e.g., Twitch, Youtube Gaming channel) further promote such a spectatorship and interactions between the spectator and the competitor (e.g., via

computer-mediated communication such as Twitch web chat). As a result, both players and audiences have actively participated in and shaped the perception, understanding, and experience of gameplay. This understanding calls for taking audience into account in game/interaction design. Theoretically, it also highlights the sociocultural infrastructure of eSports as a form of modern gaming: competitors as performers or actors/actresses within the gaming world, while spectators as audience outside of the gaming world and judge the performance using their own sociocultural values [20, 22].

Yet not only do *researchers* interpret the significance and implied sociocultural values of eSports in various ways, there seems to be a lack of in-depth analysis of how *players* (including casual, amateur, and professional players) understand eSports and what they value most out of eSports. We therefore conducted an interview study to explore the diverse perceptions of eSports using players’ interpretations.

Methodology

After consulting with two informants in the eSports field (both are professional players), we learned that *League of Legends (LoL)* was currently considered the most popular and mainstream eSports game and players usually used Facebook groups to communicate and organize events. Therefore, we searched groups with keywords “*League of Legends*” or “*LoL*” on Facebook. Then we posted a message on the first retrieved 12 Facebook groups in order to recruit players who had played eSports games as part of a team and were willing to be interviewed as voluntary participants. All players who responded to our message and showed willingness were interviewed. As a result, 26 semi-

Importance of Mechanical Skill

"[eSports is] not like turn based games. In games like chess, poker, and Pokemon there is no physical component so I would not consider them esports." -P5 (male, age 21)

Importance of spectatorship

"It has to be able to be viewed as entertainment. There wouldn't be enough money to make it plausible without streaming and such I think." - P8 (male, age 21)

structured in-depth interviews were conducted via text/audio/video Skype chat based on participants' modality preferences from May to July 2016. In each interview, 23 predefined open-ended questions regarding eSports players' game experiences were asked and the average length of interviews was 85 minutes. The questions related to this study were: *What's your definition of eSports? What types of games you consider "eSports"?*

Adopting a Grounded Theory approach [6], an in-depth qualitative analysis was used to code and interpret the data. First, both authors closely read through players' narratives to acquire a sense of the whole picture in regards to their perceptions of eSports. Then both authors identified a preliminary set of narrative themes emerging in players' accounts toward how they understood eSports. At last, both authors collaborated in an iterative coding process to identify and refine themes emerging in players' accounts and then summarized the fundamental aspects of players' understandings of eSports.

Findings

In this section we present four primary views of eSports using players' own accounts. Above all, both male and female interviewees described competition, having clear goals, and rules as being necessary conditions of eSports. Many, including most of the amateur players, mentioned that though eSports was not always a professional activity, it usually required a professional scene/atmosphere. In addition, the aspect of competition is always associated with the aspect of goal-oriented activities. Thus, neither competition with no goal nor a goal with no competition was considered eSports.

The high demand for mechanical skills defines eSports
 Players valued the importance of mechanical skills in understanding eSports and related such skills to the physical nature of the gameplay. P8 (male, age 21) described mechanical skills as *"anything from a player's physical ability like reaction time to heightened understanding of intricacies of the game"* and P9 (male, age 19) called such skills *mechanical prowess*: *"It's a game of mechanics -- one's skills on a keyboard/mouse or controller,"* he said, pointing out that some games relied more heavily on mechanics than others, *"Call of Duty for example. It's a run 'n' gun type shooter with very little strategy involved. The player with the fastest reflexes and best aim is the world champion."* For many players, intellectual skills, though essential, were not the defining nature of eSports. Giving an analogy with basketball, P5 (male, age 21) explained that one could always envision a sequence (such as making a shoot at the hoop) but the mental component did not lead to the execution: *"You have to take into consideration your success and fail rate on certain techniques while making your decisions within the game... which implies that through practice you can improve in your execution."*

With such a high demand for physical skills, players tended to associate eSports with traditional sports: *"I know that's generally seen as controversial but I feel eSports and traditional sports are comparable in terms of skills"* (P15, female, age 18). The notion of practice to improve performance also adds legitimacy to players' perception of eSports: eSports is more serious than playing videogames for fun because the core of eSports is to make strategic decisions in a timely manner and continuously engaging in practice.

Importance of Governing Body

"A ruleset not only means rules and regulations but the system and environment is also managed and controlled by a governing body, although it may change over time." - P1 (male, age 23).

Importance of Human Competitors

"I think most eSports games have components in which gamers can compete against AI, but I think it only counts when gamers verse other humans!" - P24 (female, age 19)

Spectatorship as social structure and sustainability

Several participants considered spectatorship a crucial element to define the social structure and sustainability of eSports. They gave examples such as Twitch and YouTube, and offline events. One reason was its role in maintaining and supporting eSports as a domain financially. Others, however, considered spectatorship as a way of building a social structure and culture around eSports. For example, P2 (male, age 21) argued that there were many competitive games, but that some *"end[ed] up going nowhere"* because they lacked the greater social development. *"Like any sport, esports is very community-focused,"* he explained. This idea of community, however, was at a very abstract level, and was thus uncertain what the criteria of community would be or how that would be determined.

Governing body as a central authority for eSports

Some players especially emphasized the role of "governing body" in defining eSports. For them, the simple presence of loose rules and regulations were insufficient to distinguish eSports from other online gaming practices. Instead, the uniqueness of eSports is that it is overseen by an external organization with authority and institutional structure. Specifically, P6 (male, age 21) highlighted how the presence and practice of such a governing body made eSports more than gaming for fun: *"People in their backyards may throw a football around but they aren't abiding by the NFL's ruleset. I think the same thing is pertinent in esports."*

Participants, however, had different ideas about who those governing bodies should be: Some said that the developers played a major role; others mentioned entities like MLG (Major League Gaming), ESL Gaming,

and Dreamhack but also acknowledged that there should be grassroots organizers. Nevertheless, they all tended to agree that this notion of governing body in eSports was still very much evolving.

Human opponents was the core of eSports gameplay

Somewhat surprisingly, many participants did not regard playing against the computer as eSports. For them, only playing with human opponents qualified as eSports gameplay. Yet their rationale for excluding computer opponents from eSports was more of a technical concern than a philosophical reflection: multiple participants noted that characters played by artificial intelligence (AI) did not play as well as humans mainly due to their lack of versatility. Yet some other participants acknowledged that it was plausible for computers to reach a level of sophistication to be completely unpredictable in the future, making computer opponents in eSports possible: *"AI can be made to be perfect so it would be hard to defeat them,"* said P12 (male, age 18).

One clear finding was that eSports players were not in agreement about which combination of the above factors should constitute the definition of eSports. For example, one participant (P20, male, age 20) did not think that humans or competition were "necessary" factors in defining eSports: *"I'd hesitate to say that competition and human opponents are the key factors in any esports for the same reason I'd hesitate to say the same about it for other sports."* There was also disagreement on whether or not eSports should be team-based, and while some saw eSports as an electronic take of traditional sports, others argued that eSports should only involve games that have no offline parallel. For example, P8 (male, age 21) argued that

online poker would not constitute as an eSports because one could also play poker offline.

Discussion and Future Work

In our interviews, eSports was still routinely perceived as a form of computer-mediated competitive activities that attracts spectators. Participants also tended to describe eSports using terms and concepts from traditional sports (e.g., competition and training), though they did not explain in-depth why these concepts could be applied to eSports. Yet our study points to some aspects of eSports that may have been overlooked in other studies. One is the significance of external governing bodies. Games have been long considered rule-based play [18]. Those rules, however, are seldom extended outside of the game or established by an external governing body. The emergence of eSports is changing this landscape. The presence and practice of external governing body both distinguishes eSports from amateur or spontaneous play [10, 22] and challenges traditional game studies – the sophisticated sociocultural structure of “professionalism” is likely to make studies of eSports different (and probably more complicated) than studies of non-eSports games. Game designers can also get more creative (and thoughtful) in terms of embedding quantitative methods of measuring game mechanics. Sharing more of these backend statistics could make a game more suitable for eSports because it lends itself to more precise evaluation. In addition, professionalism in eSports does not only refer to highly skilled gameplay and strategic team management [22, 23] but also emphasizes the so-called “pro culture” [22]. It explains the broader structural mechanisms that make this field distinctive -- the collaborative efforts of gaming companies, players, communities, spectators,

Players’ perceptions of eSports include:

- ⇒ Competition
- ⇒ Goals/ Rules
- ⇒ Professional scene
- ⇒ Spectators
- ⇒ Intellectual and motor skills
- ⇒ Governing body
- ⇒ Human competitors

and many other stakeholders who contribute to establishing a set of stable, widely acknowledged, and abided standards [19]. Furthermore, though the focus on interpersonal interaction is not new in studies of multiplayer online gaming (e.g., [1, 2]), eSports players especially value the competitive dynamics between human rivalries. For them, the clear awareness of defeating an actual human (not AI) constitutes the very sense of achievement and makes them “professional” (e.g., better than other human players).

Therefore, for HCI researchers who have considered online gaming a serious and important area of research instead of superficial leisure activities [17], our exploration of how players perceive, interpret, and make sense of eSports helps identify opportunities and challenges of studying eSports in HCI and CSCW. For researchers who are interested in designing technologies to support highly competitive and interactive experiences and practices, our findings regarding the criteria and qualities of eSports that are acknowledged and valued most by players shed light on the very core of a collaborative system that requires “fast and precise interaction” [8, p. 311], which opens up opportunities for new avenues of inquiry. For future work, we plan to conduct a large-scale survey study to collect more players’ interpretations with the hope to propose a coherent definition of eSports. We also plan to recruit more female participants so as to explore potential gender differences in defining eSports.

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