

The Growth of E-Sports: Examining Students' Perceptions of Technological and Financial Factors Affecting Motivation in E-Sports

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ABSTRACT

E-sports' explosive expansion has completely changed the competitive gaming scene, drawing players and spectators from all around the world. With an emphasis on technical advancement and financial careers, this research investigates the reasons why students participate in e-sports. In addition to investigating gender-based disparities in students' motivations, the study sought to evaluate students' views of the different motivating elements influencing their engagement in e-sports. The research, which used a quantitative method to examine data from 515 students, found that students believed that both financial possibilities and technology improvements had a substantial impact on their participation in e-sports. The results show that these elements are important motivators for participation as well as a developing trend in e-sports as a promising professional path and a means of personal growth. This study has ramifications for lawmakers, e-sports organizations, and educational institutions who wish to provide a more friendly and supportive environment for participants. Additionally, it contributes significant insights into the comprehension of student motivations in the context of digital gaming. The report also highlights how important it is to incorporate e-sports into frameworks for education and development in order to fully realize its potential as a tool for career growth and skill development.

Key word: *E-sports, Technology, Career opportunity, Motivation, Students.*

INTRODUCTION

Competitive gaming, or e-sports, has quickly grown to become a worldwide phenomenon with millions of players and spectators. In addition to changing the entertainment sector, this vibrant digital environment has also produced new cultural, social, and financial environments. (Kalynets & Krykavskyy, 2022). The

study reveals that the unprecedented growth of e-sports is particularly evident among youth, who form the participants and core audience (Abbas, Jasim, & Nsaif, 2019). Current research work discovers the inspirations driving young people to engage with e-sports, whether as players, fans, or professionals.

The increasing legitimacy of e-sports is evident through its inclusion in major sporting events. For instance, e-sports debuted as a medal event at the 2022 Asian Games, reflecting its acceptance in traditional sports arenas (Murray, Birt, & Blakemore, 2022). Furthermore, the International Olympic Committee (IOC) has recognized the potential of e-sports, leading to the announcement of the inaugural Olympic E-sports Games, scheduled to be held in Saudi Arabia in 2027 (Hassan, 2024).

From multiplayer online battle arenas (MOBAs) like "League of Legends" to first-person shooters (FPS) like "Counter-Strike," the variety of game genres in e-sports has increased its popularity. Major competitions with huge prize pools and millions of spectators worldwide include the League of Legends World Championship and The International for Dota 2 (Zhou, 2024).

Furthermore, it is researched that advancement of technology has significantly influenced the participation of students in e-sports (online gaming) by enhancing accessibility, interactivity, and competitiveness. With the rapid evolution of hardware and software, students are more engaged in digital gaming platforms, leading to an increased motivation to participate in e-sports (Martoncik, 2015). The growth of online gaming platforms like Twitch and YouTube has also been instrumental in encouraging students to participate in online sports. These platforms allow students to watch professional gamers, learn new strategies, and aspire to compete at higher levels (Taylor, 2018). E-sports have evolved into a significant part of student life, offering both recreational and competitive experiences. The rise of online gaming platforms has transformed e-sports into a global phenomenon, attracting millions of students (Khan, Bangash, & Khan, 2025).

The advent of the digital age has significantly transformed how individuals, especially students, engage with sports and entertainment. The exponential growth of electronic sports (e-sports), a type of competitive video gaming that has transformed from a casual leisure pastime into an organized, worldwide phenomenon, is one of the most notable results of this digital revolution. E-sports have become a vital component of youth culture, educational settings, and even professional career planning due to the integration of cutting-edge technology and digital infrastructure (Jenny et al., 2017).

The expansion and accessibility of e-sports are largely dependent on technological advancement. High-definition graphics, cloud computing, powerful game consoles and PCs, fast internet, and live-streaming services like Twitch and YouTube game, and interactive virtual reality (VR) technologies have redefined the gaming experience. These tools not only enhance gameplay but also support connectivity and real-time interaction, making e-sports a socially engaging and competitive environment (Hamari & Sjöblom, 2017). For students, these advancements have lowered barriers to entry and made e-sports more inclusive, immersive, and convenient.

In parallel, the rise of financial opportunities in the e-sports industry has emerged as a significant motivational driver for students. E-sports is no longer just a hobby it is now a multimillion-dollar industry offering diverse income-generating avenues such as professional gaming, live-streaming, sponsorship deals, merchandise, coaching, content creation, game development, and event management (Seo, 2013). According to the Newzoo Global Esports Market Report (2023), the e-sports industry generated over \$1.8 billion in revenue, with projections of continued growth driven by increased investment, media rights, and brand sponsorship. These trends highlight the rising recognition of e-sports as a viable professional career path, attracting students who aspire to turn their passion into long-term income.

Motivation among students to participate in e-sports is often influenced by a combination of intrinsic and extrinsic factors. On one hand, students are drawn by personal interest, enjoyment, and social interaction facilitated by digital gaming platforms. On the other hand, extrinsic motivators such as financial success, career recognition, and social status play a growing role in their sustained involvement (Bányai et al., 2019). For many students, the possibility of becoming a professional gamer, influencer, or content creator adds a new dimension to their academic and personal aspirations, blending leisure with ambition.

Moreover, educational institutions across the globe, including universities and colleges, have started to integrate e-sports programs into their co-curricular and academic offerings, providing scholarships, training facilities, and competitive leagues. This institutional support further enhances the attractiveness of e-sports and legitimizes it as a credible pathway for student success (Funk et al., 2018). Given these developments, it is essential to understand how technological advancements and financial career prospects influence the motivation of students to engage in e-sports. This research seeks to assess the level to which these two aspects shape students' participation, commitment, and future orientation in e-sports. The study will also explore how these motivational influences vary across gender, academic level, and socioeconomic background, offering a comprehensive view of youth involvement in digital sports culture.

Objectives of the study

1. To analyze students' perceptions regarding technological advancements as a driving factor for e-sports engagement.
2. To examine students' perceptions regarding financial and career opportunities as motivations for pursuing e-sports.
3. To assess the difference between the perception of male and female students.

LITERATURE

Competitive gaming has existed since the days of Pong, but e-sports as we know it today is relatively new. The first widespread use of home consoles in 1972 is when e-sports first emerged. (Khan, Bangash, & Khan, 2025). Electronic sports (E-Sports) have evolved from simple arcade competitions to a globally recognized industry with professional leagues, sponsors, and millions of viewers. The origins of e-sports may be found in the early 1970s, when competitive video gaming started to emerge in academic environments. Students from Stanford University participated in one of the first known video game tournaments in 1972 by playing the game Spacewar (Yongming, Wang, & Haohao, 2019).

Students from all over the world are drawn to the gaming business, which has become a professional and competitive area due to the growth of e-sports. Electronic sports, sometimes known as e-sports, are organized multiplayer video game events that frequently feature professional players and sizable crowds (Hamari & Sjöblom, 2017). The growing popularity of e-sports among students is influenced by several motivational factors, including intrinsic and extrinsic elements that shape their participation and engagement. Understanding these factors is crucial for fostering a sustainable and competitive e-sports environment in educational institutions.

Motivation in e-sports is driven by intrinsic factors such as passion for gaming, the joy of competition, and personal achievement. According to self-determination theory of (Deci and Ryan, 1985), the satisfaction of three psychological needs competence, autonomy, and relatedness leads to intrinsic motivation. It is researched that students who engage in e-sports often experience a sense of control over their gaming

choices (autonomy), develop advanced skills (competence), and form social connections with fellow gamers (relatedness). These elements contribute to sustained participation and performance in e-sports activities (Ryan, Rigby, & Przybylski, 2006).

Extrinsic motivation also plays a significant role in students' involvement in e-sports. External rewards such as financial incentives, career opportunities, and recognition influence participation (Jenny et al., 2017). The emergence of scholarships, sponsorships, and professional gaming careers has encouraged students to pursue e-sports competitively. Moreover, the social influence of peers, streaming platforms, and online communities fosters motivation by providing validation and support (Weiss & Schiele, 2013).

METHOD AND MATERIAL

The current study's goal is to examine the effects of variables that encourage students to participate in e-sports. A descriptive research design was employed in the current study because the researcher plans to gather numerical data on the purpose of the variable to be included in the study. To gather information from the participants, the researcher used a cross-sectional survey approach.

Population and Sample

In this study, the students of class 5 to Intermediate/A-Level, with the age limit between 10-18 years, of all private school working under PEIRA rules were the population of the study. There were total -6000/- students in these school at A-level and the data and strength was taken from the concern authorities of such schools. The researcher has used random sample technique to select participants from each school working under PEIRA, in Islamabad, in order to make a better representation of population. Random sample technique. The sample size of 600/- out of total population 5000/- was made on the basis of standard sampling table (Kerjcie & Morgan, 1970).

Instruments of the Study

For data collection, the researcher used two different instruments. The first one **was** the Student's Motivation Questionnaire (SMQ) to assess the factors affecting the motivation of students in e-sports involvement, and the second scale was the E-sports Involvement scale to analyze the involvement of students in e-sports gaming. Both questionnaire were self-made. The questionnaire was prepared in a five-point Likert-type scale and had scores ranging from 1 to 5. The researcher also used a basic information form for the demographic information of the participants.

DATA ANALYSIS

The researcher has used SPSS -27 version for data analysis. In the current study, the researcher has used both descriptive and inferential statistics. Descriptive statistic was used to describe item-wise analysis. While, inferential statistics was use to analyze perception of students regarding motivation of students towards e-sports involvement.

Descriptive Results

Table 1: *This table shows the description results of the study.*

Item	Gender	N	Mean	Std. Deviation	Std. Error Mean
Social	Male	295	3.6568	.74900	.04361

Factor	Female	220	3.6193	.70243	.04736
Valid N (listwise)		215			

Five hundred and fifteen students were taken as sample from six different schools working under the PEIRA in Islamabad, Pakistan. There were 850 student (16%) from “The Science School Islamabad”, 1045 (20%) from Beaconhouse Margala campus Islamabad, 920 (18%), from “The City School Capital Campus Islamabad”, 870 (16.61%) from Super Nova School Islamabad, 750 (14.32%) Headstart School Islamabad, and 800 (15.28%) ACE International Academy Islamabad, Pakistan.

Testing of Hypothesis

H_{A1}: Students perceive technological advancements as a driving factor for e-sports engagement.

Table 2: One-Sample Test

	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Technological Advancement	28.819	514	.000	.92880	.8655	.9921

The results of the one-sample t-test indicate that the mean score for Technological Advancement (Technology Acceptance Model) is significantly different from the test value of 3. The t-value is 28.819 with 514 degrees of freedom, and the associated p-value is .000, which is well below the conventional alpha level of .05, indicating strong statistical significance. The mean difference between the sample means and the test value is .92880, with a 95% confidence interval ranging from .8655 to .9921. This suggests that the true population mean for Technological Advancement is significantly higher than 3, and we can be confident that the average score is nearly one unit above the test value.

H_{A2}: Students perceive financial and career opportunities as key motivations for pursuing e-sports.

Table 3: One-Sample Test

	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Financial and Career Opportunities	22.627	514	.000	.74369	.6791	.8083

The output of the above table shows that the mean score for Financial and Career Opportunities (3.7437) is significantly greater than the neutral test value of 3. The obtained t-value of 22.627 with 514 degrees of freedom (df) is statistically significant ($p < 0.001$, two-tailed), providing strong evidence to reject the null hypothesis that the population mean equals 3. The mean difference of 0.74369 suggests that the average Financial and Career Opportunities score in the sample is approximately 0.74 points higher than the neutral benchmark. This implies that participants' perceptions of Financial and Career Opportunities are moderately favorable and statistically above the neutral level. The large t-value and slight confidence

interval further underline the robustness and reliability of this finding, suggesting consistent positive tendencies across the sample.

H_A3 To assess the mean differences among students in regards of E-sports and Technological development.

Table 4: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Technological Advance ment	Equal variances assumed	.330	.566	.091	513	.927	.00593	.06515	-.12206	.13393
	Equal variances not assumed			.091	472.789	.927	.00593	.06512	-.12203	.13390

Based on the findings presented in Tables 4. The group statistics show that male respondents (N = 295) had a mean score of 3.9288 (SD = 0.73245), while female respondents (N = 220) had a very similar mean score of 3.9229 (SD = 0.72997). The independent samples t-test results confirm that this difference is not significant, with a t-value of 0.091 and a p-value of 0.927.

H_A4 To assess the mean difference among participants in term of E-sports and Career Opportunity.

Table 5:Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Financial and Career Opportunities	Equal variances assumed	.201	.654	.304	513	.762	.02015	.06639	-.11027	.15058
	Equal variances not assumed			.304	472.789	.762	.02015	.06639	-.11023	.15050

	Equal variance s not assumed			.306	48.4.823	.760	.02015	.06587	-.10927	.14957
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Based on the data presented in Tables 5. The group statistics indicate that male participants (N = 295) reported a mean score of 3.7492 (SD = 0.76214), while female participants (N = 220) had a closely similar mean score of 3.7290 (SD = 0.72198). The results of the independent samples t-test reveal a non-significant difference, with a t-value of 0.304 and a p-value of 0.762.

DISCUSSION

The findings of this study provide valuable insights into the motivations behind student participation in e-sports, shedding light on the key factors that drive engagement in this rapidly growing digital arena. The results suggest that students are highly motivated to participate in e-sports for a variety of reasons, including social factors, entertainment and fun, technological advancements, financial and career opportunities, cognitive and mental stimulation, psychological development, and skill development. These motivations collectively highlight the multifaceted nature of e-sports engagement and the diverse benefits that students perceive from their involvement in this digital realm. Finding of the current study indicated that technological advancements have significantly enhanced the immersive quality of racing games, making them more lifelike and competitive. With advancements in graphics and artificial intelligence, racing games have become more immersive.

Such finding of the study is similar with the past research study which found that introduction of powerful gaming consoles, high-performance graphics cards, and high-refresh-rate monitors has significantly improved the quality of gaming, making it more immersive (Patil & Chintale, 2024). Similarly, another study revealed that development of interactive streaming platforms has revolutionized the way students engage with e-sports. Platforms like Twitch, YouTube Gaming, and Discord provide students with opportunities to connect, compete, and learn from professional gamers, enhancing their overall gaming experience (Taylor, 2019). Furthermore, study found that streaming platforms have been instrumental in the rise and global reach of e-sports. Platforms like Twitch, YouTube Gaming, and Facebook Gaming have become central to the consumption of competitive gaming content (Johnson & Woodcock, 2019). With over 140 million monthly active users in 2022, Twitch has emerged as a major hub for e-sports streaming (Partin III, 2025). These platforms offer more than just viewership access; they enable monetization through advertisements, subscriptions, and fan donations. Additionally, interactive features such as real-time chat and community-driven content further enhance viewer engagement, making streaming a vital part of the e-sports ecosystem (Li et al., 2025). It means that advancement of technology has greatly increased the involvement of student in e-sports.

The influence of financial rewards and career opportunities on student motivation in e-sports has been increasingly recognized in recent research. E-sports, or competitive online gaming, has emerged as a significant part of modern sports culture, drawing millions of players and spectators worldwide. This finding is tied with a study that analyzed that universities now offer e-sports scholarships, and professional gaming careers are becoming viable options. Students engaged in e-sports may have opportunities to earn scholarships or pursue careers in game development, broadcasting, and marketing (Jenny et al., 2017). Hence, Several studies have emphasized the impact of financial incentives on student participation in e-sports, a study by Hamari and Sjöblom (2017) found that monetary incentives significantly influence player engagement in e-sports, especially among students who view gaming as a potential profession. Similarly, Mora-Cantallops and Sicilia (2018) highlighted that financial gains, including donations and sponsorships,

drive student gamers to invest more time and effort into improving their skills.

The perception of e-sports (electronic sports or competitive online gaming) differs notably between male and female students, influenced by a complex interplay of social norms, cultural expectations, and digital exposure. Traditionally, gaming has been a male dominated domain, and this legacy continues to influence how both genders perceive and engage with e-sports today (Taylor, 2012). Male students often view e-sports as a competitive, career-oriented, and skill-based activity, while female students may perceive it more as a recreational or social engagement and often face gender-based barriers to full participation (Cote, 2017).

CONCLUSION

Based on the analysis of the data and the outputs of the statistical tests, this study provides a comprehensive understanding of the motivations behind student participation in e-sports. It highlights several key factors that influence students' engagement in digital gaming activities. The study reveals that development of technology is a significant motivator for involvement of students in e-sports. Technological advancements is a key driver of student participation in e-sports. The findings indicate that students are highly motivated by the availability of new technologies and digital platforms, which enhance their gaming experience.

Additionally, financial and career opportunities play an important role in motivating students to pursue e-sports. The recognition of e-sports as an authentic career path, offering both professional opportunities and financial rewards, influences students' decisions to participate.

The study also found no significant gender-based differences in the overall perceptions of students regarding the motivations for engaging in e-sports. This suggests that the factors influencing participation in e-sports are largely consistent across male and female students, highlighting the universal appeal of e-sports as an activity that transcends gender.

In results, the study underlines the multidimensional nature of the motivations behind student participation in e-sports. Entertainment and technological development are key drivers that influence students' decision to engage in digital gaming. These insights are valuable for understanding student behavior in the e-sports arena and can guide future initiatives in the growing e-sports industry.

RECOMMENDATION OF THE STUDY

1. Educational institutions should raise awareness about the cognitive, social, and career-related benefits of e-sports.
2. To address gender disparities and social barriers, it is essential to create safe, inclusive, and harassment-free gaming environments.
3. Institutions should integrate e-sports into official extracurricular activities to validate gaming as a structured and goal-oriented pursuit.
4. Parents and teachers should be educated on the positive aspects of e-sports to reduce negative perceptions.

6. Career counseling sessions should highlight the growing professional opportunities in the gaming industry such as game development, digital marketing, broadcasting, and professional gaming.
7. Connecting e-sports to future career prospects can enhance student motivation.

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