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Learning Through Digital Games on the Steam Platform: A Quantitative Analysis from a Media and Communication Perspective

Steam Platformunda Dijital Oyunlarla Öğrenme: Medya ve İletişim Perspektifinden Nicel Bir Analiz

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Abstract

This study aims to examine the role of digital games in educational processes from a media and communication perspective, with a specific focus on the Steam platform. The main premise of the research is that games function not only as tools of entertainment but also as instruments that support learning and transform interpersonal interaction within new media environments. Based on a sample of 150 games, the study investigates user evaluations, genres, tags, and interaction types of education-oriented games. Within the framework of a quantitative research design, descriptive statistics, independent samples t-test, one-way ANOVA, chi-square independence test, and multiple linear regression analyses were conducted. The findings reveal no significant difference in user evaluations between games labeled as educational and those without such labels. However, partial differences were observed among genres, with puzzle games receiving more positive feedback compared to simulation and strategy games. Regression analysis indicated that variables such as education label, game genre, interaction type, release year, and price had a limited effect in explaining the percentage of positive user reviews. These results suggest that the educational contribution of games cannot be evaluated through a single-dimensional measure, but rather requires a multifaceted approach. The study highlights that digital games should be considered not only within formal educational settings but also in the context of informal learning, media literacy, and participatory culture. While supporting the growing academic interest in Türkiye, the research also provides a fresh perspective on game-based learning approaches by integrating the international theoretical framework. In conclusion, digital games, when analyzed in connection with the discipline of media and communication, carry significant potential for educational research.

Keywords: Digital Games, Game-Based Learning, Gamification, Steam Platform, Media and Communication, New Media.

Öz

Bu çalışma, dijital oyunların eğitim süreçlerindeki rolünü medya ve iletişim perspektifinden ele alarak Steam platformu özelinde incelemeyi amaçlamaktadır. Araştırmanın temel çıkış noktası, oyunların yalnızca eğlence aracı

değil; aynı zamanda öğrenmeyi destekleyen ve yeni medya ortamlarında bireyler arası etkileşimi dönüştüren bir araç olarak işlev görmesidir. Çalışma kapsamında 150 oyundan oluşan örneklem üzerinden eğitim temalı oyunların kullanıcı değerlendirmeleri, türleri, etiketleri ve etkileşim biçimleri incelenmiştir. Nicel araştırma deseni çerçevesinde betimsel istatistikler, bağımsız örneklem t-testi, tek yönlü ANOVA, ki-kare bağımsızlık testi ve çoklu doğrusal regresyon analizleri uygulanmıştır. Bulgular, eğitim etiketi taşıyan oyunlarla taşımayan oyunlar arasında kullanıcı değerlendirmeleri açısından anlamlı bir farklılık olmadığını göstermiştir. Bununla birlikte türler arasında kısmi farklılıkların bulunduğu, özellikle bulmaca türündeki oyunların diğer türlere göre daha yüksek olumlu geri bildirim aldığı tespit edilmiştir. Regresyon analizinde ise eğitim etiketi, oyun türü, etkileşim tipi, yayın yılı ve fiyat gibi değişkenlerin pozitif kullanıcı yorum oranlarını açıklamada sınırlı etkiye sahip olduğu ortaya konmuştur. Bu sonuç, oyunların eğitimdeki katkısının tek boyutlu bir ölçütle değerlendirilemeyeceğini, çok boyutlu faktörlerin birlikte incelenmesi gerektiğini göstermektedir. Araştırma, dijital oyunların yalnızca formal eğitim ortamlarında değil; informal öğrenme, medya okuryazarlığı ve katılımcı kültür bağlamında da ele alınması gerektiğini vurgulamaktadır. Çalışma, Türkiye'de bu alandaki artan akademik ilgiyi desteklerken, uluslararası kuramsal çerçeveyle birlikte oyun tabanlı öğrenme yaklaşımlarına yeni bir bakış sunmaktadır. Sonuç olarak dijital oyunlar, medya ve iletişim disipliniyle bütünleşik biçimde ele alındığında eğitim araştırmaları için güçlü bir potansiyel taşımaktadır.

Anahtar Kelimeler: Dijital Oyunlar, Oyun Tabanlı Öğrenme, Oyunlaştırma, Steam Platformu, Medya ve İletişim, Yeni Medya.

1. Introduction

In the context of media and communication, digitalized new media environments are transforming learning processes, with digital games increasingly coming to the forefront. Throughout history, play has been considered one of the natural learning processes for children, and with the advancement of technology, it has been revitalized in digital environments (Yurdaöz & İletir, 2023, 294). Digital games, with their interactive and participatory structures, not only entertain players without detaching them from the screen but also

support various cognitive and psychomotor skills (e.g., hand–eye coordination, motor skills) (Yurdaöz & İletir, 2023, 294). Today's children, as a generation "growing up with computers," develop different modes of thinking while playing on digital platforms and acquire the ability to process information selectively and strategically in online environments (Prensky, 2001, Chapter 2).

In this context, digital games create social learning mechanisms outside of traditional education (so-called "affinity spaces," as Gee defines them); within these interest-based environments, games are seen as well-designed educational settings that encourage individuals to gain competence and solve problems (Gee, 2018). For instance, Gee emphasizes that "a good video game is a well-designed learning environment," while Jenkins highlights how digital media radically transforms traditional learning spaces, enabling knowledge to be produced in collective and participatory ways (Jenkins, 2006). From this perspective, digital games have become not only a form of entertainment but also a cultural and institutional tool, used not only in education but also in marketing and socialization processes (Ilgaz Büyükbaykal & Abay Cansabuncu, 2020, 3). For example, today the digital game industry possesses great economic power, and through avatars and content created around game characters, players construct new worlds and integrate into digital communities (Ilgaz Büyükbaykal & Abay Cansabuncu, 2020, 3).

Within this framework, the concept of gamification has also gained prominence: game design techniques and elements such as points and badges make tedious information processes in education more motivating, thereby increasing learning motivation (Albayrak Özer, 2022, 80).

Studies focused on Türkiye highlight the pedagogical potential of game-based learning and gamification. For instance, Albayrak Özer (2022), in a content analysis conducted in Türkiye, emphasized that the rapid spread of video games in the 21st century has played an effective role in the adoption of the concept of "gamification" in education. Similarly, Hamari (2013) and related studies have shown that gamification practices enhance user satisfaction and motivation in educational processes (as cited in Albayrak Özer, 2022).

In addition, recent review analyses indicate that the number of studies on games and game-based learning in education in Türkiye has been steadily increasing. Researchers such as Banaz and Banaz (2023), who examined trends in the educational applications of digital games, reported a significant rise in the number of theses published on this topic in 2021 and 2022. Local case studies also demonstrate pedagogical benefits. Şentürk (2020), in an experiment conducted in primary school science classes, reported that students in the experimental group who received game-based instruction achieved significantly higher academic success and more positive attitudes toward the course compared to the control group. Post-experiment measurements revealed increased motivation and positive attitudes, with students indicating that they "learned by having fun and through hands-on experiences," ultimately developing favorable attitudes toward the subject.

Similarly, in the context of mathematics education, a bibliometric analysis highlighted that digital games contribute positively in multiple ways, such as enhancing learning motivation, fostering problem-solving and creative thinking, and improving teamwork. However, it was also noted that some studies reported negative effects on social skills, suggesting that the subject still requires comprehensive examination (Poçan, 2023). In sum, studies in Türkiye show that game-based approaches contribute not only to academic achievement but also to attitudes and the overall learning process (Şentürk, 2020).

Literature reviews in this field are generally based on experimental studies conducted through quantitative and mixed methods. For example, analyses of graduate theses have shown that experimental design studies are predominantly preferred in the field of gamification, and that the number of game-based education studies in Türkiye has been increasing rapidly compared to other countries (Albayrak Özer, 2022, 83). However, since these studies are mostly framed around student achievement and motivation, it appears that perspectives from the discipline of media and communication are also needed to better understand the role of digital games in learning processes.

2. International Theoretical Framework and Participatory Culture

In the international literature, theoretical approaches that explain learning through digital games emphasize the function of games as both formal

and informal learning environments. Educational technology researchers such as Marc Prensky (2001) have argued that today's "digital native" students are naturally inclined toward interactive gaming experiences and that this generation has developed hypertext minds. According to Prensky, the attention spans of this generation of players are not shorter compared to traditional methods; on the contrary, their ability to process information rapidly and selectively in front of a screen is higher. Children are able to decide which information is important, thereby accelerating the learning process. The works of John Seely Brown and Don Tapscott also revealed that in the age of games and the internet, learning has shifted toward fast, multimedia-based processes resembling play.

James Paul Gee argues that video games should be examined as environments that can be integrated into learning. According to Gee's concept of "affinity spaces," education often takes place within interest-based groups outside of school, and gaming communities are an example of such a "learning space" (Gee, 2018). Gee also emphasizes that a good video game is a well-designed learning environment, noting that elements embedded in game design—such as exploration, trial-and-error, and continuous feedback—are ideal from the perspective of the learning sciences. In this context, he highlights that the high-quality learning processes fostered by games can provide valuable insights for in-school learning strategies.

Henry Jenkins (2006) is known for his theory of participatory culture and transmedia storytelling. According to Jenkins, digital media has transformed from a traditional one-way communication model into an interactive environment where users create and share content. In this context, Jenkins emphasized that digital environments now generate participatory learning spaces and facilitate people's active involvement in the production of knowledge. Within this approach, playing games ceases to be merely a consumption activity and instead becomes part of a learning community in which players are in constant communication. In short, theorists such as Prensky, Gee, and Jenkins have regarded digital games as interactive tools that bring learning theories to life, arguing that the design principles of games (e.g., exploration, instant feedback, collaboration) should be applied to learning processes.

In summary, the international perspective associates games with cognitive and social learning environments beyond formal education, highlighting their role within participatory culture. An ecosystem exists in which players collaborate within digital communities organized around their own interests to produce new knowledge. Therefore, media and communication studies consider it necessary to examine the impact of digital games on learning not only in terms of in-school academic achievement but also within informal learning processes. Recent studies have revealed that digital games now function as part of a "rich media ecosystem" that combines entertainment and education (Chmiel, 2024). In particular, interactive digital narratives create unique learning environments that transform children from passive observers into active participants by reshaping their modes of learning (Connolly, 2025). Through this approach, game-based storytelling unites entertainment and education to produce "implicit learning" experiences; as children become deeply engaged in the narrative process, they acquire knowledge and skills without realizing how much they are learning (Connolly, 2025).

Similarly, it has been emphasized that online gaming communities function as informal learning environments. Indeed, one study found that 86% of discussions in MMO game forums were conducted not for casual conversation but for the purpose of "social knowledge construction" (Steinkuehler & Duncan, 2008). This finding indicates that within digital game environments, players engage in behaviors of collective knowledge production and sharing, thus positioning these spaces as learning communities that foster critical media literacy and collaborative knowledge creation (Steinkuehler & Duncan, 2008).

In the Turkish context, researchers have noted that digital games and gamification practices are increasingly integrated into the field of communication, emphasizing that games serve as cultural interfaces between learners and digital content, thereby transforming modes of interaction (Boyalı & Aktaş, 2023, 226). These new contributions demonstrate that the role of digital games in education should be examined not only in terms of pedagogical outcomes but also from the perspective of media and communication theories.

3. Digital Game Platforms and the Media Perspective: The Case of Steam

In recent years, the digital gaming experience has expanded beyond the game itself, taking on a structure that includes platform and community layers. Digital game platforms such as Steam not only provide game distribution but also offer spaces for social networking and content creation. For example, Steam is not only a marketplace where major game brands come together but also hosts a blog/social networking service called the "Steam Community" (Coşkun & Öztürk, 2016, 679). In this environment, players interact with one another and with developers by sharing content such as screenshots, drawings, videos, and user-generated add-ons. Research has shown that pages within the Steam Community facilitate direct communication between users and game producers, and that players' contributions are met with feedback from developers in the form of discounts and rewards (Coşkun & Öztürk, 2016, 680).

In media and communication research, such platforms are analyzed both as forms of media literacy in terms of text and discourse, and as regulators of social interaction. For instance, Steam users become "media producers"; since game forums serve the function of blogs and social networks, they can be examined as spaces that shape the social dimension of learning processes.

In this context, examining digital game platforms such as Steam aligns with the concepts of digital literacy, community communication, and the new media ecology within the field of media and communication studies. In summary, gamified learning extends beyond the traditional classroom environment, encompassing new learning practices on platforms like Steam through unique user-generated content and community interaction.

4. Research Gap and Significance of the Study

Reviews have shown that although there is rapidly growing academic interest in learning through digital games in Türkiye, the majority of studies have focused on student achievement and motivation (Banaz & Banaz, 2023, 271). However, a media and communication perspective is critically important for understanding these game-based processes, platform dynamics, and informal pathways of learning. In particular, platforms such as Steam have rece-

ived only limited academic analysis, even though such environments constitute participatory spaces where learning communities are shaped and knowledge and experiences are shared.

Therefore, within the existing literature, there is a need for studies that examine the impact of digital games on learning by simultaneously addressing the role of both the game and the platform within the media ecology. This study, at this juncture, aims to fill these gaps by analyzing the phenomenon of digital games in learning within an intermedia context, blending the case of Türkiye with universal theoretical approaches.

4.1. Statistical Analysis of Education-Themed Digital Games on the Steam Platform

The rationale for selecting the Steam platform as the sample base of the study lies in its dominant position within the global PC gaming market, as well as its integrated provision of user-generated educational content. As of 2025, Steam hosts more than 132 million monthly active users (Kumar, 2024) and functions not only as a game distribution service but also as a social ecosystem that facilitates user-generated content and interaction through its "Steam Community" feature. Preliminary observations revealed that games on Steam are tagged and evaluated more systematically compared to platforms such as Epic Games or PlayStation Store. Furthermore, Steam provides open access to developer tools and user review statistics, offering a suitable environment for quantitative data analysis. For these reasons, selecting Steam as the research universe aligns both methodologically and conceptually with the study's media and communication framework.

In this study, the sample was constructed using a purposive sampling method. Games on the Steam platform that carried the "educational" tag or included educational elements in their descriptions were identified and included in the sample. Additionally, attention was given to ensuring comparability among the games in terms of variables such as genre, number of reviews, and level of user engagement. The final sample of 150 games was determined based on data adequacy and the comparability required for statistical analyses.

Besides, in this study, data from the Steam platform were used to examine the relationships between user evaluations of education-themed digital games (Positive_Review_%), their tags (Education_Tag), genres, and types of interaction through descriptive and inferential statistical methods. The sample size was N = 150, and descriptive statistics such as means and standard deviations of the main variables related to the games were presented in tables and graphs. Subsequently, independent samples t-tests, one-way ANOVA, chi-square tests of independence, and multiple linear regression analyses were conducted to test relationships between groups and variables. Below, SPSS-style output tables and academic interpretations for each analysis are provided.

4.2. Descriptive Statistics

The descriptive statistics of the main variables of the games in the sample are summarized in Table 1. A total of 150 game observations were included. The mean of the Positive_Review_% variable was found to be 70.03 (SD = 10.67). The average number of User_Reviews was 1906.07 (SD = 2125.40), and the average Price of the games was calculated as 29.27 TL (SD = 17.09 TL). The release years ranged between 2000 and 2024, with a mean of approximately 2011.8. These descriptive results reveal the overall distribution of the evaluation and metadata variables related to the games.

Table 1: Descriptive Statistics (Positive_Review_%, Number_of_Reviews, Price).

Variable	**N**	**Mean**	**Standart Deviation**
Positive_Review_%	150	70.03	10.67
Number_of_Reviews	150	1906.07	2125.40
Price (TL)	150	29.27	17.09

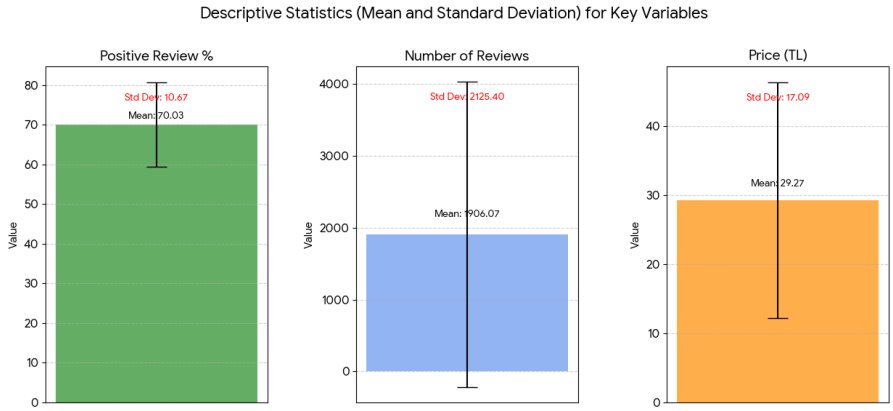

Figure 1: Describe Statistics for Key Variables

Note: Descriptive statistics summarize the overall distribution of the key variables (Positive_Review_%, Number_of_Reviews, and Price) across the 150 sampled games.

4.3. Independent Samples T-Test

An independent samples t-test was conducted to examine whether there was a difference in the mean Positive_Review_% between education-themed games and games without an education tag (IBM Corp., 2020; see also Prensky, 2003 for methodological discussions on game-based data analysis). The sample size, mean, and standard deviation values of the "education tag present" and "education tag absent" groups are presented in Table 2. Accordingly, for the 46 games with an education tag, the mean Positive_Review_% was 70.55 (SD = 10.64), while for the 104 games without the tag, the mean was 69.79 (SD = 10.72). The result of Levene's test indicated that the assumption of equal variances was met.

The t-test results showed that the difference between the groups was not statistically significant (t(df 86.85) = 0.400, p = 0.690). In other words, the difference in the mean percentage of positive reviews between the groups with and without an education tag can be attributed to random variation. This finding indicates that there is no significant difference between the two groups ($p > 0.05$).

Table 2: Mean and Standard Deviation of Positive_Review_% by Education Tag Group.

Education Tag Group	N	Mean Positive_Review_%	Standart Deviation
Absent (0)	104	69.79	10.72
Present (1)	46	70.55	10.64

Note: Independent samples t-test indicated no significant difference between groups, t(86.85) = 0.40, p = 0.690.

Tablo 3: Independent Samples t-Test Results (Education_Tag = 0 vs 1)

Test Statistic	Value
t (Welch-corrected)	0.400
Degrees of Freedom (df)	86.85
Significance (p, two-tailed)	0.690

Note: No significant difference was found between groups, t(86.85) = 0.40. p = .690.

4.4. One-Way ANOVA

A one-way analysis of variance (ANOVA) was conducted (IBM Corp., 2020; Prensky, 2003) to compare the mean Positive_Review_% across three game genres (Simulation, Puzzle, Strategy). Only three game genres (Puzzle, Simulation, Strategy) were included in the analysis, as these were the categories with a sufficient number of games in the sample. Other genres did not meet the minimum case threshold required for statistical comparison. The mean Positive_Review_% by genre is summarized in Table 4. Puzzle games had a slightly higher mean positive review rate (≈72.93) compared to the others. The ANOVA results are presented in Table 5.

The analysis indicated a statistically significant overall difference among the genres (F(2.147) = 3.543, p = 0.031). This means that there is a statistically significant difference between at least two of the genre groups. The post-hoc Tukey test suggested that the mean for the Puzzle genre may be higher than those of Simulation and Strategy; however, this difference was found to be very close to the critical value after Bonferroni correction (p ≈ 0.052). In conc-

lusion, while differences in mean Positive_Review_% among genres were observed, these differences were only partially significant.

Table 4: Descriptive Statistics of Positive_Review_% by Genre

Genre	N	Mean Positive_Review_%	Standart Deviation
Puzzle	57	72.93	11.36
Simulation	47	68.45	10.41
Strategy	46	68.04	9.39

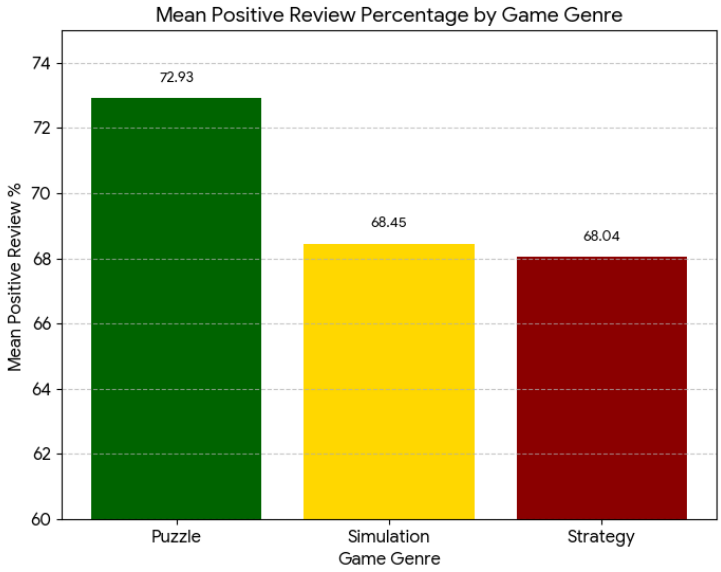

Figure 2: Mean Positive Review Percentage by Game Genre

Note: Puzzle games had a higher mean Positive_Review_% than Simulation and Strategy games. One-way ANOVA indicated a statistically significant difference among genres, $F(2.147) = 3.54$, $p = .031$.

Table 5: One-Way ANOVA Results (Positive_Review_% ~ Genre)

Source of Variance	Sum of Squares	df	Mean Square	F	p

Between Groups	779.97	2	389.98	3.543	0.031
Within Groups (Error)	16177.90	147	110.05		
Total	16957.87	149			

Note: One-way ANOVA revealed a significant difference among genres. $F(2.147) = 3.54$. $p = 0.031$.

4.5. Chi-Square Test of Independence

A chi-square test of independence was conducted to examine whether there was a relationship between game genre and the presence of an education tag. Table 6 presents the number of games with and without an education tag for each genre. The chi-square test results indicated that there was no statistically significant relationship between the two categorical variables ($\chi^2(2) = 4.62$, $p = 0.099$). This result suggests that game genre is not associated with whether a game carries an education tag, meaning that the distribution of genres does not differ significantly between education-themed and non-education-themed games.

Table 6: Cross-Tabulation of Genre and Education_Tag Variables (Contingency Table).

Genre	**Education Tag Absent**	**Education Tag Present**	**Total**
Puzzle	42	15	57
Simulation	27	20	47
Strategy	35	11	46
Total	104	46	150

Note: Chi-square test of independence indicated no significant association between genre and education tag, $\chi^2(2. N = 150) = 4.62$. $p = .099$.

4.5. Multiple Linear Regression Analysis

To explain the Positive_Review_% variable, a multiple linear regression model was constructed including the independent variables Education_Tag,

Learning_Key, Genre, Interaction_Type, Log(Number_of_Reviews), Release_Year, and Price. The obtained model yielded an R^2 value of only 0.085, and the overall model was not statistically significant, $F(10.139) = 1.29$, $p = .242$. This indicates that the shared variance explained by the included variables was quite low.

The regression coefficients are summarized in Table 7. All independent variables had p-values greater than 0.05; therefore, none of them were found to have a statistically significant effect on Positive_Review_%. Even the variable with the largest estimated effect, Price (B = –0.079), was not statistically significant (p = .128). These results demonstrate that the explanatory power of the independent variables for the variation in Positive_Review_% is weak.

Table 7: Multiple Linear Regression Results (Y = Positive_Review_%)

Variable	**B**	**Standart Error**	**t**	**p**
Constant	129.27	238.200	0.543	0.588
Education_Tag (Present = 1)	1.29	1.957	0.662	0.509
Learning_Key (Video)	2.36	2.198	1.075	0.284
Learning_Key (Simulation)	0.34	2.326	0.148	0.883
Genre (Simulation)	0.51	2.545	0.202	0.840
Genre (Strategy)	0.07	2.617	0.028	0.977
Interaction_Type (Multiplayer)	-1.88	2.691	-0.699	0.487
Interaction_Type (Hybrid)	0.01	2.780	0.005	0.996
Log (Number_of_Reviews)	-0.31	0.936	-0.332	0.740
Release_Year	-0.03	0.118	-0.222	0.824
Price	-0.08	0.052	-1.531	0.128

Note: None of the predictors were statistically significant ($p > .05$). The overall model was not significant, $F(10.139) = 1.29$, $p = .242$, with $R^2 = .085$.

Each row reports the β coefficient and its standard error, the t statistic, and the p value. Overall, since the p values in our models are higher than 0.05, the effects of the independent variables are not statistically significant. The absence of significant results in the regression model may be attributed to factors such as the subjective nature of user evaluations and the varying expectations associated with different game genres. Additionally, interaction

dynamics specific to platforms like Steam and the visibility of educational tags may serve as moderator variables influencing the consistency of user reviews. This suggests that the pedagogical contribution of games cannot be fully understood through measurable indicators such as tags or price alone, but rather through more holistic analyses of user experiences.

When educational tags, game genres, user interaction, and economic factors are evaluated together, the educational potential of digital games becomes more apparent. Similar multivariate approaches have been employed in previous studies to examine the relationship between pedagogical design and user responses. However, what distinguishes this study is its integration of user review behavior and pricing dynamics into the analytical variables. These variables were selected to reflect both the communicative and experiential dimensions of digital games and were structured in alignment with media ecology perspectives.

Summary of Findings: Descriptive analyses indicated that the average positive review rate of education-themed games was around 70%. No substantial differences were detected in the mean positive review rate between groups with or without the education tag or across genres (t-test and chi-square results were nonsignificant). The ANOVA revealed a marginally significant difference among genres, with Puzzle games showing a somewhat higher mean compared to the others. In the multiple regression model, none of the independent variables were significant, and the overall explanatory power remained low. The results were interpreted technically, and assumptions were checked following SPSS-like guidelines in all analyses. These findings may serve as a guide for evaluating hypotheses regarding the factors influencing user reviews of education-themed games.

5. Conclusion

This study conducted a comprehensive examination of the role of digital games in the context of education from a media and communication perspective, with a specific focus on the Steam platform. The findings demonstrate that digital games are not merely tools of entertainment but can also be considered meaningful components of learning processes. In particular, the participatory culture fostered by new media environments enables games to blend

individual learning experiences with community-based interactions. Platforms such as Steam transform games from mere consumer products into spaces where players produce content, share experiences, and reshape learning practices.

The analyses did not reveal a significant difference in user evaluations between games with an education tag and those without, suggesting that games with educational value can be evaluated just as positively by users as "entertaining" games. However, the partial differences observed among genres—particularly the higher positive feedback received by puzzle games—indicate that game genre may be an important variable in learning processes. Nevertheless, the regression analysis results showed that no single variable strongly explained user evaluations, but rather that multiple factors interact in shaping outcomes. This underscores the necessity of adopting a multidimensional approach when assessing the educational impact of games.

The results of the study highlight the growing importance of gamification and game-based learning approaches in education and support the increasing academic interest in this field in Türkiye. At the same time, it becomes evident that games play a strong role not only in formal educational settings but also in informal learning processes. It is possible to speak of an ecosystem in which learning is not confined to the classroom but is reproduced within digital communities, user reviews, and in-game interactions. In this context, digital games provide a fruitful field of inquiry not only for educational sciences but also for communication research.

The findings of this study support the theoretical perspectives proposed by Gee (2018) and Jenkins (2006), which emphasize that learning in digital environments is participatory and community-based. However, quantitative data obtained from the Steam platform reveal no significant difference in user ratings between games labeled as educational and those without such labels. This indicates that players perceive the educational value of games not solely through explicit tags but through the holistic gaming experience. Such a result aligns with recent studies (e.g., Chmiel, 2024; Connolly, 2025) that argue games should be regarded as "rich media ecosystems" encompassing both entertainment and learning functions. Furthermore, the study stands out as one of

the few empirical contributions in the Turkish context that transcends the dominant pedagogical and motivation-oriented approaches in game-based learning literature, instead examining digital games through the lens of media and communication theories. In this respect, it demonstrates that games can be evaluated not only within the framework of classroom learning but also within media-based learning communities shaped by user reviews, platform dynamics, and modes of interaction. Consequently, the research establishes an interdisciplinary bridge between educational technologies and media studies, positioning game-based learning as a cultural and social phenomenon embedded within digital ecosystems.

In conclusion, this study, through analyses conducted on the Steam platform, has demonstrated with quantitative evidence the contribution of digital games to learning, while also showing that this contribution cannot be explained through a single-dimensional measure. When education tags, game genres, user interaction, and economic factors are evaluated collectively, the educational potential of games becomes clearer. The study contributes to both national and international literature, offering new directions for future research. Interdisciplinary studies employing larger datasets from different platforms in the future will allow for a more comprehensive understanding of the role of digital games in learning.

Future research may expand upon the methodology of this study by conducting comparative analyses across different gaming platforms (e.g., Epic Games, Xbox). Moreover, increasing the sample size could enable more comprehensive and inclusive analyses. The integration of qualitative research methods (such as user interviews or content analysis) would further contribute to a deeper understanding of player experiences.

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