

The Mediating Role of Loyalty between Gaming Addiction and Purchase Intention towards Online Mobile in-Game Apps

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Abstract

Recent advancements in the digital gaming industry have sparked interest in exploring the interplay between online mobile gaming addiction, loyalty, and purchase intention, shedding light on the underlying mechanisms that drive consumer behavior in this immersive virtual realm. This study investigated the influence of addiction on loyalty and purchase intention among Moroccan university students. A quantitative approach was employed, utilizing a 5-point Likert scale survey instrument. The data were analyzed using SPSS Statistics 24 and Smart PLS. A two-step Structural Equation Modeling (SEM) approach was applied to examine direct and indirect effects and test the proposed hypotheses. Additionally, a Multivariate Analysis of Variance (MANOVA) was conducted to compare addiction levels between male and female participants. The findings revealed a positive relationship between online mobile gaming addiction and loyalty, as well as a positive influence of addiction on the purchase intention of in-game mobile applications. These results highlight the importance of emphasizing the need for game developers and operators to carefully consider their engagement strategies and ethical responsibilities. While fostering customer loyalty is essential, the findings raise ethical concerns about the potential exploitation of addiction to increase purchase intention.

Keywords: Online mobile games • Game addiction • Game loyalty • Mobile game purchases • In-game purchases • Moroccan consumer

Introduction

Online gaming has experienced an unprecedented surge in popularity, captivating millions of players worldwide and transforming the landscape of digital entertainment. As the image of online games continues to grow, researchers have directed their focus toward understanding the underlying psychological processes that shape players' attitudes and behaviors within these virtual environments. Loyalty towards online games, gaming addiction, and purchase intention towards online mobile in-game features have emerged as key areas of investigation, carrying significant implications for individuals and the gaming industry as a whole.

Loyalty towards online games encompasses the emotional attachment, commitment, and positive attitudes demonstrated by players towards a specific online game. It signifies a deep connection and identification with the game, leading to sustained engagement and support for the gaming community. Research has identified factors

such as game satisfaction, enjoyment, social interaction, and perceived value as influential drivers of game loyalty [1]. Understanding the nature of game loyalty is of utmost importance for game developers and marketers as it directly impacts player retention, word-of-mouth promotion, and the financial success of online games.

Simultaneously, gaming addiction has emerged as a pressing concern within the context of online gaming. Gaming addiction refers to excessive and compulsive engagement with online games, resulting in adverse consequences and a loss of control over gaming behavior [2]. It is characterized by symptoms such as preoccupation with gaming, withdrawal symptoms when not playing, and persistent gaming despite negative outcomes. Extensive research has examined the contributing factors to gaming addiction, including social interaction, escapism, reward mechanisms, and psychological needs [3]. Understanding the mechanisms underlying gaming addiction is

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crucial for both researchers and industry professionals in order to develop effective prevention and intervention strategies.

Furthermore, purchase intention towards online mobile in-game features has become a significant aspect of online gaming. This refers to individuals' inclination or willingness to spend money on additional in-game content or features, such as virtual currency, power-ups, character customization options, or access to exclusive game content. Factors such as perceived value, perceived benefits of the in-game purchases, and the individual's financial capacity influence the intention to make these purchases [4]. Understanding the determinants of purchase intention is vital for game developers and marketers in designing effective monetization strategies and enhancing players' overall gaming experience.

In summary, loyalty towards online games, gaming addiction, and purchase intention towards online mobile in-game features are interconnected facets that significantly impact players' engagement and behaviors within the online gaming realm. Exploring these constructs provides valuable insights into player motivations, preferences, and the interplay between psychological factors and game design. By comprehensively understanding the dynamics of loyalty, addiction, and purchase intention, researchers and industry professionals can foster healthier gaming environments, improve game design strategies, and cultivate sustainable player relationships.

Conceptual framework

Online mobile game addiction and game loyalty: Online mobile game addiction refers to excessive and compulsive engagement with online mobile games, resulting in negative consequences and the loss of control over gaming behavior. It is characterized by symptoms such as preoccupation with gaming, withdrawal symptoms when not playing, loss of interest in other activities, and continued gaming despite negative consequences [5].

Game loyalty, on the other hand, stands for the attachment, commitment, and positive attitudes toward a specific online mobile game. It involves a strong emotional connection, identification with the game, and a willingness to continue playing and supporting it. Game loyalty is influenced by various factors, including game satisfaction, enjoyment, social interaction within the game community, and perceived value [6].

The relationship suggests that individuals who are more addicted to a game are more likely to develop a strong attachment, commitment, and positive attitude toward the game [7].

H₁: Higher levels of online mobile game addiction will be positively influenced with greater game loyalty.

Intention to purchase online mobile in-game apps and features: Intention to purchase online mobile in-game apps and features represents the individual's inclination or willingness to spend money on additional in-game content or features. This can include items

such as virtual currency, power-ups, character customization options, or access to exclusive game content. The intention to purchase is influenced by factors such as perceived value, perceived benefits of the in-game purchases, perceived scarcity or exclusivity of the content, and the individual's financial capacity [8].

It is proposed that higher levels of game loyalty positively influence the intention to purchase online mobile in-game apps and features. Individuals who are loyal to a game are more inclined to invest financially in additional in-game content and features, driven by their positive emotional connection and identification with the game [9].

The study postulates that the addiction to online mobile games has an indirect impact on the intention for purchasing online mobile in-game applications and features. This impact is mediated by game loyalty. The findings of previous studies indicate that there exists a correlation between addiction and loyalty, which subsequently leads to a rise in the intention to make purchases within the game [10].

H₂: Increased game loyalty will be positively influenced with higher intention to purchase online mobile in-game apps and features.

H₃: Higher levels of game addiction will lead to greater game loyalty, which in turn will result in higher intention to purchase in-game apps and features (Figure 1).

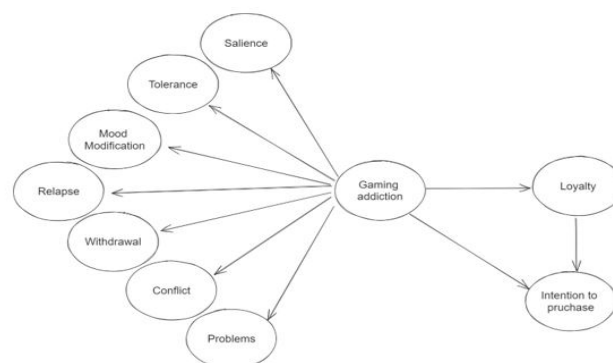


Figure 1. Conceptual model

Materials and Methods

Participants and procedure

The current investigation involved a sample of 189 participants who were students attending at Ibn Tofail University in Kenitra. Prior research has indicated that students are a suitable demographic for investigations pertaining to mobile games [11]. Although mobile games have been gaining popularity among individuals of all age groups, students have shown a particular interest in these games due to their high level of engagement with video games (Table 1).

		Frequency	%
Gender	Femme	90	47,60%
	Homme	99	52,40%
Age	Between 16 and 20 years old	8	4,20%
	Between 21 and 25 years old	129	68,30%
	Between 26 and 30 years old	38	20,10%
	Over 30 years	14	7,40%
Education	Bac+2 (DUT, BTS, DEUG, etc.)	14	7,40%
	Bac+3 (Licence, LP, etc.)	24	12,70%
	Bac+5 (Master, cycle d'ing, etc.)	128	67,70%
	Baccalaureate	5	2,60%
	Phd/Doctorate	18	9,50%
Favorite game category	Action	30	15,90%
	Simulation	12	6,30%
	Sports	44	23,30%
	Strategies	18	9,50%
Time spent on game/day	Between 30 and 59 min	47	24,90%
	Between 60 and 89 min	17	9,00%
	Between 90 and 120 min	22	11,60%
	30 min moins	93	49,20%
	Plus 120 min	10	5,30%
Number of purchases in the past year	0 chats	99	52,40%
	Between 1 and 5 chats	58	30,70%
	Between 5 and 10 chats	16	8,50%
	Plus 10 chats	16	8,50%

Table 1. Demographic characteristics.

The current investigation utilized a survey administered through the Google Forms platform to gather data. The present study involved 189 participants who completed the entire questionnaire. Previous research has established a recommended threshold for conducting structural equation modeling suggesting a minimum of 100 to 200 samples, or at least 10 cases per variable [12]. These criteria have been widely accepted in the field. The current investigation satisfied the sample size criteria suggested by both references. The gender distribution among the participants was nearly equal. Table X displays a comprehensive overview of the sociodemographic features of the entire study population.

Instruments and measures

The study utilized a questionnaire consisting of 28 items that were evaluated using a 5-point Likert scale. The questionnaire aimed to measure the constructs of loyalty and purchase intention, with a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

A subscale that evaluated addiction was measured using a 5-point Likert scale, where 5 indicated "very often" and 1 indicated "never." The research instrument included six categorical scale inquiries aimed at evaluating the sociodemographic features of the participants. The present study utilized measures of addiction, loyalty, and purchase intention that were previously established in the literature. The present study employed Griffiths' components model to evaluate addiction. The model includes six components: Salience, tolerance, mood modification, relapse, withdrawal, and conflict. A supplementary element pertaining to the category of 'problems' was incorporated. The present study investigated the composition of addiction by examining the seven components, each of which consisted of three items. The present study utilized a loyalty scale consisting of two items adapted from Choi and Kim's research. The present study utilized a five-item scale to measure purchase intention, which was developed based on previous research by Hsu and Lin as well as Paul, Modi, and Patel. The

subsequent sections will discuss the testing of reliability and validity.

Analysis

A study was conducted using a two-step structural equation modeling approach to examine the direct and indirect effects and test the proposed hypotheses. A preliminary investigation was conducted using a first-order confirmatory analysis to obtain the addiction factor score and assess the reliability and validity of all the constructs being studied. The statistical analysis was conducted using SPSS Statistics 24 and Smart Partial Least Squares (PLS) software. Structural equation modeling was conducted using the maximum likelihood model estimation technique. The present study aimed to investigate the direct and indirect effects of addiction, loyalty, and purchase on a given outcome. To achieve this, factor scores were imputed for each of the variables mentioned above and subsequently utilized to examine the final model. In addition, the technique of bootstrapping was employed to conduct additional testing on the significance of the indirect effect [13]. A study was conducted utilizing the Analysis of Variance (ANOVA) method to investigate the mean differences between variables in relation to

male and female participants. The study utilized ANOVA to compare the results. The effect size (Eta Square) of the model was employed to explain the variance of the sample in total for all constructs, as suggested by Kottrik and Williams. To minimize the impact of type I error, Bonferroni pairwise comparison test was utilized to correct for multiple comparisons [14]. The present study employed Multivariate Analysis of Variance (MANOVA) to investigate the variance differences among the seven sub-components of addiction. The present study aimed to investigate potential gender differences in addiction levels among participants.

Results

Measurement model Confirmatory Factor Analysis (CFA)

The results of the Confirmatory Factor Analysis (CFA) and squared inter-correlation provide insights into the measurement model's reliability and validity [15]. These findings contribute to the understanding of the relationships between the observed variables and the underlying constructs (Table 2).

Components	Items	Moyenne	Ecart type	Cronbach' s alpha	Composite reliability	Rho de Joreskog	Average Variance Extracted (AVE)
Salience	SL1	2,61	1,275	0.827	0.832	0.896	0.742
	S L2	2,82	1,044				
	SL3	2,81	1,153				
Tolerance	TC1	3,01	1,086	0.839	0.845	0.903	0.757
	TC2	2,80	1,085				
	TC3	2,74	1,248				
Mood modification	MM1	2,48	1,254	0.807	0.827	0.885	0.721
	MM2	2,98	1,171				
	MM3	2,81	1,183				
Relapse	RE1	2,51	1,220	0.887	0.892	0.93	0.816
	RE2	2,55	1,219				
	RE3	2,39	1,219				
Withdrawal	WL1	2,32	1,271	0.928	0.93	0.954	0.874
	WL2	2,18	1,199				
	WL3	2,16	1,195				
Conflict	CF1	2,29	1,249	0.896	0.903	0.935	0.827
	CF2	2,42	1,239				
	CF3	2,19	1,207				
Problems	PS1	2,57	1,226	0.827	0.844	0.896	0.743
	PS2	2,33	1,200				
	PS3	2,50	1,279				
Loyalty	LY1	3,46	1,211	0.832	0.834	0.922	0.855
	LY2	3,51	1,067				

Purchase Intention	PI1	2,82	1,297	0.935	0.938	0.951	0.795
	PI2	2,73	1,220				
	PI3	2,72	1,221				
	PI4	2,60	1,229				
	PI5	2,48	1,250				

Note: Model fit indices: SRMR=0.061; d_ULS=1.628; d_G=1.143; NFI=0.765

Table 2. Measurement model for the observed variables.

In terms of reliability, Cronbach's alpha coefficients and composite reliability coefficients shown in Table 2 indicate acceptable to good internal consistency for most constructs [15]. This suggests that the items within each construct are measuring the same underlying concept consistently.

The squared inter-correlation coefficients provide information about the relationships between the different constructs. The higher the squared inter-correlation coefficient, the stronger the relationship between the constructs (Table 3).

	CO	EE	FI	IA	PR	RE	REM	SE	TOL
CO	0.91								
EE	0.597	0.85							
FI	0.222	0.446	0.925						
IA	0.543	0.49	0.254	0.891					
PR	0.756	0.491	0.286	0.434	0.862				
RE	0.759	0.694	0.297	0.586	0.751	0.903			
REM	0.518	0.574	0.498	0.53	0.602	0.608	0.861		
SE	0.731	0.561	0.294	0.533	0.705	0.746	0.52	0.935	
TOL	0.64	0.603	0.498	0.549	0.738	0.728	0.792	0.649	0.869

Note: The diagonal values represent \sqrt{AVE} .

Table 3. Inter-construct correlation table with \sqrt{AVE} scores.

Furthermore, the Average Variance Extracted (AVE) values shown in Table 3 indicate the amount of variance in each construct captured by its items [16]. A higher AVE value suggests that the items are more representative of the construct. For instance, the construct "Purchase Intention" (PI) has an AVE of 0.795, indicating that 79.5% of the variance in this construct is accounted for by its items. This suggests that the items measuring purchase intention are adequately representing the construct [17].

provide valuable insights into the relationships among the variables in the study.

Overall, these results support the reliability and validity of the measurement model used in this study. The constructs demonstrate good internal consistency and capture a substantial amount of variance in their respective domains. These findings are in line with established research practices and contribute to the existing body of knowledge on the topic.

Table 4 displays the total effects of the model. The significant total effects suggest that the variables have a substantial influence on each other. For instance, the effect from addiction to loyalty (H1) shows a coefficient of 0.235 ($p < 0.001$), indicating a positive and significant relationship between addiction and loyalty. Similarly, the effect from addiction to purchase intention (H2) exhibits a coefficient of 0.418 ($p < 0.001$), highlighting a strong positive association between addiction towards online mobile games and intention to purchase mobile in-app features. Additionally, the effect from loyalty to purchase intention (H3) reveals a coefficient of 0.156 ($p = 0.033$), indicating a positive and significant impact of loyalty towards online mobile games on intention to purchase mobile in-app features.

Structural model-hypothetical model

The provided tables present the results of the analysis, including the total effects and indirect effects of the model. These findings

	Original sample (O)	Sample mean (M)	Standard Deviation (SD)	T statistics (T Student)	P values
ADD ->LY (H1)	0.235	0.236	0.065	3.589	0.001
ADD -> PI (H2)	0.418	0.42	0.072	5.846	0.001
LY -> PI (H3)	0.156	0.156	0.073	2.138	0.033

Note: Bootstrap: 5000 samples at 95% confidence level.

Table 4. Total effect effects for the proposed model.

Table 5 presents the indirect effects of the model. The indirect effect from addiction to purchase intention through loyalty indicates a coefficient of 0.037 (p=0.011). This result suggests that the relationship between addiction towards online mobile games and

intention to purchase mobile in-app features is partially mediated by loyalty towards online mobile games, implying that loyalty plays a mediating role in the association between addiction and purchase intention.

Indirect effect	Original sample (O)	Sample mean (M)	Standard Deviation (SD)	T statistics (T Student)	P values
ADD ->LY -> PI	0.037	0.038	0.022	1.942	0.011

Table 5. Presents the indirect effects of the model.

The significance of these effects is supported by the T statistics and P values. The T statistics reflect the magnitude of the effects relative to their standard deviation. The P values indicate the

statistical significance of the effects, with smaller values indicating stronger evidence against the null hypothesis (Table 6).

Variable dependante	Somme des carrés	df	Carre moyen	F	Sig.	Eta-carre partial
SL	0,984	1	0,984	0,985	0,322	0,005
TC	0,342	1	0,342	0,346	0,557	0,002
MM	2,763	1	2,763	2,662	0,104	0,014
RE	0,261	1	0,261	0,213	0,645	0,001
WL	0,002	1	0,002	0,002	0,966	0,001
CF	0,238	1	0,238	0,188	0,665	0,001
PS	0,205	1	0,205	0,18	0,672	0,001
LY	0,515	1	0,515	0,46	0,498	0,002
PI	3,414	1	3,414	2,794	0,096	0,015

Table 6. Multivariate ANOVA for male and female respondents.

It is important to note that these results were obtained through bootstrap analysis with 5000 samples at a 95% confidence level. The use of bootstrap analysis helps to assess the robustness and validity of the effects.

these differences. The ANOVA test examines the overall differences between groups, while the Bonferroni test allows for pairwise comparisons between groups.

These findings contribute to the understanding of the relationships between the variables in the model and provide empirical evidence for the proposed hypotheses.

Looking at Table 6, we observe that some variables show statistically significant at a 90% confidence level differences between groups. The variable "purchase intention" has an F-value of 2.794 (p=0.096), indicating a marginally significant difference between groups (Table 7).

The ANOVA and Bonferroni test results provide important insights into the statistical differences between groups and the significance of

Dependent variable	(I) Gender	(J) Gender	Mean difference (I-J)	Standard error	Sig	Differences at a 95% confidence level	
						Low	High
Salience	Male	Female	0,144	0,146	0,322	-0,143	0,432
	Female	Male	-0,144	0,146	0,322	-0,432	0,143
Tolerance	Male	Female	0,085	0,145	0,557	-0,2	0,371
	Female	Male	-0,085	0,145	0,557	-0,371	0,2
Mood modification	Male	Female	-0,242	0,148	0,104	-0,535	0,051
	Female	Male	0,242	0,148	0,104	-0,051	0,535
Relapse	Male	Female	-0,074	0,161	0,645	-0,392	0,243
	Female	Male	0,074	0,161	0,645	-0,243	0,392
Withdrawal	Male	Female	-0,007	0,167	0,966	-0,337	0,323

	Female	Male	0,007	0,167	0,966	-0,323	0,337
	Male	Female	-0,071	0,164	0,665	-0,394	0,252
Confilct	Female	Male	0,071	0,164	0,665	-0,252	0,394
	Male	Female	-0,066	0,156	0,672	-0,373	0,241
Problems	Female	Male	0,066	0,156	0,672	-0,241	0,373
	Male	Female	-0,105	0,154	0,498	-0,409	0,2
Loyalty	Female	Male	0,105	0,154	0,498	-0,2	0,409
	Male	Female	0,269	0,161	0,096	-0,048	0,587
Purchase Intention	Female	Male	-0,269	0,161	0,096	-0,587	0,048

Table 7. Bonferroni comparison test.

Moving to Table 7, the Bonferroni test reveals specific pairwise comparisons between groups. For instance, the comparison between "man" and "women" in the variable "PI" shows a mean difference of 0.269 ($p=0.096$), which is statistically significant at a 90% level of confidence. but the mean differences for the other variables are statistically not significant at 95% nor 90% level of confidence. This indicates that there is no significant difference in the rest of variables between males and females [18].

Discussion

The current research aimed to examine the triangular relationship among three variables, namely addiction, loyalty towards online games, and purchase intention towards online mobile in-game apps. The study analyzed the relationship between three variables and their effects. Specifically, it investigated the total effect, direct effect, and indirect effect between addiction and purchase intention, with loyalty acting as a mediator. The present study employed a total effects model to examine the relationship between online mobile game addiction, online mobile game loyalty, and the intention to purchase online mobile in-game apps. The results of the study supported all three hypotheses, indicating that online mobile game addiction positively influenced online mobile game loyalty and the intention to purchase online mobile in-game apps [19]. Additionally, online mobile game loyalty was found to positively influence the intention to purchase online mobile in-game apps. Additionally, our observations indicate that loyalty serves as a potent mediator, leading to a significant indirect impact on purchase intention, rather than a direct effect between the two variables. The present study focused on investigating the relationship between online mobile gaming addiction (ADD) and Purchase Intention (PI) of in-game apps. The results of the analyses provided valuable insights into these constructs and shed light on their connection within the context of online mobile gaming [20].

Firstly, the measurement model analysis demonstrated the reliability and validity of the addiction construct (ADD). The Cronbach's alpha coefficient and composite reliability values indicated that the items measuring addiction in online mobile gaming were internally consistent and reliable. Additionally, the Average Variance Extracted (AVE) exceeded the recommended threshold,

indicating good convergent validity. These findings suggest that the measurement model for addiction was robust and reliable [21].

Furthermore, the total effects analysis revealed a significant positive effect of online mobile gaming addiction (ADD) on Purchase Intention (PI) of in-game apps. This indicates that individuals who exhibit higher levels of addiction to online mobile gaming is more likely to demonstrate an increased intention to purchase in-game apps. These results align with prior research highlighting the impact of addiction on consumer behavior and purchasing decisions. The addictive nature of online gaming may drive individuals to engage in more frequent and extensive in-game app purchases, thereby influencing their purchase intentions.

Moreover, the indirect effects analysis indicated a significant indirect effect of online mobile gaming addiction on purchase intention, mediated through loyalty. This suggests that loyalty toward the game acts as a mediator in the relationship between addiction and purchase intention. Individuals who are addicted to online mobile gaming may develop a strong attachment and loyalty toward the game, which, in turn, influences their intention to purchase in-game apps. The notion of loyalty as a mediator aligns with previous research emphasizing the role of loyalty in consumer behavior and purchase decisions [22].

In conclusion, the findings of this study highlight the significant impact of online mobile gaming addiction on the purchase intention of in-game apps. The addictive nature of online gaming contributes to increased purchase intentions, and this relationship is mediated by loyalty toward the game. These results contribute to our understanding of consumer behavior in the context of online mobile gaming and provide insights that can inform game developers and marketers in developing effective strategies to engage and retain consumers.

The role of Loyalty (LY) in the context of online mobile gaming is a crucial aspect that was explored in the present study. Loyalty refers to the degree of commitment and attachment that individuals have towards a particular brand, product, or service. In the context of online mobile gaming, loyalty reflects players' dedication and willingness to continue engaging with a specific game and making in-game purchases.

The findings of the analysis support the significance of loyalty in influencing the Purchase Intention (PI) of in-game apps. The positive relationship between loyalty and purchase intention suggests that players who exhibit higher levels of loyalty are more likely to have a stronger intention to make in-game purchases. This can be attributed to their trust, satisfaction, and positive experiences with the game, which fosters a sense of loyalty and motivates them to invest in additional in-game content.

The measurement model analysis demonstrated that the Loyalty Construct (LY) exhibited good reliability and validity. The Cronbach's alpha coefficient and composite reliability values indicated that the items measuring loyalty were internally consistent and reliable. Moreover, the Average Variance Extracted (AVE) surpassed the recommended threshold, indicating satisfactory convergent validity. These findings provide confidence in the accuracy and consistency of the loyalty measure used in the study.

The results align with previous research highlighting the importance of loyalty in driving consumer behavior and purchase intentions in the gaming industry. Studies have shown that loyal gamers tend to spend more time and money on their preferred games, as they perceive greater value and enjoyment from their gaming experiences [23]. Additionally, loyalty has been found to positively influence various outcomes such as word-of-mouth recommendations, engagement, and continued usage behavior [24].

It is important for game developers and marketers to recognize the role of loyalty in shaping players' purchase intentions and engagement with in-game apps. Strategies aimed at fostering loyalty, such as providing high-quality content updates, personalized experiences, rewards, and social interactions within the game, can help cultivate a loyal player base and drive in-game purchases.

In conclusion, the present study highlights the significant role of Loyalty (LY) in influencing the Purchase Intention (PI) of in-game apps in the context of online mobile gaming. The findings support the importance of fostering loyalty among players through various strategies to enhance their purchase intentions and engagement with in-game content.

Managerial implication

Integration of Responsible Gaming Practices: Game developers and industry stakeholders should prioritize the integration of responsible gaming practices into their business models. This includes implementing measures to raise awareness about the potential risks of addiction, providing tools for players to monitor and manage their gaming time, and offering resources for seeking help or support if needed. By promoting responsible gaming behavior, developers can enhance player satisfaction, mitigate the negative consequences of addiction, and build trust with their player base [25].

Additionally, fostering a sense of community and social support within games can play a crucial role in promoting responsible gaming. By incorporating features that encourage positive social interactions, such as multiplayer modes and guilds, developers can

create an environment where players can connect, share experiences, and support each other in maintaining healthy gaming habits [26,27].

Conclusion

In the rapidly evolving landscape of the gaming industry, it has become increasingly crucial to prioritize responsible gaming practices to safeguard players' well-being and sustain the industry's growth. To achieve this, Johnson, Lee, and Martinez underscore the significance of collaborative efforts among game developers, policymakers, and regulatory bodies in establishing industry-wide standards and guidelines for responsible gaming.

The need for proactive measures in responsible gaming becomes evident as the gaming industry continues to innovate and expand. The collaborative efforts advocated by Johnson et al. aim to foster an ongoing dialogue between stakeholders, enabling them to stay abreast of the latest developments and best practices to protect players' interests effectively.

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