

The Role of Sociality, Entertainment, and Enjoyment in Shaping Mobile Game User Loyalty: The Mediating Effect of Flow Experience

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Received: June 12, 2025, Accepted: July 12, 2025, Published: September 12, 2025

Abstract

The rapid development of online mobile games today requires online game developers to create high loyalty in their players to survive. This study aims to determine and analyze the role of sociality, entertainment, and enjoyment felt by online game players in influencing the level of loyalty they have, and to examine the role of flow experience as a mediator that can affect changes in loyalty. This study took a sample of 300 online mobile game players who met certain criteria as respondents in this study. Survey techniques through online questionnaires were distributed to respondents, where the data collected were then analyzed using structural equation modeling (SEM). The results of this study indicate that sociality, entertainment, as well as enjoyment and flow experience can have a positive influence on increasing loyalty owned by online game players. In addition, both entertainment, sociality, and enjoyment were also found to affect the level of flow experience felt, and flow experience was found to be a good mediator in supporting every aspect felt by online game players to be more loyal to the games played. These findings provide an understanding that to form a high level of loyalty, online mobile game service providers need to pay attention to every aspect that is the reason why players play online games.

Keywords: Mobile Game, Social Entertainment, Enjoyment Experience

1. Introduction

In today's technological development, many game industries have switched to developing online games to reach a wider market. Online games themselves are a form of electronic entertainment that is quite popular today (X. Wang et al., 2021), where almost everyone can access and play the game with their mobile device. One that is growing rapidly at this time is mobile games that can be played on cell phones (Kang et al., 2020) (Kang, et al., 2020). Mobile games are games that are specifically designed and made to run on mobile devices such as smartphones and tablets (Bueno et al., 2020). Mobile games have now been made on various platforms, both Android and IOS. Playing mobile games itself has several advantages, including that it can be played anywhere if one has a mobile device that can run mobile game applications. Lei and Lee (2020) revealed that gameplay will provide its own enjoyment while playing games.

Several genres of online mobile games are of interest to the public, such as MOBA (multiplayer online battle arena) and FPS (first-person shooter), which can provide a fun experience for users and allow them to connect. In playing mobile games, there are several ways, including what is known as freemium, where players can play for free in the game, and when they need certain features to support their game, they can pay a certain amount of money to get additional facilities (Lei & Lee, 2020). This freemium model contributes significantly to game developer revenue, as loyal players are more likely to make repeated in-game purchases, generating a steady stream of microtransactions that bolster financial sustainability.

The high interest in playing mobile games in several genres in Indonesia has made many developers compete to attract consumers to play and become loyal to the games they play by holding events and competitions aimed at getting new players and increasing the loyalty of existing players (Rizkiyani & Gunawan, 2023). In the competitive mobile game market, loyalty is very important for game developers, where it can provide benefits for them not only financially, but also provide sustainability to their games (Aung Kyaw & Nuangjamnong, 2022). Loyal users often result in a higher customer lifetime value (CLV), making investments in loyalty programs and game enhancements financially justified.

To create loyalty from online mobile game players, developers need to create games that can provide pleasure not only related to entertainment but also in forming a larger social community, so most games that have a large user base are more likely to have better loyalty levels. The loyalty of game players is a very important thing that needs to be considered (Pham et al., 2022). The success of an online game to survive during increasingly fierce competition is determined by the loyalty of its players. One form of loyalty from game players is their willingness to spend funds to buy items and offer certain features provided in the game, which can lead to profits for existing game

developers. This financial impact is a key performance indicator, where an increase in loyalty correlates with a measurable rise in average revenue per user (ARPU).

Regarding efforts to maintain this loyalty, in several studies (Hsu et al., 2020; Pham et al., 2022; Wuryandari, 2021) it is revealed that the things that can make game players feel at home playing and choose to be more loyal to the game are because they get entertainment from playing games (Bauer et al., 2020; Hakim & Ismail, 2022), can build socialization and communication, 2020, can build socialization and communication, and attachment with other players (Xu et al., 2025), and get enjoyment while playing mobile games (Alexander & Hidayat, 2022; Jo, 2023). Basically, people play online games with the aim that they can be entertained and forget for a moment the routine they have been living. Currently, the majority of mobile games provide this, which can provide convenience for users to enjoy their favorite games (Abrar et al., 2022). In addition, related to online activities that have become part of people's lives today, building social relationships in the game is also one of the things that the majority of online game players expect, where good social relationships in the game can make them feel more at home playing, and can be more loyal to the online game (Hew et al., 2024). On the other hand, in addition to seeking entertainment and building sociality, game players also seek enjoyment in playing online mobile games both in terms of the enjoyment of carrying out each mission and in enjoying the appropriate features. From a cost perspective, enhancing social features or increasing enjoyment may require additional development investment, but the return on such investment can be justified through increased user engagement, reduced churn, and higher monetization rates.

Referring to this, (Bueno et al., 2020) revealed that people who feel entertained by online mobile games can engage more deeply with the game and ultimately become loyal to the game that can provide entertainment. A person's desire to be loyal is not only limited to entertainment, but also to the social relationships that are formed. Online mobile games offer this, where current online mobile games have provided features that can connect fellow players and allow them to form more intense communication. Furthermore, (Chan et al., 2021) revealed that social relationships that occur in online games can increase the state of flow or be deeply involved with what is being done, and can ultimately lead to higher levels of loyalty. A deep experience when playing games can also occur when online mobile game players can enjoy every condition in the game, so that with this enjoyment, it can encourage someone to continue playing and become more loyal, and increase enjoyment in playing games (Wu & Santana, 2022). Recent studies conducted in Indonesia, such as by (Muqarrabin et al., 2021), found that mobile gamers who frequently interact in team-based game settings exhibit significantly higher emotional attachment and loyalty to the game. This is attributed to the shared experiences and cooperative tasks that build trust and friendship among players.

Based on this, online game developers need to continue to maintain their players' loyalty so that their players can continue to have high loyalty to stay and play online games and want to contribute to the game, such as purchasing certain features, which can maintain the sustainability of existing mobile games during increasingly fierce competition. This can be done by continuing to maintain that existing online mobile games can continue to provide entertainment, foster good social communication, and can be enjoyed optimally by the players. Referring to this, it is important to see the role of entertainment, sociality, and enjoyment in influencing the loyalty of online mobile game players, and see whether, when these players have a high flow experience in playing, it can be a driving force for players to be more loyal to the mobile games they play. Through the uses and gratification theory (Xu et al., 2025) this relationship can be explained where entertainment is defined as the use of media to fulfill users' needs for escape, pleasure, emotional release, and filling leisure time (Bueno et al., 2020). Entertainment can affect a person's level of loyalty, where the more they are entertained and can release the stress levels they experience on a medium, they will choose to be more loyal to it (Hew et al., 2024). Entertainment is seen as an opportunity to escape the boredom of everyday life into an exciting and engaging fantasy world. Online mobile game players may perceive the games they play as a source of diversion and leisure. Playing with features in online games will be a form of entertainment that online game players can use to fill unused time while free or waiting. Complementing this, the Self-Determination Theory (SDT) suggests that autonomy, competence, and relatedness are psychological needs that, when fulfilled, can intrinsically motivate players to remain loyal. Research by (Pangaribuan et al., 2021) in the Indonesian gaming community, it was found that when games offered players choices, skill-based progression, and meaningful in-game social interaction, their loyalty levels and in-game spending significantly increased.

In addition to the uses and gratification theory, in an effort to build social communication, mobile game players can increase sociality with fellow users and increase the pleasure of playing the online game (Hew et al., 2024). Sociality in this concept is a form of interpersonal communication that is incorporated into a social network. Sociality is related to the social motivation that a person gets in playing online games both directly and indirectly during the activity of playing online mobile games. Online game players can play, meet, challenge, and chat with other players around the world, so it is attractive to someone who uses the internet for social stimulation. Online game players who have joined and have a high social scope can bring them to an immersive experience when playing (Chu & Wen, 2021) and make them more loyal to the online game being played (Miranda et al., 2022). Evidence from Fiki Rifkiana & Efrilianda (2024) also highlights that social features like guild systems and voice chat in Indonesian mobile games strongly correlate with increased daily active users (DAUs) and lower churn rates, further reinforcing the economic and engagement benefits of fostering sociality.

Enjoyment in playing online mobile games is also one of the important things. Enjoyment can be defined as the degree to which the activity of using a computer system is felt to be enjoyable in itself, apart from the value of the technology itself. In addition, (X. Wang et al., 2021) explain that enjoyment is a high aspect of comfort in a person when interacting with information technology. If using a system feels fun, users will be motivated or have an internal urge to use it. In the context of online games, online games that match expectations and can provide deep enjoyment for players while playing can lead to long-term sustainability in creating loyalty from these game players. Flow experience is one of the important keys to loyalty aspect (Hew et al., 2024), where someone with a level of flow experience caused by the enjoyment of playing online games, as well as the entertainment obtained and the relationships established in the game, can provide support for players to survive and continue to be loyal to the online game. Through this relationship, a conceptual framework can be built that can explain the relationship between each existing relationship in increasing the loyalty of online mobile game users. Additionally, a 2025 study by Keraf et al. (2025) revealed that enjoyment is the strongest predictor of both short-term engagement and long-term retention among Indonesian Gen Z gamers, emphasizing the need for well-designed game mechanics and emotionally rewarding content. These findings support the integration of both intrinsic and extrinsic motivational strategies to sustain loyalty in digital gaming environments. The conceptual framework can be seen in Figure 1 below.

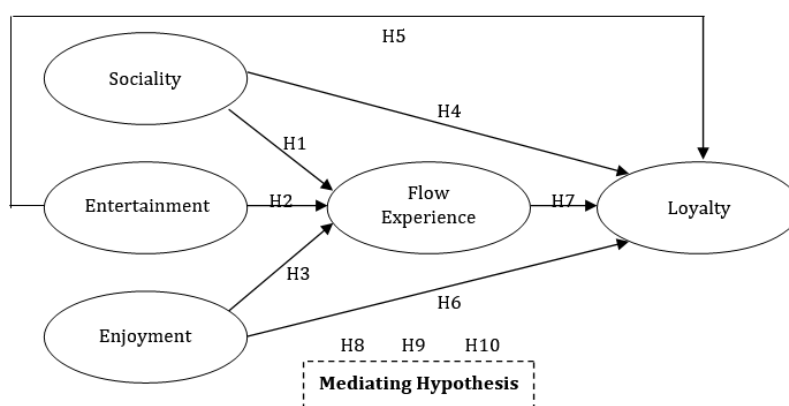


Fig. 1: Conceptual Framework

2. Methods

This study uses a quantitative approach to see the causal relationship and answer the problems raised in this study. The population in this study is all online mobile game players in Indonesia who have played online mobile games for at least 1 year and have made purchases in the online games played. This study took a sample of 300 online mobile game players with the criteria mentioned. The criteria of playing for at least 1 year and having made in-game purchases were chosen to ensure that respondents represent experienced and committed players who have established gaming habits. These players are more likely to exhibit stable loyalty patterns and meaningful engagement, making them suitable for analyzing the long-term effects of entertainment, sociality, and enjoyment on loyalty. Moreover, in-game purchasers reflect the economically active segment of the gaming population, which is highly relevant for studies exploring financial impact and user retention. These respondent criteria are used to provide more accurate information in assessing each variable. This research will use an online questionnaire distributed to mobile game players through social media or existing community groups. The assessment of each respondent's answer will use a Likert scale. In addition, the data obtained from the distributed questionnaires will then be processed using the Structural Equation Modeling (SEM) analysis too.

3. Results and Discussions

3.1 Evaluation of Measurement Model

Construct validity is used to measure how well the indicator size can reflect the theoretical latent construct (Rosda et al., 2023). The conditions that must be met are that, first, the loading factor must be significant. The loading factor to determine convergent validity can be seen in the standardized regression weight (loading estimate) table. Where the value of the standardized loading estimate must be equal to or greater than 0.50. The results of the standardized regression weights can be seen in Table 1 below:

Table 1: Standardized Regression Weight (Indicator)

Estimate				Estimate			
SC1	<---	Sociality	0.723	EJ3	<---	Enjoyment	0.885
SC2	<---	Sociality	0.778	EJ4	<---	Enjoyment	0.836
SC3	<---	Sociality	0.822	FE4	<---	Flow Experience	0.640
SC4	<---	Sociality	0.784	FE3	<---	Flow Experience	0.854
SC5	<---	Sociality	0.657	FE2	<---	Flow Experience	0.903
ET1	<---	Entertainment	0.764	FE1	<---	Flow Experience	0.823
ET2	<---	Entertainment	0.855	L1	<---	Loyalty	0.738
ET3	<---	Entertainment	0.878	L2	<---	Loyalty	0.847
ET4	<---	Entertainment	0.704	L3	<---	Loyalty	0.887
EJ1	<---	Enjoyment	0.794	L4	<---	Loyalty	0.710
EJ2	<---	Enjoyment	0.815				

Based on the table above, it is known that the results of the standardized loading estimate output are all above 0.50. So it can be concluded that all indicators used to measure each variable are able to reflect the variable. Furthermore, it is also necessary to see the level of validity and reliability of each variable based on the average variance extracted and construct reliability. For this reason, the results of the variance extracted and construct reliability tests are presented in Table 2 below:

Table 2: Testing Results of Variance Extracted and Construct Reliability

No.	Variable	Variance Extracted (AVE)	Construct Reliability
1	Sociality	0.670	0.614987
2	Entertainment	0.700	0.638944
3	Enjoyment	0.781	0.707417
4	Flow Experience	0.718	0.657616
5	Loyalty	0.707	0.645972

Based on Table 2, all latent constructs are found to meet the AVE criteria, where all constructs of sociality, entertainment, enjoyment, flow experience, and loyalty have a value greater than 0.50. Table 2 shows that each construct's reliability value exceeds 0.6, indicating all constructs are reliable.

3.2 Model Fit Test-Goodness of Fit

Table 3: Goodness Of Fit Test Results: Overall Model Fit

Goodness Of Fit Index	Cut off Value	Calculation Result	Description
Chi-Square	Expected to be smaller	329,312	χ^2 with df = 311, sig 5% which is 353.1277 (Good)
Significance Probability	$\geq 0,05$	0,228	Good
CMIN/DF	$\leq 2,0$	1,059	Good
GFI	$\geq 0,90$	0,816	Marginal
RMSEA	$\leq 0,08$	0,020	Good
AGFI	$\geq 0,90$	0,831	Marginal
TLI	$\geq 0,90$	0,989	Good
NFI	$\geq 0,90$	0,853	Marginal
PNFI	0,60 - 0,90	0,756	Good
PGFI	0 - 1,0	0,708	Good

Based on the table above, it can be seen that the goodness of fit evaluation results show good results; there are 6 (six) out of 10 (ten) criteria that have met the cut-off value. Although some indices are still below the cutoff value or classified as marginal, the value is not too far from the cutoff value. In this case, the marginal value means that the value is the closest value to the standard and is still considered feasible. Thus, it can be concluded that the model is a good fit with the existing data, and the model is acceptable.

3.3 Hypothesis Testing

Based on the results of hypothesis testing contained in Table 4, the effect of sociality on flow experience is 0.195 with a p value of 0.032 and C.R. 2.147, which indicates that sociality has a positive and significant effect. Similarly, entertainment has an estimated value of 0.285 with a p-value of 0.003, and enjoyment has an estimated value of 0.302 and a p-value of 0.000, where each of these variables affects the flow experience, so it can be concluded that H1, H2, and H3 in the test can be accepted. Furthermore, related to its impact on loyalty, it was found that the estimated value of sociality was 0.152 with a p value of 0.036, while entertainment was 0.196 with a p value of 0.026, and enjoyment was 0.167 with a p value of 0.042, indicating that both sociality, entertainment, and enjoyment have a positive and significant influence on loyalty. On this basis, it can be concluded that both H4, H5, and H6 proposed in this study can be accepted. Regarding the flow experience in its influence on loyalty, it is found that the estimated value is 0.369 with a C.R. of 3.608 and a p-value of 0.000, which shows that the flow experience has a positive and significant effect on loyalty, so this also shows that the proposed H7 can be accepted.

Table 4: Research Hypothesis Testing Results

Direct Effect				Estimate	C.R.	P
H1	Sociality	→	Flow experience	0.195	2.147	0.032
H2	Entertainment	→	Flow experience	0.285	2.963	0.003
H3	Enjoyment	→	Flow experience	0.302	3.589	0.000
H4	Sociality	→	Loyalty	0.152	2.093	0.036
H5	Entertainment	→	Loyalty	0.196	2.229	0.026
H6	Enjoyment	→	Loyalty	0.167	2.034	0.042
H7	Flow Experience	→	Loyalty	0.369	3.608	0.000
Indirect effect					Estimate	P
H8	Sociality	→	Flow Experience → Loyalty		0.072	0.030
H9	Entertainment	→	Flow Experience → Loyalty		0.105	0.016
H10	Enjoyment	→	Flow Experience → Loyalty		0.111	0.009

In table 4, it can also be seen that in testing indirect effects based on the results of collaboration with the Sobel test, it is found that related to hypothesis 8 which examines the effect of sociality on loyalty through flow experience, it is found to have an estimate value of 0.072 with a p value of 0.030 which indicates that flow experience can mediate the existing influence. Furthermore, in testing the mediation of flow experience on the effect of entertainment on loyalty, it is found to have a p-value of 0.016 with an estimated value of 0.105, indicating that flow experience has a mediating role in the effect of entertainment on loyalty. Furthermore, it was also found that flow experience mediates the effect of enjoyment on loyalty, with an estimated value of 0.11 and a p-value of 0.009, which indicates that flow experience has a mediating role in the effect of enjoyment on loyalty. Based on this, it can be concluded that overall flow experience has an important role in supporting each variable to increase loyalty. On this basis, the proposed hypotheses, namely H8, H9, and H10, can be accepted because they are proven correct.

Sociality of online mobile game players is proven to have a positive influence on increasing loyalty owned by game players, which can explain that, in addition to enjoying the game interface, someone playing games also aims to communicate with other players and build social relationships by forming teams or communities that share the same fun. Online mobile games where everyone can play easily anywhere and anytime can encourage someone to be more loyal to the online game, especially when they get a playmate from a previously formed communication relationship. Empirically, it can also be explained that online mobile games are generally played not only alone but require friends to face opponents, especially in the multiplayer online battle arena genre, so that the presence of friends who have familiarity in establishing social relationships can make online game players feel more flow in the game and have a high probability of being loyal to what they play. In addition, based on the results of causality testing, it can be concluded that sociality has a significant positive effect on flow experience. This indicates that the better the social relationship, be it in the interactions that occur, meeting new friends, or cooperation that is built in online games, the players will be more focused and immersed in the game.

The results of this study are in line with research conducted by, which states that social interaction, both human-computer interactions and human-human interactions, affects the flow experience in online game users. Many online game players enjoy their online activities because they can increase their social contact with other players in different places through the mediation of the games they play. (H. Wang & Lee, 2020) also stated that the role of sociality is very important in online games, interactivity, either between fellow players or machines directly, greatly affects the flow experience that will be created. Mutual interaction and information sharing when playing online games allows players to learn many things about how to play and other opportunities. They can also become focused on the game they are playing through

interaction, because the nature of online games is one of team competition. With this, a flow experience will be created, and players will be unconsciously absorbed in the game.

The uses and gratifications theory reveals that everyone has the right to choose to use any media to satisfy their needs, and when these needs are met, the possibility of repeating using the media will be greater. This finding also explains that online mobile games are one of the media that provide interesting entertainment and are full of challenges, such as the results of the answers of respondents who mostly agree that they use online mobile games for fun, diversion from routine, emotional release, and to fill spare time. Entertainment of online mobile game players in this study is proven to be positively related to player loyalty. When an individual does something based on intrinsic motivations, such as interest and pleasure, they are more willing to do it again in the future. If a player feels happy while playing a game, he or she is more likely to recommend the game to others, which is one of the indicators of customer loyalty. In line with the Uses and Gratification theory, the findings of this study also explain that high perceived enjoyment will make the loyalty of consumers higher, and the switching costs that occur will be very high if consumers decide to move elsewhere, which will greatly affect the value received by consumers or developers. Adding interesting factors to the game may influence their intention to continue playing and fulfill the fantasy desires of consumers. Most people play online games to avoid the unpleasant reality they experience and distract them from the unpleasant events, making them happy with what they get will further increase their loyalty.

Based on the results of the comparison test of direct and indirect influence relationships between the variables of sociality, flow experience, and loyalty, it can be concluded that flow experience mediates the relationship between sociality and loyalty, which means that the sociality created in online mobile games can cause loyalty if the players experience flow experience or are in a state of deep involvement. Increasing the flow experience has a very good impact on the continuity of a medium, including online mobile games. Improving the experience when playing by providing more complete facilities can provide its own advantages, considering that the interactions that occur will be more intense. The loyalty that is built from the existence of flow makes some people not think long before making decisions, as well as the possibility of a higher return visit. Similarly, the flow experience has a positive impact on increasing entertainment support and enjoyment on loyalty. Someone who plays online mobile games for entertainment and enjoys every activity in it, when they are more deeply involved and fully focused on playing, will encourage them to continue playing and become more loyal to the online game they play. Therefore, it is important for developers to create online mobile games that can offer all three aspects, namely sociality, entertainment, and enjoyment in playing them.

This study also considers the evolving landscape of Indonesia's digital economy. Since 2023, the Ministry of Communication and Informatics (Kominfo) has implemented licensing requirements for digital platforms, including games, under the Private Electronic System Operators (PSE) regulation. Developers must now register and comply with data governance rules, while international platforms must localize services or partner with local firms. On the economic side, the Indonesian government continues to promote the creative economy—including game development—through funding programs like BEKRAF (Badan Ekonomi Kreatif) and tax incentives for digital startups. These policies are designed to increase investment in local gaming ecosystems and encourage sustainable monetization models. Understanding this regulatory and incentive framework is essential for evaluating how developer strategies influence player engagement and loyalty in the Indonesian market.

4. Conclusion

Overall, it can be concluded that online mobile game players who play games to find entertainment, socialize, and to enjoy the online games they play have an important impact on increasing the loyalty they have to online mobile games. The findings of this study reveal that someone who plays online mobile games with a better flow experience can strengthen every aspect of both the expected entertainment and the sociality that they want to be built, and the enjoyment sought when playing online games, so that it can create a strong desire to return to play and be more loyal to the game. Therefore, it is recommended that online mobile game developers continue to pay attention to every feature, appearance, and role in the online game created so that it matches one's expectations in playing, both in seeking entertainment, building sociality, and enjoying every time spent playing online mobile games.

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