

The Effects of In-game Purchases on Students' Spending Habits

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Abstract: *This study discussed how students' spending habits and financial mindset could be affected by their enjoyment with gaming, finding variables that influence and motivate gamers in obtaining virtual items. The main data gathering tool used in this study was a researchers' made survey questionnaire under descriptive-correlational quantitative method. Based on the results gathered from the participants, the findings revealed that students' interest on in-app purchases do not affect their financial stability and mindset. Conclusions were drawn and recommendations were offered.*

Keywords—Video Games, Spending Habits, Students, In-Game Purchases, Descriptive-Correlational Study

1. INTRODUCTION

As the world progresses, mobile game businesses have developed significantly over the years [1]. Our study ought to look at the link between online gambling addiction, which then leads to the struggle of the student's financial-risk issues, and their loyalty towards in-app purchases. These gaming operations' interaction methods encourage addiction as a means of increasing online mobile game purchase intent, where serious questions are tackled in the gaming industry [2]. Students are vulnerable to making reckless decisions because of their young age, which then affects their resistance behaviours, concerns about overspending and addiction, and their frustration mechanism [3]. This research is about the mental and psychological impacts of such transactions upon the rise of these games.

In today's world, having access to the Internet is a must. Information seeking, trading, and entertainment are all common uses of the internet. There has been a dramatic change in recent years in the development of online games and the creation of mobile devices that can operate online games, such as smartphones [4]. As technology continues to progress, mobile and computer games like Mobile Legends, PUBG, Apex, and such constantly advance as well, which surely interests many. People nowadays, especially teens and young adults, enjoy playing games together with their friends and even strangers that they meet online as their way of interacting with others, relieving stress, entertaining themselves, and for various other reasons. But some online games offer virtual items, features, and updates that upgrade the performance of their chosen characters in games that are undeniably inevitable for players to acquire. By improving their account's gaming stuff, players will feel a sense of accomplishment that will motivate them to acquire each and every new item that the game releases in the future [5].

With the rise of these games, the gaming community is buzzing about in-app purchases in competitive freemium mobile games, which can peak the interest of their consumers, specifically teenagers and students. To understand such

situations, this research studies the causes of such transactions [6].

The main objective of this study is to know the financial situation of students who use in-app transactions. The results of the study will determine whether or not the effects of in-app purchases on a student's spending habits are beneficial.

2. RELATED WORKS

Since gadgets and electrical devices improve their performance stats every year, a lot of people become addicted to the games available there. With regards to revenue and players, mobile games have become the most important sector in terms of the gaming industry due to the fact that there are thousands of available games that can be downloaded for free [7]. And as of now, mobile gaming is rapidly expanding. One of the important sources of income for game developers is in-game purchases. In the process, game developers chose the freemium model, also known as free to play, which has exclusive in-game purchases to enhance the gaming experience. In some recent studies, researchers found that gamers who play are more impacted by the price value than others. On the other hand, gamers who are very serious about their gaming experience have more motivation for their in-game purchases. It was also revealed that gaming addictions really had something to do with online in-game purchasing. The game addictions were associated with loyalty, and the loyalty of the players increased because of the purchases they could make inside the game [8][9].

In recent years, in-game features and products have accounted for the vast majority of mobile game earnings. Much research has recently been conducted to investigate the factors that influence mobile gaming uptake. However, there has been little research into the factors that influence the purchase of virtual items while playing mobile games [10]. Gaming on the internet has grown in popularity as a recreational activity all over the world. The most recent innovation in online gaming is the introduction of "free-to-play" systems, in which gamers play for free but have the option to purchase game items while playing [11]. There are

three types commonly used to establish a way for game developers to earn an income. They consist of the pay-per-download model, the in-game advertisement sponsorship model, and the in-game sale model. The third type is the most commonly used by mobile games, providing a paid virtual item in the application [12].

Loot boxes are virtual items in video games that allow players to "gamble" on an item. Loot boxes introduce a gambling element into video games, potentially leading to video game users engaging in online gambling activities. However, few studies on this new issue have been conducted. Those who bought loot boxes reported more extended gaming and online gambling sessions, higher levels of problem video gaming and problem gambling severity, and higher levels of mental distress than those who did not [13]. Digital games have become an important part of many people's lives and are popular among people of all ages and genders. As a result, it is critical to understand why people are so drawn to online gaming [14]. The purpose of this study, which was based on flow theory and consumer value theory, was to investigate the interrelationships between the constructs in order to predict game users' in-game purchase intentions [15].

Having access to the Internet is a must. Information seeking, trading, and entertainment are all common uses of the internet. There has been a change in recent years in the development of online games and the creation of mobile devices that can operate online games, such as smartphones [16]. Despite the fact that the mobile games business has developed significantly in recent years, monetizing it and attracting new players remains a constant problem. Players may help achieve this goal by purchasing mobile game accessories and enrolling new players [17]. The younger people nowadays do not prioritise what they need rather their priorities lie with what they want [18]. It is also said that players tend to enjoy the game more if they are found to be directly influenced by the aesthetics of the game, rewards and perceived worth [19].

Some people purchase virtual items due to peer pressure, or because they just want to appeal to other people by increasing their image and status in games. Customer happiness will be the result if customers' expectations and realities match. In accordance with their expectations, customers are satisfied with the goods when they obtain a value that satisfies their expectations. The player will be pleased with the game if it delivers on the quality of the game items that were claimed in the game item's description. A player's satisfaction with the game has an impact on the development of their buying interest in in-game items; players who perceive a significant impact from using game items have a high level of buying interest to further improve virtual goods and pay more attention to promotions or game item updates [20]. One of the most famous mobile games played by most GenZ and young adults is Mobile Legends: Bang Bang (MLBB). It was made by a Shanghai-based video-game

developer whose game made everybody. Lower class, middle class, and high class are encouraged to play it because of its low technical requirements, and higher if needed. According to their study, players are willing to spend real money to buy virtual items because it boosts their gaming performance and shows their in-game purchases to other players for pleasure [21].

Conversely, the same goes for the free-to-play multiplayer online survival game, Fortnite. The player's impulse to bring their funds to the game is because, in terms of aesthetics, they want to look different and unique in their identity using the paid items they bought [22]. Advertising could also be one of the greatest factors causing in-app purchases. A survey was conducted in South Korea, which is known to have the most innovative technology in the industry of video games. A survey was conducted in order to learn about the playful habits, viewing of advertisements in games, and the purchase of advertised items by the players. The conclusion indicated that the traditional methods of advertising do not necessarily attract the players' attention to become consumers, but rather the reason gamers become consumers is due to the products that are being prescribed by professional gamers. Players spectate games, and as they continue to observe, they are also able to see which elements and accessories affect the streamer's gameplay [23].

Playing video games may be extremely addicting, and players frequently engage in such activities. Our study looked at both rational and irrational elements in purchasing behaviour to see how they relate to video game purchases. Regression analysis of the obtained data revealed that purchasing behaviour was impacted not only by the intention to purchase, which is a rational aspect of consumption, but also by such irrational factors as habit, impulse, and ostentation, which should be explored further in future studies[24].

3. STATEMENT OF THE PROBLEM

The primary problem of this study was to examine how in-game purchases impact students' spending habits and find variables that influence, affect, and motivate gamers in obtaining virtual items as well as upgrades. With the aim of successfully accomplishing these goals, the study sought answers to the following questions:

1. How often and how much do gamers acknowledge in-game purchases?
2. What is the level of students' spending habits?
3. Do in-game purchases significantly affect spending habits?
4. What implications may be drawn from the findings of the study?

4.METHODOLOGY

In this study, a quantitative technique was used as the research method. It's a type of research study technique that focuses on the amount of data and how it is analyzed. To arrive at a logical conclusion to the statements, the technique deductive approach is also applied. The objective of this research was to investigate the relationships between the variables in order to predict game users' in-game purchase intentions and how in-game purchases affect students' spending habits. In order to obtain all the data needed for this study, the researchers used interviews, observation, and other essential investigations. The participants were also given a letter of request from the investigators, indicating their permission to participate in the interview.

An online survey questionnaire, made by the researchers, was used as an instrument by the researchers to conduct the research survey. The participants of the study were composed of 50 students from a private school in Marilao, Bulacan during the school year 2021–2022.

The researchers employed a Likert-scale questionnaire to gather knowledge and information for this study, in order to determine the impact of in-game purchases on students' purchasing patterns. The researchers (SPSS) utilized a researcher-made online survey questionnaire. There are two sections to the questionnaire (A and B). Section A and Section B both contain Likert-scale questions that generated data on the students' utilisation of in-game transactions and spending habits: Often, Always, Sometimes, Rarely, and Never were the responses, with an open-ended question at the end of the survey asking if they had any more thoughts on the effects of in-game purchases on a student's spending habits, making it more than fifteen questions.

The chosen participants of this research study were presented anonymously to protect their identities. The method used to conduct this paper was the descriptive-correlational research method, which is a technique in quantitative research used to explore variables and their interactions that occur naturally. The researchers selected these participants because they met all the requirements needed for the research to have an excellent outcome. The participants are known to have great knowledge about how online games and in-game purchases work. Considering the fact that the participants understand the content of the paper, they have been qualified to take part in the study.

When collecting data, the researchers used the following methods:

An email was sent to the principal and administration of a private school in Marilao, Bulacan, requesting permission to conduct the study.

The questionnaires were then distributed to the respondents via Messenger with the permission of the school principal and administration.

The questionnaires were collected from the respondents, and the researchers will check to see if they were able to answer all of the questions.

5. RESULTS & DISCUSSION

Gamers' Acknowledgement of In-game Purchases

In the first part of the researchers' questionnaire are the following: The results were calculated to know the gamers' acknowledgment in in-game purchases.

Table 1. In-game Purchases

| Indicators | Mean | Interpretation |
|--|------|----------------|
| 1.) Gaming is very important to me. | 3.5 | Sometimes |
| 2.) I notice myself looking at the in game purchases section whenever I play. | 3.02 | Sometimes |
| 3.) In-game purchases interest me more than freebies on the game. | 2.52 | Sometimes |
| 4.) I think that in-game purchases ruin the experience for co-players that are not able to purchase extra goods. | 3.22 | Sometimes |
| 5.) I frequently play gacha games or games that involve loot boxes. | 3.3 | Sometimes |
| 6.) I feel sad and pressured when I can't get the item that I want in gacha games. | 3.44 | Sometimes |
| 7.) Getting the desired character/weapon/skin/virtual item that I want is more important than saving money. | 2.14 | Rarely |
| 8.) I find that it is easier to spend money on the game than work/grind for its in-game currency. | 2.48 | Rarely |
| 9.) I like investing in my hobbies and I consider gaming as one of them. | 3.18 | Sometimes |
| 10.) Games I play are usually Free-to-Play friendly. | 3.96 | Always |
| 11.) I value a game's enjoyment more than its offered products. | 4.42 | Always |
| 12.) I plan to buy in-game purchases because of friends' influence. | 2.5 | Sometimes |
| 13.) The games I play are more of an open world with a story-telling type. | 3.38 | Sometimes |
| 14.) Playing for free is okay, but I think that playing while | 2.54 | Sometimes |

| | | |
|--|------------|------------------|
| getting stuff at the in-game purchases shop is better. | | |
| 15.) In-game purchases motivate me to play well in the game. | 2.86 | Sometimes |
| Average | 3.1 | Sometimes |

It is very clear from Table 1 that the absolute answer to the question, "How often and how much do gamers acknowledge in-game purchases?" was "Sometimes" with an average score of 3.1 as shown above. The statement that was able to get the highest mean score was statement 11, with a mean of 4.42, which was interpreted as "Always". On the other hand, the statement that got the lowest mean score was statement 7, with a mean of 2.14, which was translated as "Rarely".

This result was supported by a study wherein a controlled laboratory experiment was conducted to learn people's decisions when it comes to free-to-play games. To sum it up, when the participants were asked if they were willing to pay in soft currencies, the spending they did increased thoroughly. But when they were asked to pay in euros, they were still willing to spend money, but they thought it through much more than they did with the fake currency [25]. It means that people still acknowledge in-game purchases.

There are students who love gaming but still value their money. Therefore, they are putting into consideration the value of the items they are getting. With that kind of mindset, they are measuring the products supplied in the game to meet their expectations and to make sure they are satisfied with what the game maker is offering. In a previous study, it was claimed that the perceived value of customers has an effect on their satisfaction [26].

Level of Students' Spending Habits

This is the second part of the researchers' questionnaire that focused on the students' spending habits. The results that were gathered are the data needed to know the level of the students' spending habits.

Table 2. Spending Habits

| Indicators | Mean | Interpretation |
|---|------|----------------|
| 1.) I find myself spending money on a game whenever they're offering something new. | 2.02 | Rarely |
| 2.) I spend more money on games than other things. | 2.24 | Rarely |
| 3.) Whenever I get extra money, I always use it for games. | 2.32 | Rarely |

| | | |
|--|-------------|---------------|
| 4.) Even though I don't have much money for this month, I will still spend some on games. | 1.86 | Rarely |
| 5.) I rarely spend money on online games because I think it is not worth it. | 3.5 | Always |
| 6.) Partaking in these in-app transactions enhances the overall experience. | 2.84 | Sometimes |
| 7.) I have no regrets when making such transactions. | 2.98 | Sometimes |
| 8.) I am unable to stop myself from buying whenever I see something new. | 1.72 | Rarely |
| 9.) Spending money on the game is considered essential to me. | 1.84 | Rarely |
| 10.) I only make transactions on extra loots I am sure that would help make my gameplay, compared to being Free-to-Play, easier. | 2.9 | Sometimes |
| 11.) I usually use the allowance given to me to purchase in-game loot. | 2.14 | Rarely |
| 12.) I spend money on the game because I think I deserve it after a long hour of studying or work. | 2.82 | Sometimes |
| 13.) When I have remaining money, I use it to buy low price virtual products. | 2.66 | Sometimes |
| 14.) I always find sideline jobs not for my personal needs but to sustain my gaming needs. | 1.68 | Rarely |
| 15.) I use my own income for my in-game transactions. | 2.96 | Sometimes |
| Average | 2.43 | Rarely |

As shown from Table 2, the average mean that was purposely gathered to know the level of the students' spending habits was 2.43, which is interpreted and translated as "Rarely". According to the answers of the respondents, they rarely spend money when the game is offering something new (2.02) and that they can stop themselves whenever they see the game having something new (1.72). Sideline jobs aren't considered much to sustain gaming needs (1.68). But while that is not considered, it is considered better to spend money on other things than games (2.24).

This result was supported by a study that claimed that people's resentment of transitions in games could be caused by perceived unfairness of microtransaction prices, perceived unfairness of the amount of non-monetary sacrifice required to compete/progress in a game without paying for

microtransactions [27]. The people's mindset is that there are other things worth spending money on that fully on games.

Effects of In-game Purchases on Students' Spending Habits

The findings revealed that a student's interest in in-game purchases does not affect their spending habits, evident by the 0.0437 correlation coefficient, which proves that there has been a negligible correlation. What this means is that the majority of students' gaming habits and influences do not distract their financial mindset in any way, and there might be other factors that contribute to increasing the level of spending habits among students.

During the pandemic, the internet became the focus of many learners, thus resulting in more students becoming gamers. The in-game purchases made by the subject of this research have sky-rocketed to the point that it has brought concerns to their guardians. Similar studies have shown that in-game purchases play a major role in the students' spending habits, but others do not quite agree with that conclusion.

The outcome shows that in-game purchases have no big impact on the learners' spending habits and that they can still think rationally during the process of purchasing. The teens were able to control themselves while also thinking about other options besides purchasing in-game goods. The influence that could drive the participants to play was not the in-game products, but the experience they collected in the games they played. Moreover, the other factors that also stop them from purchasing are whenever there is an unfairness in the price or the allocated value is not enough for them to continue. This results in the mindset of using their money for other things besides in-game purchasing.

Furthermore, the results gathered showed that the participants in the study have an interest in and prefer free-to-play games, as they frequently play such games. Respondents also acknowledge the importance of enjoying the game itself more rather than the pleasure of obtaining advanced in-game goods, though some of them apparently find purchases of in-game tools preferable. Nevertheless, students still prioritize saving money over spending on in-game items.

Implications based from the findings of the study

Some gamers are challenged in terms of financial responsibility and decision-making when it comes to spending money. A select few of our student participants find it easier to spend money on the game than work for the virtual items that they desire, which coexists with how those same students think that getting the in-game loot that they want is more important than saving money. These gamers are challenged specifically with the essence of self-control.

However, our data indicates that the majority of our student participants think otherwise. Meaning, they do not let their gaming enjoyment influence their spending habits. If they ever do buy virtual items, even though it is not considered a necessity to them, they would usually spend a reasonable amount of their extra money.

6. CONCLUSIONS

The findings based on the listed section of the researchers' first questionnaire were calculated to determine the gamers' acknowledgment of in-game purchases.

As shown in Table 1, the definitive answer to the question, "How often and how much do gamers acknowledge in-game purchases?" was "Sometimes." with a 3.1 average score. Statement 11 received the highest mean score of 4.42, indicating "Always." Statement 7, on the other hand, received the lowest mean score, of 2.14, which corresponds to "Rarely."

The next following are listed in the second section of the researchers' questionnaire. The results that were gathered are the data needed to know the level of the students' spending habits.

As indicated in Table 2, the average mean used to determine the level of the students' spending habits was 2.43, which can be interpreted and translated as "Rarely." Statement 5 received the highest mean score of 3.5, indicating "Always." Statement 14, on the other hand, received the lowest mean score, of 1.68, which corresponds to "Rarely." According to the respondents' answers, they rarely spend money when the game has something new to offer, and they can stop themselves whenever they see the game has anything new. In addition, side jobs aren't thought to be sufficient to meet gaming needs. However, when this is not taken into account, it is considered that money would be spent on other things than games.

These findings conclude that playing games is enjoyable, but acquiring game goods is even more enjoyable and easier to play with. All responses were based on the participants' satisfaction. The study clearly demonstrates that purchases are not necessary in games.

Furthermore, being financially responsible is a necessary step for all people. This research proves that teens, even though they are acting on impulse, know how to spend their money well. The people's mindset is that there are other things worth spending money on that fully on games. Majority of students' gaming habits and influences do not have an effect on their financial mindset in any way and there might be other factors that contribute to increasing the level of spending among students.

7. RECOMMENDATIONS

From the study, findings, and conclusions, the researchers suggest the following: (1) students must maintain awareness of their own financial responsibilities; and (2) students must spend their finances on essentials and top priorities in order to sustain their financial state.

To address the study's limitations, the researchers recommend including a greater number of students in order to make the data more accurate. To make the results more relevant, the researchers also suggest that the study should focus more on students who play video games. Furthermore, the majority of students' gaming habits and effects do not distract their financial mindset in any manner, according to the findings of the study, which is why the researchers recommend looking at additional aspects, such as online shopping, other than in-game purchases that can affect the students' purchasing habits.

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