



IE403 : Human-Computer Interaction
User Research Report - Digital Well-Being for Mobile Gamers

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Chapter 1

Methodology

1.1 Study Design

1. How did you design the experiment?

Initially, the four of us sat and had a lengthy discussion about what we wanted to achieve from this project and, to achieve that, what the data requirements from our target group were. We did that in the following manner

- (a) **Defining the Primary Goal:** The primary goal was to understand mobile gaming behaviour, including habits, attitudes, and challenges, amongst our peers, family members, friends etc. We tried our best to maximize the outreach of our survey so we would get sufficient data for our research.
- (b) **Make Survey and Interview Questions:** We formulated questions to address the main objective that we wanted, such as what were the popular games played and what genre these games belonged to, what motivated them to play such games, and what were the ups and downs in their experience. We designed our survey according to our needs which included multi-answer type, short answer type etc. Two people took the Interview questions, one asking the leading questions intended for the interviews and the other observing the interviewee's behaviour and making notes related to their answers, the tone of the answers and their overall reaction to the questions being asked to generate personalized data.

Overall, we aimed to generate meaningful data from our user research, where we collected data over 7-10 days using Google Forms and One-on-one interviews.

2. Who were the participants?

The participants in our user research experiment on mobile gaming behaviour were mainly our friends and relatives. We tried our level best to get a good and valuable response. Additionally, we selected people for one-on-one interviews, chosen randomly from our friends, as well as their friends' connections. These interviews provided more profound insights into their experiences and perspectives regarding mobile gaming. Overall, the diverse participants helped capture various behaviours and attitudes related to mobile gaming.

3. How many participants?

We received just over 150 responses to our survey and conducted 20 one-on-one interviews. The data collected from the survey and interviews provided valuable insights into the participants' experiences with mobile gaming. These insights will be used to make informed inferences about mobile gaming behaviour among participants.

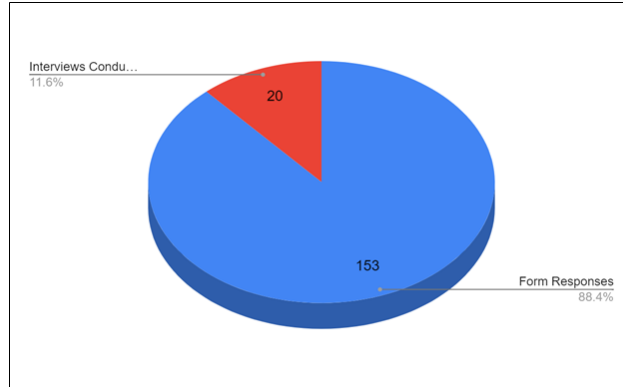


Figure 1.1: Participant Distribution

4. What are the demographics of participants?

The participants in the user research experiment on mobile gaming behaviour among participants were diverse, representing a wide range of demographics. The survey and interview participants included students from colleges and schools within and outside the DAIICT community. The age range of participants was broad, with responses from individuals as young as 14 years old to as old as 35 years old (as shown in 1.3), indicating a diverse sample. The gender distribution was biased towards the males (as shown in 1.2); participants came from various backgrounds, including undergraduate students from DAIICT and those with full-time jobs, providing a comprehensive perspective on mobile gaming behaviour across different age groups and demographics. Overall, the diverse demographics of the participants helped to capture a broad view of mobile gaming behaviour among the participants.

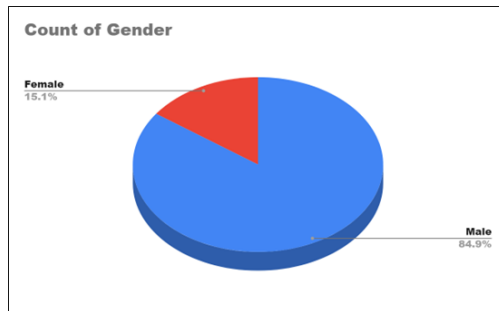


Figure 1.2: Gender Distribution

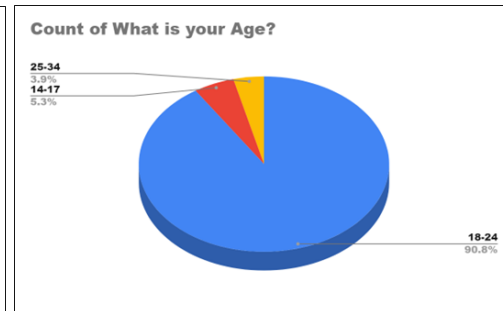


Figure 1.3: Age Distribution

Chapter 2

Experiment / Study Conducted

2.1 Experiment Description

1. What was the experiment?

The experiment aimed to conduct user research and gather insights into mobile gaming behaviour among students (mostly aged 18-24) to understand mobile gaming behaviour among students thoroughly. This involved circulating a survey and one-on-one interviews to collect data on various aspects of participant's gaming habits, attitudes, and challenges related to mobile gaming.

2. What was the hypothesis?

The hypothesis suggests that factors such as the types of games played, how often they are played, and their outlook on gaming all contribute to how participants engage with mobile games. Through a mix of surveys and interviews, the study aims to uncover patterns and connections among these elements, aiming to gain insight into what drives the gaming behaviour of the participants.

3. What was studied?

To comprehensively investigate mobile gaming habits, we used two distinct research methods:

Surveys - to gather quantitative data and analyze usage patterns.

Interviews - to investigate qualitative aspects and gain deeper insights into gaming behaviour.

The main aim was to understand the patterns and factors influencing mobile gaming behaviour among students. This information will help us create new ways to promote digital well-being.

2.1.1 Questions Asked

Table 2.1: Survey on Mobile Gaming Behaviour

Question	Type	Description
Name	Text	Please provide your name
Gender	Multiple Choice	Male, Female, Other
Age	Multiple Choice	13 or under, 14-17, 18-24, 25-34, 35-44, 45 or over
Do you play mobile games?	Multiple Choice	Yes, Sometimes, No
How often do you play?	Multiple Choice	Never, Rarely (1-2 times a month), Occasionally (1-2 times a week), Somewhat frequently (3-4 times a week), Frequently (daily)
What types of games do you typically play on your mobile phone?	Checkbox	<ul style="list-style-type: none"> • Puzzle Games (e.g., Candy Crush Saga, Wordscapes, Cut the Rope) • Strategy Games (e.g., Chess, Clash of Clans, Clash Royale) • Trivial Games: Endless Runners (e.g., Subway Surfers, Temple Run 2, Sonic Dash) • Action Games: Shooters (e.g., PUBG Mobile, Call of Duty: Mobile, Free Fire) • Sports Games (e.g., FIFA Mobile, NBA 2K Mobile) • Role-Playing Games (e.g., Genshin Impact, Honkai Impact 3rd, Pokémon GO)
Where do you usually play mobile games?	Checkbox	<ul style="list-style-type: none"> • At home • During my commute (e.g., on the bus, train) • During breaks at work/school • While socializing with friends/family (occasionally) • Before Bed
Do you play games on any other devices besides your phone?	Checkbox	<ul style="list-style-type: none"> • PC • Laptop • Tablet • Console
Do you think video games are educational?	Multiple Choice	Yes (or else all my years of playing have gone to waste), No (I should have been reading books all those years)
Why do you like to play games?	Checkbox	<ul style="list-style-type: none"> • Kill time • Have fun • Work in teams • Escape real world • Stress relief • Competition • Occupy mind • Make friends
Continued on next page		

Table 2.1 – Continued from previous page

Question	Type	Description
Do you still find time to play when you're busy?	Multiple Choice	Yes (can't stay away!!), No (school/work comes first!!)
Describe your mood after finishing a gaming session?	Checkbox	<ul style="list-style-type: none"> • Energized • Relaxed • Accomplished/Satisfied • Frustrated • Bored • Stressed • Disappointed
What do you usually do right after you finish playing a mobile game?	Checkbox	<ul style="list-style-type: none"> • Check social media • Browse the internet • Start another mobile game • Go back to a previous task (work, school, etc.) • Relax/do nothing
In your opinion, what makes mobile games so engaging and difficult to put down?	Checkbox	<ul style="list-style-type: none"> • Compelling gameplay mechanics (e.g., challenging yet achievable goals, satisfying rewards) • Short, engaging sessions that fit easily into my schedule • Progression systems that keep me motivated to play more • Social features that allow me to connect with others • Storytelling or characters that keep me invested
Do you spend money on the games you play?	Multiple Choice	Yes, No
How much money do you spend on the games you play (in INR) on a monthly basis?	Multiple Choice	<ul style="list-style-type: none"> • less than 500 • 500 - 1000 • more than 1500 • I don't spend money at all
What are some of the biggest challenges you face in controlling your mobile gaming time?	Checkbox	<ul style="list-style-type: none"> • Losing track of time while playing • Difficulty putting the phone down after completing a level or task • Feeling the urge to play even when I know I should do something else • Feeling bored or restless without mobile games • Notifications and in-game prompts tempting me to play more
What you don't like about mobile gaming?	Checkbox	<ul style="list-style-type: none"> • It costs too much • It's frustrating • It's boring • My friends don't play • Too many rules to learn
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Table 2.1 – Continued from previous page

Question	Type	Description
Would you be interested in features or tools that could help you manage your mobile gaming time?	Multiple Choice	<ul style="list-style-type: none"> • Yes, I would be interested in features that help me manage my mobile gaming time. • No, I am not interested in such features. • Maybe, it depends on the specific features offered. • I don't play mobile games often enough to need such features.
Have you ever tried to reduce your mobile gaming time? If so, what methods did you use?	Text	User Input

Table 2.2: Interview Questions on Mobile Gaming Behaviour

Question	Description
Name	Please provide your name
Student ID	Please provide your student ID
Do you play games?	Yes/No
Can you describe your typical gaming routine?	Open-ended
What do you enjoy most about playing mobile games?	Open-ended
Would you feel you are addicted to your gaming habit?	Yes/No
What strategies do you use to control your gaming time? (if you do)	Open-ended
How do you think your gaming habit affects your daily life?	Open-ended
What would motivate you to reduce your gaming time?	Open-ended
How do you think a digital tool could help you manage your gaming time better?	Open-ended

2.1.2 Rating Scales Used

We used different rating scales to understand how participants felt about certain aspects of mobile gaming. For example, some questions asked for simple yes or no answers, while others asked them to rate their agreement or how often they did something.

2.1.3 User Requirements

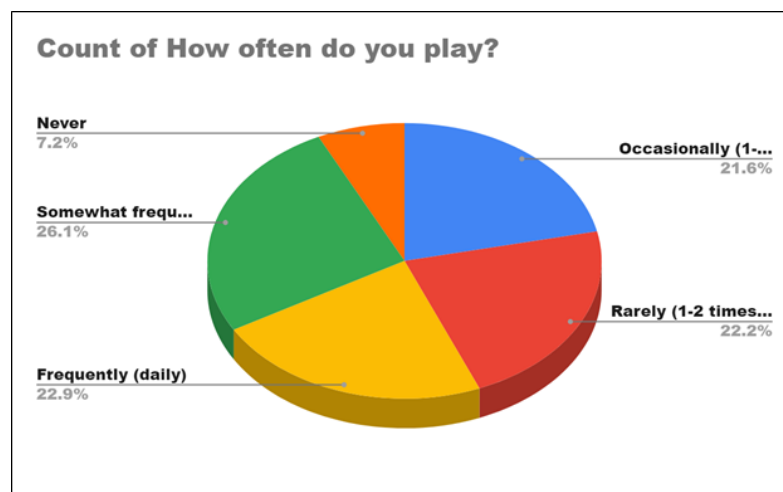
Our surveys and interviews taught us what users wanted and needed regarding mobile gaming. This included what features they wished their gaming tools had, how they managed their gaming time, and what influenced their gaming habits. Our goal was to figure out how to improve the mobile gaming experience for users based on what they told us.

Chapter 3

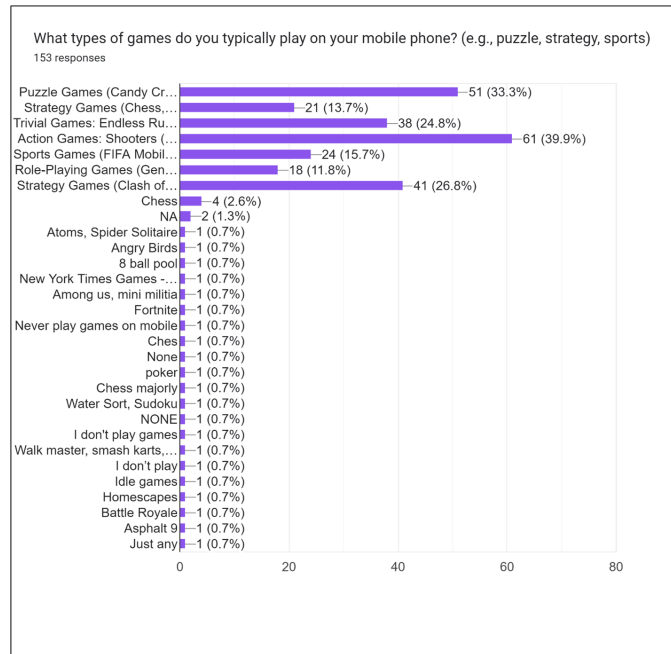
Findings

3.1 Observations and Visualizations

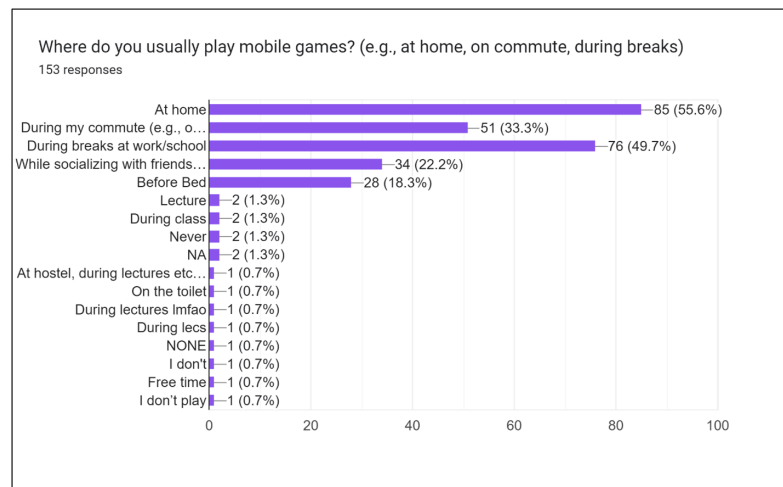
1. For each question asked or task given, what did you observe in participants?
 - Out of 153 participants, 74 regularly played mobile games, 64 played mobile games occasionally, and 15 did not play any mobile games. Approximately 26% of the participants played 3 to 4 times a week, and 22% played daily, while the rest played once or twice a week or a month. The pie chart below shows us the same.



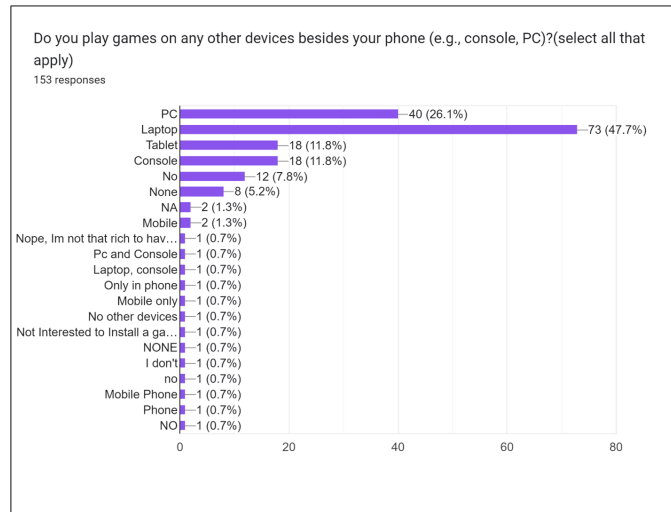
- The majority of the participants preferred Action shooting, puzzle, and Strategy games, finding them engaging and competitive and gave some satisfaction according to interviews. The response distribution is as follows:-



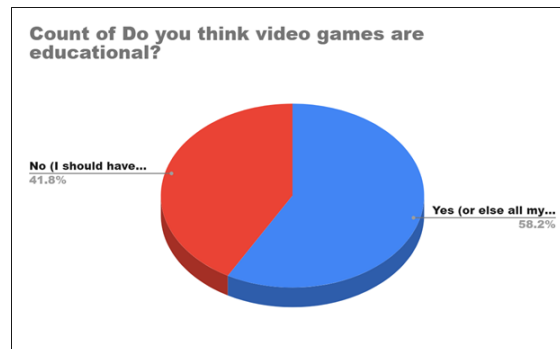
- When asked where they played mobile games, 55.6% played at home, 49.7% during breaks at school or work, 33.3% during commute, 22% while socializing, and surprisingly, 18.3% just before going to bed. This tells us that most participants prefer to game in their comfort zones and when they get time to relax.



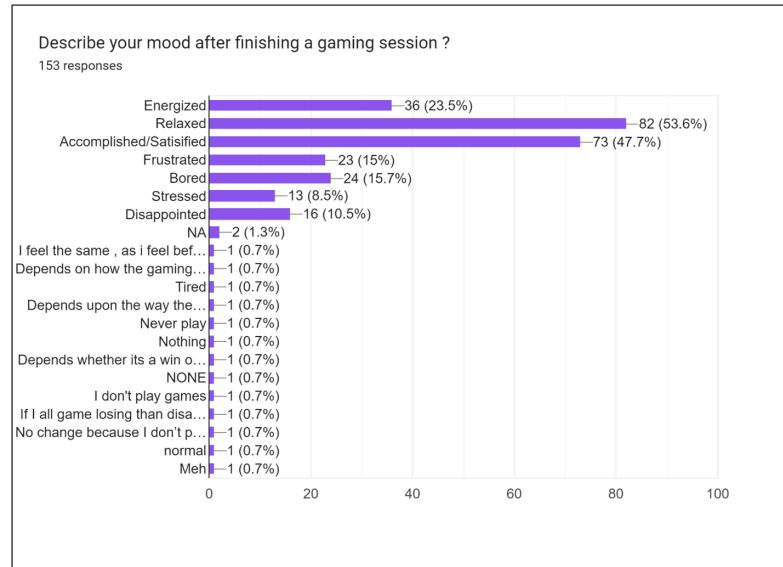
- Most participants favoured gaming on PCs, laptops, and consoles over mobile devices. This could be due to the ease of using the PC and the screen size providing a better gaming experience.



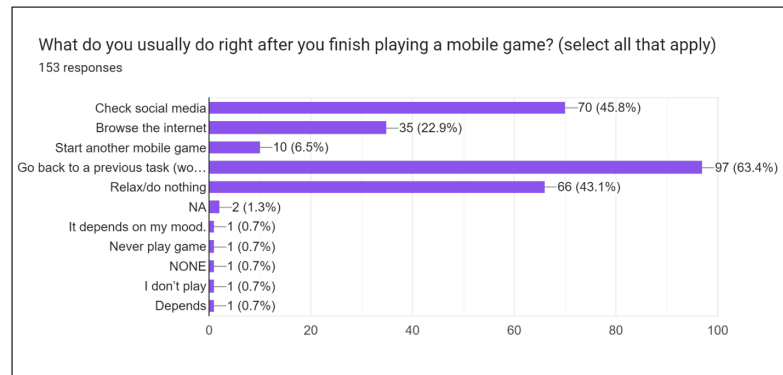
- 58.2% of the participants found video games educational, indicating a positive perception of gaming's educational value.



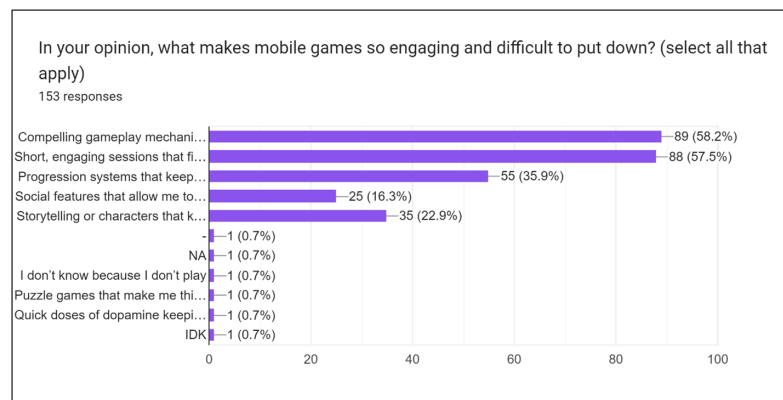
- Common post-gaming moods included feeling accomplished, relaxed, and energized, with boredom, frustration, and disappointment being prevalent to varying degrees. Some reported feeling stressed after gaming.



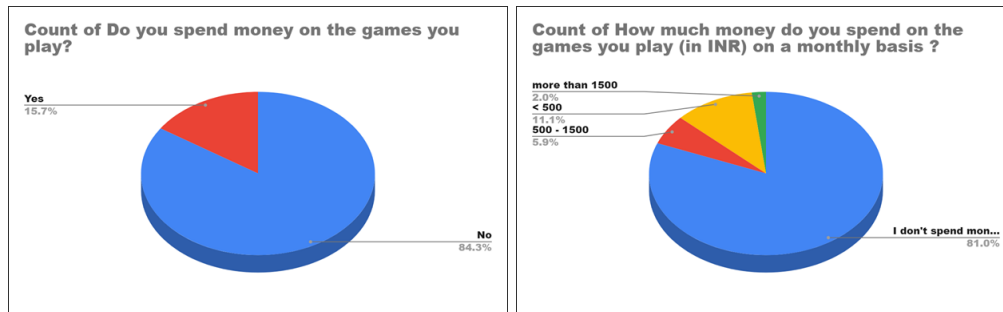
- After finishing a mobile game, most respondents returned to a previous task or relaxed. Checking social media and browsing the internet were also everyday post-gaming activities. This tells us about their addiction to phones.



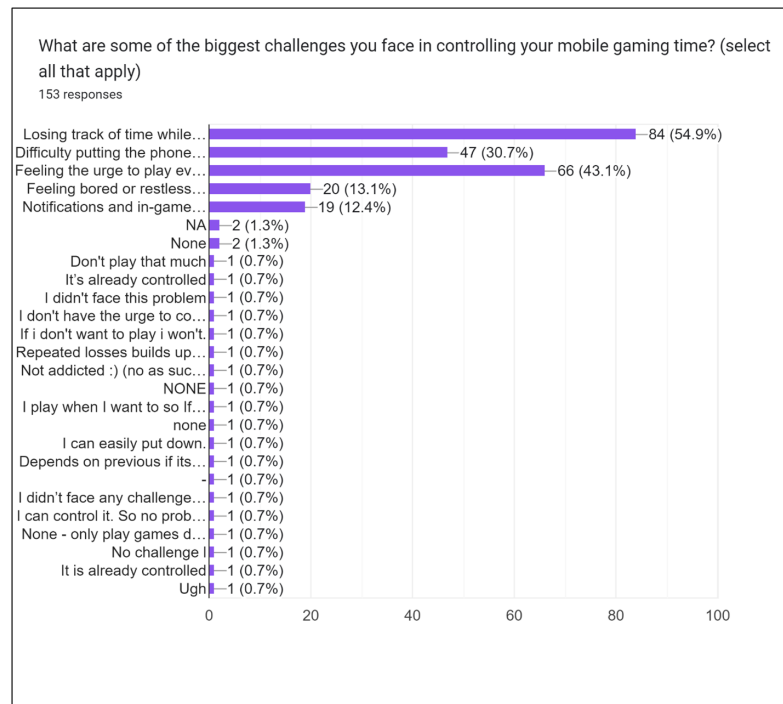
- Compelling gameplay mechanics and progression systems were cited as the main reasons for engagement with mobile games. Short, engaging sessions and storytelling also played significant roles, which tells us about the attention span of the participants.



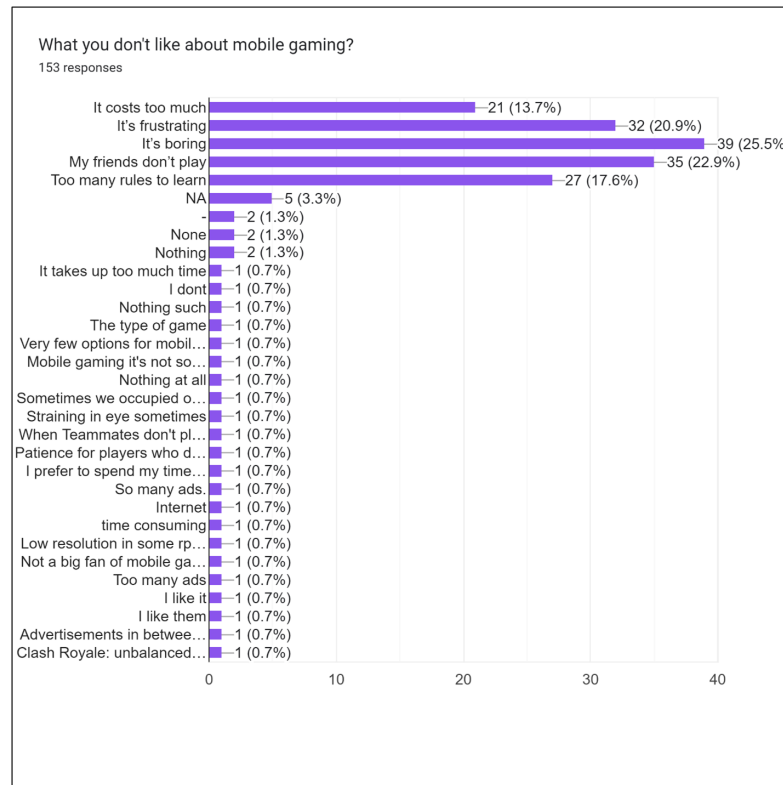
- Most respondents did not spend money on the games they played, with only a few indicating monthly expenditures. This tells us about their commitment to and interest in the gaming experience.



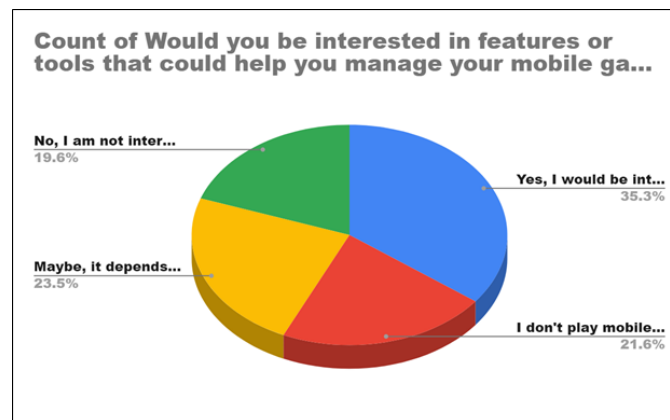
- Challenges in controlling mobile gaming time included losing track of time, difficulty putting the phone down, and feeling the urge to play even when other tasks should be prioritized.



- Common dislikes about mobile gaming included boredom, lack of friends playing, high costs, complex rules, frustration, eye strain, distraction from essential tasks, excessive ads, and internet dependency.



- When asked if they were interested in reducing gaming time, responses varied, with many expressing interest in tools to help manage gaming time effectively. According to interview participants, those with longer hours of game time were not interested in reducing their time at all.



- It was observed that participants used various strategies, from technological tools to self-discipline, to reduce their time playing mobile games. Some of them include:
 - **Uninstalling the game:** Many people uninstall the game from their phones to avoid temptation.
 - **Using app timers:** Some use app timers to limit their time playing games. Once the timer is up, they can't open the app anymore.

- **Setting screen time limits:** Others set screen time limits for gaming apps so they can only play for a certain amount each day.
- **Physical distancing:** Placing the phone out of reach or giving it to someone else helps to avoid gaming.
- **Focusing on other activities:** Engaging in other activities like studying, going outside, or spending time with friends distracts from gaming.
- **Creating distractions:** Keeping busy with other things like reading, doing chores, or engaging in hobbies helps to reduce gaming time.
- **Using focus apps:** Some use apps designed to help control phone usage and limit distractions.
- **Self-control:** Many simply rely on self-control and discipline to limit their gaming time.

We gathered more profound insights from the interviews into what our participants wanted and what they liked/disliked about the particular games. We also put them in a real-life situation where if they were asked to develop a digital well-being application, what would they put forward and bring to the table in making the application better? Most responded by making an application that forces the participant into closing the game because of the intensity of the addiction, which can be one way to look at it due to the complex and stubborn nature of us humans not to let go of things we enjoy and that satisfy us even though they might be harmful. Others who disbelieved the idea of a digital well-being application were not interested in using such an application.

Chapter 4

Conclusion

Our study looked at how 153 people play mobile games. We learned much about what they like, how they play, and what they think about gaming on their phones.

We learned that gaming on phones is influenced by personal choices, outside factors, and what people think they get out of it. While gaming can be fun and educational, managing how much time we spend on it can also be complicated.

Most people we talked to played games at home, and many thought games could teach them something. But people feel different things after playing, like happy or sometimes bored.

People usually don't spend much money on mobile games but sometimes find it challenging to stop playing them. Interestingly, many want tools to help them control their gaming time. They try different things to limit their gaming time, like deleting games or using phone timers.

Understanding all these details about mobile gaming helps us develop better tools and resources to help people play responsibly. By knowing what challenges gamers face, we can create solutions that make gaming a fun and healthy part of life for everyone.