

Introduction

- Most mobile games are free and generate revenue with microtransactions, a purchase within a video game to get features, functions, or other in-game content (Kim et al., 2017).
- There have been several research efforts to model factors that influence purchasing of in-game content with factors such as satisfaction, perceived value, attitudes found to play a role (Hamari & Keronen, 2017)
- Mobile games can make use of designs mechanics to market to users, encourage spending their time in game, and encourage purchasing in-game content (Zagal et al., 2013).
- These design mechanics that are intentionally used by game designers to cause negative experiences are referred as dark game design patterns (Zagal et al., 2013).

Current Study

- This research sought to gain a greater understanding of purchasing behavior of mobile video game players and the impact of dark game design patterns using diary studies.

Methods

Participants

- 4 participants (3 males and 1 females, Ages = 18 to 24)
- All participants were mobile video game players (at least 3-5 hours per week) and thought purchasing in-game content was acceptable

Procedure

- Participants picked a game from a set list of mobile games to play over 14 days
- Participants would play the game for at least 30 minutes each day and complete a daily log
- At the half-way point (7th day) and the last day of the study (14th day), participants were interviewed about their experience

Measures

- Daily activities, experience, and play time
- Satisfaction as measured with the GUESS-18 (Keebler et al., 2020)
- Purchase intention and purchase behavior

Games

- Participants played one of the games below (from left to right: Raid Shadow Legends, Marvel Contest of Champions, Mobile Legends: Adventure, Marvel: Future Fight)

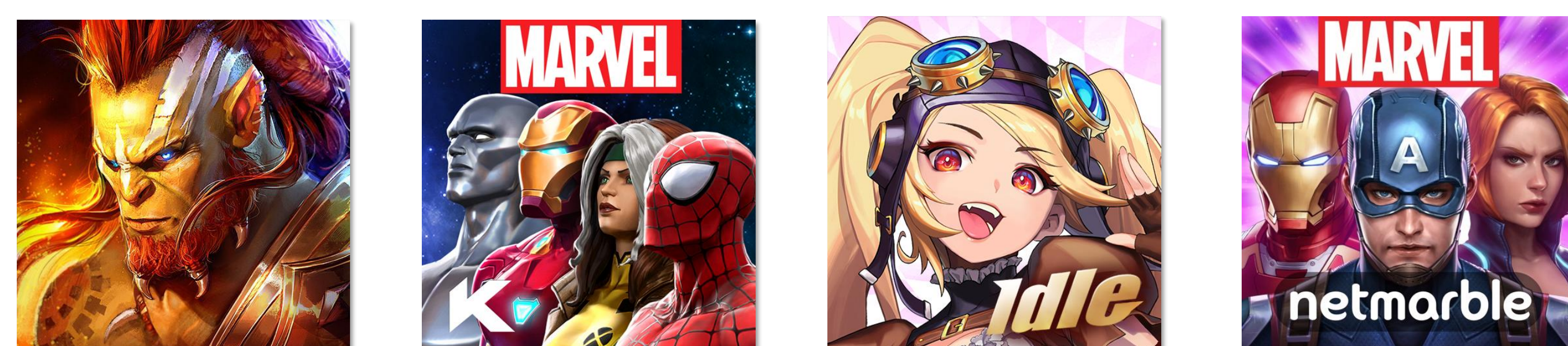


Figure 1: Logos of the games participants played over the diary study period

Results

- Overall, participants tended to start the logging with a positive impression of the game they chose to play
 - The games tended to give participants free items and currencies when they first started playing
- All participants experienced “grinding” or completing repetitive tasks to extend playtime at some point during the two weeks of logging
 - Grinding was viewed as a negative experience but some came to accept it after a while
- Participants purchased in-game currencies which were used to buy new characters, materials to upgrade characters, or energy (stamina) which was used to continue playing the game
 - Most of the participants that purchased something, thought it met their expectations.
 - One participant mentioned they were disappointed with their purchase as they did not receive the character, they wanted from an item which gives a random chance to receive characters

Discussion

- Data collection for this research is still ongoing with the goal to have around 10-12 participants
- Based on participant’s qualitative feedback, dark game design patterns tended to impact their experience with the game
 - Context was very important as while grinding was typically viewed as something negative, some participants were okay with it as a way to level up characters in game

Future Research

- Future research should examine ways to quantify the impact of dark game design patterns on factors such as satisfaction, continue intention, perceived value, and purchase intention

References

- Hamari, J., & Keronen, L. (2017). Why do people buy virtual goods: A meta-analysis. *Computers in Human Behavior*, 71, 59-69.
- Keebler, J. R., Shelstad, W. J., Smith, D. C., Chaparro, B. S., & Phan, M. H. (2020). Validation of the GUESS-18: A Short Version of the Game User Experience Satisfaction Scale (GUESS). *Journal of Usability Studies*, 16(1).
- Kim, H. S., Hollingshead, S., & Wohl, M. J. (2017). Who spends money to play for free? Identifying who makes micro-transactions on social casino games (and why). *Journal of Gambling Studies*, 33(2), 525-538.
- Zagal, J. P., Björk, S., & Lewis, C. (2013). Dark patterns in the design of games. *In Foundations of Digital Games 2013*.

Figure 2: Journey maps from each of the participants. Each line conveys a participants experience of playing their game over the two-week period of the diary study. Purchase points and quotes to describe their experience are displayed as well

