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Zürcher Hochschule der Künste Zurich University of the Arts

Incremental Games & Motivation

Survey Evaluation

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Introduction

This survey was conducted as part of my master thesis in game design at the Zurich University of the Arts, Switzerland.

The survey deals with incremental games and their motivation design, as well as player motivation and retention, and positive and negative emotions while playing. It is preceded by some general questions to determine player types and preferred game genres, which in turn help to better understand the results of the above mentioned topics and put them into context.

The survey was open to the public and was specifically targeting Incremental Game players. The survey was posted in the the Incremental Games subreddit (r/incremental games), which is where most of the participants originated from.

The survey was open for one week and was filled out by 534 participants.

All collected data is handled anonymously. Collected e-mail adresses were only used to send out the evaluation of this survey.

This evaluation is structured as follows:

- 1) Introduction
- 2) General Questions
- 3) Motivation
- 4) Game Feedback, Game Feeling & Player Feeling
 - 1) Click Feedback
 - 2) Positive Player Feeling
 - 3) Negative Player Feeling
- 5) Implications
- 6) Correlations and Conclusion

General QuestionsPreferred Game Genres

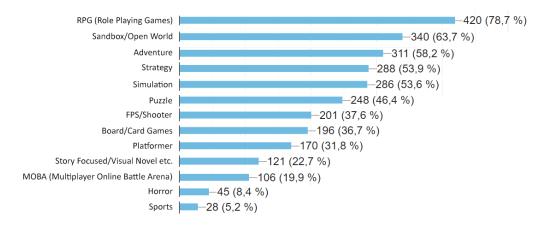
The general questions serve to identify the player type of the participant.

The question about the preferred game genre and player type according to Bartle (see next page) help to draw conclusions about which type of player is most likely to be attracted to Incremental Games and likes to play them.

To get an overview of the games played by participants, an incomplete list of known and popular incremental games has been compiled. Participants selected games they had played and had the possibility to add more games in a text field.

And lastly, the question about preferred platforms for Incremental Games gave an overview of which platform players prefer to play Incremental Games on. This is interesting for later research on the differences between the platforms and the monetization of Incremental Games.

What genre(s) of games do you like to play in general? You can choose multiple.
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The top three game genres of participants were Roleplaying Games (78,7%), Sandbox/Open World Games (63.7%) and Adventure Games (58.2%).

It is worth mentioning that strategy and simulation games took fourth and fifth place. Both genres had almost the same amount of votes (288 and 286).

It is to be concluded that players who enjoy playing strategy and simulation games probably appreciate the same qualities of planning, observation and connected systems in incremental games.

General Questions Player Type

The Bartle taxonomy of player types is a classification of video game players based on a 1996 paper by Richard Bartle. It classifies players of multiplayer online games into four types based on a series of questions to determine the game interests. Most players belong to more than one group.

Achiever - "I want to achieve specific things in games (eg. collect items, points, ...)"

Explorer - "I want to explore as much as possible of a game world, mechanics, etc."

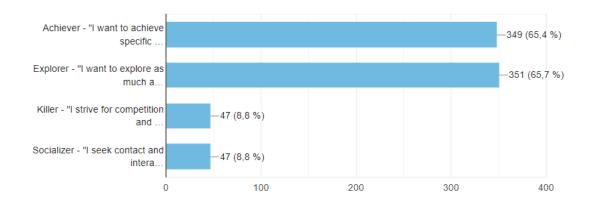
Killer - "I strive for competition and conflict with other players."

Socializer - "I seek contact and interaction with other players."

(Participants were able to choose multiple answers.)

What player type are you most like (Bartle Test)?

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The player types Achiever and Explorer were by far the most chosen player types. 145 participants chose Achiever, 147 participants chose Explorer and 161 participants chose Achiever and Explorer.

This means that 453 out of 534 participants (84.8%) in this survey can be assigned to the player types Achiever and/or Explorer.

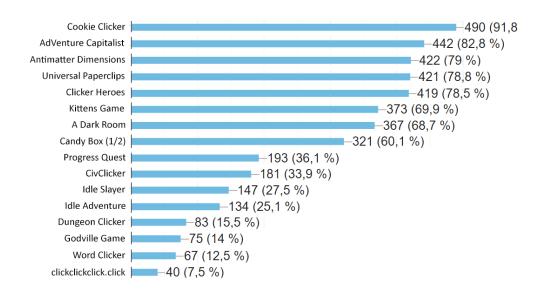
This result correlates strongly with the idea that incremental game players prefer games in which they have many options to unlock things like upgrades, features and achievements. It can be assumed that players who are Achievers and Explorers could enjoy Incremental games more than players who are more likely Killers and/or Socializers.

General Questions Incremental Games

The incremental games on the list below were chosen to feature well know and popular incremental games as well as some more niche games such as Progress Quest, clickclickclick and Word Clicker, which all have unique aspects to them.

The list features web-based and mobile incremental games, as well as incremental games of different subgenres (e.g. more story focused, multiple resources, ...)

What Incremental games do you play/have you played? You can choose multiple. (Specify other incremental games which are not on this list in the text box below.)
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The top three incremental games played by the group of participants are Cookie Clicker (91.8%), AdVenture Capitalist (82.8%) and Antimatter Dimensions (79%).

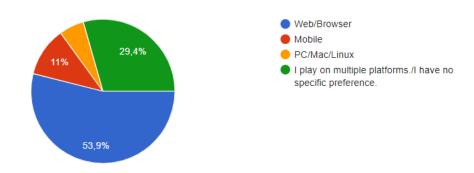
Only 6 participants (1.1%) reported having played only one incremental game. 28 (5.2%) participants stated they played 2-3 incremental games.

256 (47.9%) stated that they played 4 - 10 incremental games.

218 (40.8%) stated that they played 10 + incremental games.

General QuestionsPlatforms

What platform do you prefer for playing incremental games?
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I terms of preferred platform for incremental games Web/Browser-based games are in the lead with 288 votes (53,9%).

157 (29,4%) participants stated that they have no specific platform preference and/or play on multiple of the above mentioned platforms.

59 (11%) participants stated that they prefer playing on mobile.

Even though there are many mobile incremental games, this group of participants favors web/browser based incremental games the most. This could be due to the fact that mobile games still have a bad reputation among gamers and are often dismissed as cash-grabs because of unethical, poor monetization.

This distribution is important for further evaluation and comparison of the answers, as many questions are directly or indirectly related to the preferred game platform.

General Questions Must Haves

The answers to the question, which elements and features are must-haves in an incremental game, were less meaningful than expected.

The answers show certain preferences of the participants, with the "ascension/rebirth mechanic" being the most frequently chosen with 373 (69.9%) votes. "Frenzy", a time-limited event in which certain bonuses increase resource accumulation many times over, has only gotten 32 votes (6%). This again indicates that incremental games are more likely to be played by players who are not only looking for pure action, but who enjoy planning and strategy based games.

The following must-haves were additionally mentioned by participants:

Automation – The process of resource accumulation is automated

Offline Progress – the game continues to accumulate resources even when the game is closed

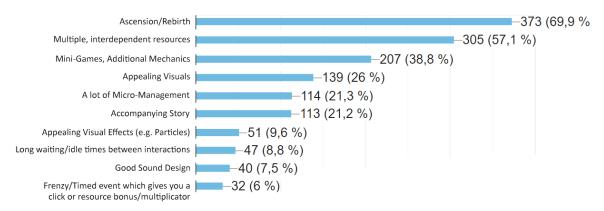
Unfolding Mechanics – a gradual addition and unlocking of new mechanics

Paradigm Shifts – A shift of focus in the game (e.g. going from making paper clips to exploring and mining space)

Good UI – An understandable, intuitive user interface

However, many participants commented that an incremental game does not *necessarily* have to feature any of these elements.

What are your personal "must-haves" for an Incremental game? (Specify other must-haves in the text box below.)



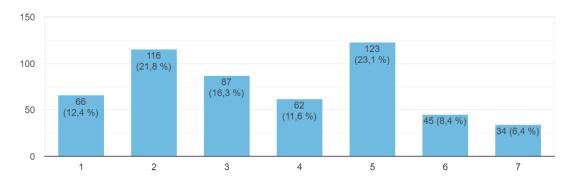
These questions about motivation serve to gain an understanding of which elements, mechanics and features of incremental games motivate the participants while playing. The following questions were formulated as a statement and participants were asked to choose whether they agree or disagree with it.

Response scale:

- 1 = disagree strongly
- 2 = disagree
- 3= disagree somewhat
- 4 = neutral
- 5 = agrees somewhat
- 6 = agree
- 7 = agree strongly

I am motivated to click the main button/resource generating button.

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The "main button" here refers to the button which the player first interacts with to gain resources in the beginning of the game/playthrough.

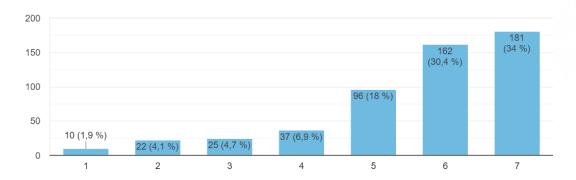
Most of the participants either voted "agree" (123) or "disagree" (116), with agree being slightly higher. The other options are also represented, but not as pronounced.

Since the resource button(s) becomes obsolete after some time in a lot of incremental games, it is evident that the resource button loses importance.

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I am motivated to unlock all achievements, upgrades, purchasables.

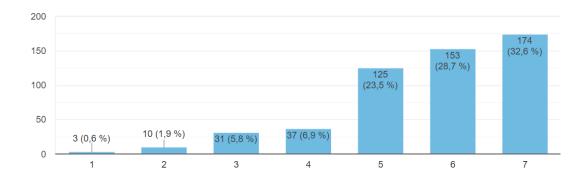
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The motivation to unlock achievements, upgrades and purchasables on the other hand is very clear as 343 participants voted "agree" (30.4%) or "agree strongly" (34%) and only 32 participants voted "disagree" (4.1%) or "disagree strongly" (1.9%).

This correlates again to the results of the Bartle-Test Player Type question where 453 out of 534 participants (84.8%) stated that they are Achievers or Explorers in games.

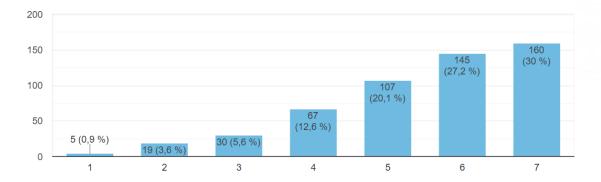
I am motivated to unlock and play other game mechanics/mini-games (if existing). 533 Antworten



The motivation to unlock new game mechanics and/or mini-games is even more clearly favored, as 84.8% of participants voted between "agree a somewhat" to "agree strongly" and only 8.3% voted "disagree somewhat" (5,8%) to "disagree strongly" (0.6%).

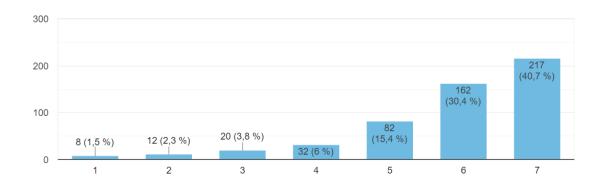
I am motivated to optimize my playthrough and play more efficiently.

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It is also very clear that most of the participants play to optimize their playthrough and play more efficiently. This again correlates to the high number of Achievers in this group of participants, as players seem to set goals for themselves to play more efficiently and accumulate resources faster.

I am motivated to replay the game and/or use ascension/rebirth features (if existing). 533 Antworten



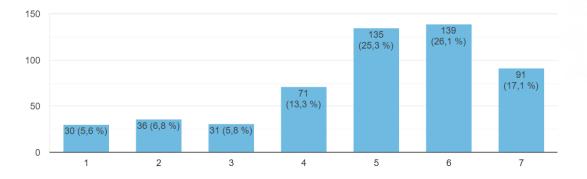
The Ascension, Rebirth or Restart is a very common feature in incremental games which lets players start the game anew. Players lose their current progress but start the new run with a bonus, usually one for faster resource accumulation.

This feature is unique to incremental games and it can thus be argued that this is why most of the players are very motivated to use this feature.

This feature also satisfies the Achiever player type.

I am motivated to improve my strategy/approach when (re)playing.

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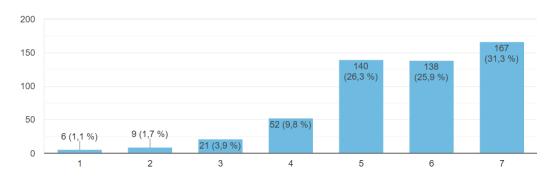


Improving one's strategy and improving efficiency is closely related, but not quite the same.

Many incremental games are playable without having a thought through strategy. But there are games, where progression is very slow, when the player spends their resources thoughtlessly. This result highlights that most players are motivated to improve their strategy while playing or replaying an incremental game, and correlates with the large amount of participants who enjoy playing strategy games (53.9%).

I am motivated when my resource count increases quickly.

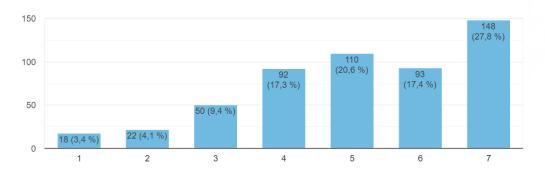
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Since incremental games at their core are about resource accumulation it is clear that most participants are motivated by seeing their resources increase quickly.

I am motivated when my resource count reaches very large numbers.

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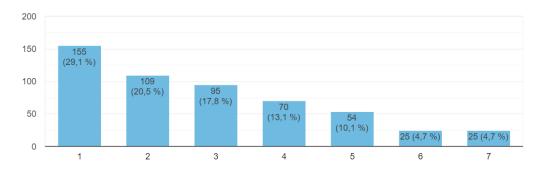


This question ties into the previous question about resource accumulation and it's results are thus similar.

A point worth mentioning now is, that a few participants stated that the presentation of said resource number is very important. It was stated, that numbers written as "1'000'000" feel better to the player than an number written as "1M", because "The numbers feel larger."

I am motivated to set up challenges for myself while (re)playing (e.g. Try to get to a certain resource count in x minutes etc.).

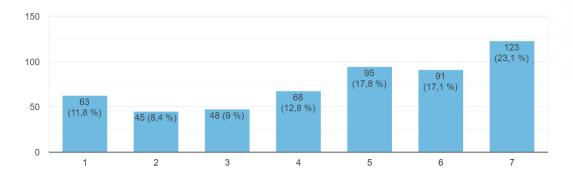
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Next to improving ones strategy and trying to play more efficiently most participants voted that they are *not* motivated to set up challenges for themselves. It can be assumed that players prefer to be presented with challenges by the game and do not feel the need to come up with their own.

I am motivated to find out more about the story (if existing).

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The answers for this questions were rather balanced, with a small tendency towards participants agreeing with the statement.

Participants who previously stated that they enjoy story based games and/or roleplaying games also voted that they are motivated to find out about the story of an incremental game.

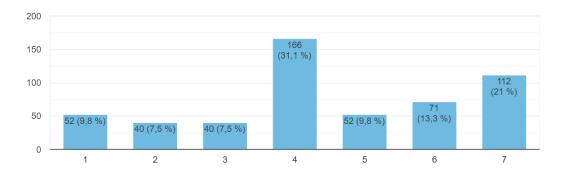
Feedback & Feeling Game Feedback, Game Feeling & Player Feeling

The following questions are about game feedback, game feeling and player feeling. They focus on the emotions of player during playing incremental games. The focus now shifts from what motivates participants to their positive and negative feelings during certain events while playing.

These questions are preceded by game feeling questions concerning click feedback. The goal of these questions is to illuminate whether or not the participant prefer a certain input method.

I think that clicking with a mouse is more satisfying than tapping (on a screen) while playing incremental games.

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Mouse click vs. Tapping

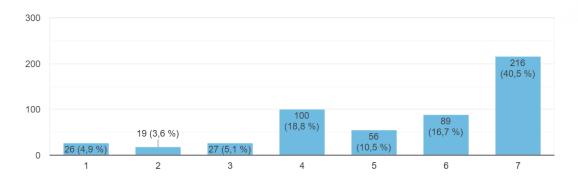
Most of players voted "neutral" (31.1%) which can be interpreted as having no preference between clicks and taps. The rest of the votes are distributed between agree and disagree, with a slight tendency towards agreeing.

This tendency towards favoring mouse click feedback can be explained with the 53.9% of participants preferring Web/Browser-based Incremental games which are not operated with tapping on a screen, like mobile games.

Feedback & Feeling Click Feedback

I think that clicking with a mouse is more satisfying than using a trackpad while playing incremental games.

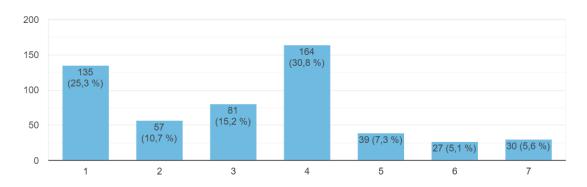
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Mouse click vs. Trackpad

The answers to the question if participants prefer mouse input over trackpad input is more clear. 40.5% (216) of participants agree strongly with the statement, whereas 18.8% (100) of participants voted for neutral/no preference. Only very few participants prefer trackpad input over mouse input when playing incremental games.

I think that tapping (on a screen) is more satisfying than using a mouse while playing incremental games.



Feedback & Feeling Click Feedback

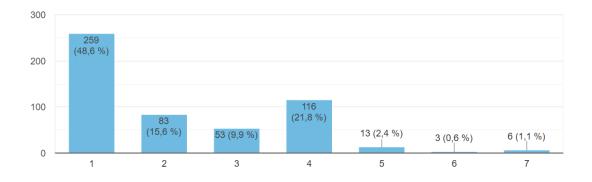
Tapping vs. Mouse click

25.3% of participants voted that they do not prefer tapping over mouse input, whereas 30.8% of participants voted for neutral/no preference.

Only very few participants prefer tapping on a screen over mouse input when playing incremental games.

I think that using a trackpad is more satisfying than using a mouse while playing incremental games.

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Trackpad vs. Mouse

It is evident that most participants do not prefer a trackpad over a mouse.

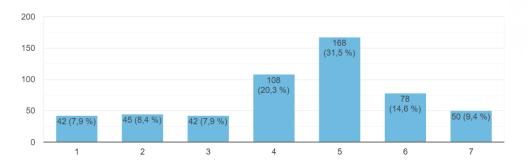
Almost half of the participants (48.6%) "disagree strongly" with the statement and only 1.7% "agree" (0.6% (3)) or "agree strongly" (1.1% (6). This tendency is partly explained by the fact that a trackpad is often less precise than a mouse.

Again, it is to be mentioned, that the group of participants is unevenly distributed between players who play on a mobile phone and players who play on a Computer, which further indicates, that input preference is directly linked to preferred platform.

Feedback & Feeling Click Feedback

I feel satisfaction when a click is accompanied by a visual effect (e.g. particles) on screen.

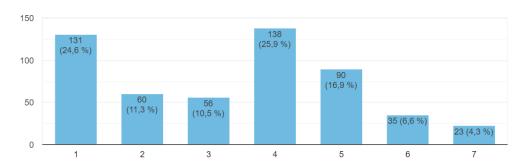
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55.5% of participants voted "agree somewhat" (31.5% (168)) to "agree strongly" (9.4% (50).

I feel satisfaction when a click is accompanied by an auditative effect (e.g. sound effect/chime) on screen.

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The answers to this question are more interspersed. The top answers were neutral (25.9% (138)), disagree strongly (24.6% (131)) and agree somewhat (16.9% (90)).

It is to be assumed that some participants are in general less focused on auditive feedback. It is also a common occurrence that visuals and gameplay are regarded as more important than sound and music by players.

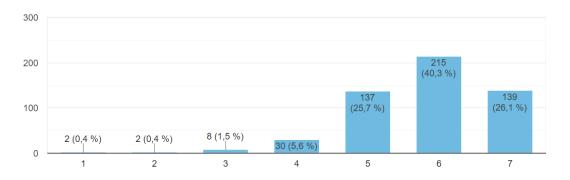
The following questions are concerning how players feel/felt during playing incremental games. They focus on different events which can occur during playing.

These questions are about positive player feelings.

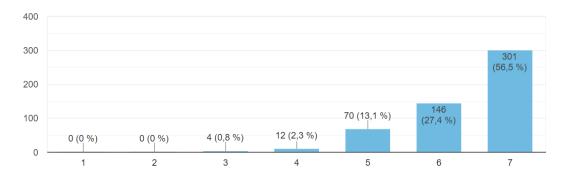
The question results are listed first and a summary, conclusion and comments follow after.

I feel happy/satisfied when I reach a milestone/achievement.

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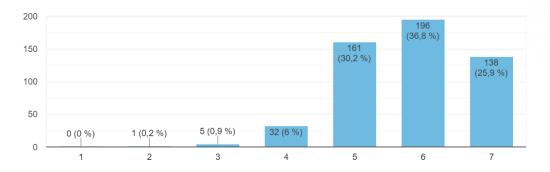


I feel happy/satisfied when I unlock a new mechanic or mini-game.



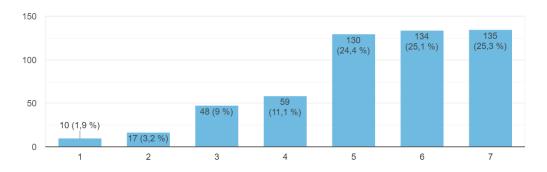
I feel happy/satisfied when I can purchase an item/upgrade.

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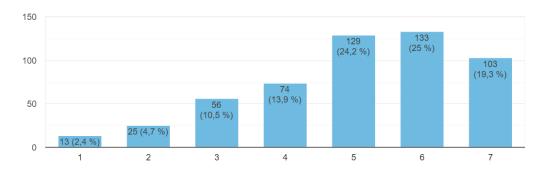


I feel happier/more satisfied when I reach a milestone/achievement after waiting for a long time.

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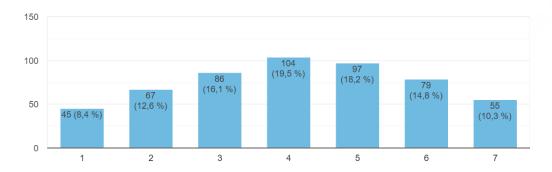


I feel happier/more satisfied when I can purchase an item/upgrade after waiting for a long time.

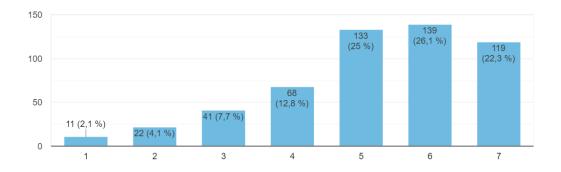


I like to wait for longer periods of time to be able to bulk-purchase/bulk-unlock features in an incremental game.

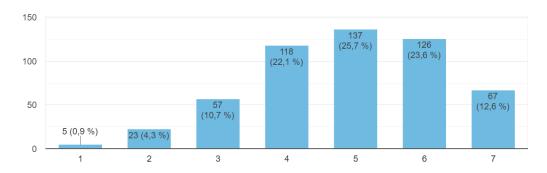
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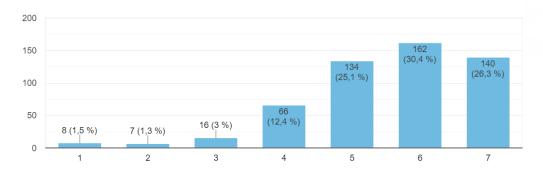
I feel empowered when I can bulk-purchase/bulk-unlock features in an incremental game.
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I like to wait for shorter periods of time to be able to spend my resources immediately in an incremental game.

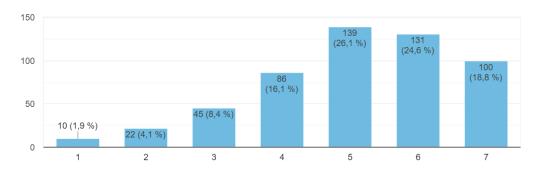


I feel happy/satisfied when a new/different strategy works better in a new playthrough.
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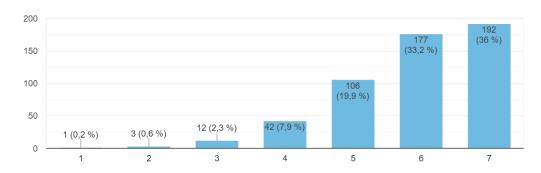


I feel excited to plan ahead.

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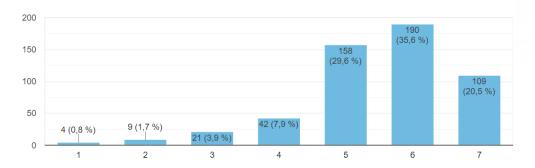


I feel happy/satisfied when a plan/strategy works out.



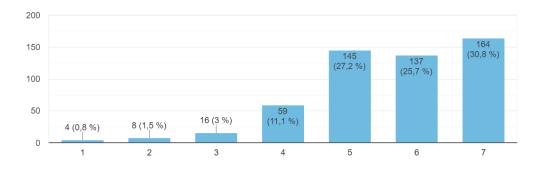
I feel excited when I am coming closer to reaching a milestone/self-imposed goal.

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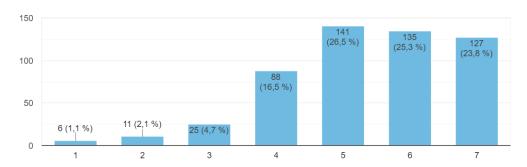


I feel positively challenged by a game's increasing complexity/difficulty.

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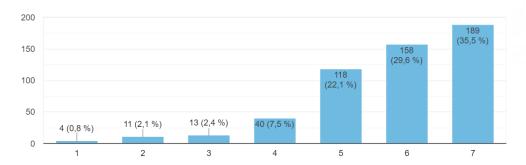


I feel empowered when I have an abundance of resources.



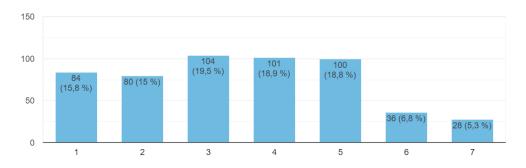
I feel empowered when my resources increase faster than in a previous playthrough.

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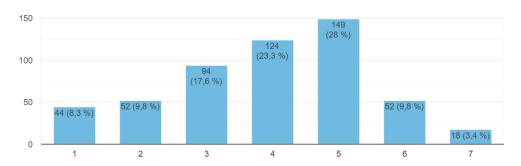


I feel euphoric/ecstatic when I get a bonus or a frenzy (e.g. timed event where click power or other resource production is increased).

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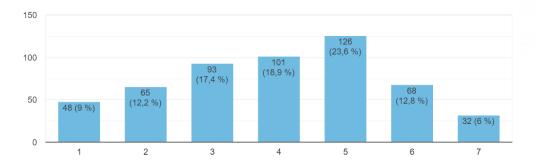


I like the anticipation idle times/waiting times bring to the game.



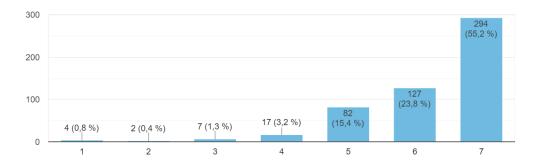
I experience idle time/waiting times as relaxing.

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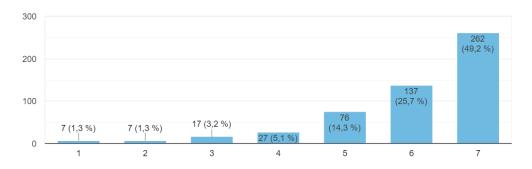


I like that I can leave the game alone and still make progress.

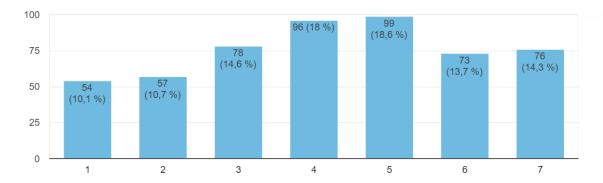
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I like that I don't have to interact with the game all the time and still make progress.



I feel satisfied when the game has no definite end/win state.



Feedback & Feeling Positive Player Feeling - Conclusion

It is evident that the participants agree with most of the statements on positive player feeling. This paints a clear picture of which elements and features are motivating factors in incremental games.

However, the questions on which the participants did not choose the same answers are equally interesting.

The following questions stood out, as the participants' answers were evenly distributed between on the answer scale:

"I like to wait for longer periods of time to be able to bulk-purchase/bulk-unlock features in an incremental game." (p. 19)

Evenly dispersed answers to this question could imply that participants are not very invested in bulk-purchasing or –unlocking items and features while playing incremental games. On the other hand, it should be noted that participants were fairly unanimous in agreeing to the statement that bulk-buying/-unlocking feels empowering (p. 19).

This shows that participants do enjoy bulk-buying/-unlocking in incremental games, but their enjoyment does not stem from waiting longer or shorter periods of time until they can perform these actions, but from the sense of achievement they bring. When they are performed.

"I feel euphoric/ecstatic when I get a bonus or a frenzy (e.g. timed event where click power or other resource production is increased)." (p. 22)

Only 12.1% (64) of participants voted "agree" (6.8% (36)) or "agree strongly" (5.3% (28)) to this statement. The rest of the answers were fairly evenly distributed between the other answer options. This can be interpreted as indifference towards a "frenzy" mechanic. Regarding that only 6% or participants voted a "frenzy" mechanic as a must have in an incremental games further supports this assumption.

"I feel satisfied when the game has no definite end/win state." (p.24)

45.4% (189) of participants voted between "disagree somewhat" to "disagree strongly". The most voted answer was "agree somewhat" (18.6% (99)).

A few participants who disagreed with the statement further expressed that they enjoy the qualities of endless playing that incremental games have, but prefer when the story has a definite ending (which can tie into the ascension/rebirth mechanic).

Finishing or completing a story is another form of achievement and satisfies the achiever player type.

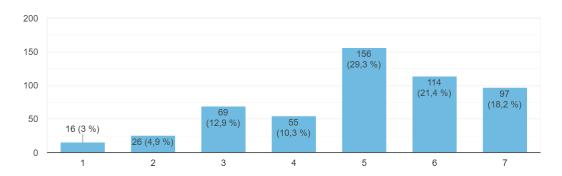
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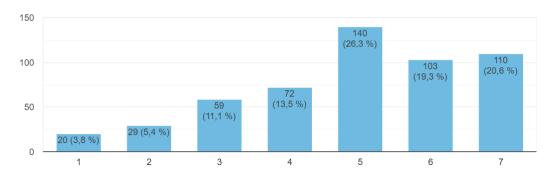
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I feel impatient when I can't interact with the game, because I lack resources.

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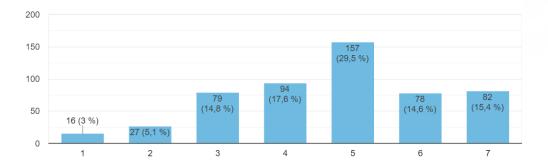


I feel bored when I can't interact with the game, because I lack resources.



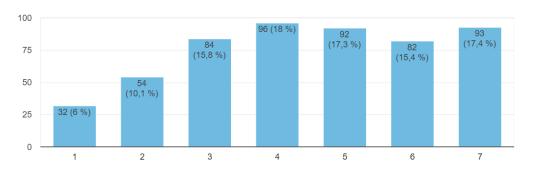
I feel impatient when I have to wait for resources to accumulate.

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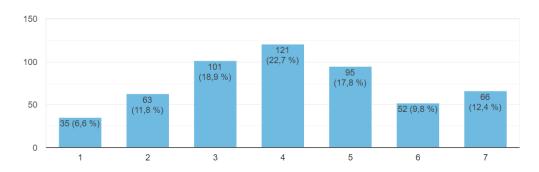


I feel underchallenged when I can't interact with the game.

533 Antworten

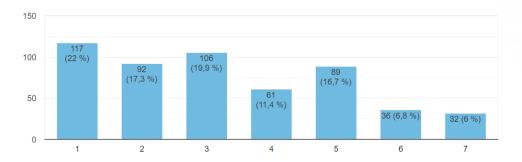


I feel underchallenged when I have to wait for resources to accumulate.



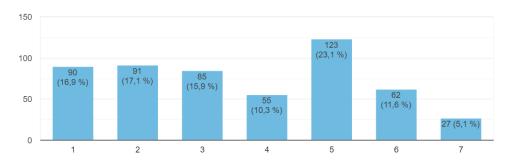
I feel overwhelmed with too many resources.

533 Antworten

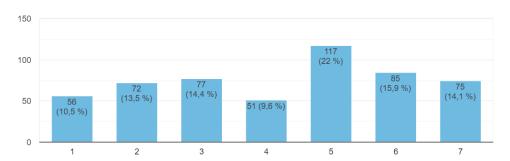


I feel overwhelmed with too many possible decisions/choices (e.g. What to spend resources on etc.).

533 Antworten

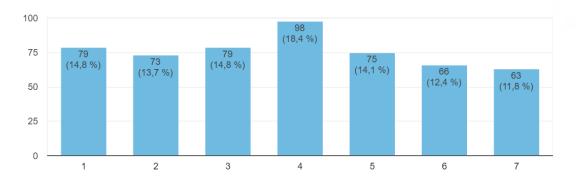


I feel overwhelmed with too many tasks or too much micro-management.

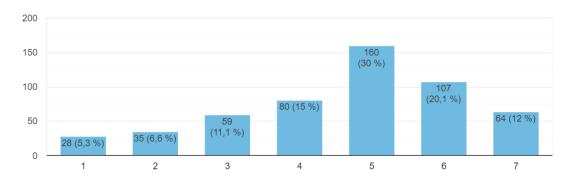


I feel unsatisfied when the game has no definite end/win state.

533 Antworten



Playing an incremental game feels pointless after some time.



Feedback & Feeling Negative Player Feeling - Conclusion

Boredom & Impatience

What stands out is that participants indicated that they are bored, impatient or underchallenged when they can't interact with the game or have to wait until they can progress again, even though waiting and idling is one of the core concepts of incremental games. (p. 26/27)

32.1% (171) of participants agreed ("agree" 20.1% (107), "agree strongly" 12% (64)) to the statement that playing an incremental games feels pointless after some time. Another 30% (160) answered "agree somewhat". This gives us a total of 331 (62.1%) participants who somehow think that playing an incremental game feels pointless after some time (p. 29)

These answers show that participants are well aware that incremental games in some way have a pointless aspect to them. They also seem to be aware that one of the main features of these games is what makes them bored and impatient.

Waiting is almost universally experienced as unpleasant and annoying for most people. And yet the constant urge to achieve more exceeds the boredom of playing an incremental game. This puts the under-stimulation of waiting/idling in direct connection with the achiever and explorer player type of these participants. It can be assumed that players who are less ambitious in achieving and exploring in games would find waiting and idling in incremental games much more tedious, than this group of participants, who stick with the game nevertheless.

Feeling overwhelmed

117 (20%) of participants answered "disagree strongly" to the statement whether they feel overwhelmed with too many resources. Only 32 (6%) agreed strongly to the statement. (p.28)

Half of the participants (266 (49.9%)) answered between "disagree somewhat" and "disagree strongly" to the statement whether they feel overwhelmed with too many choices (e.g. where and when to spend resources). All answers on the negative end of the spectrum were evenly distributed, while answers peaked on "agree somewhat" (23.1% (123)) on the positive side of the answer scale. (p.28)

It can be concluded that players enjoy having lot of resources and choices, but can feel overwhelmed when they are presented with too many choices where the benefit or downside of the choice is not apparent or well enough communicated.

It can be further assumed that a player can handle many resources and choices well, when presented with them gradually.

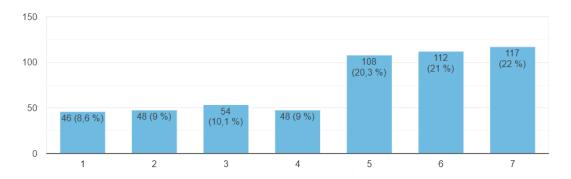
These questions dive a bit deeper into possible implications and addiction potential of incremental games .

Please note that any game or activity can harbor addiction potential and this part of the survey is in no way a critique of incremental games.

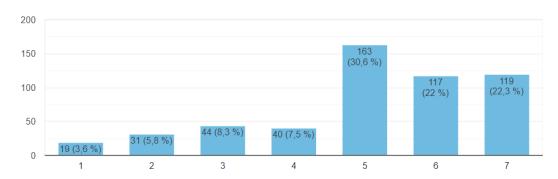
The question results are listed first and a summary, conclusion an comments follow

I sometimes can't/couldn't stop playing an incremental game.

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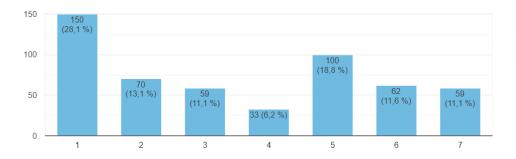


I sometimes feel/felt that I have to check in on the game often.



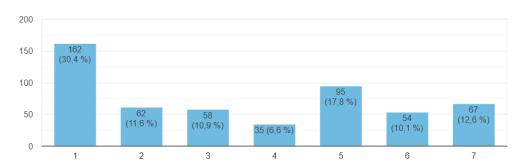
An incremental game has gotten in the way of my everyday life before (e.g. having to interrupt routine, chore etc. to check in on the game).

533 Antworten



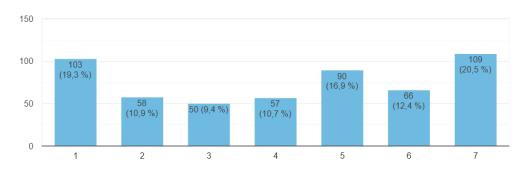
An Incremental game has gotten in the way of my regular work/school life at least once (e.g. not being able to focus on a task because of the game).

533 Antworten



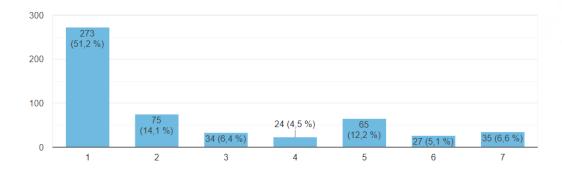
I felt addicted to an incremental game before.

533 Antworten



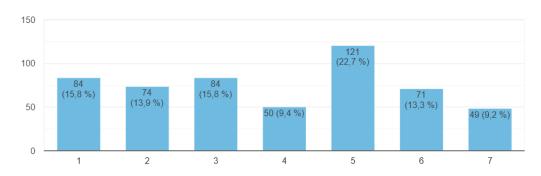
I feel/felt that I would have payed money (eg. In-app purchases) to accelerate my progress in an incremental game.

533 Antworten

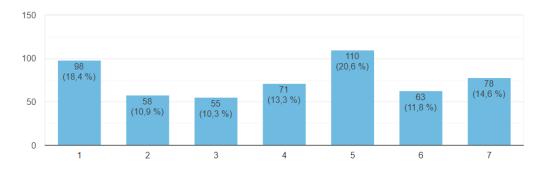


I have/had trouble to not let myself get distracted by an incremental game.

533 Antworten

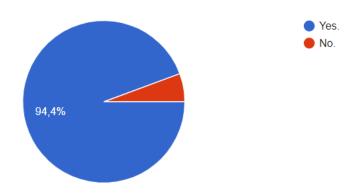


I noticed that I sometimes fell into some sort of trance while playing an incremental game.



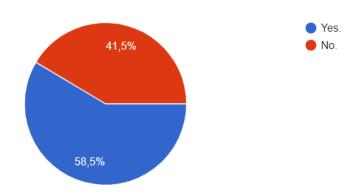
I have played an incremental game for more than one month.

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I have played an incremental game for more than one year.

533 Antworten



An overwhelming 94.4% (503) of participants have played an incremental game for more than one month and 58.5% (312) have played an incremental game for more than one year.

This shows how engaging incremental games are for this group of participants. However, it should be noted that a large number of participants are avid incremental game fans and therefore this data does not reflect the general commitment of any person starting to play an incremental game.

Implications - Conclusion

Addiction potential

337 (63.3%) of participants gave answers between "agree somewhat" to "agree strongly" to the statement that they felt like they couldn't stop playing an incremental game. (p.31) 399 (74.9%) of participants gave answers between "agree somewhat" to "agree strongly" to the statement that they felt like they had to check in on the game often. (p.31) 256 (49.8%) of participants gave answers between "agree somewhat" to "agree strongly" to the statement that they felt addicted to an incremental game before. (p.32) Answers to the question whether participants felt distracted by an incremental game or entered a trance like state while playing were more evenly distributed. Both questions showed spikes in the answers "disagree strongly" (~17%) and "agree somewhat" (~20%). (p.33)

Implications in real life

The questions relating to whether incremental games had an influence on the real life of the participants were mostly answered in the negative. In both questions around 30% (28.1% (150), 30.4% (162)) of the participants answered with "disagree strongly". (p.32)

By comparing these sets of data, it is evident that incremental games do have a certain addictive factor, but this is not necessarily higher than in other games.

Many participants stated that they had noticed that an incremental game fascinated them greatly, but most of them did not experience any restrictions or implications in their everyday life, due to this fascination.

An interesting side of incremental games is that the game itself never reaches an end, so the player has to decide when to stop playing, be it after a day, a month or a year. In addition, incremental games are very accessible, as they are often web/browser or mobile based. So there is a smaller threshold to play and incremental game, unlike with console games. Ones mobile phone and a PC or laptop are basic everyday equipment for most people, and so the incremental game is always at hand, just one browser-tab or app away.

Willingness to buy

382 (71.7%) of participants gave answers between "disagree somewhat" to "disagree strongly" to the statement that they felt like they would pay real life money (e.g. in-app purchases) to accelerate their progress in an incremental game. (p. 33)

This tendency to be unwilling to spend money on an incremental game could stem from the fact that the group of participants consists mainly of web/browser players and that the incremental game genre is less monetized than other game genres. One reason for this is that many incremental games are designed by hobby developers who make their games freely available to the community. Mobile incremental games are more heavily monetized than web/browser based ones.

Conclusion

This survey has only partially covered many of the topics that were addressed and a separate survey could be launched for each one of these sub-topics.

Nevertheless, this survey allowed me to get to know the incremental games community better and gave me an insight into the basic dynamics between incremental games and players.

The results of this survey are very meaningful and will support my further research, as well as provide a scientific basis for further discourse on the topics dealt with.

Closing Words

I would like to thank all participants who took part in this survey and gave me an insight into their playing behaviour, motivation and emotions while playing. The collected data and the resulting insights will help me to further research motivation design and psychology behind incremental games.

With this evaluation and my thesis I hope to support the development and understanding of this underrated game genre.