
Product Design of Card Game with the Theme of Mental Health for Teenagers

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ABSTRACT

This research contains the product development of the card game, Wellbeing, which is a game published under Petualangan Menuju Sesuatu that attempts to simulate different events and coping mechanisms as a means to educate players about mental health management. The methods used in this research are qualitative and quantitative research through interviews with expert and extreme users, as well as surveys to the target consumer and literature studies. The purpose of this research is to discover whether or not the card game, Wellbeing, is already able to answer the needs of its target market. The results afterwards show that the game is already able to garner positive response from the public as well as provide them with content that can give appropriate educational value and thereby solve the problem which is the lack of coherence between the initial iteration of the product and its target market at the time.

Keywords: board game, educational game, mental health literacy, gameplay mechanic, target market fit

INTRODUCTION

Becoming a teenager or young adult comes with plenty of challenges; many of them are facing a drastic transition phase toward adulthood, without being equipped with outlook and skills needed to face them (National Research Council of The National Academies, 2015)

At this time there is still a gap between a traditional education system in discussing mental health, so that there are a lot of teenagers and young adults nowadays that have a level of mental health literature and ability to process basic mental health information at a low level. (Kutcher et al., 2016) As a result, the

difficult periods mean that plenty of them are vulnerable to experience stress and other mental conditions that can have a disastrous impact in the future. According to Gardner (Setia Budi, 2019), in the theory of *Multiple Intelligence*, humans has various types of intelligence and has different methods to study, such as visual-spatial, musical, kinesthetic, verbal language, interpersonal, intrapersonal, logic-mathematical, and naturalistic

On the other hand, the development of board game and card game in Indonesia has increased very fast in the last few years, so that the Indonesian Game Association (AGI) and the Indonesian gaming industry hold Indonesian Game Day (HARGAI) on 8 August 2017 (Wibowo, 2016), and one of the game genre that spreads in Indonesia is in education.

Education games itself is a game that has an aim not just as a source of entertainment, but also as an educational media. The titles of Indonesian card games that fall under this category are Waroong Wars and Linimasa. Both of these games take an educational topic – local culinary for Waroong Wars and history for Linimasa— and packaged it in an interesting way with lively visuals combined with various aspects and components to educate their market.

Despite all that, the variety of topics brought up by Indonesian educational board games is still limited. In the event of International Game Day Convention “SPIEL 2019” in Essen, Jerman, there are 20 kind of Indonesian board game on display with various themes such as History, Culture, Local wisdom, Coffee, and even Javanese Characters, however not one of them brought up the topic of mental health (Siswadi, 2019). However, data from Riskesdas in 2018 shows that the prevalence of emotional mental health problems for Indonesian citizens that are 15 years of age has increased since 2013.

Because of that, *Wellbeing*, which is a product under the banner of Petualangan Menuju Sesuatu project (@petualanganmenujusesuatu), is designed to facilitate the learning and entertainment aspect for Indonesian teenagers and young adults, with the aim of increasing their mental health literacy and help open discussion about mental health between them.

Petulangan Menuju Sesuatu itself is a project that has started since 2018 with the mission of spreading awareness about mental health through comics and stories. In the 3 years that this project has operated the Instagram account

@petualanganmenujusesuatu has flourished where it has over 70 thousand followers and read by an average of 13,000 Instagram users for each comic. Petualangan Menuju Sesuatu has also worked together with various brands and organizations such as Tokopedia, Warner Music Asia, Penerbit Haru, Ibunda, Narasi, Ajak Gerak, and Universitas Ciputra.

Demo of this game has also been spread among its target market community; however, it was found that the demo version doesn't really fit well in any age range. Some contents of the cards used in the game *Wellbeing* still seem childish for the demographic 17-24 years old, despite the mature topic raised in that game. In the gameplay itself, the game *Wellbeing* is still unable to fully grab the attention of teenagers and young adults who wish for a more challenging mechanism.

Wellbeing competitor is a board game titled *Your Friend is Sad* which is published independently by a comic illustrator Shen (@shencomix) and a board game designer, Jason Anarchy. This game is a card game with similar target market and theme, with the same age range of 17-24 years old and a mental health topic. This game is interesting because he is able to package a heavy topic, which is depression, with a light-hearted way without diminishing the importance of that topic, while still delivering it well to its target market. This game uses promotion media and language style that seems intimate with its target market and uses trusted professional sources as the basis of its gameplay mechanism.

Because of that in order to provide a more optimal gameplay experience, there needs to be further research for the content and mechanism or the card game *Wellbeing* that will surely be helped and verified by professionals in the field of psychology so that it can more specifically answer the needs of teenagers and young adults.

RESEARCH METHOD

For this research, the data used are primary and secondary data. Here, the primary data is used to obtain further insight into the real market situation, particularly in the context of the target market of the card game *Wellbeing* which are the followers of the Instagram account Petualangan Menuju Sesuatu. In

addition to that, the primary data is also used to obtain a specific insight into the development step of the game where the source person is allowed to directly interact with the design result or the existing prototype. On the other hand, the function of the secondary is to collect expert's insight that has been validated in various publications. Secondary data act as a reference and knowledge source from things that has been implemented and proven to be successful/unsuccessful from design of existing games

Primary Data

The primary data collection method is done through the quantitative method by distributing surveys to the target audience, and in a qualitative way through interviews with (*expert user*) as well as interviewing and doing test play with possible product users (*extreme user*).

The survey itself is conducted toward 108 people, where 89.8% of the respondents are follower of Petualangan Menuju Sesuatu, while the rest of the respondents are people who does not follow Petualangan Menuju Sesuatu, which are teenagers and young adults with an age range of 18-24 years and are board game fans. The survey is done through *Google Form* and is spread in the university area, the Petualangan Menuju Sesuatu account, and the *board game* community.

Secondary Data

The secondary data collection method is done through qualitative literature study method about gameplay, game interface, educational games, teenager mental health, mental health literacy, and *target market fit*. This data collection method is done indirectly by completing the data through literature study through the information source of books and journals.

Source Person Profile

- Betari Aisah as a psychology graduate, and content-creator in the field of mindfulness and *wellbeing*.
- Novensia Wongpy, S.Psi., M.Psi., as a clinical psychologist.

- Amanda Teonata as a psychology graduate and research assistant in Universitas Ciputra.
- Magga Putra Candra as a board game enthusiast
- Yaselino Jamlean as a board game enthusiast.
- Jeremia Stefanus Sanjaya Wibowo as a board game enthusiast

RESEARCH AND DISCUSSION

Through quantitative primary data collection, it is discovered that the perception of the target audience toward the design result has been conducted as well as for their understanding toward the message in the promotion media. On the qualitative primary data collection, the research is focused more on how the existing design mechanism can stand when compared to the psychological theory and *gameplay enjoyment* as a whole

Breakdown of the data collection techniques, data source, and instrument can be seen through the table below:

No	Data Collection Techniques	Data Source	Instrument
1	Interview	Expert User	<ul style="list-style-type: none">• What is the opinion about the types of Life Cards and how they reflect real life• What is the opinion about the type of action cards and how these action cards are able to reflect the coping mechanism as taught in psychology• What is the opinion about the game mechanism that limits the mental health point to just 10 point

2	Test-play & Interview	Extreme User	<ul style="list-style-type: none"> • What is the perception and knowledge about mental health before and after the game • What is the expectation of the game and whether or not they are fulfilled or not at the end of the game • <i>Review</i> about the game as a whole
3	Google Forms Survey	Target Audience	<ul style="list-style-type: none"> • Perception of design work • Understanding about the message on the promotion media

Table 1. Data Collection Instrument

The result of the primary data collection, together with the secondary data collection can be divided into the topic of *Gameplay*/Mekanisme Permanan, *Game Interface*, Educational Games, Teenager Mental Health, Mental Health Literacy, and *Target Market Fit* that is elaborated in more detail below:

Gameplay

Gameplay is a set of rules that determine how a game should be played, which consists of challenges to be overcome and actions that players can do. The Game Mechanics handbook itself discusses 5 types which are: *physics*, *internal economy*, *progression*, *tactical maneuvering*, dan social interaction, where the latter four categories are categorized more as an “*emergence gameplay*,” which is a relatively easier game but having more variations that developed from different combination of configuration when the game is ongoing (Adams & Dormans, 2012). In the test result with an extreme user, the list of cards taken from each round are different, which results in different interactions between the players as well.

In addition to that, the gameplay mechanism structure can also be divided into 10, where one of them is called *Cooperative Game*. The game in this category requires the players to coordinate with each other to reach a mutual victory

condition together. This type of game has a low *barrier of entry* which means it can be accessed by a wider audience and requires players to work together, which is appropriate for Wellbeing card game (Engelstein & Shalev, 2019). This is confirmed by the interview result with the extreme user after playtesting, however of course along with additional inputs, such as in order to ensure that the players truly need and want to interact and cooperate with each other, the game has to be more difficult. This input results in a design revision, in which a readjustment on the amount of decrease of Mental Health Points on Situation Cards of negative nature.



Figure 1. Revision of the number of points and *Copywriting* On a Life Card
Source: Personal Data

In addition to that, the importance of keeping the appropriate level of game difficulty is also discussed in the book “*Rerolling Board Games: Essays on Themes, Systems, Experiences and Ideologies*” that states that in order to make a player’s game to be more meaningful, the player has to feel challenged by the game. However, it shouldn’t get to the point where they feel that the game is unwinnable (Brown & MacCallum-Stewart, 2020). This means that the mechanism that is too complex is also not good as it decreases the incentives for players to play it continually as validated by the expert user Betari Aisah which suggests a revision to reduce the type of effect/mechanism for the Life Cards.



Figure 2. Revision for the Mechanism/Effect for Life Cards
Source: Private Data

By implementing boundaries with the appropriate portion and designing a good mechanism, *board game* can be a tool to raise important issues and start conversation about things that usually aren't easily talked about in the open (Brown & MacCallum-Stewart, 2020). The potential of the card game *Wellbeing* as a means for this is also confirmed by all three expert users, particularly Amanda Teonata, who states that the content of the cards can be a very good learning device.

Serious games itself is a type of game that doesn't have 'entertainment' as its primary objective, but rather a balance between ensuring that players are motivated but also be able to reach its 'serious' objective (Vaz de Carvalho et al., 2016). Because of that, insight from expert users about the game content that is already appropriate is also very valuable.

Game Interface

The suitability between illustration design and game themes is very important to take care of. No matter what design style is chosen, it needs to fit the theme, genre, and target of the player in order to really create a good playing experience (Leonardo & Megawati Sutanto, 2018). Aside from that, the visual

aspect in a game can also be an extra selling point that makes a game to be more desired (Ambarwati, 2018).

For the Wellbeing card game, a visual that is in line with Petualangan Menuju Sesuatu becomes an extra selling point because of the target market that are mostly followers of the account @petualanganmenujusesuatu. This is again confirmed by questions on the survey that aims for a game visual design.

Despite that, an interesting visual doesn't mean that the functionality side is neglected. According to the journal written by Samuli Kuosa, content layout or card assets also need to look simple in order to make it easier to read and play. Starting from the application and color typography, they have to support each other so that the game can flow naturally (Kuosu, 2016). Because of that, choosing a design style isn't solely to be able to be in line with the *brand* Petualangan Menuju Sesuatu but also to focus on clarity, which leads to the choice of combination between a *flat design* style and the cartoon illustration style of the comic Petualangan Menuju Sesuatu.

According to the test of playing together with *extreme users*, the card *layout* is already easy to read and understand. There's an input about the writing style and *copywriting* on the card to be made more explicit, but everything else is already good. The design style is also already interesting enough for the target audience, according to the survey result that leads to the game visual design

Educational Games

Educational games are games that have an aim not just as entertainment but also as an educational resource. In designing your own educational game, the main elements that need to be known is to determining the consumer target, game genre, gameplay, as well as creating a game interface that doesn't make it difficult for players when they're using the product (Ambarwati & Tjandrawibawa, 2018).

Apart from that, the other element that can be present in an educational game is narration or *storytelling*. With this element, the game can give an immersive experience to its players. This in itself can be achieved through the Wellbeing card game design because it uses the cartoon illustration that enables it to add the

element of story and humor, implicitly in every card design. In addition, *copywriting* also contains *storytelling* elements by using *quotes* that are relatable in nature and has emotional appeal.

In the book *Educational Game Design Fundamentals*, one of the more interesting quote states, “*Educational games address eternal and universal needs, but also individual human ones.*” According to this book there are 3 important things to be filtered in designing an educational game: player expectation about the game itself, the designers’ ethos, and the accuracy of the education delivered. This is important because it can help design games that are more concrete and ensure that the creative elements are loaded with the appropriate portion and in the correct part (Kalmpourtzis, 2019). This is confirmed by the interview result with the expert user who states the importance of putting a *trigger warning* or *disclaimer* in the handbook so that players can play the game with the full awareness that this game is not a tool to diagnose themselves, and of the sensitive topic that will be brought up.

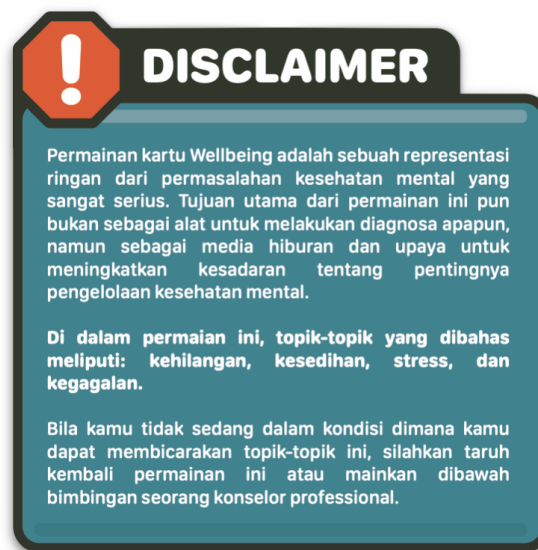


Figure 3. Addition of *Disclaimer* on *Guidebook*
Source: Personal Data

Apart from that, the educational game aspect that is also discussed in the book is about ‘freedom’. By giving a chance for players to experience various freedoms, such ‘freedom to fail’, ‘freedom to experiment’, ‘freedom to design

personal identity’, ‘freedom to work hard, and ‘freedom to interpret something’, *Wellbeing* can become a dynamic and lively game (Kalmpourtzis, 2019).

Education through games is no longer considered something weird-people from various circles, and even educational institutes have already realized the potential of using a game as a learning media that is both fun and meaningful (Rooney & Whitton, 2016). Even from a short gameplay test, it was observed that *extreme users* can already find the educational value of the game as denoted by the shift in understanding about the amount of variation of positing coping mechanisms that are available.

Teenage Mental Health

Starting from feeling alone to having difficulty asking for help from people around them, teenagers often don't know what they need to do when dealing with difficult periods in their lives. Although the *Wellbeing* game doesn't explicitly try to tackle the issue of depression, knowing about real experiences of teenagers in facing difficult times really helps in understanding their needs (especially emotional ones) (Cognevich, 2020).

In addition, it is also important to know what strategies they can use in facing those periods, and what can help encourage them to ask for and receive help (Frydenberg, 2010). One of them is the *Behavioral Activation* strategy that is used to identify situations that become a trigger for negative emotions and to build a positive strategy around it (McCauley et al., 2016). This concept itself has become the base concept behind the *Wellbeing* card game mechanism, and is agreed by the expert user that it has a great potential in becoming a learning tool in counselling as well, particularly in helping visualize situations and open up a conversation.

The Institute of Medicine and National Research Council of The National Academies also admits that to be a young adult in this day and age comes with several challenges; how the young adults face various difficult life choices and how many among them are living an unhealthy life due to their lack of skill in managing their mental health during these difficult times. This discussion is also interesting because it's very relevant with the topic brought up by the card game

Wellbeing, and will help in designing scenarios for the Life Cards that are relevant and **relatable** to the target market (Institute of Medicine and National Research Council, 2015). According to the *expert user*, some of the situations discussed in the Life Cards in the card game **Wellbeing** is already relevant, although there is still an opportunity to make it even more specific in the next card iteration.

Mental Health Literacy

Mental Health Literacy is someone's skill to be able to obtain, process and understand the basic information about mental health. Here, the four concept that needs to be understood in increasing mental health literacy are (1) Understanding how to achieve and maintain mental health; (2) Understanding about mental health problems and how to treat it; (3) Reducing the stigma about mental health problems; and (4) Knowing when and how to obtain needed help and how to develop the competency in '*self-care*' (Kutcher et al., 2016).

This discovery is important because increasing mental health literacy for players is the main goal, or in the context of '*serious games*', the serious goal of the card game *Wellbeing*. Besides that, this research also talks and admits the presence of a gap in the traditional educational system that hasn't been able to discuss about mental health literacy well enough. The card game *Wellbeing* is hoped to be one of the means to close the aforementioned gap.

Based on the interview result before and after the playtesting, it is observed that the card game *Wellbeing* doesn't contain the second mental health literacy point, however it does the points number one, three and four. The first point is in understanding how to achieve and maintain mental health, and the fourth point is in knowing when and how to get help, raised through the game mechanism that requires the players to use an Action Card (or positive coping mechanism) in facing negative situations as illustrated in the Life Cards. Meanwhile, the third point is raised through the use of cards under the category of Interaction and Reflection, as well as the use of inclusive languages and game topics as a whole. The presence of the cards *Warning Signs*, the use of *Token Stress*, and the explanation listed on the handbook is hoped to become a helping tool so that players can be comfortable in opening a discussion about health and

mental health problems. Interviews before and after the playtest proves that a deeper and more open understanding is felt by players after playing through two rounds of the game.



Figure 4. Life Cards
Source: Personal Data



Figure 5. Action Cards
Source: Personal Data



Figure 6 Mental Health Token and Stress Token
Source: Personal Data

Target Market Fit

One of the data collection techniques that can be done is in a qualitative and quantitative way is through interviews with source people (*expert & extreme user*), questionnaires toward possible consumers, and literature study to decide whether the game designed has achieved the target market fit or not. (Leonardo & Megawati Sutanto, 2018) The card game *Wellbeing*, also has to undergo all the steps above in order to verify whether or not the design result is already appropriate or not.

In addition, the product design that fits the market also must go through the phase 'MVP' or '*Minimum Viable Product*' which is the first iteration of a product that can be tested in the market. The card game *Wellbeing* itself has already gone through the first test phase, however since the MVP design process can often be done multiple times in order to reach a product that is truly ready (Olsen, 2015), this means that the next test is done with *extreme user* in a real game condition with a full asset.

Despite that, there's also another alternative in using a '*buyer persona*', which is a technique that is often used in marketing to ensure that the product offered will reach the correct person in an accurate way, which is by building the most ideal buyer persona (Revella, 2015). This step has already been done in the design process of the card game *Wellbeing* in the step of consumer review.

CONCLUSION

The card game *Wellbeing* has a very huge potential to become a learning media for mental health management for teenagers and young adults. With content that is specifically made for a niche target market which are teenagers and young adults between 18-24 years old, educational value can be delivered more accurately, measured by whether or not the playing experience is successful in increasing the mental health literacy level within its players. Besides that, a mix between that education with a mechanism with visual appeal and challenges is also important in ensuring that the target market will be interested in playing it continually.

Suggestion for the future for product owners is to do further development for the product variation and its marketing. The product variation mentioned is a series of cards that will in the future raise problems and coping mechanisms that are more specific. For instance, a card game series *Wellbeing: Family* or the card game *Wellbeing: First Job*. For the marketing, this means digging further on the potential of this game as a therapy helping tool or for mental health counselling as part of the product activation.

For the Visual Communication Design subject, this research can be used as prior research about the potential of board game as a tool and means for mental health education. It can be researched further on how the effect of the visualization and theories illustration of the application of coping mechanism and mental health techniques to help someone to absorb the learning better.

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