

| | |
|------------------|---|
| Title | The Glass Ceiling : a more casual and playful approach to feminism through card game |
| Sub Title | |
| Author | Nguyen, Anh Ha Linh(Okawa, Keiko) 大川, 恵子 |
| Publisher | 慶應義塾大学大学院メディアデザイン研究科 |
| Publication year | 2022 |
| Jtitle | |
| JaLC DOI | |
| Abstract | |
| Notes | 修士学位論文. 2022年度メディアデザイン学 第948号 |
| Genre | Thesis or Dissertation |
| URL | https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=KO40001001-00002022-0948 |

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

Master's Thesis
Academic Year 2022

The Glass Ceiling: A More Casual and Playful
Approach to Feminism through Card Game



Keio University
Graduate School of Media Design

Nguyen Anh Ha Linh

A Master's Thesis
submitted to Keio University Graduate School of Media Design
in partial fulfillment of the requirements for the degree of
Master of Media Design

Nguyen Anh Ha Linh

Master's Thesis Advisory Committee:

| | |
|----------------------------|----------------------------|
| Professor Keiko Okawa | (Main Research Supervisor) |
| Senior Assistant Professor | |
| Donna Chen | (Co-Advisor) |

Master's Thesis Review Committee:

| | |
|----------------------------|---------------|
| Professor Keiko Okawa | (Chair) |
| Senior Assistant Professor | |
| Donna Chen | (Co-Reviewer) |
| Professor Matthew Waldman | (Co-Reviewer) |

Abstract of Master's Thesis of Academic Year 2022

The Glass Ceiling: A More Casual and Playful Approach to Feminism through Card Game

Category: Design

Summary

Gender equality is one of the social development goals that contributes to a sustainable society with full human potential. However, despite the decades of feminist advocacy, gender study and activism, the progress to push back sexism and gender inequalities still has a long way to go, especially regarding its relevance among young people. Survey shows that many youths find it hard to get started on this particular discussion, since it is not a common subject to casually talk about. Additionally, a possibly negative reaction also puts a damper on any attempt to strike up a conversation about gender issues.

This research seeks to contribute to the progress of gender equality by bringing feminism into the casual environment of youths, providing a more relaxing approach to such a topic through the use of gamification. The resulting card game aims to spark feminist conversation that is casual and playful, letting young people explore the topic freely while still retaining the critical and nuanced aspects. The evaluation from observation and surveys during user tests support the hypothesis that young people have a lot to contribute in a conversation regarding gender equality, and under the right circumstances could have insightful discussion among themselves. The card is, therefore, effective in creating a suitable atmosphere for people to discuss feminist topics. The level of gender awareness in participants increases after each play session, and many different discussions are evoked.

Keywords:

gender consciousness, solidarity, female empowerment, communication tool, gamification

Keio University Graduate School of Media Design

Nguyen Anh Ha Linh

Contents

| | |
|--|------------|
| Acknowledgements | vii |
| 1 Introduction | 1 |
| 1.1. Goals and Contribution | 1 |
| 1.1.1 Building a path towards gender equality through feminism | 1 |
| 1.1.2 Bringing feminism into youths' daily life | 3 |
| 1.1.3 Making the topic casual and playful through gamification . | 4 |
| 1.2. Research Question | 4 |
| 1.3. Contribution | 5 |
| 1.4. Thesis structure | 5 |
| 2 Literature Review | 7 |
| 2.1. Gender consciousness, female empowerment and solidarity | 7 |
| 2.2. Activism among young people in Asia | 8 |
| 2.3. Playful experience in education with gamification | 10 |
| 2.4. Existing work | 11 |
| 2.5. Summary | 12 |
| 3 Concept Design | 14 |
| 3.1. Pre-research data collection | 14 |
| 3.2. Solution | 16 |
| 3.3. Concept | 16 |
| 3.4. Final Prototype | 18 |
| 3.4.1 Target user and setting | 18 |
| 3.4.2 Rules | 19 |
| 3.4.3 Cards types and functions | 19 |
| 3.4.4 General gameplay flow | 20 |

| | | |
|----------|--|-----------|
| 3.4.5 | Design Elements | 20 |
| 4 | Proof of Concept | 31 |
| 4.1. | Validation | 31 |
| 4.2. | User test | 32 |
| 4.2.1 | Description | 32 |
| 4.2.2 | Observations | 32 |
| 4.3. | Evaluation of final prototype | 40 |
| 4.3.1 | Survey result and discussion | 40 |
| 4.3.2 | Evaluation of the cards' goals and final outcome | 45 |
| 4.3.3 | Players' extra comments and feedback | 46 |
| 4.3.4 | Insights and further discussion | 47 |
| 5 | Conclusion | 50 |
| 5.1. | Main Findings | 50 |
| 5.2. | Limitations | 51 |
| 5.3. | Future Work | 51 |
| | References | 52 |
| | Appendices | 59 |
| A. | Initial research data collection | 59 |
| B. | Content of the Glass Ceiling cards | 60 |
| C. | Content of the Glass Breaker cards | 60 |
| D. | Content of the Command cards | 61 |
| E. | Content of the Discuss and Vote cards | 62 |
| F. | Pre-user test survey | 63 |
| G. | Post-user test survey | 64 |

List of Figures

| | | |
|------|--|----|
| 1.1 | Snapshot of SDG progress in Asia and the Pacific, 2022 | 2 |
| 2.1 | KEEP COOL board game | 11 |
| 2.2 | Nasty Woman card game | 11 |
| 3.1 | A question from the feminist topics engagement habits survey . . | 14 |
| 3.2 | Testing of Concept using the alpha version | 18 |
| 3.3 | Total card types (from left to right: Glass Ceiling, Glass Breaker, Command, Discuss and Pair cards | 19 |
| 3.4 | An example of a quote from a Glass Breaker card. | 22 |
| 3.5 | The Command cards. | 22 |
| 3.6 | The Discuss Vote card | 24 |
| 3.7 | The pair cards | 26 |
| 3.8 | Art direction sheet | 27 |
| 3.9 | Characters design and inspiration | 28 |
| 3.10 | Colour design for the cards | 29 |
| 3.11 | The cards as seen once printed | 30 |
| 3.12 | Open Sans font (Carnegie Mellon University) | 30 |
| 4.1 | User test session 1 | 32 |
| 4.2 | User test session 2 | 34 |
| 4.3 | User test session 3 | 35 |
| 4.4 | User test session 4 | 36 |
| 4.5 | User test session 5 | 37 |
| 4.6 | The GEDU monthly meeting and KMD Plenary showcase | 39 |
| 4.7 | Pre and post-user test surveys comparison on degree of comfort while talking about feminism | 40 |

| | | |
|------|---|----|
| 4.8 | Pre and post-user test surveys comparison on the Common fate component | 41 |
| 4.9 | Pre and post-user test surveys comparison on the Power discontent component | 42 |
| 4.10 | Pre and post-user test surveys comparison on the System blame component | 43 |
| 4.11 | Pre and post-user test surveys comparison on the Collective orientation component | 44 |

Acknowledgements

The past two years have been fraught with challenges as the pandemic prowled and wrapped the world in its claws. Instead of moving to another part of the world and experiencing a new culture, a huge part of my research progress is limited to online activities in my home country. However, despite the trials that come with new modes of education and distance, the support I receive from my professors, friends, and family have made it all worth it. From the bottom of my heart, I would like to extend the most sincere thanks to my thesis advisor Professor Keiko Okawa, whose patience and guidance have motivated and helped me through the rough patches. To my sub-supervisor Professor Donna Chen, whose wisdom and brilliance have guided me throughout writing my thesis. If it were not for these two brilliant women, I would not have been able to see this research through the finish line.

To the wonderful friends I have made at Global Education family: the girls in my same batch Jiayi and Misaki - whose support and company bring me joy every day, the seniors Yukiko, Silmi, Leandro, Gen Gen - who have offered me inspiration and guidance, thank you everyone for your help and friendship. I am incredibly honoured to be a part of this family.

To my lovely KMD friends and classmates, I express my utmost thanks to your support and love for my project.

To my best friend and roommate Gari, thank you for letting me drag you into this wild, exciting journey and sticking by my side this whole time.

And finally, to my dear family in Vietnam, my parents and little siblings, my aunt and cousins, who are always there to support me no matter what, thank you for your love and trust. I hope I will be able to make you proud.

Chapter 1

Introduction

1.1. Goals and Contribution

1.1.1 Building a path towards gender equality through feminism

Gender Equality

Gender equality is a human right which plays an important role in achieving a peaceful society with sustainable development (Shannon et al. 2019) [1]. It is defined by the United Nations (UN) as equal rights, responsibilities and opportunities to everyone regardless of gender (UN n.d) [2]. This means that the needs and priorities of both women and men are considered, and the diversity of different groups is recognised. After centuries of feminist advocacy, gender study and discourses, gender equality has become one of the most important determinants of quality of life and economic development (Malhotra, Schuler and Boender 2002; Sen et al. 2007; Shannon et al. 2019) [1,3,4]. However, despite such recognition, the progress towards gender equality around the world remains sluggish (Hawkes and Buse 2013) [5].

To be specific, the UN's annual World's Women report in 2020 came out with a lamenting result: against all efforts for gender equality in education, the percentage of women in managerial positions globally remains 28%, which is proportionally the same as in 1995 (UN 2020) [6]. In 2022, the Economic and Social Commission for Asia and the Pacific Asian countries (ESCAP) released a report on Social Development Goals (SDGs), highlighting the little progress in the areas of gender equality (ESCAP 2022) [7].



(Source: Economic and Social Commission for Asia and the Pacific Asian countries website)

Figure 1.1: Snapshot of SDG progress in Asia and the Pacific, 2022

With the goal of gender equality reaching a plateau, it is worth to note that other goals such as quality education and zero hunger are also held back. As pointed out by Morrison and Morrison (2007) [8], more opportunities for women lead to improvement in other human development outcomes and poverty reduction, due to the expanded labour forces and increased productivity. With such an interconnected relationship between SDGs components, progress in one area could encourage growth in others. For that reason, the research seeks to contribute specifically to the gender equality goal through the advocacy of feminism.

Feminism and its core components

What is feminism? Due to the term encompassing so many different perspectives, it is hard to pin down one specific definition (Delmar 2018) [9]. Regardless, those who identify with the word today operate under the same basic notion of gender equality (Loke, Bachmann and Harp 2017) [10]. This means that whichever feminist ideology one might follow - be it liberal feminism, marxist feminism or radical feminism - the end goal is still contributing to the progress of closing gender gap, stopping violence against women and pushing for fundamental changes in gender inequalities.

As discussed above, given the variety of feminist viewpoints, it is within the interest of this research to narrow down and focus mainly on some core components - namely gender consciousness, female solidarity and empowerment. To be specific, Gurin et al. (1980) [11] defines the four dimensions of group consciousness as common fate, power discontent, system blame and collective orientation.

When applied to gender issues, this theory provides a way to reflect a politicised gender identity, as well as evaluate the extent to which one interprets experience through a gendered lens. Unfortunately, most people function in a state of gender unconsciousness where they neither question the status quo or seek to change it (Bierema 2003) [12]. Therefore, through raising awareness on such a problem, people could examine events in their life through a critical perspective, recognizing gender bias and from there, actions for female solidarity and empowerment could be taken.

When individuals realise their common interest and work together to challenge unequal power relations, political change could be triggered (Sweetman 2013) [13]. For that reason, the research focuses on two components within feminist literature that are rooted in collective action: solidarity and empowerment. The definition of solidarity is examined based on the work of feminist philosopher Sandra Lee Bartky, viewing the concept as political and affective alignment with the experiences of others, acknowledging the context of their sufferings and thus fostering a sympathetic attitude that is both politically conscious and emotionally inflected (Bartky 2002) [14]. On the other hand, empowerment is defined as a multi-dimensional process that inspires and helps people gain control over their own lives (Page and Czuba 1999) [15]. Such a concept has been applied to many social movements, including feminism, where it has been shown to positively influence political attitudes and participation (High-Pippert and Comer 1998) [16]. Both topics deal with raising awareness, fostering empathy and inspiring people, thus act as a good opening for people to learn about feminism.

1.1.2 Bringing feminism into youths' daily life

Bierema (2003) [12] contested that gender consciousness begins with learning, and it could only happen when people look at power relations through a critically gendered lens and question the current status quo. At the same time, social movement scholars have always recognised the important role young people play in the rise of many social movements around the world (Earl, Maher and Elliot 2017) [17]. There are many reasons for youth to engage in politics. For some, it is having good role models and a support system that encourage their engagement, while others suffer from negative influences and are determined to transform such

experience into activism (Dergic et al. 2022) [18]. In some cases, young people could even contribute to politicising their parents (Bloemraad and Trost 2008) [19]. However, despite the contradictory evidence, youth are still often framed as not politically engaged and treated as incomplete members of society (Henn and Foard 2014; Anderson 2015) [20,21]. By assuming their disinterest, young people are denied their agency in forming their own political socialisation and learning. The research, as a result, seeks to offer an environment for young people to do so with their peers and loved ones, without the pressure of being judged or looked down on.

1.1.3 Making the topic casual and playful through gamification

Gamification refers to the use of game design elements in a non-gaming context, with the aim to encourage and motivate people into carrying out tasks that otherwise might not be attractive (Aparicio et al. 2012) [22]. Various areas could benefit from the application of such a concept, especially education. As feminism includes various heavy topics, it could prove to be a challenge to bring it up in a casual setting. The research hopes to alleviate such a burden and make the topic approachable for conversation, at the same time retain its critical aspect, encouraging participants not only to have fun, but also assert and reflect on the information presented to them. For that reason, gamification will be implemented in the form of a card game, which offers a nice combination of both imagery and text presentation in its format.

1.2. Research Question

In view of the above discussion, this research seeks to provide a solution for the following questions: How could we bring feminism into a casual setting? Is it possible to simplify complex issues, such as gender consciousness, female empowerment and solidarity to their core components, so that they can be conveyed and analysed in a simple way? What kind of phrasing and presentation will get people to engage critically with text-based content? Those are the main principles that

would guide the ideation and design process. Additionally, the research proposes that everyone, especially young people, have a lot of nuanced thoughts and discussion on feminism, and that it is not a difficult topic to have a conversation about. The research seeks to provide a way and an environment to tease out such interaction.

1.3. Contribution

The research offers a tool that could contribute to three main areas: firstly, to increase gender consciousness by promoting feminism in conversation between young people, raising their awareness and knowledge on the topic. Secondly, to create a relaxed, safe and friendly environment for gender issues discussion, which in turn fosters a sense of solidarity and empowerment between participants. And finally, to present interesting facts and information to people regarding the aforementioned topics with creative and engaging design, thus exploring different ways content could be perceived and engaged.

1.4. Thesis structure

The thesis follows the structure as below:

Chapter 1

Introduces the goals and contribution the research seeks to achieve. A brief rundown of gender equality, its connection to feminism and young people's daily life, and gamification is offered.

Chapter 2

The Literature Review discusses the definition of the relevant topics, exploring the studies regarding feminism, gender consciousness, female solidarity and empowerment. Existing card games for social causes and research on gamification are also discussed.

Chapter 3

The Concept Design details the pre-research data collection, design process from visual language to text content, how the cards work and the thinking behind the construction of each card.

Chapter 4

The validation process is described, observation and insights gathered from the user tests will be presented and discussed. Survey results are presented and analysed.

Chapter 5

Discusses the main findings, limitations of the research and plan for future work.

Chapter 2

Literature Review

2.1. Gender consciousness, female empowerment and solidarity

The idea of group consciousness in early literature was mainly defined as identification with a particular political belief (Brown 1931; McClain 2009) [23, 24]. However, the theory has since evolved beyond that. To be specific, scholars have proposed a further complete distinction between the two: identification is a psychological sense of belonging to others who are on the same stratum characteristics, whereas consciousness is a set of political beliefs and action orientations springing from that very awareness of similarity (Gurin et al. 1980; Rogers and Chong 2004) [11, 25]. In one of the defining articles on the subject, Gurin (1985) [11] identified the four components that made up gender consciousness: 1) common fate, the subjective acknowledgement that by understanding what happens to women in general, one could understand what happens in their own life, 2) power discontent, the idea that women hold insufficient power and influence in society, 3) system blame, the dissatisfaction at women's lack of power, realising it as unjust and caused by systematic forces, 4) collective orientation, the awareness that in order to battle such imbalance power dynamics, the best course of action is to work with other women, rather than individually.

Gender consciousness has been used in a variety of subsequent feminist research, notably by Swim et al. (1995) [26] on modern sexism - highlighting the denial of continued discrimination, hostility toward women's demands, absence of support for policies in education and work that are beneficial to women, or in articles examining transnational feminist movement, such as the work by Ferree and Hess (2002) [27], pointing out how the rise of international cooperation and political

changes means that women's resources, power and autonomy are now transcending national borders. Moreover, studies have highlighted how gender consciousness is related to higher levels of women's rights activism (Duncan 1999; Henderson-King and Stewart 1994) [28, 29]. Therefore, gender consciousness is essential for raising awareness on feminist topics.

At the same, existing literature also refers to solidarity and empowerment as a part of group consciousness, or an end result from it (McClain et al 2009; Burson and Godfrey 2020) [24, 30]. As pointed out in a research by Hogan (2020) [31], solidarity is prompted when people realise and acknowledge their shared problems, while explicit forms of collective action could be achieved by facilitating empowerment. When applied to gender issues, they offer a way for women to unite and fight back against the inequalities they are subjected to. The early application of such theories dates back to the feminist consciousness-raising and collective action in international development in the 1970s (Cornwall 2016) [32]. There exists an insistence among scholars that empowerment was not something that could be bestowed by others, but rather the awareness of the inequalities in power, the conviction of one's right to have rights and actions to press for and bring about structural changes that benefit gender equality (Kabeer 1999; Sen 1997) [33, 34]. Such observation is aligned with the goals of increasing gender consciousness, creating a direct link between these topics.

Drawing from the research and studies discussed above, gender consciousness is closely tied to female solidarity and empowerment. By raising the level of gender consciousness, awareness and empathy for women's struggle are fostered. From there, a network of support and female empowerment could be built, thus contributing to the goal of gender equality.

2.2. Activism among young people in Asia

There has been a considerable amount of debate over young people's role and involvement in political movement, opinions vary from framing them through a "youth deficit" model - which regards them as mere victims of society, to the argument that they are in fact politically active, as evident when their participation in protest is examined (Earl, Maher and Elliott 2017) [17]. Especially in the case of

Northeast and Southeast Asia, the frequency with which university students have been at the forefront of opposition movements in these regions has captivated the world (Weiss and Aspinall 2012) [35]. Despite the claim perpetuated since the early 2000s about youths being “The Three Give Up Generation” (Korea) or the “Loss Generation” (Japan), young people in Asia have always expressed their stances on multiple issues through collective actions (Joo 2018) [36]. Especially in the case of gender issues, with Asian culture making the context significantly different from feminist struggle in the West, women and girls in the regions still find ways to make their voices heard (Yu 2009) [37]. Notable examples include the arrest of the Chinese Feminist Five in March 2015 when they attempted to spread awareness on sexual harassment on public transportation, the 2019 movement Ku-Too - which protests gender discrimination in Japanese workplace dresscode, or the Tal-Corset (Escape the Corset) movement in Korea where young women reject the conventional beauty standards and expectation society places on them (Wang 2018; Miura 2021; Lee and Jeong 2021) [38, 39]. Though the countries in which those movements originated from are different, they share the same characteristic of being organised by young people. Youths have not been there as mere participants, but as the vanguard of these collective actions.

Looking back, patterns of political behaviours used to take into account only electoral turnout and civic duties, leading to the assessment that young people have been disillusioned by the major institutions and turned to political disengagement (Norris 2004) [40]. However, the examples listed above prompt one to re-examine how the nature and methods of activism have changed over time. It could be said that young people are not politically indifferent, but engage in the conversation in a different way. As pointed out by Norris (2004) [40], youths are more than likely to engage in cause-oriented political action. Their primary goal focuses upon social changes through direct action strategies and solidarity, altering lifestyles and asserting social identities, just as much as through policy-making and governmental decision-making (Tarrow 2011) [41]. Such observation reflects the goals of this research, and supports the design approach that encourages changes through activities which revolve around an intimate, daily life activity like casual conversation.

2.3. Playful experience in education with gamification

As with any development that possesses great potential, the literature on gamification is steadily increasing and branching in different directions. Koivisto and Hamari (2019) [42] commented that in order to take advantage of the existing knowledge and implement it to productive use, concerted efforts are needed. Observation from different perspectives and context could contribute positively to how such a process could benefit other disciplines.

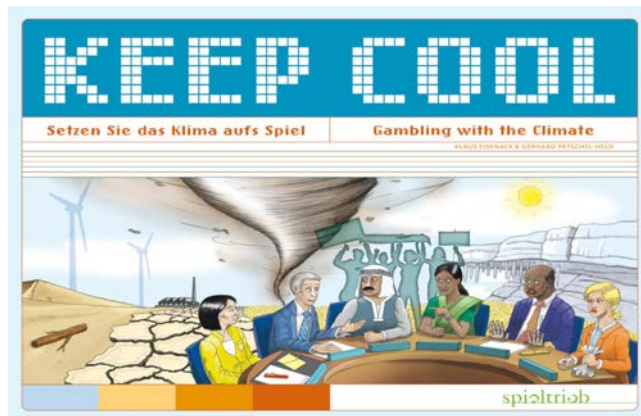
Being an entertainment medium, games are often utilised for different purposes, taking advantage of their ability to engage and excite. Many researchers have come to the same conclusion that when playing games, people could experience mastery, immersion, enjoyment, competence - common characteristics of intrinsically motivated human behaviour (Liu, Li and Santhanam 2013; Huotari and Hamari 2017; Liu, Santhanam, Webster 2017) [43–45]. Indeed, an essential aspect of games lies in its self-chosen nature. Malaby (2007) [46] pointed out that while engaging in a game, players accept the contingency of the end result, however, the process is often fun and enjoyable regardless of the final outcome. By incorporating those qualities into activities outside game, specifically in the case of this research: education, affordance of gameful experiences while raising awareness could be achieved - such a process is what made up gamification (Huotari and Hamari 2017) [44].

An empirical study on gamification published by Hamari, Koivisto and Sarsa (2014) [47] has examined how it enhances services with motivational affordance, consequentially invokes a playful and relaxed experience while encouraging further behavioural outcomes. In this research, the type of game is specifically a board game. For further clarification, board games provide a universal language between students and experts from different fields, providing a more accessible approach to study complex issues than other forms of gaming (Eisenack 2013) [48]. A study by Eisenack (2013) [48] on a board game about climate change has proven that it could be effectively used in education, giving students a chance to obtain a holistic picture of the issue, at the same time laying out a common language for deep reflections. Therefore, existing literature supports the utilisation of playful

experience to tackle the issue of feminism being a difficult topic to bring up in conversation.

2.4. Existing work

As discussed above, raising awareness and increasing knowledge via games has been a popular method among educators. Notably, there are many board games about social issues on the market.



(Source: KEEP COOL official website)

Figure 2.1: KEEP COOL board game



(Source: Amazon official website)

Figure 2.2: Nasty Woman card game

KEEP COOL (Figure 2.1) is a board game about climate change where each player represents a country, competing against each other to balance their own economic interests and protect the world's climate through negotiation. The goal of the game is to raise awareness on climate change and the understanding of its obstacles and difficulties. Through the game, the authors wish to convey the issues in a simplified manner but still retain the serious elements and discussions. The research aims to create a similar experience with the topic of feminism, building from the foundation KEEP COOL has provided.

Furthermore, Nasty Woman (Figure 2.2) does address various topics concerning female empowerment and gender dynamics. The creator, Amanda Brinkman, commented that this social card game provided a platform for women to be in conversation with one another, fight back and have fun (Bustle 2018) [49]. With lively illustration and hilarious conversation starters, the game brings up many issues American women have to face in their daily life, while keeping the mood light and playful.

However, Nasty Woman focuses entirely on Western context and politics. Most of the prompts and collectible cards are about American figures and scenarios such as Trump's presidency, All Lives Matter rhetoric, etc. . . - while those issues are indeed important, a focus on Asian context in existing work is still lacking. Additionally, the overall tone of Nasty Woman is notably too light-hearted for nuanced discussion, leaning frequently into playful quips and witty observation. Therefore, this research seeks to combine positive elements from existing games and fill the gaps of areas that are yet to be explored.

2.5. Summary

The literature reviews discussed above have provided much insights for the research to carry on with the concept design. By examining the link between gender consciousness, female solidarity and empowerment, the content of the card game could be visualised with coherence and clarity, ensuring that the messages are arranged in a way that makes sense and leave an impression on players. The gender consciousness model provides a framework for the discussion the game wants to evoke, while the discussion on youth's activism contributes to the overall direction

of the text and design imagery. Lastly, the research on gamification and existing work give credential to the overall concept, at the same time pointing out the limitations that the research seeks to tackle.

Chapter 3

Concept Design

3.1. Pre-research data collection

In addition to the research on literature review, an early study was conducted via online questionnaires targeted at teens and young adults regardless of nationalities. The questions inquire after their main source of feminist news and information, their choice of partner to discuss feminist issues, how comfortable are they in talking about such topics, and what do they think is the hardest aspect to overcome in order to broach the subject to their conversation partner (Appendix A). Participants are also given the choice to share their preferred solutions to the aforementioned problems.

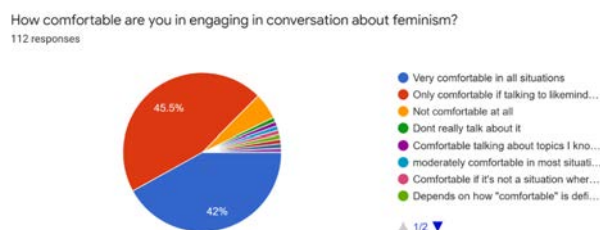


Figure 3.1: A question from the feminist topics engagement habits survey

On April 2021, the online questionnaire was posted in the format of Google form on Twitter and Tumblr - two popular platforms among young people. A schedule was set to stop accepting more responses after a week since posting day. From 112 responses received, some insights are gained as followed:

1. The role of surrounding environment in people's engagement habit

Internet forums and blog holds the top spot as the primary source young people come to for feminist news and information, with 94.6% participants opting for it. The next common source is academic paper (41.1%) and the third spot is non-profit organisation newsletter (20.5%). It is notable that these sources are available online, and people do not have to disclose too much personal information to gain access to them. The comfort that anonymity and personal autonomy provides could play a big role in encouraging people to look up feminist topics using those tools.

2. Conversation partners' feelings and reaction

While asked about how comfortable they are in discussing feminism, 45% of participants stated that they are only comfortable while talking to like-minded individuals, 42% expressed their comfort in all situations, and others are either uncomfortable or are only comfortable under certain conditions (Figure 3.1). Furthermore, for most people (77.7%), the possibility of aggressive viewpoint from their conversation partner is the biggest hurdle for them to start talking about feminist topics. That is followed closely by the fact that it is not a common topic to talk about (40.2%), and people's lack of interest (24.1%). There are other extra answers given, but the overall sentiment reflects that of the top three. The feedback for those two questions suggest how the responses from their conversation partner could affect people's willingness to talk about certain topics.

3. The importance of overall setting and content of conversation

When asked about their preference for a good way to start conversation about feminism, 61.6% of participants opted for a controlled environment where they could discuss and debate safely. This highlights the importance of the general setting surrounding the discussion. Additionally, 44.6% suggested a good conversation starter topic to talk about, while others expressed the need for engaging content. Those are the angles that could be examined in order to create a better experience for them.

These results suggest that while young people are willing to engage in conversation regarding feminism, they prefer to have them in a safe and friendly environment.

The insights have called into attention the importance of overall setting, conversation partner and content in triggering youth's interest and willingness.

3.2. Solution

Based on the literature review, related work and pre-research data collection, a communication tool in the form of a card game is proposed. As discussed above, the game will focus on three areas within feminism which are gender consciousness, female empowerment and solidarity. The content is designed and presented in various ways that would provoke different interaction from the players. Furthermore, while the main goal is to create the most relaxed and casual environment possible, the game will also have a competitive edge to it. Since competitiveness promotes students' intrinsic motivation while engaging in an activity (Matsuda et al. 2013) [50], applying it into the card game could encourage players to ponder over their discussion input carefully. Building on the foundation of Exploding Kittens - a party card game where players have to avoid a certain card while strategizing against their friends to win, the proposed card game aims to follow the same structure and rule.

3.3. Concept

The name of the card game is decided as Glass Ceiling. According to Cambridge Dictionary (n.d) [51], Glass Ceiling is a point after which one could no longer go further. The term is often associated with the phenomenon where women try to move up the organisational ladder, yet only a few could actually make it to the top position (Powell 1999) [52]. In Asia, the Glass Ceiling effect is indicated by the lack of female employees in managerial positions, not even necessarily the top ones (Pai and Vaidya 2009) [53]. This speaks of a lack of opportunities for women to get promoted and grow in their area of expertise. Specifically, Asian women have to face a labour market that offers them lower salary and lower quality jobs than those for their male counterparts - a disparity largely due to social norms dictating their domestic responsibilities and restriction on their choice of jobs (Asian Development Bank 2015) [54]. Therefore, the Glass Ceiling effect is

something Asian women encounter regularly. It is an apt imagery to use as the main design theme for the game.

Alpha version

The first prototype was created to test the concept and gameplay interaction (Figure 3.1). The overall design in this state remained simple, with greater emphasis on text content. The deck contained 25 cards and play time spanned around 5 minutes. There are 4 types of cards: the game-over card which contains information and statistics about women around the world, the saviour card which displays popular feminists' inspiring quotes, the command card that presents and defines feminist terms, and finally the pair cards that contain trivial facts about women's issues.

Two user test sessions were held in a casual setting with 3 participants each time. Participants were all Asian college students with ages ranging from 18 - 24. The first user test was on November 24th 2021, while the second one was on December 2nd 2021. Players displayed special interest in the pair cards that contained trivial facts, holding them up to their friend to see and discuss. On the other hand, the fill-in-the-blank command card inspired some creative answers, as players took time to mull over them carefully. Participants also expressed excitement when they could use a card to intercept their friends' play.

In the end, the game could be played from start to finish, and the cards functioned as intended for the most parts. However, due to insufficient number of cards, each gameplay interval is quite short and could not bring about much deep discussion. The user test had shedded light on weak points in the concept and helped define the way for improvement.

Firstly, some players tend to not read all the text, stating that they were too long. This calls to attention the need to create incentives for people to engage meaningfully with the content. Secondly, players prefer it when the text is tied to the gameplay and directly affects how they interact with their friends. This could act as one possible motivation for the first point, meaning that players are encouraged to read the text because it benefits them to do so. Lastly, some card functions fail to get their point across and contribute little to the gameplay, such as the pair cards. Therefore, different ways of content presentation should be taken into consideration. Despite those previous held-back, the game overall still



Figure 3.2: Testing of Concept using the alpha version

generates discussion and comments from players. Therefore, with the structure of the concept being on the right track, the design and presentation could be polished considerably in the final prototype.

3.4. Final Prototype

3.4.1 Target user and setting

From pre-research data collection and alpha version testing, the content and design of the cards draw the interest and understanding from young adults. Additionally, due to discussion of sensitive topics being an integral part of the game, the target audience for the final prototype falls in the age range of 18 - 30 years old. Moreover, while the game could be enjoyed by people of all nationalities, the content possibly resonates more to Asians than others, owing to the use of issues and imagery familiar to them.

Since the aim is to create a casual, relaxed atmosphere, the game could be played in various kinds of settings. From hangouts such as friends gathering, parties, or an academic atmosphere like in a classroom or group study. The discussion could be viewed as competitive, albeit in good humour. There are also incentives to provoke careful consideration from players before giving their answer. Therefore, depending on the context of the play session, it could serve either educational purposes or a relaxing nature of discussion.

3.4.2 Rules

The main goal of players in the game is to collect as many Glass Breaker cards as possible, while avoiding the dreaded Glass Ceiling one. Each person will be dealt five random cards at the start and one Glass Breaker, the rest will go in the drawing pile, faced down. Participants could gain Glass Breaker by different means such as drawing it from the pile, stealing it from another player using the command card, or winning it by having the most voted answer in the discussion round. On the other hand, if one accidentally draws the Card Ceiling card from the pile, they have to sacrifice one Glass Breaker to save themselves from elimination. The game ends when the whole pile is drawn and everyone counts their Glass Breaker cards, whoever has the most will win.

3.4.3 Cards types and functions

In total, a full deck contains 65 cards, within which are five types of cards with different functions. To be more specific, there are 10 Glass Ceiling, 20 Glass Breaker, 13 commands, 6 discuss and 16 pair cards.



Figure 3.3: Total card types (from left to right: Glass Ceiling, Glass Breaker, Command, Discuss and Pair cards)

Glass Ceiling and Glass Breaker cards: the Glass Ceiling is the ‘Game Over’ card while the Glass Breaker functions as the ticket out of elimination. If a player accidentally draws the Ceiling from the pile, they are out of the game unless they use the Glass Breaker to save themselves. Once drawn, the player has to put both cards down immediately.

Command cards: these cards contain different commands that let players interact with each other. It could be used to take a random card from other participants, or even stop them from getting votes in the discussion round. Players simply need to follow the command on the card and utilise it to their advantage.

Discussion cards: one important way to obtain extra Glass Breaker is to use this card to invoke a discussion round. Once used, all players have to participate in a discussion about the question written on the card, then everyone votes for the answer they like the most and that person would be rewarded with a Glass Breaker.

Pair cards: these cards come in pairs of the same colour. Players need to collect two in order to use them.

3.4.4 General gameplay flow

- Set 6 Glass Breaker and all Glass Ceiling cards to a side.
- Hand each player one Glass Breaker.
- Shuffle the deck and hand each player extra 5 cards, put the rest face down in the middle of the table.
- Determine the order, the first person plays their card by discarding it face up.
- Player ends their turn by drawing an extra card from the draw pile.
- Continue with the next player until the end.

3.4.5 Design Elements

There are two main design elements to this card game: content and visual. The content includes the text that is tied to the cards’ function, while the visual

enhances engagement and creates the general atmosphere. As the aim is to spark thoughtful discussion while maintaining relaxed feelings in participants, the two elements are tailored specifically to follow such core ideas.

Content

The content of the cards is developed based on the research goals of raising gender consciousness and expanding people's knowledge on feminism. Specifically, it revolves around raising awareness on feminist issues, providing statistics and figures, pointing out gender bias and introducing feminist figures to players. From the insights gathered in the alpha version user test, great emphasis is placed on creating engagement incentives and interaction among players. This is reflected on the text and function of each card type.

- Glass Ceiling

As discussed above, the Glass Ceiling is the game over card. This card contains general statistics and information on the injustices and gender bias women have to face around the world (Appendix B). As such, the card aims to raise awareness on those issues and presents players with new information they might take interest in. At the same time, its role as the elimination card could bring players a sense of annoyance at being obstructed from continuing the game, or regret that they would have to give up a valuable card in order to preserve. While it is not comparable to the frustration over real world issues, it still lets the players experience a fraction of the reality women have to deal with. Therefore, not only awareness is raised, but sympathy could be fostered as well.

- Glass Breaker

To nullify the effect of the Glass Ceiling, the Glass Breaker comes into play. These cards contain inspiring quotes from popular female figures in different fields, such as Kimberly Crenshaw, Yuri Kochiyama, etc... (Appendix C). Since the cards serve as both something to collect to win the game, and save players from elimination, they aim to let players relate their joy and success to that of other feminists. Additionally, the chosen quotes focus on rousing women's spirit and determination, thus communicating to the players a sense of solidarity and empowerment with other women.

*"Unbinding my feet I clean out a thousand years of poison,
With heated heart arouse all women's spirits.
Alas, this delicate kerchief here
Is half stained with blood, and half with tears."*

— Qiu Jin

revolutionary, feminist, and writer

Figure 3.4: An example of a quote from a Glass Breaker card.

- Command

Since most of the players' interaction in the game come from the command cards, the content aims to be clear and concise. The command are designed around different terms and topics in feminism, phrasing them in a way that is both a definition as well as an instruction on how the card functions (Appendix D).



Figure 3.5: The Command cards.

For example, a player could steal a Glass Breaker card from their friend by ‘condemning’ them to be ‘fridged’ - a term used to describe a trope in superhero media where a female character is brutalised so the male character’s arc could be developed (Scott 2013) [55]. Not only does this introduce the concepts to participants, it also lets them either embody the word or make their friends do so. From those functions, the cards seek to let players have fun and interact with

their peers, at the same time enriching their vocabulary on feminist topic.

- Discuss and Vote

As the most integral part of the gameplay that mainly focuses on raising players' gender consciousness, the content of Discuss and Vote cards receive the most attention and tailoring. Since the card has to display a scenario and a question, they are the ones containing more text than other cards (Appendix E). During the first alpha version user test, that proves to be a problem because most players are not interested in reading something too long. Therefore, the final prototype ties the Discuss and Vote cards directly to the players' chance to win, prompting them to use and engage with its content. Additionally, the text has to be as condensed and to-the-point as possible, yet leaves enough room for nuanced discussion and analysis. With those goals in mind, the Discuss and Vote cards' structure is built on a combination of professor Tomasek's model of Critical text engagement and Gurin's Gender Consciousness theory.

The model of Critical text engagement proposes using reading prompts to promote critical reading and engagement with text for undergraduate students (Tomasek 2009) [56]. Critical reading here is defined as an alternative way of reading that goes beyond the usual information processing and comprehension (McDonald 2004) [57]. Instead of just stopping at figuring out what the authors mean, students are encouraged to negotiate or create their own meaning that makes sense based on their personal background knowledge (Tompkins 1997) [58]. These ideas could be aligned with Gurin's Gender Consciousness theory to tailor an experience that would encourage young people to look at daily events through a gendered lens - by promoting its four core components: common fate, power discontent, system blame and collective orientation. Thus, meaningful talk and reflection on the issues and ideas of feminism could emerge.

The reading prompts are organised into six different categories and the content is designed in accordance with each topic.

1. **identification of problem or issue (power discontent and system blame:** the players are asked to identify and describe the potential issues brought up by the card, which in this case is about domestic violence and the culture surrounding it that prevents women from speaking up. This

creates the need for them to understand the viewpoint and consider the complexities of the topic.

2. **making connections (common fate):** this card brings up an interesting fact about the product design process' tendency to overlook user tests for women, and asks players to connect it to their daily knowledge of the topic, then coming up with their own examples. Therefore, players' subjectivity could be examined and merged with the information the text provided, encouraging them to reflect on their personal experience (McDonald 2004) [57].

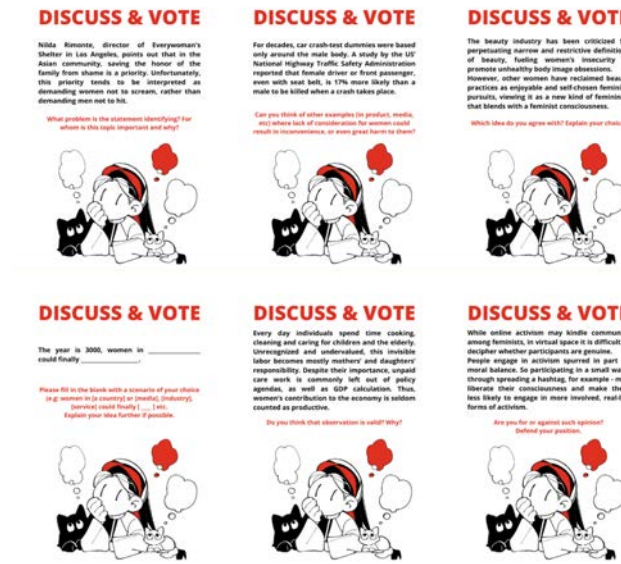


Figure 3.6: The Discuss Vote card

3. **interpretation of evidence (system blame):** two different viewpoints of the beauty industry's effect on women are brought up, players are asked to give their opinion on which one they agree with and why. From there, consistency between players could be checked, leading to identification of bias and assumptions that might have caused the differences in their answer.
4. **challenging assumptions (common fate):** an opinion on unpaid domestic work is presented on this card and players are encouraged to examine

and criticise their assumptions regarding the topic. By listening to different stances and reflecting on their own, players could learn to recognize how even the most mundane daily activity could look different when inspected under a gendered lens.

5. **making applications (collective orientation):** players are asked to fill in the blank of a sentence regarding the future of women. This lets them apply what they have learned through other discussions in the game, thus showing them the value in those conversations.
6. **taking a different point-of-view (collective orientation):** for this card, players are asked to weigh in whether online activism is a viable way to tackle a social issue or not. While there is no need for a definite answer, an opportunity for people to consider diverse ideas supports critical reading (Fecho 2001) [59]. When faced with others who do not share the same point of view, players would get the chance to elaborate on issues they think are important so people could see their point of view.

- Pair

The pair cards are the ones players have to collect and play in pairs. They draw comparison on how men and women are perceived in different situations, highlighting gender bias one might overlook in daily life. The text is displayed by listing out the adjectives or words used in each case, opting to get the point across as straightforwardly as possible (Figure 3.6).

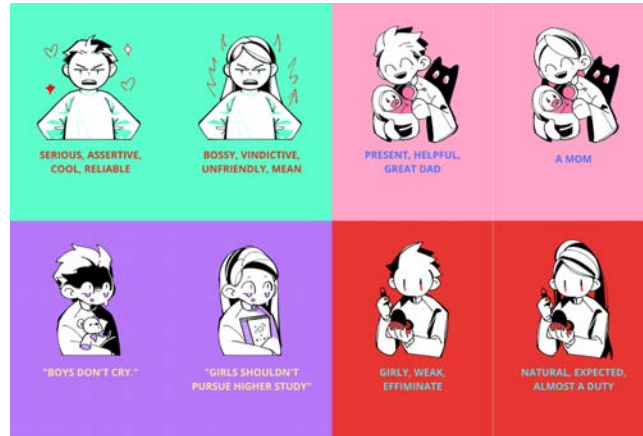


Figure 3.7: The pair cards

Visual

- Art direction

Studies have discussed the importance of art style in capturing readers' attention, thus increasing the possibility that the accompanying text would be read (Ramsey 1982; Pereira 2008) [60,61]. For this research, a stylized and comical art style is adopted for the cards' illustration. Due to comics being regarded as light entertainment, people are likely to feel comfortable decoding meaning from them (Darnhofer 2018) [62]. Additionally, the humorous nature of comics could enable an open, relaxed discussion about sensitive topics (Bartlett 2013) [63]. Therefore, emphasis is placed on cute elements and characters - drawn in clean, precise lines with flat colours on black and white ink.



Figure 3.8: Art direction sheet

- Character design and aesthetics

The narrative world of a game is not only told by text, but also shown and conveyed through visual elements such as characters and colour scheme (Pratama, Wardani and Akbar 2018) [64]. The cards' illustrations therefore aim to tell a story that will resonate with the players, helping them relate to the topics mentioned in the text, and as a result, encourage them to examine the events in their daily life through a more critical lens.



(a) Weaving a Realm (Vietnam Center 2020)



(b) Character sketch and final

Figure 3.9: Characters design and inspiration

With the stylized art direction, the characters are designed in the most simplified manner without too much focus on distinctive facial details. This is to create a form of placeholder for the players to put themselves in the game’s narrative. The frequently used shapes are circles and squares, making the general aesthetics considerably snappy and to the point.

The main characters include a girl, a boy and two black and white cats. The inclusion of animals is meant to create a domestic and adorable vibe, complementing the human pair. The clothes they wear take inspiration from Vietnamese traditional costume, conveying a sense of Asian aesthetics while remaining simple and elegant (Figure 3.8). Since the clothes could be worn by both sexes, it provides a sense of unity despite their physical differences. Additionally, while the actions these characters perform follow the text content, they are portrayed in a humorous way to add levity to the topic, thus making the images (and by association the concepts they embody) more memorable to the players (Diehl 2018) [65].

- Colour palette

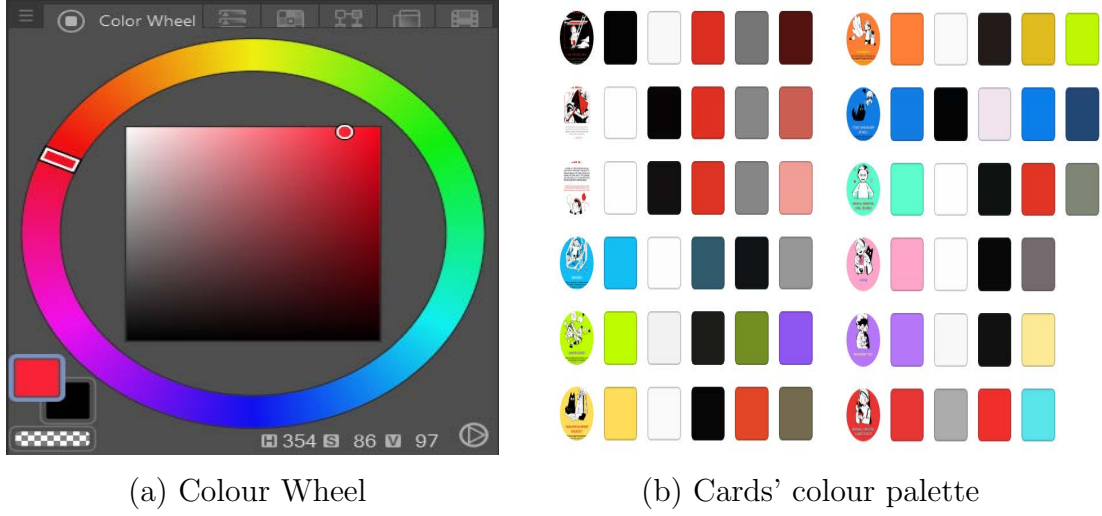


Figure 3.10: Colour design for the cards

It is within the interest of the research to keep the saturation and brightness on the upper right of the colour wheels (Figure 3.8). Due to the colours in that area being perceptually inviting, viewers' attention would be attracted (Camgöz, Yener and Güvenç 2004) [66]. At the same time, the cards' functions and content also play an important role in determining the colours. For example, the Glass Breaker, Glass Ceiling and Discussion cards contain shades between red, white and black. Since they are the cards that discuss most of the heavy topics in the game's content, those colours would help evoke a sense of potential hazard (red), danger (red - black) and normalcy (white) (Ng and Chan 2018) [67].

Moreover, other cards, which fill an essentially playful and interactive role, receive extra vibrant, lively colours. However, the main subject within the card - the character illustration, remains drawn strictly in black and white. The sharp edge created by this monochrome colour choice acts as juxtaposition between the characters and the background, making the vibrant colours pop out significantly (Figure 3.9)

- Typography

The font used for the cards is Open Sans, ranging from Bold to Extra Light version.



Figure 3.11: The cards as seen once printed

It is a san serif typeface with an upright stress and open form. The appearance is neutral, yet friendly and easy to read. As the illustration has fulfilled the role of creating the playful mood for the game, the typography focuses more on being clear and simple - the same characteristic as the content it is trying to convey.

Open Sans Light
Open Sans Regular
Open Sans Semibold
Open Sans Bold
Open Sans Extra Bold

Figure 3.12: Open Sans font (Carnegie Mellon University)

Chapter 4

Proof of Concept

4.1. Validation

The research applies both quantitative and qualitative analysis for the validation process, which includes observation during user tests, pre and post gameplay survey on gender consciousness and feedback session. The user tests are held in casual settings such as friends gathering, coffee date, and breaktime from group study. The facilitator will also participate in the game to experience how players interact and record the flow of the discussion.

For the user test quantitative, a Gender Consciousness survey is handed out before and after participants play the game (Appendix F, G). The general structure is based on Duncan (2011)'s survey on gender consciousness and cognitive centrality. For starter, participants are to rate on a 5-point scale on how comfortable they are with engaging in conversation about feminism. Then the survey will go into four components of gender consciousness. Firstly, common fate is measured by asking participants if they think what happens to women in their country will affect what happens to their life. Four multiple choice options are provided: a) it will not affect me at all b) it will not affect me very much c) it will affect me some d) it will affect me a lot. Secondly, power discontent is assessed by asking participants' thoughts on how much influence do they think women and feminists in their country have. Participants are asked to rate it on a 3-point scale: 1) too much influence 2) just about the right amount of influence 3) not as much influence as they deserve. Thirdly, participants are to rate on a 5-point scale on whether they agree with the assessment "Women today face a lot of discrimination due to stereotypes associated with their gender.", with choices ranging from 1) strongly disagree to 5) strongly agree. Finally, for collective orientation, the

question is how often participants feel a sense of anger at how women are treated in society. Four reply options include a) almost never b) occasionally c) some of the time d) most of the time. Additionally, the post-user-test survey also includes extra questions on players' most liked card and least favourite one, as well as providing room for extra comments they might have.

4.2. User test

4.2.1 Description

The user test involves 14 participants who are divided into 6 sessions. Each session lasts from 45 minutes to 1 hour - considerably longer than the alpha version user test. At the start, the facilitator lays all the card types on the table and explains the function of each one, players then have some time (5 - 7 minutes) to look over the cards before the game officially starts. During the gameplay, the facilitator takes note and recording of the discussion. Due to the research goals, all sessions are held in a casual setting. However, there are two additional showcases that are more formal than usual: the Global Education (GEDU) monthly meeting and Keio Media Design (KMD) Plenary meeting.

4.2.2 Observations



Figure 4.1: User test session 1

The first session was held at one participant's house on April 30th 2022. The atmosphere was light and relaxed after a hearty dinner. All participants (including the facilitator) were women, with two Vietnamese graduate students and a Japanese office worker. The age range fell within 24 - 30. The players picked up the rules quickly after some first few rounds. A smooth game rhythm settled in 5 minutes into the game.

Overall, the participants were taken with the cards' colourful design. They picked some cards up and examined them during the introduction time. The general atmosphere did not change after the game started, competitiveness did not emerge even during the discussion round. Players paid more attention to the discussion rather than trying to win over the other. Notably, during one round, two participants had the same votes, so one of them decided to give the reward (the Glass Breaker card) to the other, saying she wanted to help them. After that, if a discussion round resulted in players having similar ideas, players were likely to vote for the person they thought was low on Glass Breaker cards. Thus, a sense of solidarity and empowerment was born out of what was supposed to be the competitive part of the game.

Another discussion that brought up a lot of discussion was on products design that were inconvenient to women. Players shared unpleasant experiences in electronic stores where employees just assumed they did not know what they were talking about, in medical fields where they heard many medicines were not tested properly for women, and in the media where they felt like the portrayal of women's bodies was uncomfortable to them. Each personal experience made way for the expansion of another, and a chain of topics spun out from there. A player then exclaimed there were so many things designed without consideration for female users at all, and now that they thought about it, it just kept coming.

Another memorable interaction was when a player pulled out a Command card titled 'Toxic Masculinity' and announced she would now become a toxic man, stealing a Glass Breaker card from another player. Other Command cards also evoked the same fun, cheeky interaction between players.

Session 2:

Figure 4.2: User test session 2

On May 12th 2022, the second session was conducted in a cafe after lunch. Apart from the facilitator, the other two participants were women, one Chinese and one Japanese. The age range fell within 20 - 25. The players were not too familiar with card games, but the rules settled in after around 10 minutes into the game. There were some questions on the cards during the gameplay, but it did not disturb the flow.

The longest discussion was once again on products design that neglect female users, with bad experience in electronic stores and the portrayal of women in the media being brought up - the same as in the first session. Another topic that stood out was unpaid housework. One player remarked wistfully that when a woman became a mother, her given name was forgotten, and she was only referred to as “[her child’s name]’s mom” from then on. Beauty industry also garnered much thoughtful discussion. One player pointed out how she felt more pressure to put on makeup while living in her home country than when she went abroad. After much deliberation, the players agreed that due to the personal connection to the country, people felt the need to conform to the beauty standards more than when they were in another culture.

On another occasion, the players became excited when a pair of same-colour cards were put down. They commented on the “Girls should not pursue higher

study” stereotype portrayed on the card, reminiscing about family members who had said the same thing to them. A player also expressed regret that she did not get any pair cards throughout the playthrough, as they seemed interesting and she wanted to collect them.

Session 3:



Figure 4.3: User test session 3

During this session on May 19th 2022, the facilitator explained and oversaw the game via Zoom meeting, while the participants set up the cards and played among themselves. There were 2 male participants and 3 female ones. All of them were Vietnamese university students, aged from 18 - 25. Due to the online mode of communication, the instruction time took longer and players sometimes had to disrupt the gameplay to ask about the cards.

Overall, players in this session were much more competitive than previous ones. They used command cards liberally, finding joy when they could stop their friend's advance. One player even held onto all the Discuss and Vote cards they got till the end, so as to prevent any possible discussion that could result in other players scoring a Glass Breaker. Despite that, the competitiveness was notably good-natured. That was made apparent when players were not sure who to vote for in a discussion round, they all agreed to do rock, paper, scissors to decide.

For topic discussion, players spent a lot of time on the card that asked them to imagine a future scenario for women. Two boys of the group had the same idea of

women not having to give birth anymore. The explanation they gave for such an answer was unexpectedly nuanced: they felt like a lot of gender problems came from society thinking motherhood was a woman's responsibility. Another topic that got a lot of attention was the beauty industry. While a boy agreed that the beauty industry was upholding unhealthy beauty standards, the girls argued that that was the whole point of a brand's marketing. Since the girls were professional communication students, they expressed their understanding for such practice, but at the same time acknowledged that it was harmful, and there were better ways to market their products in the future. This discussion stood in contrast with the one in the second user test session, where both girls agreed that the beauty industry was perpetuating harmful body images and they felt like they were pressured into putting on makeup.

Session 4:



Figure 4.4: User test session 4

The fourth session took place in a self-study room at Keio University on May 23rd 2022. The facilitator joined the game with 2 male participants - one Japanese and the other Brazilian, aged over 30. They had some experiences with card games, thus taking in the rules quickly. Once again, the atmosphere went back to being less competitive and more good-natured.

While talking about the beauty industry, the Brazilian player shared his perspective on how beauty standards were different in his country, but regardless it

played the same role of forcing an unhealthy body image on women. Regarding unpaid housework, the Japanese player brought up a remarkable point about stay-at-home dads, suggesting that the issue could expand beyond gender inequality and encompass social welfare policy as well. Additionally, he commented on how he did not realise some issues women faced could also affect men negatively until he made such a connection.

Another notable interaction was when the future scenario card came up, one player suggested women could do away with giving birth in the future - just like the two boys in the previous sessions. Lastly, there was some expressed concern over using the command cards, because the player felt bad about using them to intercept their friend's play. This stood as a contrast to the previous session where players had no qualm about using such a mean.

Session 5:



Figure 4.5: User test session 5

This session also took place in a self-study room at Keio University on May 25th 2022. This time, the game included 2 female participants. One was from Indonesia and one from China, their age ranging from 23 to over 30. The instruction process did not take long and a stable gameplay was achieved after a few minutes in the game.

For this session, regarding the beauty industry topic, a player expressed that due to her age, she did not feel much pressure to conform to the beauty standards anymore. However, after hearing the discussion from other players, she could understand how it must feel like for younger people. Another notable point came up in the product design topic, once again female players shared their unpleasant personal experience at electronic stores, and the medical field's negligence on female user tests was also brought up. Later on, during the topic of online activism, players conveyed their dislike for how performative it felt. Such a view was different from the first session, where players reacted positively to online activism. It should be considered that participants in this session were involved in real-life activism, whereas the ones in the first session were more involved in online platform campaigns.

Regarding the general atmosphere, players were not particularly competitive. They remarked on how it was quite hard to make a vote when everyone had the same idea. More often than not, a player would be willing to concede a Glass Breaker to their friend, if no one could decide who to vote for.

Session 6:

The last session was special in the way that it was the only one played in an one-on-one format. The session was conducted on June 1st 2022 at an outdoor cafe. Apart from the facilitator, the other player was an Arab girl, with age ranging from 18 - 25. Since there were only two people, the instruction process was much faster.

For the discussion, the topic that garnered the most attention was still product design, where the mention of unpleasant experiences while shopping for electronic devices was once again brought up. However, other cards also inspired talk that went beyond the original prompts, showing how interconnected many issues were. Especially, when the future scenario card came up, the player only stated that she hoped in the future, women in Arab countries could finally have full equal rights.

The answer stood out from other discussion so far because in previous sessions, most players gave thoughts on incredibly futuristic scenarios. However, the reality was that there were countries where women still had yet to attain basic human rights. For citizens of those countries, their hope for the future was neither grand nor innovative, but fundamentally essential: gender equality.

GEDU monthly meeting and KMD Plenary showcase

The GEDU monthly meeting and KMD Plenary showcase are both events at Keio University for students to meet up and exchange their research updates, with the former being available only between Global Education sub-project members, and the latter involving the whole School of Media Design. There are no user tests conducted in both of these events, the only purpose is to showcase the cards to a broader audience and give a brief introduction about the research. The GEDU meeting was on May 14th 2022, while the KMD Plenary showcase was on June 10th 2022, both were held on the university's campus.



Figure 4.6: The GEDU monthly meeting and KMD Plenary showcase

Overall, people were drawn to the cards' colourful palette and playful illustration. It sparked enough interest that most people would sit down and listen to the explanation about the gameplay. A brief demonstration on the Discuss and Vote card was held between 3 professors and 2 students. The discussion, while brief, sparked a lot of different ideas and personal experience sharing. The topic of female-user negligence in product design was able to inspire reflection on all participants' daily life, leading to consideration beyond gender issues such as body type, nationality, etc. . .

4.3. Evaluation of final prototype

4.3.1 Survey result and discussion

As discussed above, the surveys handed out before and after the user test applied Duncan (2011)’s survey on gender consciousness and cognitive centrality to measure the change in gender consciousness of participants. The two surveys share the same set of questions, with an exception for the post-user-test one having extra questions on cards preference and gameplay feedback (Appendix C). The result of the survey is as followed:

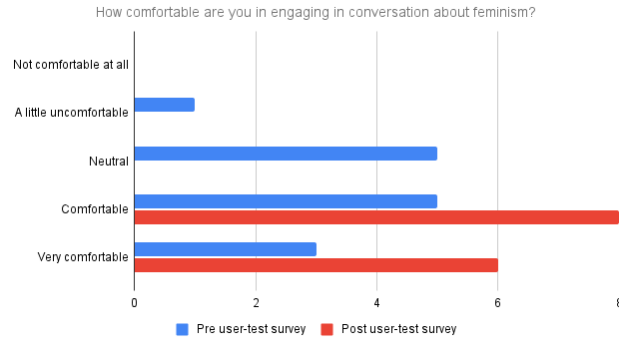


Figure 4.7: Pre and post-user test surveys comparison on degree of comfort while talking about feminism

Regarding the question on the degree of comfort that players experience while engaging in feminist conversation, there is a substantial rise in comfort level after playing the game. Some participants, who were either neutral or a little uncomfortable before, now chose comfortable or very comfortable. This is also reflected in the observation of the user tests, where players contributed considerably to the discussion and voiced out many different opinions. Notably, in the third session, there was one boy who showed up unexpectedly to the gathering. He thought it was a normal card game at first and decided to join his friends. He was quite surprised at the content and shy to speak up at first, but as the game unfolded, he started to participate more in the discussion, and became more involved in the flow of the gameplay.

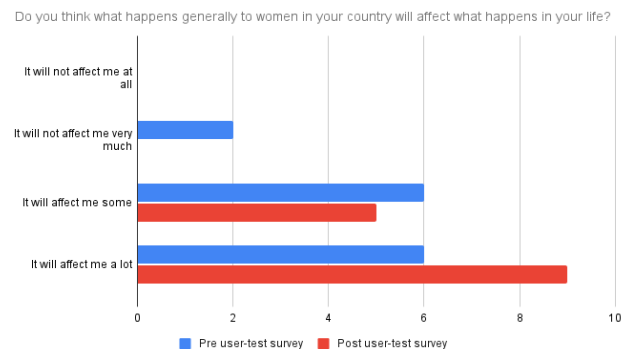


Figure 4.8: Pre and post-user test surveys comparison on the Common fate component

The next question concerns the common fate component in Gurin’s Gender Consciousness theory. Participants were expected to recognise that what happened to women would also explain what happened in their own life. The result supports such expectation, with more participants choosing the “It will affect me a lot” option after the user test (from 42.9% to 64.3%), and no one chose “It will not affect me very much” anymore. The user tests justify this increase, as players were prompted to look at events in their life through a gendered lens, specifically through topics such as product design for female users, beauty standards or the gender bias conveyed in the pair cards. Specifically, in the showcase event at KMD, there were participants who realised the lack of consideration for female physique in product design also affected men who did not fit into the stereotypical male body standards. Such discussion prompted much reflection on how one approached the design process. In addition, many personal experiences shared in the user tests overlap, helping female participants realise a lot of their struggles are the same.

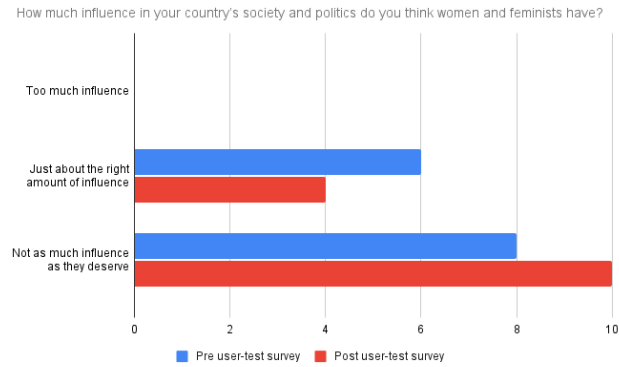


Figure 4.9: Pre and post-user test surveys comparison on the Power discontent component

This question focuses on the power discontent component, gauging participants' awareness on women's lack of power and influence in society. There is a notable improvement in this regard, as more people choose the "Not as much influence as they deserve" after the user test. Per the observation during each playthrough, participants got to listen to the experience of others and took in new perspectives. From beauty standards across cultures to the status of women in different countries, by taking in each other's stories, participants had the chance to evaluate what they already knew and compared it with these new knowledge they just acquired. Therefore, those discussions contribute to their understanding of the situations women have to face in society.

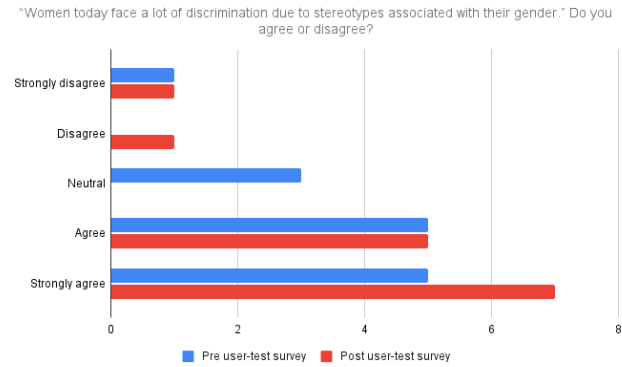


Figure 4.10: Pre and post-user test surveys comparison on the System blame component

For the system blame component, which is the acceptance that women's lack of power is unjust and caused by systematic forces, the responses are more varied. While the number of people who choose "Strongly agree" with the prompt question increases, there are still two players who chose "Disagree" and "Strongly Disagree". Specifically, there is one person who picked "Agree" at first, but then changed their answer to "Disagree". When interviewed, their explanation was that through playing the game, they realised that a lot of problems women faced affected men negatively as well, so they found the question prompt lacking. Therefore, even though it is a "Disagree" option, the reasoning behind it highlights a post-game nuanced understanding of how everyone could suffer under gender inequalities.

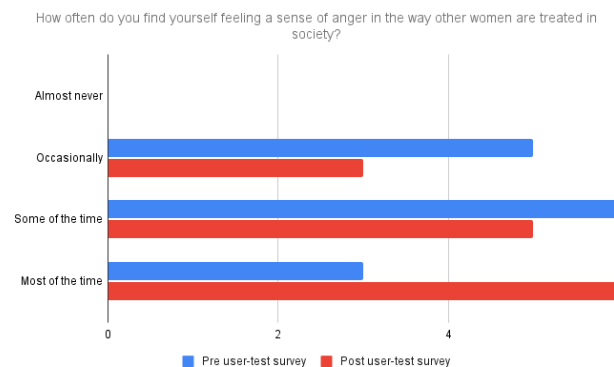


Figure 4.11: Pre and post-user test surveys comparison on the Collective orientation component

The final question focuses on the collective orientation component, asking participants to rate how often they feel a sense of anger in the way women are treated in society. From there, the players' sense of solidarity could be estimated. In this case, there is a notable increase in people picking "Most of the time" after playing the game. In the user test, female players share many personal experiences with each other. Especially when it comes to the topic of higher education for women, many participants talked about how a family member or an acquaintance persuaded them to not advance their study. That discussion always led to other female players expressing their sympathy and scolding at the person who said such a discouraging statement to their friend. For male players, while discussing the topic of beauty standards or seeing the terms on the Command card, they also provide a surprisingly deep and meaningful discussion, showing that they understand and acknowledge the injustices women face more than they might let out.

With three components improving on their scores and one component getting mixed responses, albeit ones with a positive context, it means the level of gender consciousness in all participants increased after playing the game. At the same time, observation from each user test session supports that a casual, relaxed atmosphere to discuss feminist issues have been achieved. Players' interaction with the text content also improves considerably from the previous alpha version test.

The discussion lasted much longer and generated diverse opinions as well as personal experience sharing. Despite the competitive factor within the gameplay, all sessions went on good-naturedly, with players even offering support to each other.

4.3.2 Evaluation of the cards' goals and final outcome

As discussed above, each card in the deck plays a different role that fulfils specific objectives. The result of how the cards perform in gameplay setting is as followed:

- **Glass Ceiling:** with its content focusing on the injustices women face around the world, the Glass Ceiling card aims to raise awareness and let players experience the frustration of being obstructed from advancing. As a result, players did exclaim in regret and surprise whenever they got the card. A player in the first session, after reading what was written on her Glass Ceiling, complained that the information really made her upset at the state of the world women had to live in. The card achieves its goal.

- **Glass Breaker:** for this card, its objective lies in letting players relate their joy and success to feminist causes through popular quotes from prominent female models. It fulfils such a purpose since players enjoy collecting these cards. A feeling of empowerment and solidarity also appears between female participants, as they are willing to leave the card to another who they think needs it more.

- **Command:** for a card that aims to raise knowledge on feminist terms and foster players' interaction, the command card achieves its purpose. The players called out the term on the card loudly as they played it, and made joking remarks on the command that they gave their friends (e.g: "I will now show my toxic masculinity and steal your card!"). Additionally, participants enjoyed using the cards to interact with others in the game, creating a harmonious gameplay feeling.

- **Discuss and Vote:** with the goal of encouraging people to look at daily events through gendered lenses via meaningful discussion and reflection, these cards prove to be effective. The discussion evoked by the prompts last from 15 to 20 minutes, with participants providing many insights and personal opinions. Players are also able to relate the problems to their real life experience, at the same time offering and receiving support from everyone else.

- **Pair:** as the card that aims to highlight gender bias, the pair cards' design creates intrigue and interest in players. However, when it comes to relevance in

the overall gameplay, these cards are still lacking. A player in the second user test expressed that she would like to experience the moment when she collected two cards of the same colour and saw the gender bias presented, but due to there being too few copies, she was not able to collect them. Additionally, since there was no actual reward for getting a correct pair, players did not interact with these cards as much as expected.

4.3.3 Players' extra comments and feedback

At the end of the post-user-test survey, participants are asked about their most favourite and least favourite card. For the most favourite card, it is the Discuss and Vote. Some comments about it are as followed:

- It is hard in the beginning to talk about the topic comfortably but after the second topic it becomes easier.
- Discuss and vote because it gives me a chance to think about the problem presented on the card, and to relate to things happening in my life. Also, it gives me a chance to listen to others' stories, and relate that to my own life.
- The discussion cards bring up a lot of interesting topics, it's fun and eye-opening to talk about it with other people.

Additionally, there are suggestions to improve the card in the future. For example, the discussion question could be phrased in a more open way, allowing all types of answer rather than making it argumentative and requiring players to choose a side. On the other hand, the least favourite card is the Pair one. The comments express fondness for the design, but not so much for the function:

- The pair cards. Although the gender stereotypes presented on the cards were inspiring, I feel its role in the game is minor. It'll be better if there are more game mechanics associated with this card.
- The pair cards can have more significance.
- The pair cards are a bit hard to understand.

One suggestion to improve this card includes increased integration to the game's mechanics. For instance, if a player manages to collect the Pair cards, they would be rewarded with a card of their choice from the discarded pile. By doing so, players will be more interested in looking for the cards to collect, and it will play a bigger role in participants' chance of winning. Finally, the exit survey also includes a question asking participants if they could see themselves playing the game with other people. Out of 14 participants, 12 responded that they could see themselves playing it with family, friends or co-workers. One person commented that the game provides a good way to tease out how people might feel about certain issues. There is also another comment about wanting to play it with male friends to see their discussion. However, there are two remaining participants expressing doubt on the game's replayability. One of them states that since they already know about the discussion, they do not feel like they could be motivated to play the game again. The other one, while sharing the same sentiment with most of the other players, remarked that they would prefer to play it with people of the same political leaning only. Therefore, replayability and less argumentative discussion prompts are worth considering in future updates of the game.

4.3.4 Insights and further discussion

Visual design

Regarding visual design, the card game successfully attracts viewers' attention. The colour palette stands out and receives compliments from the players. Additionally, the illustration is able to enhance the text's presence, drawing people's eyes to the text it represents. Even though the characters are wearing Vietnamese traditional costume, the comic artstyle and simplification of details allow viewers to feel connected to the art, while the use of cute elements like the kittens hold their attention. All these artistic choices lead to participants spending more time examining the cards than in the alpha version test.

Content

Overall, the content fulfils the research's goals, but at the same time, there are still areas that could be improved.

1. Rules coherence

While the explanation time of the game's mechanics is shorter than the previous alpha version, players still need to play it for a little while to get into the rhythm. Over the course of the game, there are still questions about some cards' function. However, all user test sessions progressed successfully from beginning to the end. It might take some time to get the rules, but it does not hinder players' engagement and enjoyment.

2. Scope of discussion

Even with just one question prompt, it could generate nuanced and deep discussion that span out to other topics as well. This shows how interconnected gender issues are, and players have a great time unravelling the thread of conversation through their stories. Moreover, a person's opinion on a topic is greatly affected by their personal background and experience. For example, with the topic of the beauty industry alone, there are different stances between players. There are men who could recognise the negative impact that beauty standards have, but there are also women working in the industry and understanding why they take advantage of those standards. As such, there are many ways a discussion could go on with just one question prompt.

3. Solidarity and empowerment in experience sharing

One notable observation during the user test is that a lot of women's personal experiences are similar and overlapping. A female player could be sharing her story and the one sitting next to her would exclaim she was also in the same situation. Such interaction creates a sense of solidarity where women share their experience, recognise their struggles as one and examine it critically together. From that understanding comes unity and empowerment as the girls encourage and show support to each other.

4. Awareness and empathy

In the case of male players, going through the game helps them realise many problems women face affect them negatively as well. Additionally, they offer surprisingly deep and insightful opinions on matters such as unpaid housework and future scenarios. It shows that there are men who are more

aware of women's suffering than they might let out, evident by how the assessment on motherhood being shackled to women by society came up on two separate occasions by male players. Such awareness and empathy are able to shine through when they are given the chance to discuss.

Chapter 5

Conclusion

5.1. Main Findings

Throughout the design process, user tests and final data analysis, the Glass Ceiling card game has proven to be an effective tool to foster feminist conversation, creating a relaxed and casual atmosphere to discuss such issues. With lively illustration and eye-catching colour design, the game is an example of how important visual presentation is to people's engagement with text content.

At the same time, the conversation sparked by the game mechanics is nuanced and critical, yet the general atmosphere remains good-natured and supportive between participants. Female players are likely to seek cooperative interaction while playing the game. Moreover, it brings them a kind of catharsis to be able to discuss their experience and know that others share their feelings. For male players, getting them to look at events through a gendered lens lets them acknowledge the negative effect of gender inequalities in their life. The game also offers a platform for men to express their empathy and understanding of women's struggles, something that might not seem apparent under normal circumstances.

The findings support the hypothesis of the research that given the right environment, feminism is a conversation topic that young people could engage in easily. Through gamification, complex issues could be simplified and people of different backgrounds could find a common language to communicate with each other. The experience sharing and discussion that stem from the game creates a sense of solidarity and empowerment between players. At the same time, the knowledge and awareness they acquire could encourage further behavioural outcomes, and overall contribute positively to the progress of gender equality.

However, the game also suffers some problems in design such as replayability, rules coherence and Pair card's lack of significant function. Additionally, some

users still remark that the argumentative phrasing of the question prompts could affect the atmosphere negatively. Therefore, those are the important points that future research needs to focus on to bring about a better user experience.

5.2. Limitations

While the result of the user test is positive, the card game still possesses shortcomings that stem from various limitations. Firstly, feminism is a diverse topics and opinions are varied based on personal experience, nationality, occupation background, etc... Therefore, a single game could not cover every topic satisfactorily, even when it has been narrowed down in scope. Secondly, due to the limitation of language ability, the game is now only available in English, and thus inaccessible to a considerable portion of its target user. Thirdly, because of time restraint, there was no in-depth survey on players' cognitive bias before trying out the card game. While the gender consciousness questionnaire provided insights on participants' thought process on the topic of feminism, it is worth to note the possibility that people would not want to come across as discriminatory during the play test. Finally, there is no reliable method to determine the changes the game could inspire players in the long run. Even though the discussion in the game is productive and insightful, it would be within the interest of the research to be able to determine the changes in players' action later.

5.3. Future Work

Further research would focus on improving its current design problems. A proper rule sheet and introduction booklet are greatly necessary for rules coherence and accessibility. Different ways of presenting the question prompts and the tone it conveys would also be considered. Moreover, it is within the interest of future research to translate the cards' content into different languages, so people who are not fluent in English could also play the game and join the discussion. It would be valuable to assess how the meaning and context of the cards would translate into a different language as well.

References

- [1] Geordan Shannon, Melanie Jansen, Kate Williams, Carlos Cáceres, Angelica Motta, Aloyce Odhiambo, Alie Eleveld, and Jenevieve Mannell. Gender equality in science, medicine, and global health: where are we at and why does it matter? *The Lancet*, 393(10171):560–569, 2019.
- [2] Gender mainstreaming, united nations. United Nations n.d. URL: <https://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>.
- [3] Anju Malhotra, Sidney Ruth Schuler, and Carol Boender. Measuring women’s empowerment as a variable in international development. In *background paper prepared for the World Bank Workshop on Poverty and Gender: New Perspectives*, volume 28. The World Bank Washington, DC, 2002.
- [4] Gita Sen, Asha George, Pirooska Ostlin, and Silvina Ramos. Unequal, unfair, ineffective and inefficient gender inequity in health: Why it exists and how we can change it. 2007.
- [5] Sarah Hawkes and Kent Buse. Gender and global health: evidence, policy, and inconvenient truths. *The Lancet*, 381(9879):1783–1787, 2013.
- [6] The world’s women 2020: Trends and statistics, united nation. United Nations 2020, 2020. URL: <https://www.un.org/en/desa/world%E2%80%99s-women-2020>.
- [7] UN ESCAP. Asia and the pacific sdg progress report 2022: widening disparities amid covid-19. 2022.
- [8] Andrew Morrison and Andrew R Morrison. Gender equality, poverty and economic growth. 2007.

- [9] Rosalind Delmar. What is feminism? In *Theorizing feminism*, pages 5–28. Routledge, 2018.
- [10] Jaime Loke, Ingrid Bachmann, and Dustin Harp. Co-opting feminism: media discourses on political women and the definition of a (new) feminist identity. *Media, Culture & Society*, 39(1):122–132, 2017.
- [11] Patricia Gurin, Arthur H Miller, and Gerald Gurin. Stratum identification and consciousness. *Social Psychology Quarterly*, pages 30–47, 1980.
- [12] Laura Bierema. The role of gender consciousness in challenging patriarchy. *International Journal of Lifelong Education*, 22(1):3–12, 2003.
- [13] Caroline Sweetman. Introduction, feminist solidarity and collective action. *Gender & Development*, 21(2):217–229, 2013.
- [14] Sandra Lee Bartky. *Sympathy and solidarity: And other essays*. Rowman & Littlefield Publishers, 2002.
- [15] Nanette Page and Cheryl E Czuba. Empowerment: What is it. *Journal of extension*, 37(5):1–5, 1999.
- [16] Angela High-Pippert and John Comer. Female empowerment: The influence of women representing women. *Women & Politics*, 19(4):53–66, 1998.
- [17] Jennifer Earl, Thomas V Maher, and Thomas Elliott. Youth, activism, and social movements. *Sociology Compass*, 11(4):e12465, 2017.
- [18] Vanja Dergić, Iris Dähnke, Nadya Nartova, Anastasiia Shilova, Raquel Matos, and Alexandra Carneiro. When visibility becomes political: visibility and stigmatisation of young people. *Journal of Youth Studies*, pages 1–17, 2022.
- [19] Irene Bloemraad and Christine Trost. It’s a family affair: Intergenerational mobilization in the spring 2006 protests. *American Behavioral Scientist*, 52(4):507–532, 2008.
- [20] Matt Henn and Nick Foard. Social differentiation in young people’s political participation: the impact of social and educational factors on youth political engagement in britain. *Journal of Youth Studies*, 17(3):360–380, 2014.

- [21] Erik Andersson. Situational political socialization: a normative approach to young people's adoption and acquisition of political preferences and skills. *Journal of Youth Studies*, 18(8):967–983, 2015.
- [22] Andrés Francisco Aparicio, Francisco Luis Gutiérrez Vela, José Luis González Sánchez, and José Luis Isla Montes. Analysis and application of gamification. In *Proceedings of the 13th International Conference on Interacción Persona-Ordenador*, pages 1–2, 2012.
- [23] William O Brown. The nature of race consciousness. *Social Forces*, 10(1):90–97, 1931.
- [24] Paula D McClain, Jessica D Johnson Carew, Eugene Walton Jr, and Candis S Watts. Group membership, group identity, and group consciousness: Measures of racial identity in american politics? *Annual Review of Political Science*, 12:471–485, 2009.
- [25] Dennis Chong and Reuel Rogers. Reviving group consciousness. *The politics of democratic inclusion*, pages 45–74, 2004.
- [26] Janet K Swim, Kathryn J Aikin, Wayne S Hall, and Barbara A Hunter. Sexism and racism: Old-fashioned and modern prejudices. *Journal of personality and social psychology*, 68(2):199, 1995.
- [27] Myra Marx Ferree and Beth Hess. *Controversy and coalition: The new feminist movement across four decades of change*. Routledge, 2002.
- [28] Lauren E Duncan. Motivation for collective action: Group consciousness as mediator of personality, life experiences, and women's rights activism. *Political Psychology*, 20(3):611–635, 1999.
- [29] Donna H Henderson-King and Abigail J Stewart. Women or feminists? assessing women's group consciousness. *Sex Roles*, 31(9):505–516, 1994.
- [30] Esther Burson and Erin B Godfrey. Intraminority solidarity: The role of critical consciousness. *European Journal of Social Psychology*, 50(6):1362–1377, 2020.

- [31] Michael J Hogan. Collaborative positive psychology: Solidarity, meaning, resilience, wellbeing, and virtue in a time of crisis. *International Review of Psychiatry*, 32(7-8):698–712, 2020.
- [32] Andrea Cornwall. Women’s empowerment: What works? *Journal of International Development*, 28(3):342–359, 2016.
- [33] Naila Kabeer. Resources, agency, achievements: Reflections on the measurement of women’s empowerment. *Development and change*, 30(3):435–464, 1999.
- [34] Gita Sen. Empowerment as an approach to poverty. *Human Development Report*, 97, 1997.
- [35] Meredith Leigh Weiss and Edward Aspinall. *Student activism in Asia: Between protest and powerlessness*. U of Minnesota Press, 2012.
- [36] Yunjeong Joo. Same despair but different hope: Youth activism in east asia and contentious politics. *Development and Society*, 47(3):401–422, 2018.
- [37] Su-lin Yu. Third-wave feminism: A transnational perspective. *Asian Journal of Women’s Studies*, 15(1):7–25, 2009.
- [38] Qi Wang. Young feminist activists in present-day china: A new feminist generation? *China Perspectives*, 2018(2018/3):59–68, 2018.
- [39] Jieun Lee and Euisol Jeong. The 4b movement: envisioning a feminist future with/in a non-reproductive future in korea. *Journal of Gender Studies*, 30(5):633–644, 2021.
- [40] Pippa Norris. Young people & political activism. *Harvard University, John F. Kennedy School of Government*.(32p), 2004.
- [41] Sidney G Tarrow. Power in movement: Social movements and contentious politics. 2011.
- [42] Jonna Koivisto and Juho Hamari. The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45:191–210, 2019.

- [43] De Liu, Xun Li, and Radhika Santhanam. Digital games and beyond: What happens when players compete? *Mis Quarterly*, pages 111–124, 2013.
- [44] Kai Huotari and Juho Hamari. A definition for gamification: anchoring gamification in the service marketing literature. *Electronic Markets*, 27(1):21–31, 2017.
- [45] De Liu, Radhika Santhanam, and Jane Webster. Toward meaningful engagement: a framework for design and research of gamified information systems. *MIS quarterly*, 41(4), 2017.
- [46] Thomas M Malaby. Beyond play: A new approach to games. *Games and culture*, 2(2):95–113, 2007.
- [47] Juho Hamari, Jonna Koivisto, and Harri Sarsa. Does gamification work?—a literature review of empirical studies on gamification. In *2014 47th Hawaii international conference on system sciences*, pages 3025–3034. Ieee, 2014.
- [48] Klaus Eisenack. A climate change board game for interdisciplinary communication and education. *Simulation & Gaming*, 44(2-3):328–348, 2013.
- [49] Bustle2018. This new "nasty woman" card game will have you your friends howling with laughter. Bustle2018. URL: <https://www.bustle.com/p/this-nasty-woman-card-game-will-make-you-your-friends-laugh-out-loud-10059112>.
- [50] Noboru Matsuda, Evelyn Yarzebinski, Victoria Keiser, Rohan Raizada, Gabriel J Stylianides, and Kenneth R Koedinger. Studying the effect of a competitive game show in a learning by teaching environment. *International Journal of Artificial Intelligence in Education*, 23(1):1–21, 2013.
- [51] In *Cambridge Dictionary*. URL: <https://dictionary.cambridge.org/dictionary/english/glass-ceiling?fbclid=IwAR0FkioCiv3T6C-2Ap1r4MPqMl4KT46w9BVJUCBuHHy09Di-0A9AcU4w1Xc>.
- [52] Gary N Powell. Reflections on the glass ceiling: Recent trends and future prospects. 1999.

- [53] Kalpana Pai and Sameer Vaidya. Glass ceiling: role of women in the corporate world. *Competitiveness review: An international business journal*, 2009.
- [54] Asian Development Bank. *Women in the Workforce: An Unmet Potential in Asia and the Pacific*. Asian Development Bank Mandaluyong City, Philippines, 2015.
- [55] Suzanne Scott. Fangirls in refrigerators: The politics of (in) visibility in comic book culture. *Transformative Works and Cultures*, 13(2013):1–20, 2013.
- [56] Terry Tomasek. Critical reading: Using reading prompts to promote active engagement with text. *International journal of teaching and learning in higher education*, 21(1):127–132, 2009.
- [57] Lorraine McDonald. Moving from reader response to critical reading: developing 10–11-year-olds’ ability as analytical readers of literary texts. *Literacy*, 38(1):17–25, 2004.
- [58] Gail E Tompkins. *Literacy for the Twenty-First Century: A Balanced Approach*. ERIC, 1997.
- [59] Bob Fecho. Why are you doing this?”: acknowledging and transcending threat in a critical inquiry classroom. *Research in the Teaching of English*, pages 9–37, 2001.
- [60] Inez L Ramsey. Effect of art style on children’s picture preferences. *The Journal of Educational Research*, 75(4):237–240, 1982.
- [61] Nilce Pereira. Book illustration as (intersemiotic) translation: Pictures translating words. *Meta: Journal des traducteurs/Meta: Translators’ Journal*, 53(1):104–119, 2008.
- [62] Ika Darnhofer. Using comic-style posters for engaging participants and for promoting researcher reflexivity. *International Journal of Qualitative Methods*, 17(1):1609406918804716, 2018.

- [63] Ruth Bartlett. Playing with meaning: using cartoons to disseminate research findings. *Qualitative Research*, 13(2):214–227, 2013.
- [64] Dendi Pratama, Winny Gunarti Widya Wardani, and Taufiq Akbar. Building contextual perception through background illustrations in visual novel with historical theme. *Journal of Arts and Humanities*, 7(10):53–64, 2018.
- [65] Edward James Diehl. Using cartoons to enhance engineering course concepts. In *2018 ASEE Annual Conference & Exposition*, 2018.
- [66] Nilgün Camgöz, Cengiz Yener, and Dilek Güvenç. Effects of hue, saturation, and brightness: Part 2: Attention. *Color Research & Application: Endorsed by Inter-Society Color Council, The Colour Group (Great Britain), Canadian Society for Color, Color Science Association of Japan, Dutch Society for the Study of Color, The Swedish Colour Centre Foundation, Colour Society of Australia, Centre Français de la Couleur*, 29(1):20–28, 2004.
- [67] Annie WY Ng and Alan HS Chan. Color associations among designers and non-designers for common warning and operation concepts. *Applied Ergonomics*, 70:18–25, 2018.

Appendices

A. Initial research data collection

Which gender do you identify as?

- a. Below 18 b. 18 - 25 c. 26 - 30 d. Over 30

What are your primary sources when it comes to knowledge on feminist history, current events or general information?

- a. Academic articles b. Internet forums / blogs
c. Non-profit organisations newsletter d. Other

How comfortable are you in engaging in conversation about feminism?

- a. Very comfortable in all situations b. Only comfortable if talking to like-minded individuals
c. Not comfortable at all

Who do you usually find yourself talking about such a topic with?

- a. Internet acquaintances / friends b. Family c. Co-workers d. Other

While broaching the topic of feminism, what do you think is the hardest aspect to overcome?

- a. People are not interested
b. People aggressively maintain different views
c. It is not really a common topic to randomly talk about d. Other

What do you think would help most to solve the aforementioned obstacles?

- a. A controlled environment where people could discuss and debate safely

- b. Good conversation starter to get in the topic
- c. Engaging content to talk about
- d. Other

B. Content of the Glass Ceiling cards

- On an average day, women globally spend about 3 times as many hours on unpaid domestic and care work as men.
- By 2019, women held only 28 percents of managerial positions globally - almost the same as in 1995.
- On average, women's clothing tends to have small pockets, or none. Men's clothes are designed for utility, women's clothes adhere to beauty standards gender roles.
- Within STEM, the higher you go, the less women there are. Of 215 Nobel laureates in physics by 2022, only 4 are women.
- According to CARE, an international NGO, of the world's one billion poorest people, women and girls make up 70 percents.

C. Content of the Glass Breaker cards

- "We liked to be known as the clever girls. When we decorated our hands with henna for holidays and weddings, we drew calculus and chemical formulae instead of flowers and butterflies." - **Malala Yousafzai (Nobel Peace Prize laureate).**
- "Muscles are fleeting. Bodies give out. But integrity, honor? The confidence to be oneself, to follow one's heart? The compassionate drive to help others, even at great risk? That's strength." - **Majorie Liu (NY Times best-selling author comic book writer).**
- "Women live in male systems, know male rules, speak male language when around men, etc. But what do men really know about women? Only screwed up myths concocted to perpetuate the power imbalance." - **Cherríe Moraga (writer, feminist activist, poet, essayist).**

- “Remember that consciousness is power. Consciousness is education and knowledge. Consciousness is becoming aware. It is the perfect vehicle for students.” - **Yuri Kochiyama (politician civil rights activist)**.
- “Unbinding my feet I clean out a thousand years of poison. With heated heart arouse all women’s spirits. Alas, this delicate kerchief here. Is half stained with blood, and half with tears.” - **Qiu Jin (revolutionary, feminist, and writer)**.
- “When feminism does not explicitly oppose racism, and when anti-racism does not incorporate opposition to patriarchy, race and gender politics often end up being antagonistic to each other, and both interests lose.” - **Kimberly Crenshaw (lawyer, civil rights advocate, philosopher)**.
- “Patriarchy is as current as Brexit, Donald Trump, nationalist political parties. It is as au courant as hedge funds, weaponized drones. Patriarchy is not old-fashioned; it is as hip as football millionaires Silicon Valley start-ups.” - **Cynthia Enloe (feminist writer, theorist, and professor)**.
- “It’s very important for feminism to tell our daughters that they should be strong. But also to tell our sons that they can be vulnerable, to have these characters on screen that are not perfectly masculine cowboys that never fail, for our boys to change their psyche as well.” - **Chloe Zhao (second woman to ever win an Oscar for directing)**.
- “I do not think I ever opened a book in my life which had not something to say upon woman’s inconstancy. Songs and proverbs, all talk of woman’s fickleness. But perhaps you will say, these were all written by men.” - **Jane Austen (novelist)**.
- “I am not free while any woman is unfree, even when her shackles are very different from my own.” - **Audre Lorde (writer, feminist)**.

D. Content of the Command cards

- ! Fridged !: Condemn your friend to the fate of a female character whose main purpose is to be harmed so the male character could be motivated! Take one Glass Breaker from a random player.

- ! Mansplained !: Behold! Unsolicited opinions offered in the most condescending manner possible! Prevent a random player from participating in one discuss and vote round. You can play this at any time.
- ! Toxic Masculinity Attack !: Beware of traditional masculine norms that can be harmful to men, women, and society overall! Steal a random card from the next player.
- ! Gaslight Gatekeep Girlboss !: Embody the toxic type of feminists that go on to break the glass ceiling, while leaving other less privileged women to clean up the glass. Shuffle the deck.
- ! Solidarity !: Stand with other women, work together with care and respect for a brighter future for us all! Stop the action of other card except for Ceiling (either directed at yourself or at other player). You can play this any time.

E. Content of the Discuss and Vote cards

- Nilda Rimonte, director of Everywoman's Shelter in Los Angeles, points out that in the Asian community, saving the honor of the family from shame is a priority. Unfortunately, this priority tends to be interpreted as demanding women not to scream, rather than demanding men not to hit. **What problem is the statement identifying? For whom is this topic important and why?**
- For decades, car crash-test dummies were based only around the male body. A study by the US' National Highway Traffic Safety Administration reported that female driver or front passenger, even with seat belt, is 17 percents more likely than a male to be killed when a crash takes place. **Can you think of other examples (in product, media, etc) where lack of consideration for women could result in inconvenience, or even great harm to them?**
- The beauty industry has been criticized for perpetuating narrow and restrictive definitions of beauty, fueling women's insecurity to promote unhealthy body image obsessions. However, other women have reclaimed beauty practices as enjoyable and self-chosen feminine pursuits, viewing it as a new kind of femininity that blends with a feminist consciousness. **Which idea do you agree with? Explain your choice.**

- The year is 3000, women in.....could finally..... **Please fill in the blank with a scenario of your choice (e.g: women in [a country] or [media], [industry], [service] could finally.... etc. Explain your idea further if possible.**
- Every day individuals spend time cooking, cleaning and caring for children and the elderly. Unrecognized and undervalued, this invisible labor becomes mostly mothers' and daughters' responsibility. Despite their importance, unpaid care work is commonly left out of policy agendas, as well as GDP calculation. Thus, women's contribution to the economy is seldom counted as productive. **Do you think that observation is valid? Why?**
- While online activism may kindle community among feminists, in virtual space it is difficult to decipher whether participants are genuine. People engage in activism spurred in part by moral balance. So participating in a small way - through spreading a hashtag, for example - may liberate their consciousness and make them less likely to engage in more involved, real-life forms of activism. **Are you for or against such opinion? Defend your position.**

F. Pre-user test survey

Which gender do you identify as?

- a. Male b. Female c. Prefer not to say

Which age group do you belong in?

- a. Below 18 b. 18 - 25 c. 26 - 30 d. Over 30

How comfortable are you in engaging in conversation about feminism?

Not comfortable at all - A little uncomfortable - Neutral - Comfortable - Very comfortable

Do you think what happens generally to women in your country will affect what happens in your life? (common fate)

- a. it will not affect me at all b. it will not affect me very much
c. it will affect me some d. it will affect me a lot

How much influence in your country's society and politics do you think women and feminists have? (power discontent)

too much influence b. just about the right amount of influence

c. not as much influence as they deserve

"Women today face a lot of discrimination due to stereotypes associated with their gender." Do you agree or disagree? (5 point scale / system blame)

Strongly disagree - Disagree - Neither agree nor disagree- Agree - Strongly agree

How often do you find yourself feeling a sense of pride or joy in the accomplishment of other women? / How often do you find yourself feeling a sense of anger in the way other women are treated in society? (collective orientation)

Almost never - Occasionally - Some of the time - Most of the time

G. Post-user test survey

Which gender do you identify as?

a. Male b. Female c. Prefer not to say

Which age group do you belong in?

a. Below 18 b. 18 - 25 c. 26 - 30 d. Over 30

How comfortable are you in engaging in conversation about feminism?

Not comfortable at all - A little uncomfortable - Neutral - Comfortable - Very comfortable

Do you think what happens generally to women in your country will affect what happens in your life? (common fate)

a. it will not affect me at all b. it will not affect me very much

c. it will affect me some d. it will affect me a lot

How much influence in your country's society and politics do you think women and feminists have? (power discontent)

too much influence b. just about the right amount of influence

c. not as much influence as they deserve

“Women today face a lot of discrimination due to stereotypes associated with their gender.” Do you agree or disagree? (5 point scale / system blame)

Strongly disagree - Disagree - Neither agree nor disagree- Agree - Strongly agree

How often do you find yourself feeling a sense of pride or joy in the accomplishment of other women? / How often do you find yourself feeling a sense of anger in the way other women are treated in society? (collective orientation)

Almost never - Occasionally - Some of the time - Most of the time

Which card do you enjoy the most? What is the reason?

Which card do you enjoy the least? What is the reason?

Can you see yourself playing this card deck with other people? If yes, who? (friend, family, co-workers, etc