



IMPROVING THE INCLUSION OF TRANS AND GENDER DIVERSE PEOPLE IN VIDEO GAMES THROUGH CHARACTER CUSTOMIZATION



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ABSTRACT

The objective of this research paper is to identify how the experience of character customization can be improved for trans and gender diverse individuals.

Diversity and inclusion has become an important topic in today's digital games. Though, games containing character customization often only offer stereotypical 'male' and 'female' options, with little room for gender-affirming customization choices. With character customization being also a tool for trans and gender diverse people to discover and express themselves, this paper aims to identify the features that are currently amiss for this group of people to feel included.

The surveys show that respondents need more diverse body types, including trans body options, as well as non-genderlocked cosmetic features. Special remarks were made on gender inclusive language and pronoun choices.

PREFACE

I would like to thank Ing. Marco Strijks MEd. (he/him), Impact Developer / Liaison Officer for Diversity & Inclusion and Ambassador of the Th!nk with PRIDE network, who provided consistent professional guidance and data on LGBTQ+ topics during this research. I was able to gain invaluable professional experiences during this time.

The Th!nk with PRIDE network welcomed me and furthered my research in meetings as well as webinars.

I would also like thank Mark Schipper for his advice and guidance during prototype development, as well as for motivating and reassuring me in my work in times of uncertainty. I am as well thankful to Ruben Sinkeldam for providing me with helpful recommendations for writing this paper.

Additionally, I would like to thank the other graduation students for sharing information and thoughts, as well as lifting the mood.

Furthermore, I thank my friend Noel Gotthardt for reviewing my paper, as well as providing invaluable sources for my research from their professional medical point of view, and for keeping me company during writing.

The author, Devin Alan Paul, has written this research paper as their graduation thesis. The author is a non-binary trans person studying Creative Media and Game Technologies at Saxion University of Applied Sciences.

GLOSSARY

Cisgender

A gender description for when someone's sex assigned at birth and gender identity correspond in the expected way (e.g., someone who was assigned male at birth, and identifies as a man). A simple way to think about it is if a person is not transgender, they are cisgender. The word cisgender can also be shortened to "cis."

Cisnormativity

The assumption, in individuals and in institutions, that everyone is cisgender, and that cisgender identities are superior to trans* identities and people. Leads to invisibility of non-cisgender identities.

Coming out

The process by which one accepts and/or comes to identify one's own sexuality or gender identity (to "come out" to oneself). 2 verb : the process by which one shares one's sexuality or gender identity with others.

Gender binary

The idea that there are only two genders and that every person is one of those two.

Gender expression

The external display of one's gender, through a combination of clothing, grooming, demeanor, social behavior, and other factors, generally made sense of on scales of masculinity and femininity. Also referred to as "gender presentation."

Gender identity

The internal perception of an one's gender, and how they label themselves, based on how much they align or don't align with what they understand their options for gender to be. Often conflated with biological sex, or sex assigned at birth.

Gender normative / gender straight

someone whose gender presentation, whether by nature or by choice, aligns with society's gender-based expectations.

Genderqueer/ Gender diverse

A gender identity label often used by people who do not identify with the binary of man/woman. 2 *adj.* : an umbrella term for many gender non-conforming or non-binary identities (e.g., agender, bigender, genderfluid).

Trans*

An umbrella term covering a range of identities that transgress socially-defined gender norms. Trans with an asterisk is often used in written forms (not spoken) to indicate that you are referring to the larger group nature of the term, and specifically including non-binary identities, as well as transgender men (transmen) and transgender women (transwomen).

Transgender

A gender description for someone who has transitioned (or is transitioning) from living as one gender to another. An umbrella term for anyone whose sex assigned at birth and gender identity do not correspond in the expected way (e.g., someone who was assigned male at birth, but does not identify as a man).

Transition / transitioning

Referring to the process of a transgender person changing aspects of themselves (e.g., their appearance, name, pronouns, or making physical changes to their body) to be more congruent with the gender they know themselves to be (as opposed to the gender they lived as pre-transitioning).

(Comprehensive* List of LGBTQ+ Vocabulary Definitions - It's Pronounced Metrosexual, 2021)

CONTENTS

| | |
|---|----|
| Abstract..... | 2 |
| Preface | 3 |
| Glossary | 4 |
| 1. Introduction..... | 7 |
| 1.1 Reason | 7 |
| 1.2 Objective Of The Assignment | 8 |
| 1.3 Company Outline..... | 8 |
| 2. Preliminary Problem Definition | 9 |
| 2.1 Understanding the Impact..... | 9 |
| 2.2 Connection to the Trans/ Gender diverse community | 10 |
| 2.3 The Problem | 10 |
| 3. Theory..... | 11 |
| 3.1 Market Analysis..... | 12 |
| 4. Problem Definition | 13 |
| 5. Main and Sub Questions | 14 |
| 5.1 Main Question | 14 |
| 5.2 Sub Questions | 14 |
| 6. Methodology..... | 15 |
| 6.1 Scope | 17 |
| 7. Results..... | 18 |
| 7.1 What features should be included in the prototype to improve the inclusion of trans and gender diverse people?..... | 18 |
| 7.2 Which tools can be used to create the character customization prototype?..... | 19 |
| 7.3 How can a prototype that is catered towards a more diverse audience be constructed?..... | 19 |
| 7.4 How to design a clear and easily readable design guide?..... | 21 |
| 8. Conclusion | 23 |
| 9. Discussion and Recommendations..... | 24 |
| Bibliography | 25 |
| Appendices | 26 |
| Appendix A | 26 |
| Appendix B..... | 29 |
| Appendix C..... | 39 |

1. INTRODUCTION

Nowadays, gender diversity has become a widely discussed topic. Even though awareness for trans and gender diverse people is growing, they feel that accurate representation and inclusion in modern media, such as video games, is barely existent (Aller, 2018). Diversity, including trans topics and gender diversity, is important to players these days, especially those who belong to marginalized groups (Ngoc, 2020/21). Trans and gender diverse people ask for more inclusive content in video games as they not only seek representation but as well a tool to immerse and find themselves in today's games to explore and express their gender identity (Aller, 2018).

This paper researches how to improve the accurate representation and inclusion of trans and gender diverse people in video games through the usage of character creation/ customization.

1.1 REASON

Trans and gender diverse people often get no or false representation in modern media (Jobe, 2013) & (Simmons, 2018). The visibility for trans and gender diverse people has effects on serious real-life aspects, such as mental health (Rabasco, A., Andover, M., 2021). The importance for the inclusion of trans and gender diverse people in modern media, and therefore the importance of this assignment, lays in the protection of the mental wellbeing of this particular group. Discrimination of marginalized groups includes and is defined by inequality. Studies suggest that victimization and discrimination are strong predictors of suicidal ideation severity within the population of trans and gender diverse people, and the factors of victimization, discrimination, and trans, gender diverse (TGD) community connectedness impact change in SI severity across time. These findings provide evidence for the importance of anti-discrimination laws that apply to TGD people, as well as the utility of connecting TGD clients to the TGD community. (Rabasco, A., Andover, M., 2021)

Equality in the form of inclusion is therefore an essential factor.

Additionally, there is a personal motivation, since the author is a non-binary trans person, and has been aware of the lack of representation and/ or misrepresentation of different genders in video games for years.

1.2 OBJECTIVE OF THE ASSIGNMENT

While there is a lack of accurate gender diverse representation in modern media as a whole (Jobe, 2013) & (Simmons, 2018), this assignment focuses on how to increase gender inclusivity in video games. The gender diverse people as clients of this assignment seek to find representation in video games.

The product being developed is a guide for character customization and can be used by the gaming industry during game development. Templates will guide game designers and set a framework on how to implement gender inclusive content in video games.

Feedback and guidance during this research is provided through Ing. Marco Strijks MEd. (he/him), Impact Developer / Liaison Officer for Diversity & Inclusion and Ambassador of the Th!nk with PRIDE network¹.

1.3 COMPANY OUTLINE

As this is a free written assignment, there is no company present.

However, this paper is written in close cooperation with Ing. Marco Strijks MEd. (he/him). Marco Strijks is Impact Developer / Liaison Officer for Diversity & Inclusion and Ambassador of the Th!nk With PRIDE network². Strijks also works with the Workplace Pride Foundation³ and several organizations who see the impact of an inclusive environment.

Moreover, Th!nk With PRIDE as a community of LGBTQIA+ people in various professional fields is furthering and supporting this research.

¹ <https://www.facebook.com/PrideSaxion>

² <https://www.facebook.com/PrideSaxion>

³ <https://workplacepride.org>

2. PRELIMINARY PROBLEM DEFINITION

Gender diverse people have expressed their problem with not finding fitting representation in video games (Aller, 2018). That was proven true especially for non-binary genders but also for many males and females, as can be seen in figure 1 (See [appendix A](#) for detailed description).



Devin Alan Paul (2021). [Gender In Video Games]. Source: *Twitter*

2.1 UNDERSTANDING THE IMPACT

Video games are a billion-dollar business and have been for many years. In 2020, the revenue from the worldwide PC gaming market was estimated at almost 37 billion U.S. dollars, while the mobile gaming market generated an estimated income of over 77 billion U.S. dollars (Statista Research Department, 2021).

Since March 2020 more gamers entered the market. Germany saw 25% increase with 6.5M more gamers; U.K. saw 50% increased with 8.6M more gamers; S. Korea saw 34% increase with 9.4M more gamers; and US saw 28% increase with 28M more gamers (Facebook Gaming, FBIQ, 2021).

This makes the gaming industry one of the biggest, fastest growing markets worldwide.

With the rise of educational games, it's been proven that games have in fact impact on society and human behavior (Baker, 2014).

But also, games like *Tell Me Why*, developed by DONTNOD Entertainment (2020), include and handle topics such as transgenderism and show that games also have an effect on the visibility, meaning awareness and recognition of marginalized groups such as trans and gender diverse people.

Florent Guillaume (he/him), Game Director at DONTNOD Entertainment, experienced that “accurate and honest” representation of trans characters in *Tell Me Why* helped trans and gender diverse people being seen and feel included in the game. Furthermore, Guillaume expressed how the “experience of walking in a trans persons shoes” helped cisgender people, such as relatives, and friends of trans individuals understand the topic of transgenderism, as well as reflecting upon their own habits and awareness toward gender (Guillaume F., personal communication, 2021).

2.2 CONNECTION TO THE TRANS/ GENDER DIVERSE COMMUNITY

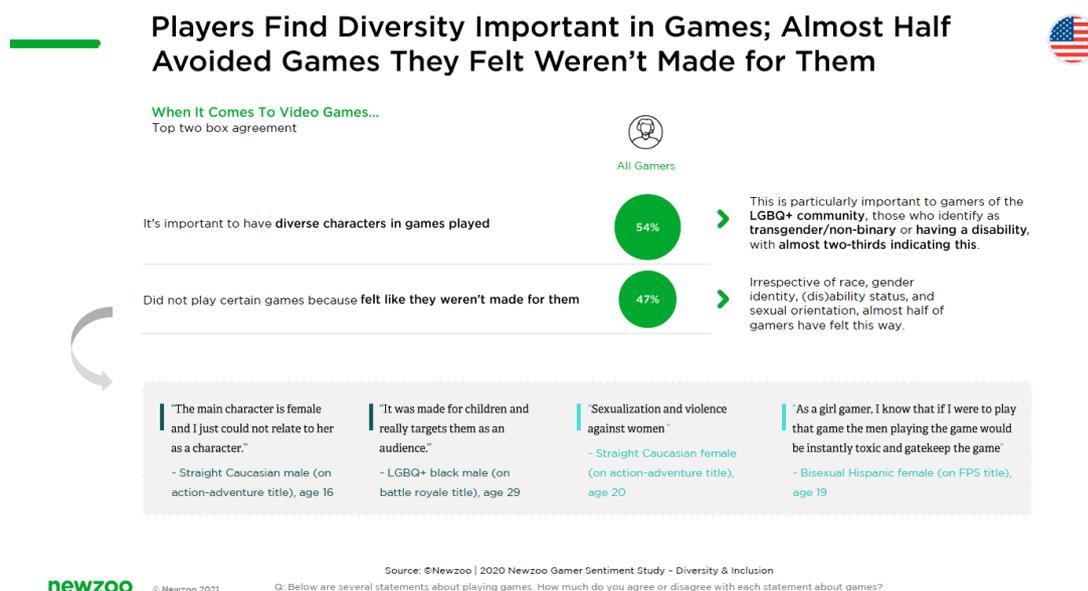
As previously stated, the gaming market is large and fast growing (Facebook Gaming, FBIQ, 2021). Which brings up the question of how big the target group of trans and gender diverse gamers currently is. Referring to the issue of visibility, these precise numbers are yet to be discovered, since genders, other than male and female are usually excluded from current statistical research, not only in the gaming industry.

When only given two gender choices, gamers are made up of 47% women and 53% men globally. (Ngoc, 2020/21). However, when taking a closer look at individual gamers in the U.K. and U.S., researchers found, that gamers are also diverse in terms of gender, sexuality, ethnicity, and disability.

14% of U.K. gamers identify as part of the LGBTQ+ community, while the U.S LGBTQ+ gaming community measures 13% (Ngoc, 2020/21).

Upon requesting further insight to the specific dataset, Ngoc shared that 3% of U.K. survey participants identify as transgender/non-binary/other, and approx. 5% in the U.S.

Furthermore, research showed that players find diversity important in games and almost half avoided games that they could not identify with, as shown in figure 2 (Ngoc, 2020/21).



Ngoc (2020). [The Evolving Global Gamer]. In *newzoo*

2.3 THE PROBLEM

Considering the research conducted up until this point, the problem for trans and gender diverse gamers lies within the missing diverse representation in video games, which leads to feelings of exclusion, as well as the conscious decision, to avoid games that exclude these groups.

The question that arises with this problem is how can we improve gender diverse representation in video games, so that trans and gender diverse players feel included, and what is a reasonable, sizable starting point for a broad topic like this?

Research has shown that character customization in games can help players to feel more connected to the game itself (Jin, 2012). Particularly interesting for this research is, that players who can visually identify more with their avatar (meaning creating an idealized version of themselves) also became more immersed in the game (Jin, 2012). This becomes important when we take prior findings of this paper into account that state, that players avoid games that they cannot identify with.

It has been found, that for trans and gender diverse people avatar creation/ character customization in games is a formative step in acknowledging and exploring their gender identity (Aller, 2018).

Participants of the same study expressed that to them character creation is the most important feature in a game, and that most important customization features include body shape, hair, facial features, accessories, and the ability to select and mix both conventionally binary gendered features within one avatar (Morgan H, Et al., 2020).

The problem that arises at this point is, that character customization is still often tied to binary gendered game layouts, bodies and other features, such as binary pronouns, and gender locked clothing.

This research will explore how the experience of character customization can be improved for trans and gender diverse people, and how to universally apply the solution to various complex avatar creators.

3. THEORY

To get a better understanding of what aspects of character customization need changing, this part of the paper focuses on what is already known about how trans and gender diverse people experience the creation/ customization process. Information was found by examining studies and research conducted in the past years as well as existing games.

Aller (2018) states the majority of the trans and gender diverse respondents consider avatar creation systems to be a tool for self-discovery and self-expression that can allow them to create an idealized version of themselves in a safe environment.

Furthermore, the target group (n=36 people) strongly expressed a need for a larger variety of body types, for the reason that they can create a character that has closer resemblance with their personal build, instead of hyper-feminine or a hyper-masculine character choices which exists in many games.

The test group also wished for a choice of pronouns other than he/him and she/her. They also express that visuals such as clothing, makeup, and hairstyles should be combinable with any character regardless of gender/ body choices. (Aller, 2018)

Similar findings were documented in a research paper titled “The Role of the Avatar in Gaming for Trans and Gender Diverse Young People”, where participants expressed their need for customizable pronouns, as well as the diverse body types and clothing.

This paper stresses that the ability to customize the avatar was pivotal when choosing to purchase a game, proving that customization and the ability to identify with a character/ game content determines playability/ purchase (Morgan H, et al., 2020).

The latter has also been found in the New Zoo research about diverse gamers. The study has found that almost half of the participants would avoid a game if they felt like it was not made for them. The same research found that more than half thought that diverse characters in games are important (Ngoc, 2020/21).

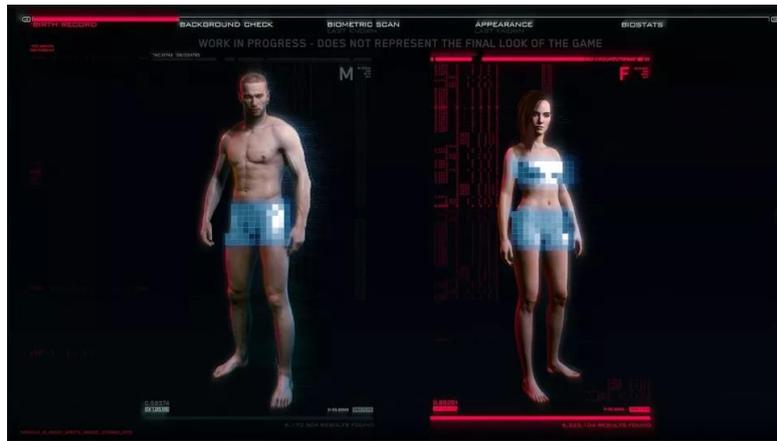
3.1 MARKET ANALYSIS

With these research results in mind, a market analysis of current games was conducted.

The most known AAA game that attempts to include diverse bodies is *Cyberpunk2077*. In *Cyberpunk2077*, the player can choose various genitals for their character, though chest options are gender locked. The game also makes the player choose between female and male specifically and has no choice of pronouns, as can be seen in figure 3. The body shape/ build itself is also not customizable.

Another AAA game that allows the player to actually customize the body shape and build of the character is *The Sims 4*. Although *The Sims 4* lets the player experiment with clothing, they still have to decide between male and female and a pronoun choice option is not given. Also missing are options for different chests, and facial hair is gender locked.

A game that solved the pronoun options by avoiding them all together is the AAA game *Animal Crossing New Horizons*. No customizing option is gender locked and bodies are simplified. Different body types are not included. Although the game uses only one character model, and pronouns aren't used to address the player, the player must choose between a character with short and long hair in the beginning, before getting to the next screen for customization, as can be seen in figure 4.



CD Project Red. (2020). [Cyberpunk customization menu]. In *Cyberpunk2077*.



Nintendo. (2020). [AC Customization Menu]. In *Animal Crossing New Horizons*.

In the indie game market, it seems to be more common that games provide pronoun choices. Not all of them contain a character creator. Instead, many offer a diverse character cast to choose from or no visual representation of the character at all. Particularly interesting is how *Sunless Skies* went about character creation. The character itself is portrayed as only a silhouette of the head that is customizable, and the player can choose a title to be addressed as instead of pronouns. The titles include gendered and non-gendered options. *Sunless Skies* points out that the characters gender is up to the player, as can be seen in figure 5.



Failbetter Games. (2019). [Sunless Skies Customization Menu]. In *Sunless Skies*.

When analyzing the change of character customization in games, AAA and indie, it can be said that over all character creators have become more diverse but that options are still often binary gendered, and that customization options are to an extent, often still gender locked.

4. PROBLEM DEFINITION

The problem definition did not change from preliminary assumptions. Based on an analysis of existing games, it can be concluded game developers try to add diversity to their games.

The problem definition is as follows:

Although many character customizers are more diverse, the remaining problem is, that character customization is still often tied to binary gendered game layouts, gendered language, bodies and other features, such as binary pronouns, and gender locked clothing.

This research will explore how the experience of character customization can be improved for trans and gender diverse people, and how to universally apply the solution to various complex avatar creators.

5. MAIN AND SUB QUESTIONS

5.1 MAIN QUESTION

The main question targets four topics being the product, requirements, context, and the goal(s). This question will form the main objective of the research paper.

The main research question is as follows:

„How can a platform non-specific character customization prototype, be used to improve the inclusion of trans and gender diverse people in video games using a digital design guide tailored towards a more diverse audience?“

5.2 SUB QUESTIONS

The sub questions will serve as elaboration of the main research question and help to answer it.

- 1) What features should be included in the prototype to improve the inclusion of trans and gender diverse people?*
- 2) Which tools can be used to create the character customization prototype?*
- 3) How can a prototype that is catered towards a more diverse audience be constructed?*
- 4) How to design a clear and easily readable design guide?*

6. METHODOLOGY

To get a better understanding of how the sub questions were answered, this chapter will focus on the methods necessary to gain an effective answer for each question.

The approach used for this research is a mixed methods approach, which supplies both quantitative and qualitative data. The reason for this is, that some of the sub questions need a more personal experienced based research, while others are better answered by collecting statistical and measured data.

It is important to mention, that the research questions have been approached in ascending order (Q1-Q4), for the purpose of using results of previous questions as a marker for subsequent questions.

Approach Q1: What features should be included in the prototype to improve the inclusion of trans and gender diverse people?

For gathering information on the needs of trans and gender diverse people in relation to character creation, an online search using the Google search engine was conducted. As this topic is very specific, the keywords ‘gender diverse character customization’, ‘character customization and gender’, ‘gender identity character creation’ and ‘transgender character customization’ were used. Only the first page of the Google search was viewed, since the quality of research results decreases from there on.

Sources that were categorized as valuable are research papers on the topic of character customization, especially in relation to trans and gender diverse people, as well as websites that show information such as interviews with the target group, and case studies or polls. Sources found were judged on how credible the website/author was as well as how much the content connects with the research sub-question.

In researching case studies and papers, insight was gained of what features trans and gender diverse people seek in character customization, as well as what is currently amiss. The insights gained were collected and used to create a Likert-scale questionnaire, listing several improvement ideas for character customization. The questionnaire was created as a survey using Google Forms. The questionnaire includes questions like “Would you say that feature <x> would improve <y>” and “How important is feature <x> to you?”. To test if the target group responds positively to the changes, 18+ year old, English-speaking trans and gender diverse players were asked to participate in the questionnaire. Participants were found via Twitter as well as through sharing the survey on trans and gender diverse discord servers. Expected was a response of (n=50), achieved was a total of (n=102). This step granted insight for further adjustments, as well as likes and dislikes of features. Lastly, A final documentation of the findings allowed a clear vision of what features need to be included in the prototype to improve inclusion.

Approach Q2: Which tools can be used to create the character customization prototype?

The Google search engine was used to conduct a search using the keywords ‘prototyping tool’, ‘app prototyping’, ‘character customizer tool’. Only the first page of the Google search was viewed, since the quality of research results decreases from there on.

Tools/ sources that were categorized as valuable for creating a prototype, were those that allowed implementing the features deemed as mandatory by the results found in Q1).

To make the implementation of those features possible, necessary characteristics of a tool include adding clickable buttons, adding custom graphics, adding text, transition animations, shareable link to finished prototype.

Other criteria to find a suitable tool, were time efficiency, meeting the authors skills, as well as low cost. Through comparing the different tools, it was possible to choose the one that best suited the purpose of this research as well as the mentioned criteria.

Approach Q3: How can a prototype that is catered towards a more diverse audience be constructed?

Information on how to go about constructing the prototype were gathered by researching existing prototypes, as well as games, that contain character customization. An online search using the Google search engine was conducted using the keywords ‘game with character customization’, ‘gender diverse character customization’, ‘game character creation’, ‘character customization game’. Only the first page of the Google search results was viewed, since the quality of research results decreases from there on. Games that claim to have, or are known for, more diverse character creation were marked with higher significance, as they relate to the research topic. The games required a publishing year from 2018 until 2021 to ensure that they are of contemporary nature. From this, a list of various games was created. After selecting games for different platforms based on their relevancy to the subject of diverse character customization, the selected games were tested by the author. From this it was learned how character customization layouts/ customization prototypes are typically constructed, as well as the features they contain.

By comparing the typical layout and feature construction to the features deemed as mandatory for improving inclusion in Q1), missing features were identified.

From this, a design base for the prototype catered toward a more diverse audience was constructed.

The design base was used to build a digital character customization prototype using Marvel (www.marvelapp.com) as a prototyping tool due to efficiency and skill level of the author. (View results Q2)

The testable prototype was established for the target audience of trans and gender diverse players.

To test if the target group responds positively to the prototype, 18+ year old, English-speaking trans and gender diverse players were asked to participate in testing the prototype unmonitored. Afterwards, they were asked to complete a questionnaire. The questionnaire was created using Google Forms and uses a Likert-scale system to determine the participants view on certain features. The form includes questions such as “Would you say that feature <x> improved <y>” and “How important is feature <x> to you?”. The questionnaire contains a commentary section that gives participants the chance to remark what they found particularly positive/ what they disliked or would like to change. Participants were found via Twitter as well as through sharing the survey on trans and gender diverse discord servers. Expected was a response of (n=20), achieved was a total of (n=24).

From the insights of these test results, necessary iterations of the prototype can be assumed.

Approach Q4: How to design a clear and easily readable design guide?

To answer this question, an online search using the Google search engine was conducted for the purpose of researching existing design guides. These can or cannot be gaming specific. Keywords that were used in this search contain ‘design guide’, ‘game design guide’, ‘guide UI design’. Only the first page of the Google search results was viewed, since the quality of research results decreases from there on. Sources were judged on how credible the author was, as well as how suitable the guides were as an example framework for this research. Accompanying the web research, a comparison of existing printed guides has been conducted. The guides used were art books and drawing guidebooks and were judged by the same criteria.

In looking into these existing design guides, examples were gathered. These examples were compared with each other to determine the differences as well as the similarities for the reason of finding a key structure used by most guides.

A second Google search focused on how to create a layout for a guide. Keywords of this search were ‘guide layout’, ‘document layout guide’, ‘creating a guide’, ‘improving readability’. Only the first page of

the Google search results was viewed, since the quality of research results decreases from there on. Sources deemed as valuable were those, who give insight on improving the readability of a guide. Through the described methods, an understanding of how to create an easily readable design guide was gained. With these results, as well as personal knowledge from a graphic design degree, a design document layout was created using the industry standard software InDesign. The layout includes placeholder text which will be replaced with research results of this paper, as well as placeholder graphics that will be replaced by example graphics. This InDesign document created a blueprint for a sufficient design guide document.

6.1 SCOPE

This chapter states the scale of this research as well as limitations and deliverables.

The focus of this research is to find a solution for the issue of trans and gender diverse inclusion in the case of in game character customization. Therefore, a testable digital prototype will be created, as well as a design guide for gender inclusive character customization. The prototype will not focus on visuals or graphics, for the purpose of maximizing efficiency and allowing this research to spend more time on layouts, language and theoretical features that will help to improve inclusion. The prototype will be a clickable, digital application for windows and mac. Testing will be done with players who identify as trans and or gender diverse. The expectation for the test group size is 100-200 people. Participants must be 18+ years old and be able to speak English fluently. The testing will not include tests with other cis-gendered players. An iteration of the prototype cannot be produced in this time frame.

The gender inclusive character customization design guide will be targeted toward game developers and feature examples and insight on how to approach a more diverse character customization in games.

The guide will be usable for any game genre that contains a character customization and will be applicable to any platform. Included will be solutions for various complex character customizers, focusing mostly on layout and language.

This research has a strict time limit of three months and is also limited in terms of visuals, as it pays most attention to measurable data that can improve the inclusion of trans and gender diverse people. The project has no funding and is being produced as a bachelor thesis.

7. RESULTS

7.1 WHAT FEATURES SHOULD BE INCLUDED IN THE PROTOTYPE TO IMPROVE THE INCLUSION OF TRANS AND GENDER DIVERSE PEOPLE?

Desk research:

It has been found that trans people use character creation not only to feel included but also as a tool for self-discovery and expression (Aller, 2018). The same has been found to be true in another study, which also discussed that trans and gender diverse people often feel excluded and under-represented in character creation (Morgan H, et al., 2020).

Aller found that the target group wishes for cosmetics, such as clothing, makeup, and hairstyles etc., to not be gender locked. Participants asked for pronoun options beyond he/ she/ they or avoid the selection of pronouns. The most important feature asked for was a variety of body types that are diverse and adjustable. Aller's key finding also expresses that trans and gender diverse people wish for options beyond the cis-normative beauty ideals.

Survey:

More than 70% say that the avoidance of gender selection at the start of character selection (deciding between a stereotypical male and female avatar) would improve their feeling of inclusion.

98% strongly agree that a choice of diverse bodies/ body types is necessary to feel more included, participants also added that they would like to choose trans body options (for example surgical scars of gender-affirming surgeries, such as masculinizing chest surgery.)

Almost all participants (99%) expressed that cosmetic choices such as hairstyles and clothes should be combinable with any body type/ gender expression to improve the feeling of inclusion.

A more mixed answer was found when asking if an all-in-one layout would help with inclusion.

63.8% agree more strongly, while 26.5% felt indifferent about it and 3.9% disagreed completely.

The great majority (94.1%) expressed that a feature making it possible to choose pronouns would improve their experience to a great extent (see [appendix A](#) for full survey results). The people feeling indifferent or opposed to this feature mentioned that they would either prefer to avoid gendered terms completely or been given the option to not label the character at all.

When asking participants about what feature they think is missing/ what feature is needed to make them feel included, fifteen people mentioned that a variation of voices should be available and not depend on gender or looks of the character. They further expressed that non-gendered language such as 'voice1, voice 2' is important to them. Participants also mentioned that romance options in-game should not depend on the gender identity you choose for your character. These features were often mentioned with Cyberpunk2077 as a negative example. In Cyberpunk2077, the characters gender can either be male or female and gets locked depending on the voice the player chooses.

7.2 WHICH TOOLS CAN BE USED TO CREATE THE CHARACTER CUSTOMIZATION PROTOTYPE?

Desk research:

After comparing the possibilities of using the Unity engine, InVision App and Marvel App, it has been found that Marvel (www.marvelapp.com) is the most suitable tool to create a prototype for this research. The suitability has been determined by time efficiency, skill of the author, cost and available features to use.

Marvel is an app that allows designing and creating prototypes of apps.

Marvel's features include a Sketch plugin which allows using the app with Sketch, allows communicating with a team through Slack, allows you to store and retrieve files with Box, allows contributors to leave comments, works with Apple TV, allows specifying what team members can do, allows you to organize files, uses layers, allows you to add interactive elements to your designs, has timers, allows you to automatically move between screens, works with Google Drive, allows embedding videos from YouTube, Vimeo, SoundCloud and Spotify. Marvel is also free to use for one project at a time.

InVision has the same and even more detailed features but since it's also a professional prototyping tool, its learning curve and functions were too complex and elaborate to apprehend in time for this research.

The Unity Engine was ruled out quickly after testing it, for the reason that all functions would have had to be programmed first to use them, meaning a sizable disadvantage in time efficiency.

7.3 HOW CAN A PROTOTYPE THAT IS CATERED TOWARDS A MORE DIVERSE AUDIENCE BE CONSTRUCTED?

Desk research:

It has been found that creation layouts usually feature a 'male or female' tab, which is something this prototype needs to avoid due to the results of Q1) and the aim of inclusivity. Few games use icons for different body parts instead of text. Non-gendered language is found more often in layouts but often becomes void because it only exists within a gendered 'male or female' tab that the player must decide on. After categorizing features deemed as mandatory to improve inclusion by Q1), the following has been decided for the layout.

The main menu must include body, head, hair, clothes, and voice. The categories themselves include the following features.

Body: frame, height, chest, scars/ tattoos

Head: shape, eyes, mouth, nose, make up

Hair: cut, color

Clothes: tops, bottoms, onesies, accessories

Voice: 1, 2, 3, 4, ...

After completing the main menu section, a feature for naming the character as well as picking pronouns had to be included. Design sketches can be found in [appendix B/ design sketches](#).

Prototyping & Survey:

The prototype was created using Marvel, an access link, as well as a GIF of the full prototype [appendix B](#). The test group completed the prototype and connected questionnaire, results are as follows:

More than 90% of participants expressed the overall neutrality and inclusivity of wording used as ‘very satisfactory’. 70% also said it improved their feeling of inclusion. A small number of participants disclosed the wording they used in the ‘body: chest’ feature made them feel uncomfortable, all of them were referring to the ‘rounded vs. angular’ selection. Improvement recommendations included a ‘shape’ and ‘size’ slider labeled with ‘+’ and ‘-’.

The ‘all-in-one’ layout structure, which replaced the most common used layout structure found in character customization (separating options by gender choice), has found to be an improvement. Over 90% of participants expressed that it advanced their feeling of inclusion to a great extent.

The option allowing to combine cosmetics (such as hairstyle, clothes, etc.) with any body type and gender expression improved the feeling of inclusion for more than 90% of participants to a great extent. Similar findings were made in terms of offering different body types. A total of 83% deemed this feature to advance inclusion to a great extent.

More mixed opinions were found with the adjustable height feature. More than half of the participants (58%) said it helped extensively with feeling included but 12,5% were neutral and 4,2% said it did not change their feeling of inclusion at all.

78% of participants declared that the chest feature helped them feel more included (62,5% even said it helped to a great extent). 16% were neutral about this feature.

Gender-affirming surgery scars made more than 86% of participants feel more included.

About 83% said that being able to combine any face shape, eyes, nose, and mouth improved their feeling of inclusion, the rest felt indifferent about this feature.

The makeup feature furthered feelings of inclusion for 77% of participants, though about 8% felt indifferent about it. 92% expressed that the non-gender-locked hair feature bettered inclusion for them, with a total of 79% who conveyed it helped to a great extent. Similar results were found in terms of offering non-gender-locked clothing. 91% disclosed it improved inclusivity (75% to a great extent), while the rest felt indifferent about this feature. Almost the same result came about from the voice feature, though 12,5% felt indifferent about it while 87,5% said it improved their feeling of inclusion.

Almost all participants (about 95%) expressed that the pronoun feature greatly improved their feeling of inclusion. The participants feeling indifferent about the feature said they only did so, because the option to choose mixed pronouns (they/ he, she/ they, ...) was missing (see [appendix B/ Survey 2](#) for full survey results).

The open commentary/ suggestion section revealed that body and facial hair should be an available option for all gender expressions. Furthermore, a range of skin colors and skin detail (such as freckles, moles, and acne) should be included. Participants also expressed that especially genderfluid individuals would like the option to adjust the character at any given time without having to restart a game and having to create a new character.

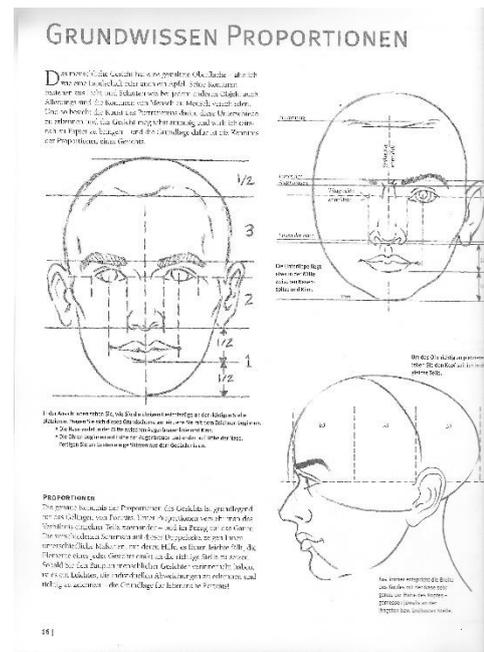
7.4 HOW TO DESIGN A CLEAR AND EASILY READABLE DESIGN GUIDE?

Desk research:

It has been found that guides differ vastly depending on the purpose and topic they are written for. As can be seen in figure 6 and 7. Though, they have a similar structure.



6 NASA. (1975). [NASA Brand ID]. In NASA



7 Walter T. Forster (2016). [Grundwissen Proportionen]. In *Die Kunst der Zeichens Menschen*

By comparing the various guides, a structure has been defined that was most used throughout the compared guides to serve as a framework for the blueprint:

- Intro (What is this guide about?)
- Reason (Why is this guide important, what can be gained?)
- Core topics: For this specific guide :
 - Layout
 - Language
 - Features
- Conclusion (Summing up the core take-aways)
- Reference and sources

When working out a layout for the guide, special attentions was paid to improving its readability.

According to TCK Publishing, readability is improved by paying attention to the following areas. (Corson-Knowles, 2021)

1. Using simple words your readers can understand
2. Defining new or complex words right away
3. Simple sentence structures
4. Using one idea per sentence
5. Active sentences
6. Subheadings
7. Reading supplements (like pictures or graphs)
8. Creating soundbites
9. Using personal language
10. Organization
11. Humor and entertainment

To further ensure the readability, a readability score tool was used (Free Readability Formula Consensus Calculator, 2021). A readability score is a computer-calculated index which can tell what level of education someone will need to be able to read a piece of text easily. Typical factors used for readability scoring include, average sentence length, syllable count, percentage of multi-syllable words, average word length, familiarity of words, and complexity of sentences (Take control of your content with ReadablePro, 2020).

The knowledge and experience of the author's graphics design degree and the afore mentioned results facilitated the author to create a layout blueprint using InDesign. The guide can be found in [appendix C](#).

8. CONCLUSION

This chapter addresses the main research question „How can a platform non-specific character customization prototype, be used to improve the inclusion of trans and gender diverse people in video games using a digital design guide tailored towards a more diverse audience?“

Respondents of the surveys used to construct the prototype gave consistent views on what they need to feel included. Both surveys used, revealed, that freedom in visual and cosmetic combination is a crucial part of (gender) expression.

Furthermore, it has been found that customization option should not be gender-locked and best exist in one layout with no gender separation. The most important features to add in gender inclusive character customizers, contain pronoun choices, body type diversity, cosmetic diversity (clothing, makeup, ...), and voice choices. Details on these features are as followed.

Language proved to be a meaningful part of inclusiveness. In regards to that, giving players the opportunity to pick a combination of pronouns was the strongest point made by participants. Another element of inclusive language contained non-gendered wording, such as ‘breasts’, ‘female voice’ or ‘male torso’. Instead, sections can be labeled ‘chest’, ‘voice 1, voice 2, ...’ and ‘torsos’.

When talking about visuals, body types that are more diverse and include trans bodies were a much requested feature. Adjustable chest sizes and gender-affirming surgery scars were tested to be a vital feature. Respondents also expressed that prosthetics and similar disability options would be a welcoming addition. Clothing, makeup, facial and body hair and hairstyles were best received when combinable with any body type and gender expression. If character customizers contain audible feedback, participants showed great satisfaction when they could pick any voice for their character (no gender locking).

The key take-away from this study is, character customization can improve the feeling of inclusion for trans and gender diverse people through offering more customization options without gender-labeling or gender-locking any of the features.

9. DISCUSSION AND RECOMMENDATIONS

When researching about inclusiveness it promptly became apparent, that there is no clear line between gender inclusivity and diversity as a whole. Gender expression is a broad topic, which touches fluidly on many other aspects of diversity, such as ethnic backgrounds, disabilities, sexualities, etc. Participants of both surveys confirmed this later on, as their answers in the comment sections often included thoughts about other aspects of diversity.

This impacted the research in terms of decision making, often placing the difficulty in deciding what subjects were valuable to include for the overall goal of improving gender diverse inclusion. The decisions on what to include/ exclude were made based on time, skill of the author and results of the first survey. Looking back, the subjects chosen were all valuable for the main question, though it would have been beneficial to touch on ethnic backgrounds more.

With that in mind, setting the scope and limitations for this project was by far the most challenging task. In retrospective, the scope was fitting for the short time frame of this research but uncovered that the topic is complex in itself and deserves a bigger scale research. Although possibilities were limited due to the global pandemic (COVID-19), respondents were able to test the prototype online and share their opinion the same way. As this was the author's first research of this scale, they slightly underestimated the task of phrasing surveys in an academic, neutral matter. Fortunately, this task was managed with the support of guiding teachers and other students.

The ideal future plan of this research, is first, elaborating and improving on the existing prototype. The prototype should be changed accordingly to the participant's feedback, as well as include visual and auditory feedback. Ideally, this should be done by a group of researchers/ game developers to be time and skill-efficient. After setting up a more polished prototype version, the testing process should be repeated and monitored. Depending on the test results, iterations can be made, and the test group can be expanded to include cis-gender people.

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APPENDICES

APPENDIX A

Figure 1)



This survey was conducted by the author of this paper, Devin Alan Paul.

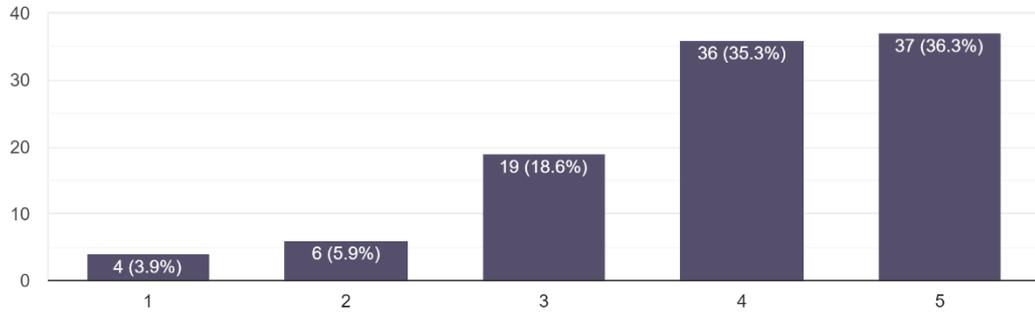
The survey conducted on the social media website 'Twitter' and had a total of (n=111) participants. Participants were, as suggested by the results, binary and non-binary.

The survey proved that non-binary as well as binary people feel misrepresented in video games.

Survey 1 (Q1)

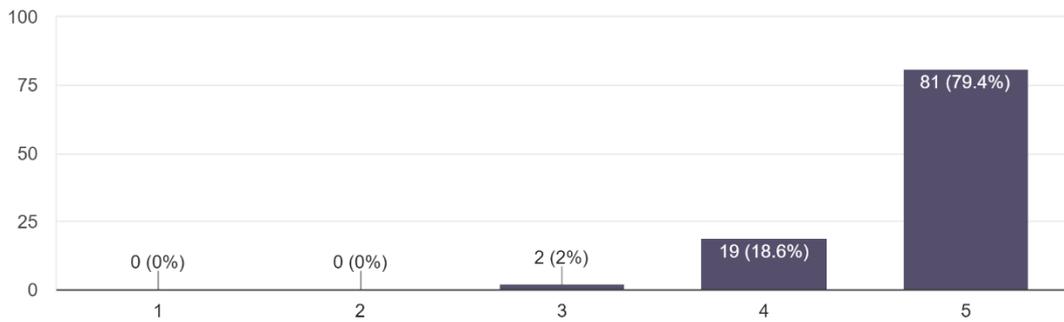
Assuming a game starts with character creation. How would the avoidance of gender selection at the start of this process improve the feeling of inclusion?

102 responses



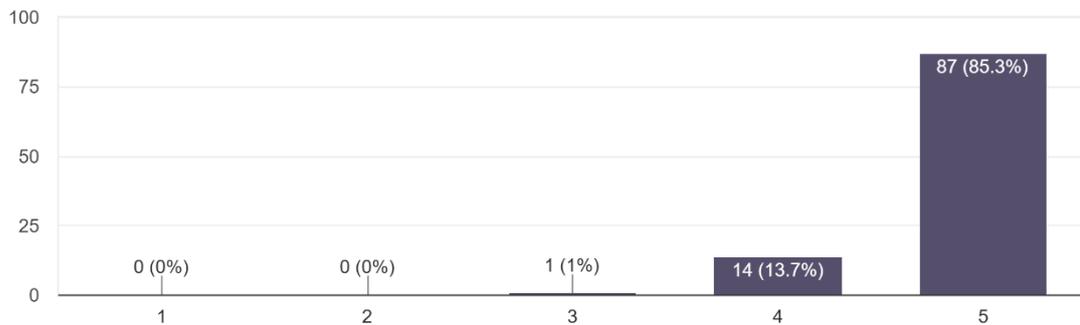
Would a choice of diverse bodies/ body types improve the feeling of inclusion?

102 responses



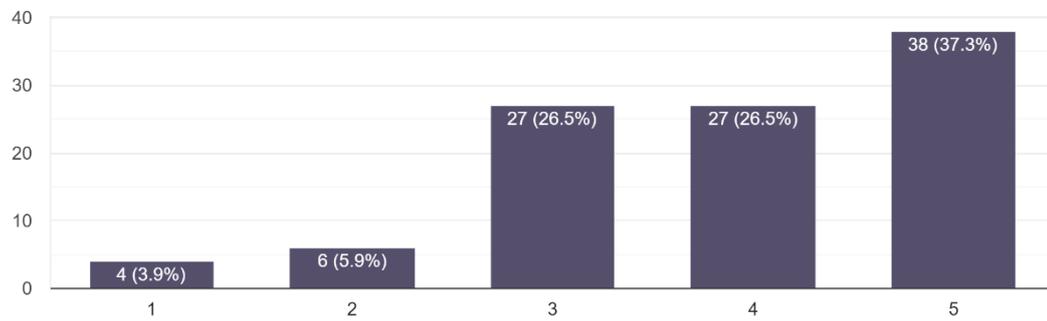
Would a feature making cosmetic choices (such as hairstyle, clothes, etc.) combinable with any body type improve the feeling of inclusion?

102 responses



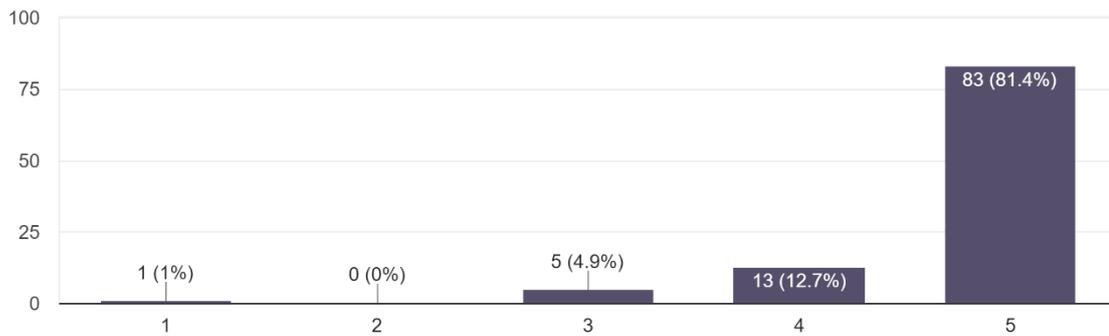
Assuming all cosmetic choices are combinable with any body type. Would the use of an "all-in-one" layout (see image) improve the feeling of inclusion?

102 responses



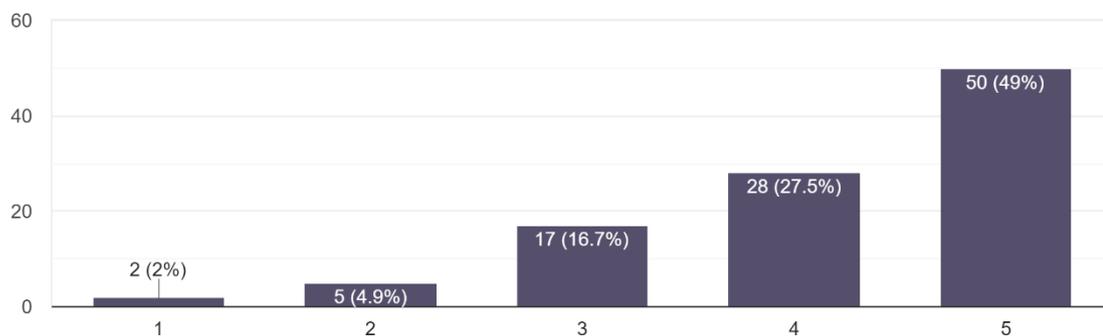
Would the option to choose any pronouns improve the feeling of inclusion?

102 responses



Would the option to choose a gender identity improve the feeling of inclusion?

102 responses

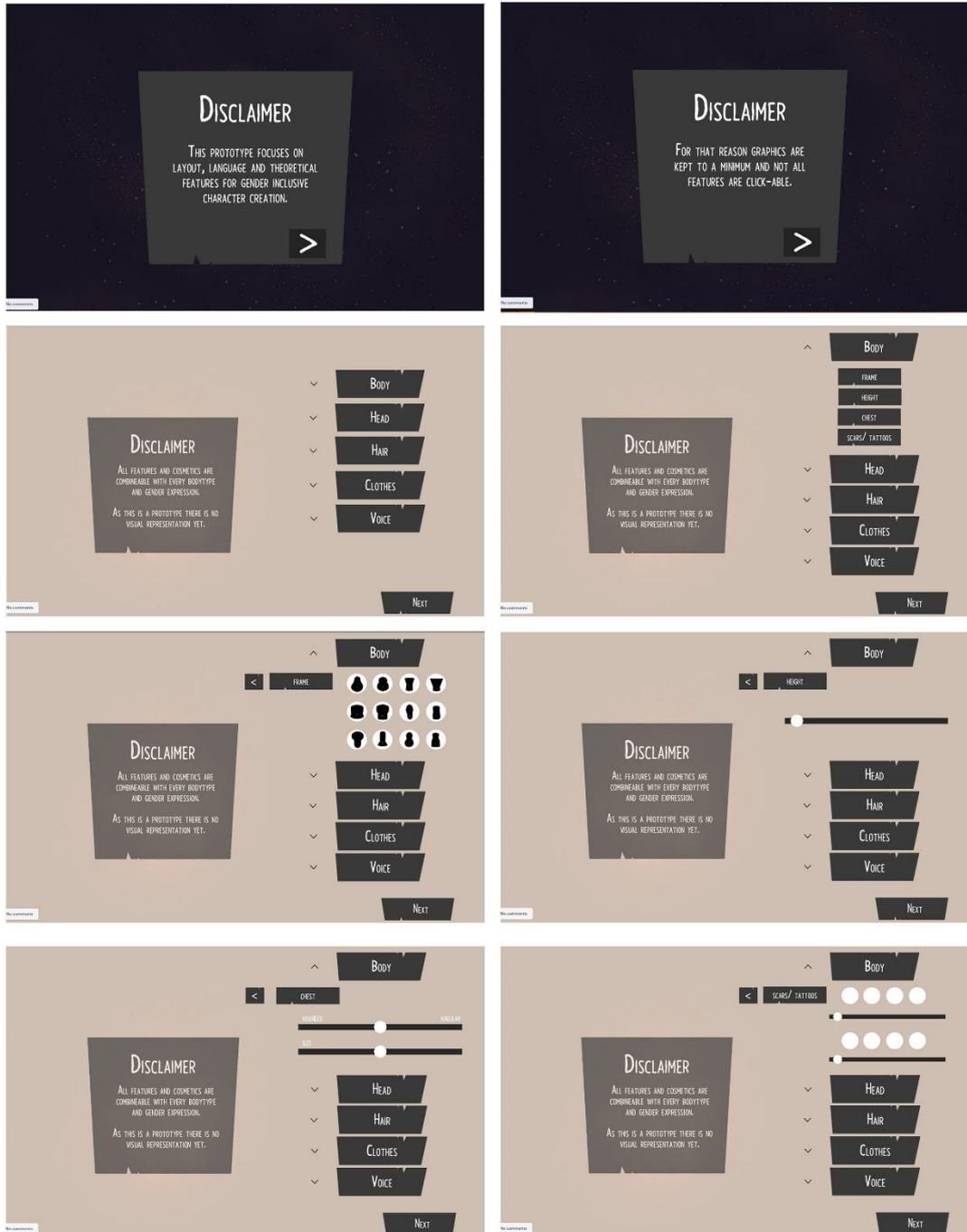


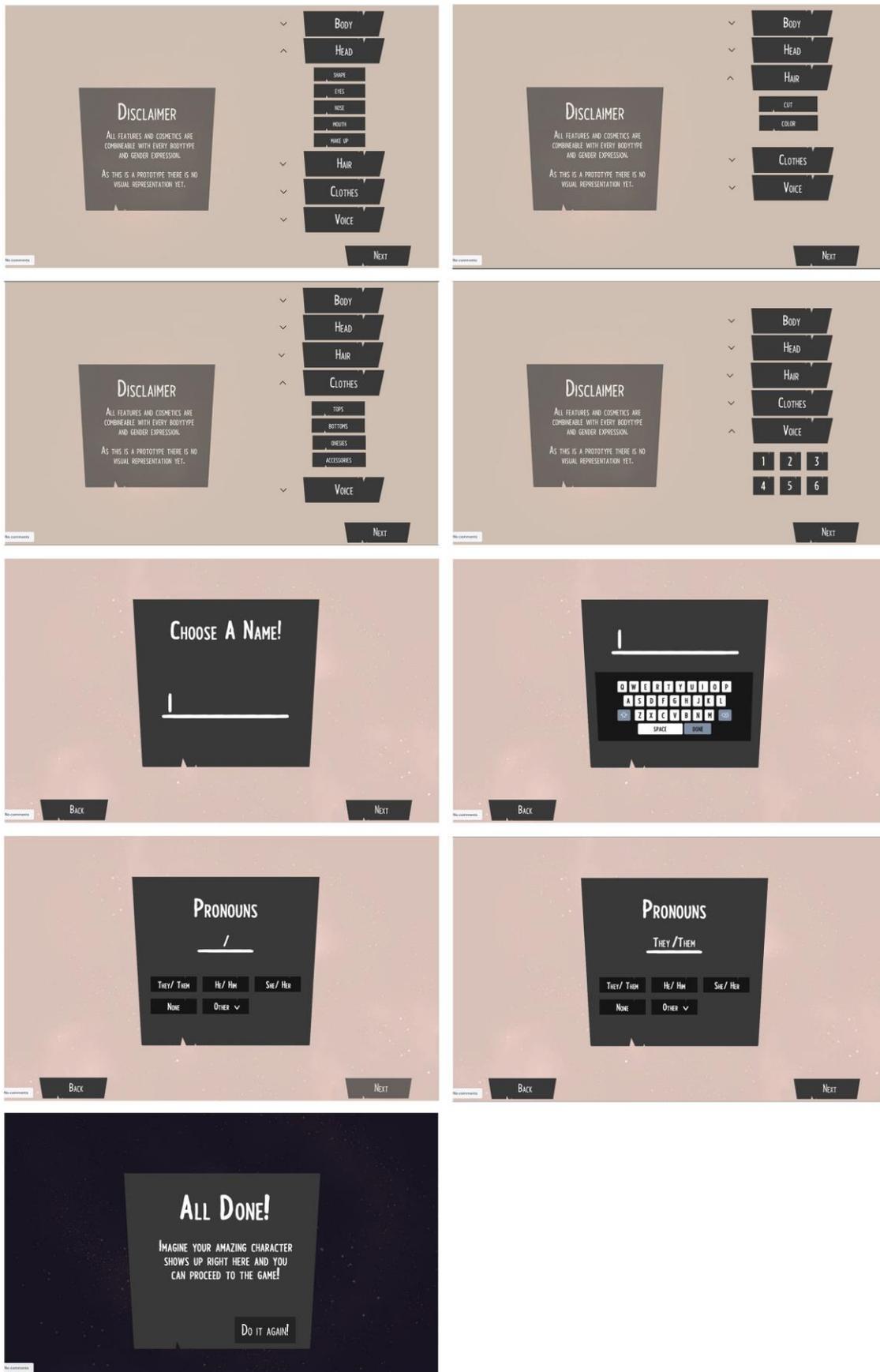
APPENDIX B

Link to finished prototype

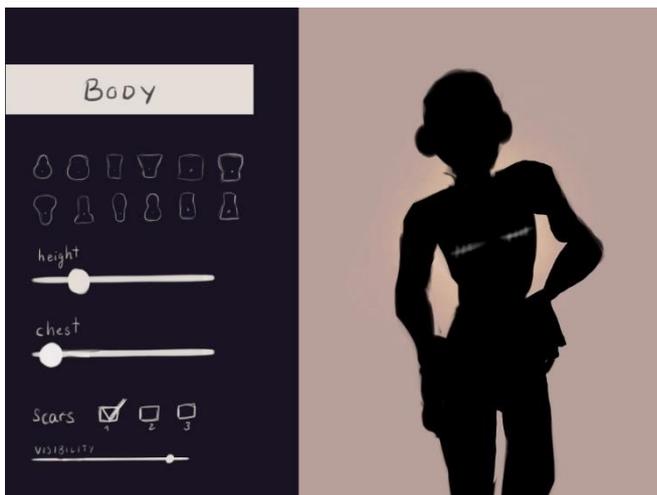
<https://marvelapp.com/prototype/9h2f851>

finished prototype scenshots:



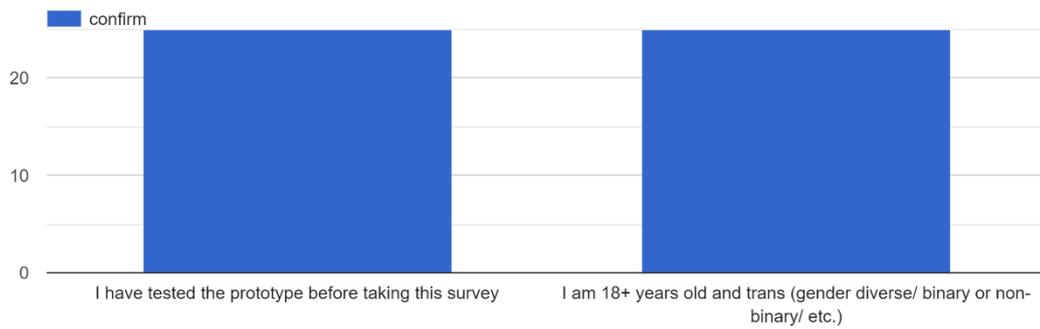


First iteration/ design sketches



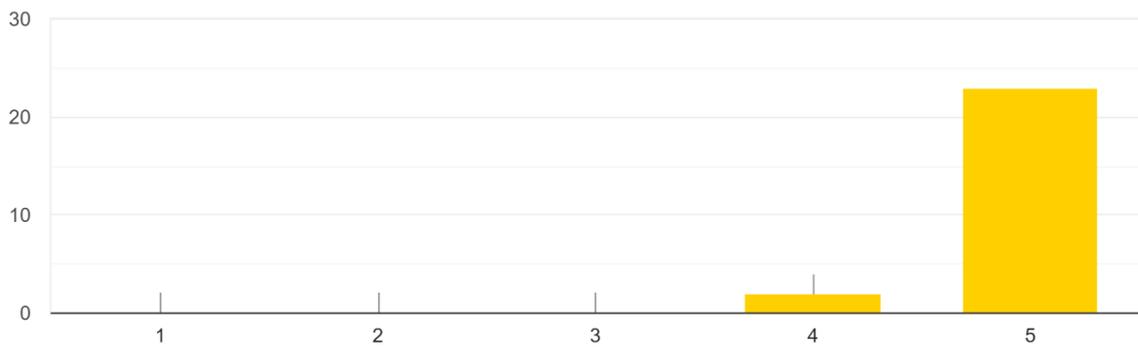
Survey 2 (Q3)

Disclaimer



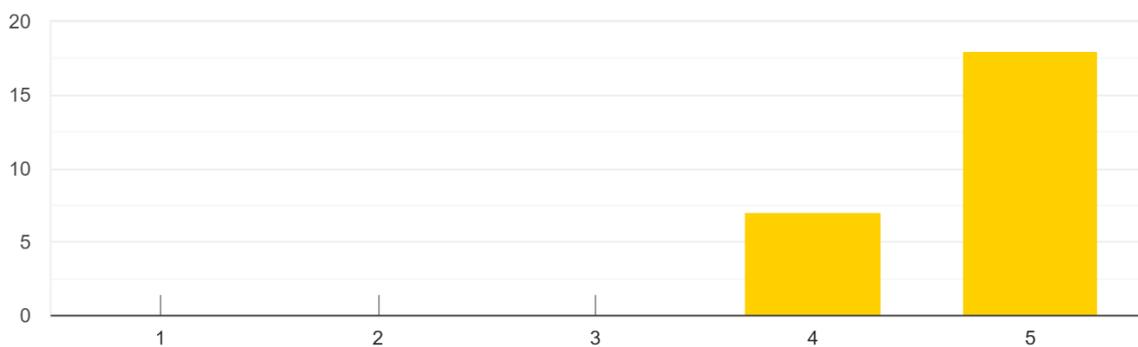
How satisfied were you with the neutrality/ inclusivity of wording used in the prototype?

25 Antworten



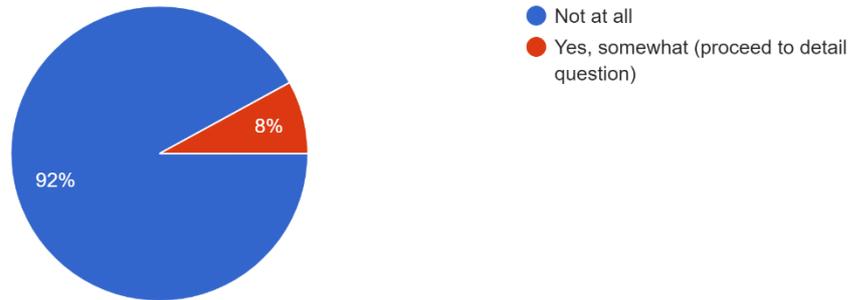
How did the wording used improve the feeling of inclusion?

25 Antworten



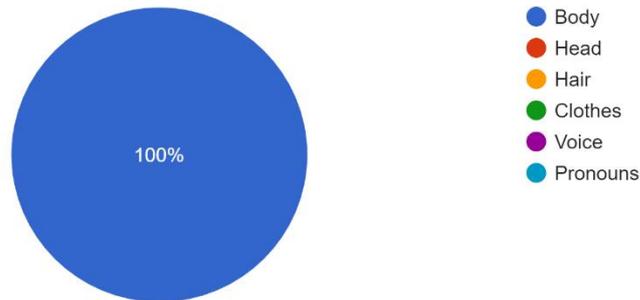
Was there a part where the wording used made you feel uncomfortable or excluded?

25 Antworten



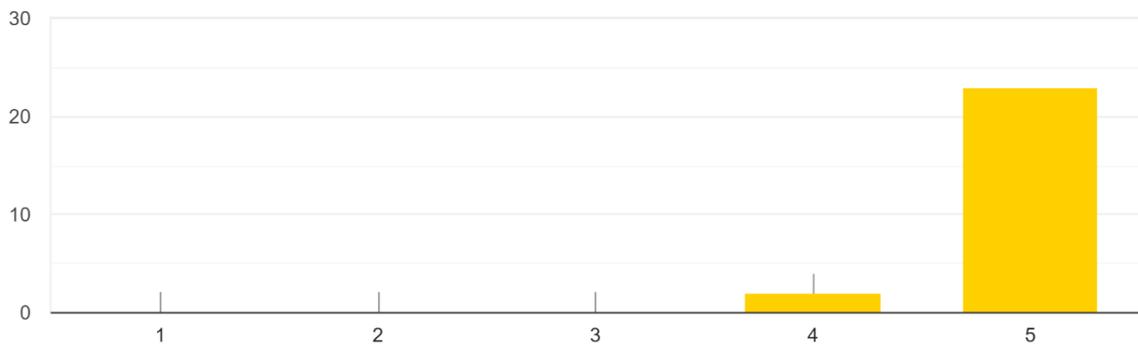
The wording in one of the following section made me feel uncomfortable or excluded:

2 Antworten



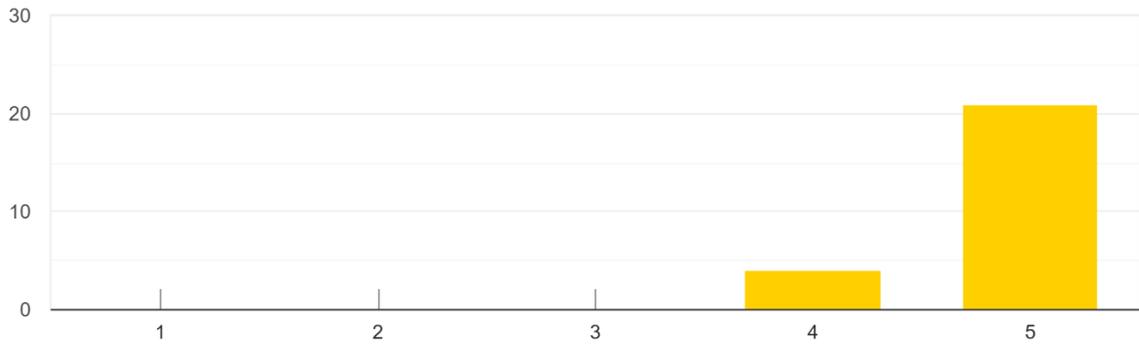
Would you say the "all-in-one" layout (options not separated by gender choice) improved the feeling of inclusion?

25 Antworten



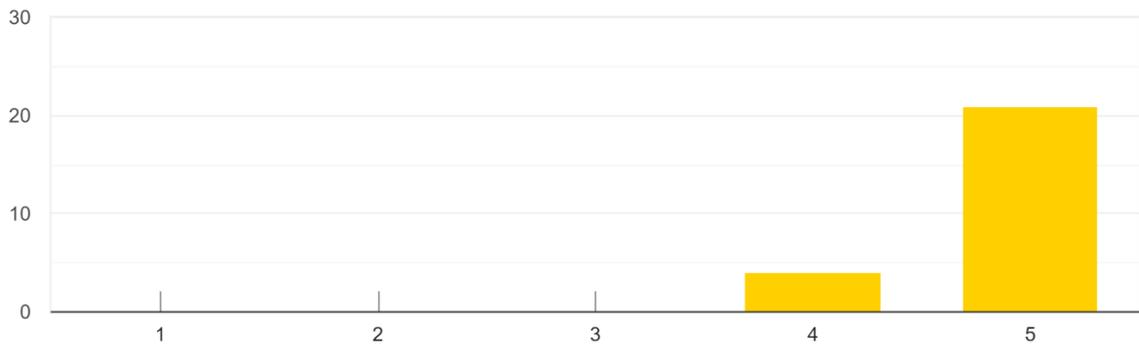
How did the choice of diverse bodies/ body types improve the feeling of inclusion?

25 Antworten



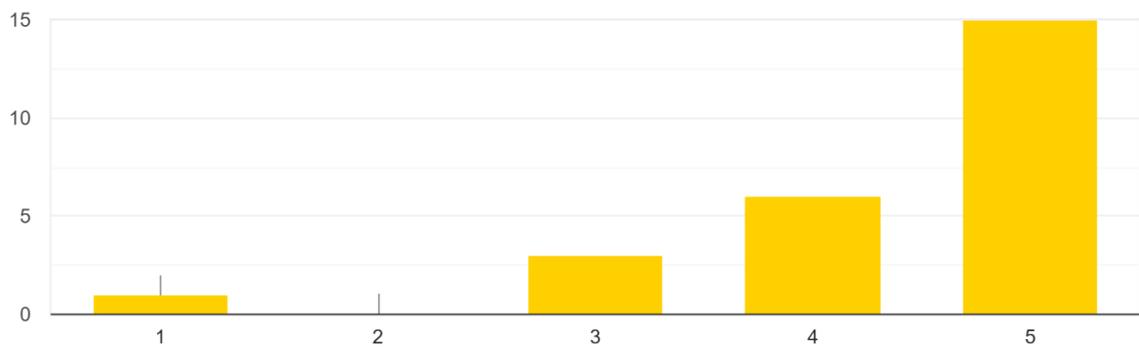
How did the choice of diverse bodies/ body types improve the feeling of inclusion?

25 Antworten



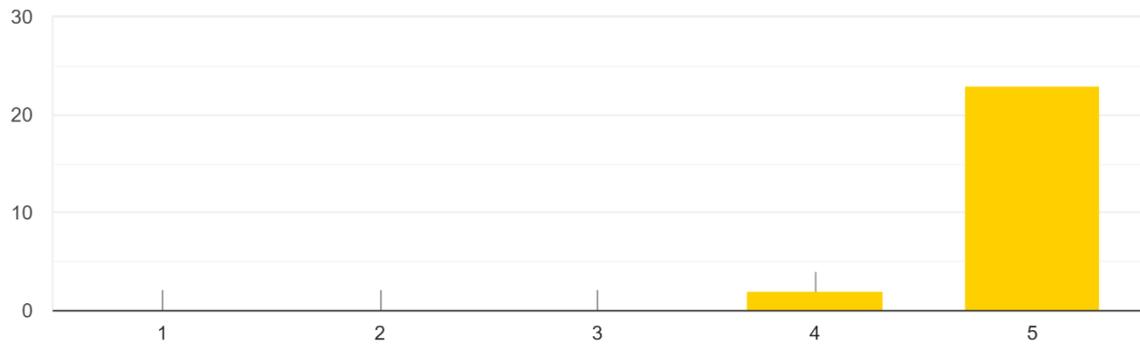
How did the adjustable height feature improve the feeling of inclusion?

25 Antworten



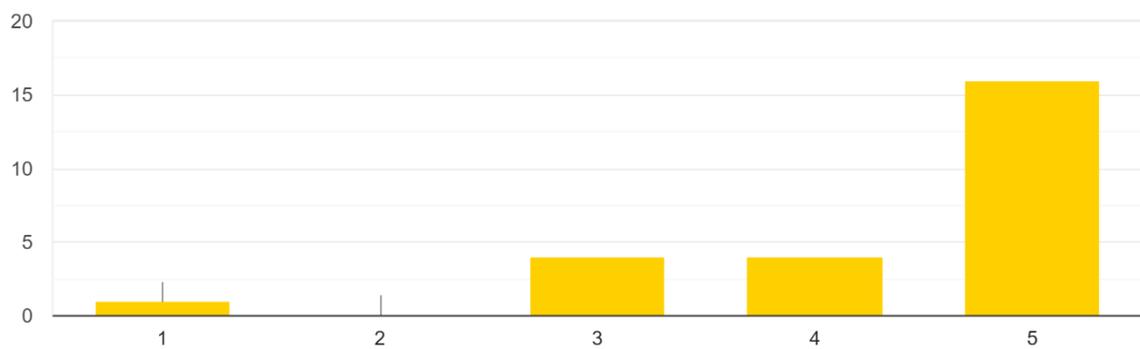
How did being able to combine cosmetic choices (such as hairstyle, clothes, etc.) with any body type/ expression improve the feeling of inclusion?

25 Antworten



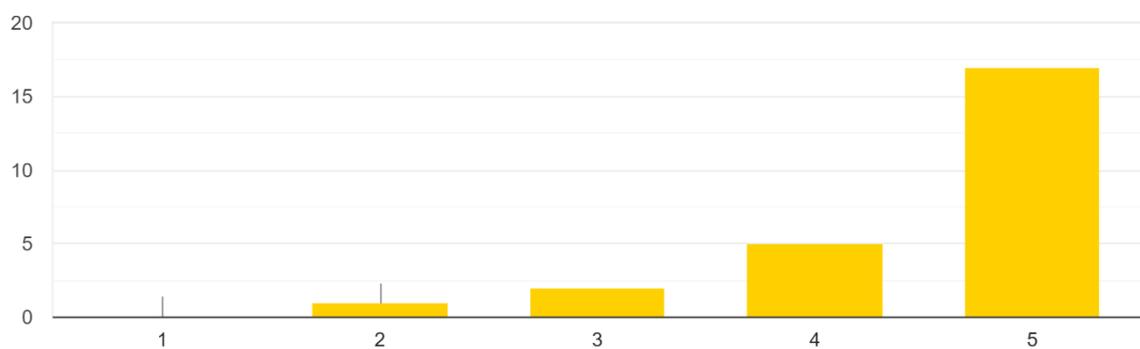
How did the chest feature improve the feeling of inclusion?

25 Antworten



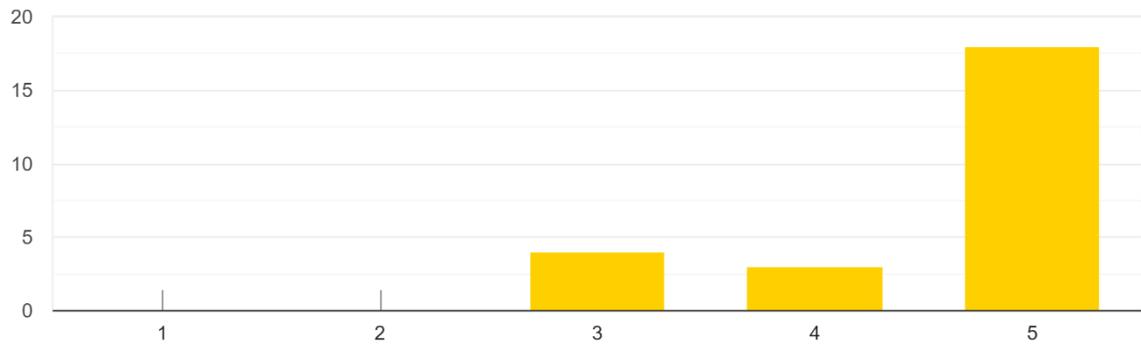
How did the scar feature, including gender affirming surgery scars, improve the feeling of inclusion?

25 Antworten



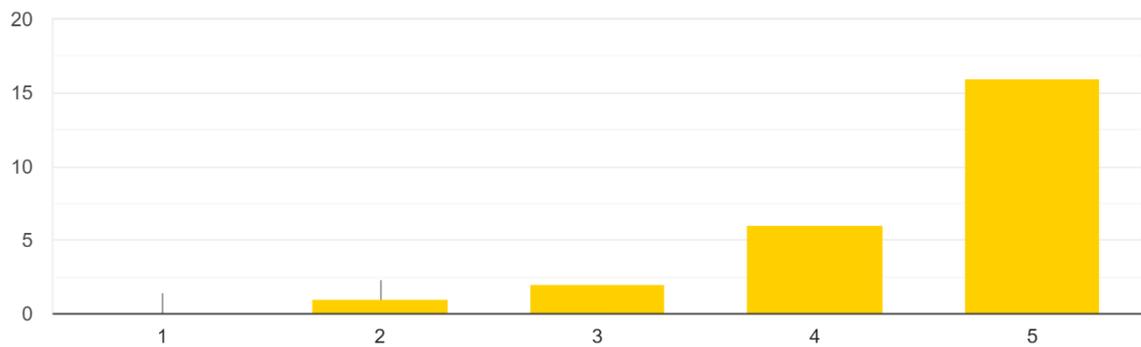
How did the feature allowing to combine any eyes, nose, mouth with any head shape improve the feeling of inclusion?

25 Antworten



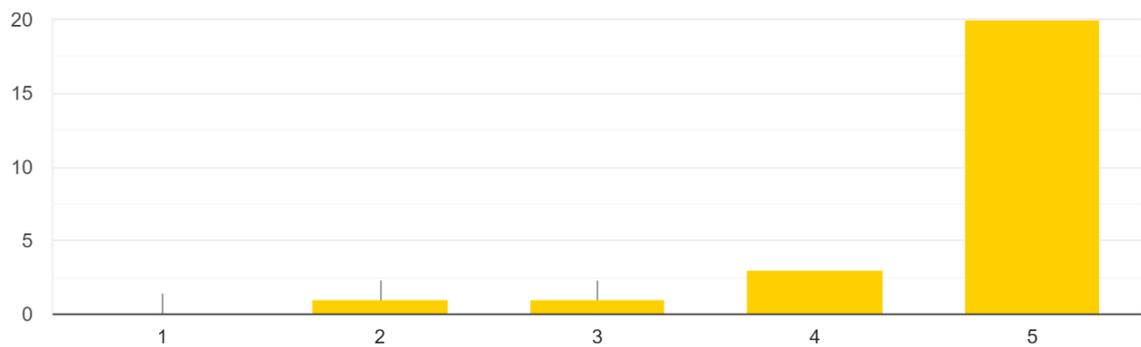
How did the make up feature improve the feeling of inclusion?

25 Antworten



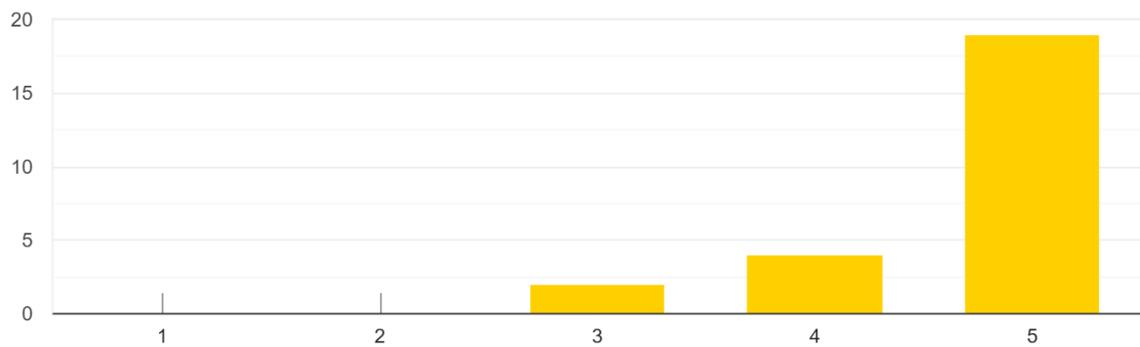
How did the hair feature improve the feeling of inclusion?

25 Antworten



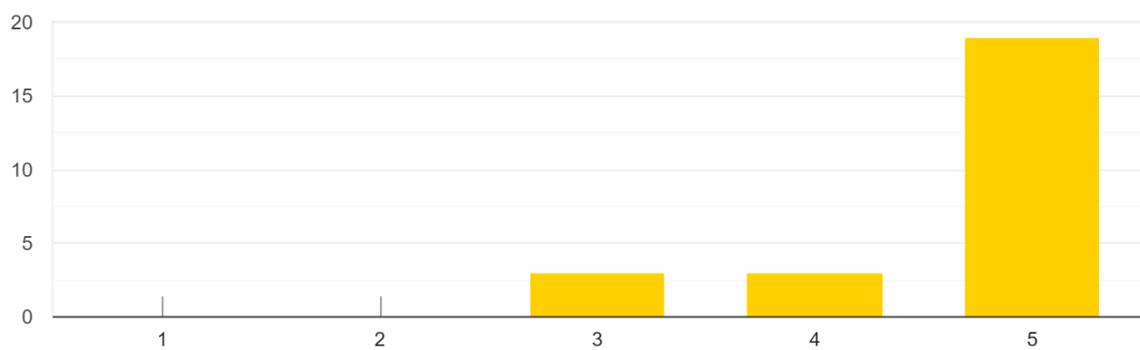
How did the clothes feature improve the feeling of inclusion?

25 Antworten



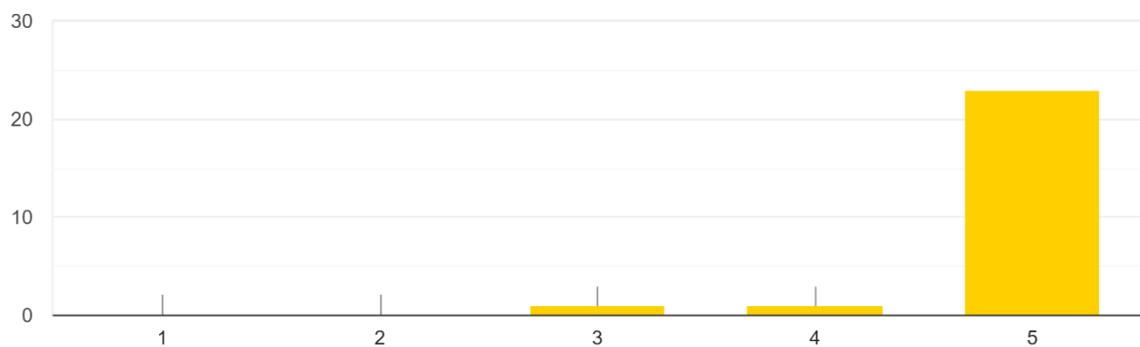
How did the voice feature improve the feeling of inclusion?

25 Antworten



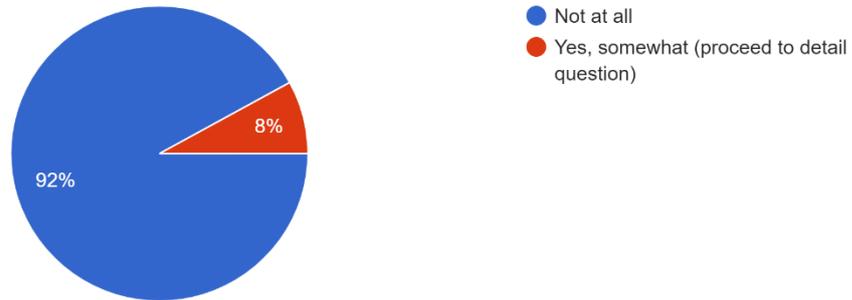
How did the option to choose any pronouns after completing customization improve the feeling of inclusion?

25 Antworten



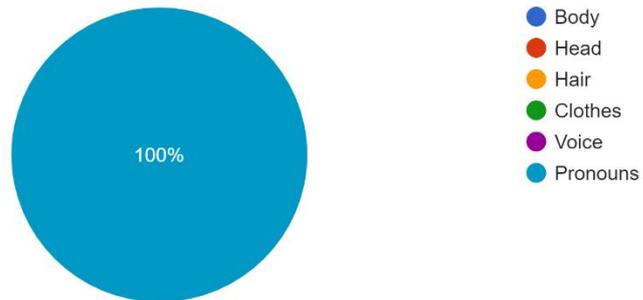
Was there a feature made you feel uncomfortable or excluded?

25 Antworten



A feature in the following section made me feel uncomfortable or excluded:

2 Antworten



APPENDIX C

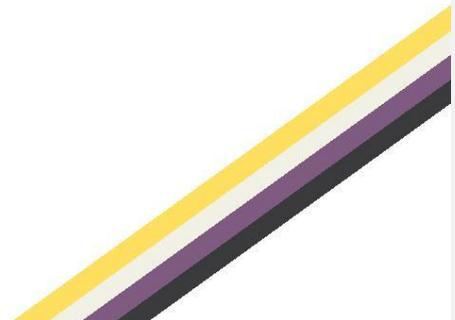
Gender Inclusive Character Customization Guide

A GUIDE TO
**GENDER INCLUSIVE
CHARACTER CUSTOMIZATION**



CONTENTS

- 3 Introduction
- 4 Basics
- 4 Features & Layout
- 4 Layout
- 5 Features
- 10 Features & Layout
- 11 Language
- 12 Conclusion & Recommendation
- 12 Special Thanks



INTRODUCTION

About this Guide

The author, Devin Alan Paul (they/them), is a Graduation Student Creative Media and Game Design of Saxion University 2021.

This guide is the product of a four-month research conducted by the author. Information and access to the research paper can be found in the appendix.

Content

The goal of this guide is to encourage game developers, such as game designers and artists of this industry, to take on a more diverse approach when it comes to building character customizers.

The main focus in this is adapting gender inclusive

character customization, that is not driven by stereotypes. This will allow players of any gender, ethnicity, and body type to feel more connected to the character they're creating and ultimately get them more invested in a game.

Reason

From an ethical point of view, creating representation options for more marginalized groups such as trans and gender diverse people, is an important step toward equality.

The visibility for trans and gender diverse people has effects on serious real-life aspects, such as mental health. The importance for the inclusion of trans and gender diverse people in modern media, and therefore the importance of this assignment, lays in the protection of the mental wellbeing of this particular group. Discrimination of marginalized groups includes and is defined by inequality. Studies suggest that victimization and discrimination are strong predictors of suicidal ideation severity within the population of trans and gender diverse people, and the factors of victimization, discrimination, and trans, gender diverse (TGD) community connectedness impact change in SI severity across time. These findings provide evidence for the importance of anti-discrimination laws that apply to TGD people, as well as the utility of connecting TGD clients to the TGD community. (Ana Rabasco, Margaret Andover, 2021)¹

Equality in the form of inclusion is therefore an essential factor.

From a business point of view, offering more inclusive features will also expand the number of players who can connect with the product on a personal level. Research of the New Zoo gaming study 2020/2021 has shown that players find diversity important in games and almost half of them avoid games that they could not identify with. (Ngoc, 2020/21)²

This means by opening up for inclusive content, a broader audience can be gained.

To strengthen both ethical and business reasons, character customization has been proven to be a crucial aspect of player and game content relationship / immersion. Research has shown that character customization in games can help players to feel more connected to the game itself. Particularly interesting is, that players who can visually identify more with their avatar (meaning creating an idealized version of themselves) also became more immersed in the game. (Jin, 2012)³ The following sections of this guide will be split into language, layout, and features. All of these researched contents are applicable for various complex character customizers and are adjustable to stuff.

BASICS

Character customizers can vary in complexity depending on how much time and money can be spent on assets, the style of the game or the goal of the customizer itself.

To make this guide applicable to any style of custom-

izer, the following chapters focus on basic factors and ways to translate them to various complex character customizers.

FEATURES & LAYOUT

A crucial part is what features are available to the audience, as well as in which way these features are presented.

This section talks about important features to include and how to best incorporate these features in the layout of a customizer.

LAYOUT

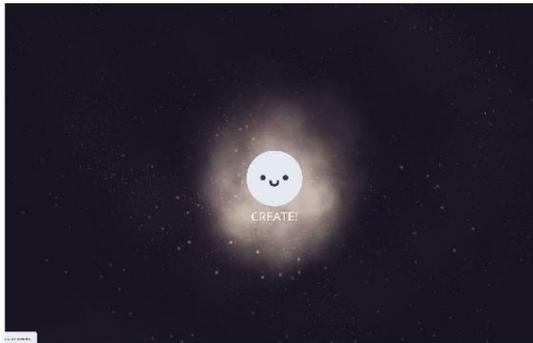
When it comes to improving gender inclusivity and furthering exploration of players, gender should not be the first thing pushed on them when starting character creation.

Many character customizers start by having to decide on a male or female character, rather than focusing on visual non-gendered aspects.

Most of the time after choosing one or the other, customization options are locked within this gender selection.

The prototype used for testing in the study rejects both of these options.

Instead, it uses an “all-in-one” layout where options weren’t separated.



By taking away need to decide the character’s binary gender at the start of the customization process, the focus is now on the character itself as well as on the available customization options.

Another positive aspect of an all-in-one layout is, that it is time saving. The workload for setting up, designing, and programming two separate panels is lowered efficiently.

FEATURES

The features listed in this chapter have been tested and proved to further the feeling of inclusion for trans and gender diverse people.

The features are listed from 'most improvement' to 'least improvement' and will be elaborated on one by one.

Pronoun Choices

The first place for being the most important feature is shared by the pronoun feature and the non gender locked cosmetics feature.

Offering the player to choose pronouns for the character they are creating has been by far the most requested feature.

A Pronoun is a word that can function as a noun phrase used by itself and that refers either to the participants in the discourse (e.g. I, you) or to someone or something mentioned elsewhere in the discourse (e.g. she,he, they). Pronouns are connected to gender expression just as much as a person's name, clothing, haircut, behavior,

voice, and/or body characteristics.

Most of the time people use pronouns far more often than a persons name when referring to one another, so being able to choose the right words for the character a player is creating, is a reaffirming and important choice.

Commonly used pronouns are he/him, she/her and they/them. But many people like using a mixture of these pronouns, as well as no pronouns at all (only being referred to by name), or using 'neopronouns'¹.



¹ Neopronouns are a category of new (neo) pronouns that are increasingly used in place of "she," "he," or "they" when referring to a person. Some examples include: xe/xem/xyr, ze/hir/hirs, and ey/em/eir. Neopronouns can be used by anyone, though most often they are used by transgender, non-binary, and/or gender nonconforming people.

When it comes to setting up pronoun choices it's advised to give the player the option to select two or more sets of pronouns and use them interchangeably in the game when using text.

The ideal would be to offer an option where a player can use a keyboard to type in their own custom pronouns. Although, this option is more difficult to realize when exchanging text bits in a game through programming

because of grammar issues.

A possible solution is to use the name the player chose for the character instead but still support their choices by giving credit to it in game. Examples could be an in-game ID card showing their pronouns.

Another in game contact could be the player introducing themselves with said pronouns while an NPC shows a reaffirming and positive reaction toward that action.

Cosmetics

The feature to combine any visual option (cosmetics) with any body type is just as important as the pronoun feature. (In short: not gender locking any cosmetics)

Being able to use any hairstyle, clothes, make up etc. for a character opens up more customization options and furthers freedom of expression.

As previously explained in the layout section this also saves layout and design work.

Objects requiring meshes such as hairstyles and clothes can be rescaled to fit the body and head a player chooses.

A rule of thumb for inclusive customizers is: **Regardless of how complex a character customizer is, all customization option should be made available to any body-base a player chooses for their character.**

Examples for cosmetics are: Make-up, Hair, Body hair, Clothes, Scars, and Tattoos.

Body Types

Many character creators work with the stereotyped body of either a heavily muscled masculine person with broad shoulders or a slender, small waisted, petite, feminine person.

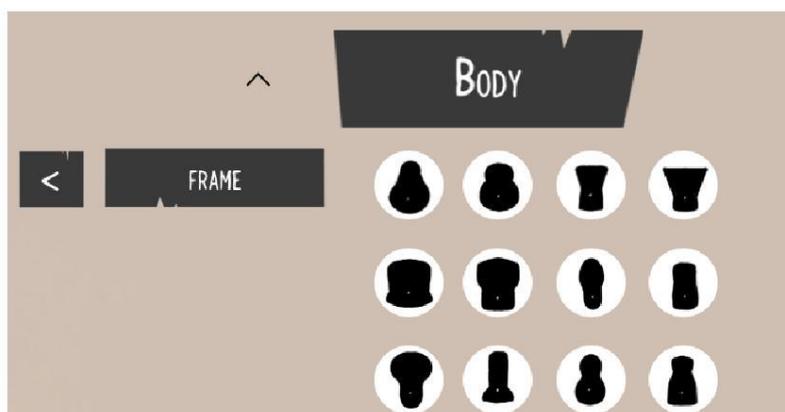
The demand for more diverse body types has not only been raised by the trans and gender diverse community but can be found amongst various research papers connected to body imagery in video games.

Nicole Martins, a professor of media at Indiana University, co-authored a 2009 study on female body imagery in video games, as well as a study in 2019 on how hyper-idealized video game bodies affect men and

women. "In our [2009] study, we analyzed over 8,000 human characters across 150 game titles. Only 358 were female (less than 5% of the video game population)." Noting the full diversity of Overwatch's current roster, she added that Overwatch is a "great step in the right direction." (D'Anastasio, 2016)⁴

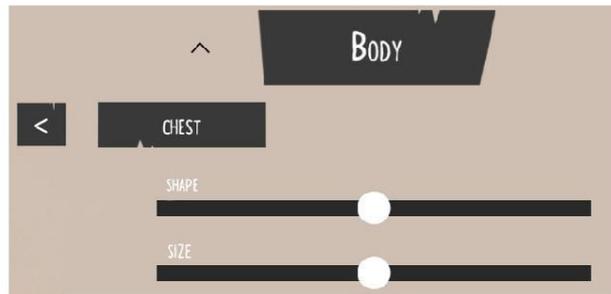
When offering various choices of body shapes the participants of the study connected to this guide showed great excitement.

Depending on the level of detail in the character creator different body types can be offered through adjustable slider or, for simpler creators, with limited preset shapes.



When talking about body types it is necessary to point out, that secondary sex characteristics should be adjustable separately from the body base. This becomes especially important for the chest area. Breasts/ pectoral muscles are often associated directly

with having a female or male gender. In not labeling a chest as such but instead incorporating another, separate size slider, players can just decide on the visuals they prefer without having gender constructs pushed on them.



Skin

Another necessity is a range of skin colors and skin conditions. Although this guide focuses on gender inclusivity, it's also crucial to include people of color and support diversity across all ethnicities. When it comes to skin conditions, textures can be used to add them to any skin

color. Blemishes, moles, birthmarks, pigment conditions (like vitiligo) are a few of these options. This also gives the player the chance to create a more individualistic character.

Hair

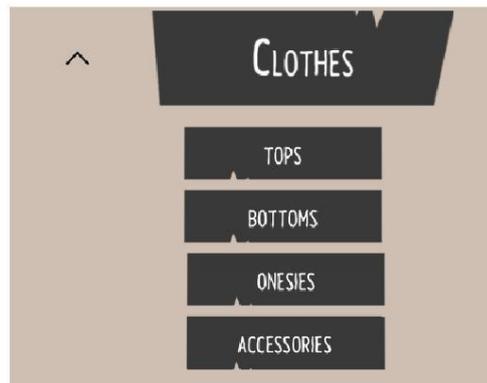
Similarly to what was said before, all hairstyles and colors should be made available for any head base. A range of diverse hair options is advised. The hair options do not have to be split into short/long hair and can just exist within one layout. A separate section can be used to choose a hair color.

Equally important is the topic of body hair. Beards should be made available for any face and not be gender locked! Similarly, an often requested feature is a body hair texture for any body type. Adding options for leg and arm hair is a welcomed extra if the character customizer can offer that amount of detail.

Clothes

Similarly to the different hairstyles, all clothing should be available to any body type. Clothing is a big part of gender expression and should be encouraged in inclusive customizers. The pieces can simply be separated in 'tops', 'bottoms' and 'onesies', or even 'shirts', 'pants', 'skirts', 'dresses'.

By not putting gender tags on these section such as 'female clothes' or 'male clothes' the player doesn't need to think about labels and can simply pick a piece of clothing they enjoy. The same applies to accessories, such as hats, jewelry, bags, glasses, etc.



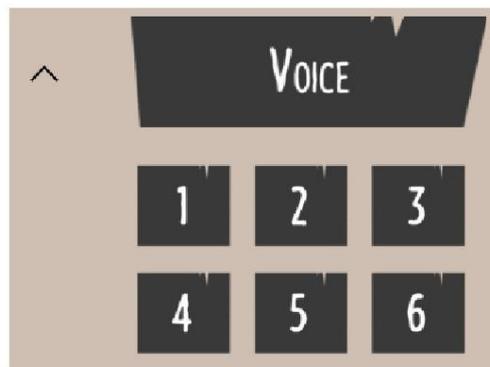
Voice

Although voice is not a visual feature, it does play a big part in gender expression. This topic got brought up by several participants independent from each other. Oftentimes when we hear a chest voice we categorize it as masculine and a throat voice as feminine. In a more inclusive character customizer any voice should be avail-

able to any body type/ expression. The voice should also NOT decide the characters gender or pronouns, same as any of the listed features.

The player should have free choice over various voices that aren't connected to any gender.

An option is to label them 'voice1', 'voice2', 'voice3', etc.



Facial Features

This a more niche feature and can vary depending on the character customizer.

The idea is to provide exchangeable parts for a face base shape. Eyes, nose and mouth can all be chosen individually and independent from each other. A good example here is the Game Animal Crossing New Horizons. Eyes and mouth function as textures and are easy to ex-

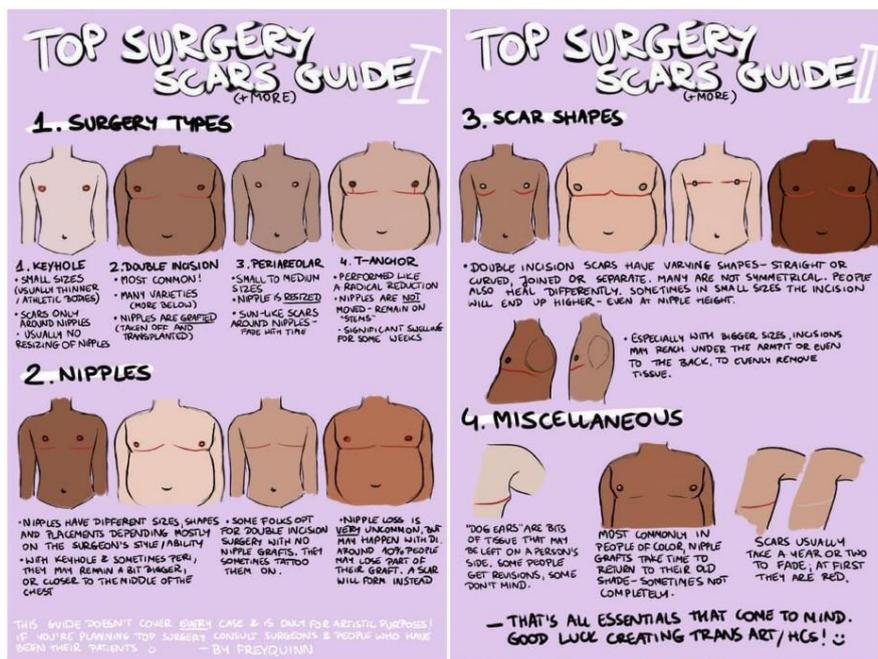
change. While that, or adjustable sliders are the ideal, this only applies to few character customizers. A solution for customizers with set faces is to offer a range of face shapes that are not only complimenting the stereotypical masculine or feminine type. Important to note is, that a variety of ethnicities should be available too.



Makeup, Scars & Tattoos

When it comes to gender expression, makeup, scars and tattoos were much requested features. Makeup, like lipstick, eyeshadow, etc. Should be available for any head a player chooses. Depending on complexity, a range of different makeup looks can be offered, or, more individual options such as keeping lip makeup separate from the eye makeup. Additionally, an opacity slider can be added to give players the choice of how heavy the makeup should look. A similar approach should be used for scars. In a lot of games players can choose battle scars but scars can and

should be more than just an accessory. For trans and gender diverse individuals who want and/ or need gender affirming surgeries, scars often come as a result of an important step in their transition. For that reason, including gender affirming surgery scars, such as top surgery (mastectomy) scars and phalloplasty scars. These scars can look different and vary in size and shape depending on the procedure used for the surgery. The following image shows some references.



Tattoos can compliment the scar feature. While many trans and gender diverse people like to leave their scars the way they are, others choose to use tattoos to cover or emphasize their scars.



This way tattoos are not only an accessory but become meaningful to players.



Height

Many video games have a set character height. A lot of times diversity is also found in terms of height, this does not exclusively apply to trans and gender diverse people. While many trans women are tall and many trans men

short, there are also short and tall cisgender people. With the inclusion of different body types, a height feature comes as complementary bonus for players. A slider can be used to adjust the characters height.

FEATURES & LAYOUT

Additions & Conclusion

While the listed features have been tested and confirm an improvement in trans and gender diverse inclusion, many participants asked for additional options. One of these features is including disability options, such as wheelchairs and prosthetics. Another comment mentioned that it would be ideal to have the option to change a characters looks and pronouns at any given point. This way people can grow with their character. This is also a welcoming feature for gender fluid people, who can feel different about how they want to portray their gender expression depending on the day. With this, it would also be a nice addition to make the characters name adjustable at any point.

Many participants also mentioned that romance options, if existent in the game, should NOT depend on a characters gender identity.

In conclusion, all features in a character customizer should be available for any type of base character and should not be gender locked, or separated by gender.

The goal is to open up customization possibilities to the player, as well as encouraging gender expression. With features such as non gender locked clothing, players do not have to face gender stereotypes while expressing themselves.

The inclusion of trans bodies, as well as various body types is crucial at this point in time, so that players may create characters closer resembling themselves.

By incorporating all features in one layout (see layout section), none of the available customization options are pushed on the player and thus, diversity and visibility is added without taking away from more 'traditional' options.

LANGUAGE

Language is one of the most important as well as the most difficult part in terms of inclusivity. The study this guide is based on, was done entirely in English and so,

translation options are not included in this guide. However, recommendations on what to look out for will be given.

Wording

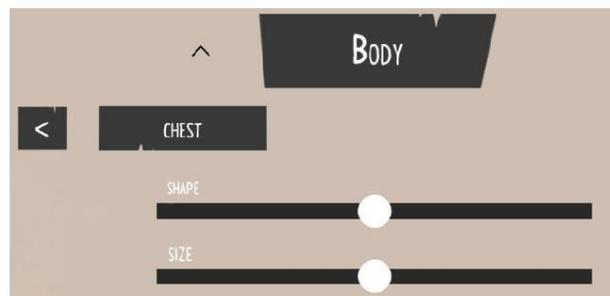
When it comes to the wording used in character customizers, the general goal is to keep it neutral in terms of gendered indications.

An example would be to not use descriptors such as 'female voice' or 'male voice', but instead just number them 'voice 1', 'voice 2', ...
Another possibility is to describe them: 'low pitch voice', 'high pitch voice', ...

If titles or job descriptors are part of the customizer, it's best to include mixed and inclusive terms.
An example would be 'police officer' instead of 'policeman/ policewoman' or, 'flight attendant' instead of 'steward/ stewardess'. Gendered status titles can and should still be included as a form of gender expression but there should also be gender inclusive alternatives.

Examples for inclusive status descriptions are:
King/Queen/Majesty/Monarch/Highness/Royalty/Grace
or
Lord/Lady/Noble/Noble-born/Aristocrat
or
footman/ maid/ butler/ housekeeper/ head servant/ servant
or
Mr./Ms./Mrs./Mx.

This way there is a choice on gendered and non-gendered titles to choose from, which includes all players. When offering titles it becomes especially important not to link these titles to pronouns. Players should be able to use mixed gendered terms for their character. Example: Lady Steel (he/him)



Body parts can and should always be described gender neutral, since they have no connection to someone's gender.

CONCLUSION & RECOMMENDATION

Summing up, it can be said that this guide offered researched ideas to improve diversity in character customization with special attention to gender inclusiveness. These are by far not all steps that can be taken to make customization, or games in general, more diverse. In the end, diverse products are best achieved by working with a diverse team. This includes direct colleagues, as well as test groups.

I recommend to test features with a diverse audience and to listen to their needs and feedback.

For example, if transgender topics are part of your product, work with transgender people! This includes actors, test groups, artists (etc.)

By finding a way of opening products up to a wider audience, visibility and representation can be gained for marginalized groups. Also, this opens up an even bigger market for the products in question.

All in all the gaming market is showing great progress in opening up for inclusiveness and diversity and that movement can be amplified reinventing character customization!

Full research paper here:

<https://drive.google.com/file/d/1HnfW5BzJ1miX-K64RNx7ospqh5vzM2LNu/view?usp=sharing>

SPECIAL THANKS

A special thanks goes to Ing. Marco Strijks MEd. (he/him), Impact Developer / Liaison Officer for Diversity & Inclusion and Ambassador of the Th!nk with PRIDE network, who provided consistent professional guidance and data on LGBTQ+ topics during this research. I was able gain invaluable professional experiences during this time.

The Th!nk with PRIDE network welcomed me and furthered my research in meetings as well as webinars. Similarly, I would like to thank the participants of the study, who provided extremely important feedback and offered creative solutions to design problems.



Endnotes

- 1 Ngoc, M. T. (2020/21). The Evolving Global Gamer & The Business Case for Diversity & Inclusion. Newzoo.
- 2 Ana Rabasco, Margaret Andover. (2021). Suicidal ideation among transgender and gender diverse adults: A longitudinal study of risk and protective factors. /: Journal of Affective Disorders.
- 3 Jin, S.-A. A. (2012). SELF-DISCREPANCY AND REGULATORY. Boston: Department of Communication Boston College.
- 4 D'Anastasio, C. (2016, September 2). A Discussion On Female Body Diversity In Games. Kotaku. <https://kotaku.com/a-discussion-on-female-body-diversity-in-games-1786109287>.

| REFLECTION

TECHNOLOGICAL COMPETENCES

Because this was a free-written assignment, I was responsible for every step of this project from start to finish, including graphics creation and design. I was able to use my design and artistic knowledge to create the UI interface of the character creator. It was my first time making a customizer layout, and I learned a lot about how to make a layout like this, user-friendly and (gender) inclusive. All 2D assets, such as buttons and backgrounds of the interface, were created by me using photoshop. I quickly developed a workflow pipeline from creating layout sketches to placing the finished asset in the prototype. Because I am not as well versed in programming as I am in design and art, finding an efficient way to quickly create a testable prototype was an interesting problem to solve. After careful consideration, I used the online tool 'Marvel' to create a clickable prototype. Marvel made it possible for me to quickly set up buttons, exchange graphics, and update it at any given time. This way I was able to focus on the design and function of the creator instead of spending time on programming/ scripting.

By the end of this project, I felt more skilled in setting up and designing a character creation interface.

DESIGNING/ PROTOTYPING COMPETENCES

As mentioned before, I was able to use my design and artistic knowledge to create the UI interface of the character creator. The prototype was created with an online application, allowing me to make iterations and changes when necessary. Methods of displaying information were internally tested with participants to see their response and then either tweaked or removed and reworked. The prototype helped to identify issues and created a more valuable product in the end.

TESTING AND ROLLING OUT

The testing was done in the form of online surveys connected to the prototype. While an in-person test would have been interesting, the possibilities were limited due to COVID-19. Although this placed a hurdle, I was able to reach out to the test group of trans and gender diverse gamers online and test the product efficiently within these limitations. The surveys made clear which parts needed to be redesigned, adjusted, and which features had to be included in order to ensure a gender inclusive character customizer.

INVESTIGATING AND ANALYZING

The problem was investigated and questioned through intricate research and solutions were proposed. Especially regarding language and feature methods, many approaches were explored, tested and integrated into the final guide. Throughout this project, reliable sources from literature, experienced industry professionals and 'Devcom' talks were used. To ensure that information is valuable to a timely topic like gender inclusiveness, I paid special attention to the contemporary nature of the sources.

CONCEPTUALIZING

By keeping a close connection to the test group, it was possible to gain several ideas for executing features. Depending on the complexity of character creator, various ideas were taken into account and documented in the guide. These range from solutions for a minimalistic character customizer to a detailed one.

Furthermore, I implemented alternative ideas and solutions in the guide.

Looking back, I think more time could have been spent on alternative solutions, although this could have been too ambitious for a small-scale research.

DESIGNING

Setting the scope for this project was by far the most challenging task, as the research topic touches fluidly upon many other aspects of the problem. However, the resulting products are a usable guide and prototype that show the desired outcome of improving inclusion for trans and gender diverse gamers. Furthermore, these products offer a sufficient base for further research and iterations on this topic. The product was appealing and well-received by the target audience.

ENTERPRISING COMPETENCES

Ensuring the marketability was a particularly interesting task. The sources showed that diversity is a widely requested topic in today's games, with several sources showing that a sizable market would be ignored by not catering to a more diverse audience. With this project being based in activism, the goal was to find a way that inclusion can be improved for a marginalized group, while also paying attention to not exclude the rest. This was achieved by keeping language neutral, and layout and customization options open to the player.

WORKING IN A PROJECT-BASED WAY

I stuck to the planning that I set up in the original implementation plan. Throughout this project I used a planner to write checklists and a calendar to keep track of deadlines.

Because I have diagnosed ADHD, my focus and attention have to be delegated in different way than those of a neurotypical person. This placed a challenge for me, but with careful planning and regular meetings with my expert, as well as my study coach, this challenge was well managed.

Working independently was not an issue, although I realize I could have asked for more feedback through my expert.

COMMUNICATION

Feedback from expert, guiding teacher, second reader as well as fellow students was requested and used to improve the report and products. The chapters in the report are structured and sources and writing use APA formatting. Misunderstandings were swiftly communicated and solved in a professional manner.

LEARNING ABILITY AND REFLECTIVITY

The process of testing showed that, even though I am also part of the trans and gender diverse community, some wording or features were flawed or forgotten. I put great emphasis in listening to feedback of the trans and gender diverse test group. That way I learned new perspectives that I had not considered before. My expert helped me to reflect on features, which made it possible for me to improve and reiterate options. Students and teachers taught me a great deal about how a written report should look like, by the end of my thesis I felt more skilled in setting up similar documents. In upcoming research projects of this kind, I would improve my communication by asking for even more feedback and improve my planning through better prioritization of tasks.

RESPONSIBILITY

In a project with a subject this important and timely, I felt the need to ensure that I was acting respectfully and open-minded. I saw it as my responsibility to act empathetically and ethical when communicating with the target group, as well as with my expert.

Throughout the report, I made sure to include the pronouns of the people I worked with as a step of normalization and respect.

Small issues were sorted out swiftly and without problems. One participant brought up a specific phrasing that I had used in a survey description as 'micro-aggressive phrasing'. I handled the situation immediately

and thanked the participant for bringing up the issue.

Throughout products and the report sources were added, so that my steps are retractable and understandable.