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**EXPLORING THE USE OF IMMERSIVE
NARRATIVES FOR SOCIAL AWARENESS:
GENDER EQUALITY**

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Abstract

This dissertation examined how immersive storytelling affects young adults' social awareness, more specifically the recording of the gender equality subject. Through an extensive literature review, this thesis identified gaps in storytelling, technology, and immersion, providing a foundation for subsequent chapters. The methodology described the qualitative approach, participatory design methods, and storytelling techniques for data collection and analysis. An immersive site-specific installation with focus group and thematic analysis revealed patterns and wide-ranging insights into participants' experiences, shedding light on their understanding and awareness of gender equality issues. The findings highlighted the transformative potential of immersive storytelling, demonstrating its ability to increase participants' apprehension and sensitivity to social justice and equality. The discussion chapter situated the research within the existing literature, critically examined emotions awakened, and acknowledged limitations of the project. The study had a restrained timeframe and technological resources to be completed, leaving room for even more exploration in the future. The expected contributions were positioning immersive narratives in transdisciplinary contexts and the development of a framework to be implemented in future projects aimed at social awareness through social innovation.

Keywords: *immersion, gender, social awareness, equality, storytelling*

Resumo

Esta dissertação examinou como as narrativas imersivas afetam a consciência social de jovens adultos, mais especificamente sobre a igualdade de gênero. Através de uma extensa revisão de literatura, este estudo identificou lacunas nos campos da narrativa, tecnologia e imersão, fornecendo uma base para os capítulos subsequentes. A metodologia descreveu a abordagem qualitativa, os métodos de design participativo e as técnicas de narrativa para coleta e análise de dados. Uma instalação imersiva *site-specific*, com grupo focal e análise temática, revelou padrões e insights abrangentes sobre as experiências dos participantes, lançando luz sobre sua compreensão e consciência relativas às questões de igualdade de gênero. Os resultados destacaram o potencial transformador da narrativa imersiva, demonstrando sua capacidade de aumentar a apreensão e sensibilidade dos participantes em relação à justiça social e igualdade. O capítulo de discussão situou a pesquisa dentro da literatura existente, examinou criticamente as emoções despertadas e reconheceu as limitações do trabalho desenvolvido. O estudo teve prazo e recursos tecnológicos restritos para ser concluído, deixando espaço para ainda mais exploração no futuro. As contribuições esperadas foram a colocação de narrativas imersivas em contextos transdisciplinares e o desenvolvimento de um *framework* para ser implementado em futuros projetos voltados para a conscientização social através da inovação social.

Palavras-chave: *imersão, narrativas, igualdade, gênero, storytelling*

Acknowledgements

“We are what we do, but we are, above all, what we do to change what we are.”
(Galeano, 1984).

It took a lot of courage and will power to cross an entire ocean and cross continents during a world pandemic for the opportunity of accomplishing a long-time wish. But I wouldn't have done it any other way. And, for that, I'd like to take this opportunity to praise my parents, who always allowed me to dream as high as I wanted to, which was the fuel that got me here today. Also, my advisors that guided me all the way through here and my friends and family who supported me whenever needed.

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1. Introduction

In recent years, there has been a resurgence in communication practices for social change, emphasising the importance of voice, citizenship, and collective action as core values. Gender equality, recognized as one of the 17 Goals of the 2030 UN Agenda for sustainable development, necessitates urgent and relevant global commitments to address social issues and develop initiatives that facilitate the achievement of these goals (Tuftte, 2013). This fact alone would be relevant enough to drive this research, but when combined with the researcher's previous experience of over 15 years of experience in the Performing Arts field, cultural production and - most recently - in a site-specific project directed to discuss women's daily struggles, it becomes an even more pressing matter to be developed.

According to Fischer-Lichte (1995), all aspects of human life can be understood as a 'theatrical' construct, encompassing events beyond those that take place on formal stages. The 'theatricality' extends beyond the traditional stage and permeates various aspects of our daily lives and social interactions. This concept, combined with the researcher's professional background, serves as the foundation for this project to explore the potential of immersive narratives as a means of social awareness within the intersection of technology, art, and social responsibility in the context of a site-specific immersive installation.

The primary motivation of this project was to investigate the potential of immersive narratives for social awareness. Aiming to explore how individuals' experiences with immersive narratives contribute to their understanding of and engagement with gender equality issues. This research drew from various authors such as Barthes & Duisit (1975), Jenkins (2006), Green & Brock (2000), Babbie (2016), Boal (2005), hooks (1984), Mitchell (2010), Hartsock (1983) McLuhan (2007), among others, to establish a theoretical foundation and identify potential gaps in the existing literature in the fields of narratives, gender, technology, and immersivity.

A qualitative Arts-based and Focus Group combined approach with storytelling techniques was adopted to explore how young adults, students from the University of Porto, perceive gender bias through immersive narratives in the context of a site-specific installation. For data collection, this project explored the creation process, including the integration of technology and artistic elements to immerse participants in a narrative

experience centred around gender equality, while also discussing the implementation and execution of the immersive installation through a thematic analysis.

As for the expected contributions to be achieved are the appointment of social matters of extreme relevance, the opportunity to position immersive narratives in transdisciplinary contexts, and a framework developed to be implemented in future projects aimed at awareness and impact through social innovation.

1.1 Context

In addition to the information provided at the introduction, regarding gender equality being part of the 2030 UN Agenda for sustainable development and the increase in the development and use of immersive narratives for social change, another relevant context should be considered due to its relevance: approximately 2.4 million women do not have opportunities for economic equality (World Bank, 2022). Meanwhile, immersive narratives can offer a new and highly interactive form of storytelling, taking advantage of the latest technology to create a truly immersive experience (Jenkins, 2006), that can have a greater sense of presence and emotional connection with characters and their experiences. In addition, as mentioned briefly, the author has a personal motivation to explore the theme, stimulated by a past personal observation on how a site-specific theatre play had a social impact on the audience and generated meaningful discussions amongst them about gender equality topics.

A preliminary project named InCômodos (See Appendix A), artistically created and directed by the researcher from 2014 to 2019 in Rio de Janeiro, Brazil, served as a profound influence and motivation to delve deeper into the relationship between immersive narratives and social awareness. It was a site-specific immersive theatre experience, aimed to shed light on the micro violences women face daily and raise the audience's social awareness towards the thematic. InCômodos achieved this by designing a house with five distinct rooms, each stimulating a different human sense for the spectators: hearing, touch, sight, smell and taste. Based merely on empirical observation, the multisensory immersive approach seemed to allow participants to engage more fully with the experiences portrayed, having the potential of creating a heightened level of empathy and understanding toward the gender equality topic.

Through the project, the researcher empirically witnessed firsthand the transformative power of immersive storytelling in eliciting emotional responses and

prompting critical reflection, reported by a newspaper piece that observed a random audience participating in the play and gathering their testimonials immediately after it (see Appendix A). The entire InCômodos experience combined with the reaction from spectators was an inspirational catalyst for the researcher's desire to dive into the theoretical underpinnings and practical applications of the relationship between immersive narratives and social awareness, laying the foundation for an ongoing quest to contribute to the emerging field of immersive storytelling for social change, and this project is one of the outcomes.

All this context previously mentioned above makes it both interesting and relevant to explore the outcomes of the intersection between art, technology, and social awareness when focused on a gender bias debate in artistic experiences. Therefore, this research's main motivation is to explore the potential of immersive narratives to be used for social awareness, focused on uncovering possibilities of amplifying the gender equality debate.

1.2 Purpose, Research Goals & Questions

The focus of this study was to explore the potential of immersive narratives to debate gender equality in the context of artistic experiences. The research deployed a qualitative approach with a sampling by convenience. Aiming to examine how young adults perceive gender bias through immersive narratives and how this can help their state and social awareness to social justice and equality. The target was students from the University of Porto, from various genders, sexual orientations, and cultural backgrounds.

In addition, it provides a structured framework that could be applied in future social impact projects with various themes aimed at young adults, including details on room and environmental characteristics, participants recruitment techniques to attract diverse representative groups, sessions structure as well as all the main insights collected on all those topics mentioned just now.

Based on the literature review, the research goals and questions were developed to fully enable the intersection between immersive narratives, art, technology, and social responsibility for gender equality, focusing on the opportunity to position immersive narratives in transdisciplinary contexts.

The main research question (MRQ) is: *How do participants' experiences with immersive narratives contribute to their understanding and awareness of gender equality issues?*

And to further examine this subject, the project will also examine the following research questions:

- Research-question 1(RQ1): *How do participants perceive the effectiveness of immersive narratives in raising social awareness and promoting dialogue about gender equality?*
- Research-Question 2 (RQ2): *What are the potential strengths and limitations of utilising immersive narratives as a tool for promoting social awareness and driving meaningful conversations about gender equality?*
- Research- Question 3 (RQ3): *What are the key insights and recommendations for the design and implementation of future immersive narrative interventions, aimed at fostering social awareness and addressing gender equality issues?*

1.3 Methodology

As previously mentioned, this research methodology was structured focusing on exploring the intersection between immersive narratives, art, and social responsibility for gender equality. By utilising a qualitative approach with Arts-based and Focus Group methods applied in a convenience sample composed by students from the University of Porto. It is essential to also mention that this project adhered to ethical guidelines for ensuring the safety and well-being of participants. Anonymity and confidentiality were maintained throughout data collection, analysis, and reporting.

According to Ritchie & Lewis (2003), the objective of qualitative research is to comprehend the nature and form of phenomena, unpack meanings, develop explanations, or generate ideas, concepts, and theories. This approach is renowned for its ability to provide rich and detailed information. Consequently, the analysis of each unit of data collection resulted in numerous meaningful insights. To ensure a thorough exploration of these insights, it was essential to keep the sample sizes reasonably small. This allowed for an intensive examination of the collected data, ensuring that the richness and depth of participants' narratives were properly captured and analysed (Ritchie & Lewis, 2003).

Focusing on exploring the research questions, mentioned in the previous chapter, the research design included the following instruments for data collection: a social demographic pre-Focus Group survey, a focus group activity for participants - including

an Arts-based multimedia narrative intervention - in which participants engaged with a three-phase art intervention designed specifically for this research - as well as a post- Focus Group evaluation, all of this generated collective insights on the impact of immersive narratives on young adults perceptions and awareness.

More and more it is recognised that clear guidance is needed on the practical aspects of how to do qualitative analysis. Once all data was collected, a Thematic Analysis (Braun & Clarke, 2006) was implemented, information gathered categorised into themes, allowing a deeper exploration of participants' perspectives, experiences, and beliefs related to gender bias and social awareness. It was all done carefully enough not to lack focus on rigorous and relevant Thematic Analysis (Braun & Clarke, 2006), and to avoid having implications in terms of the credibility of the research process (Nowell et al, 2017). To answer the research questions specific methodologies were implemented, as follows:

- To answer RQ1, the focus group discussion was conducted. Participants engaged with immersive narratives through an Arts-based multimedia intervention. Their perceptions of the effectiveness of these narratives in raising social awareness and promoting dialogue were explored. Factors influencing their perceptions, such as narrative elements, emotional engagement, and personal experiences examined.
- To address RQ2 there was a combination of the focus group discussion and Thematic Analysis (Braun & Clarke, 2006). Participants' experiences with immersive narratives were explored, focusing on the strengths and limitations they perceived in utilising these narratives for promoting social awareness and driving meaningful conversations about gender equality. Themes related to the efficacy, engagement, and potential drawbacks of immersive narratives identified and analysed.
- To answer RQ3 an Arts-based qualitative approach was employed. The participants' experiences with the immersive narrative intervention were examined, and their insights and recommendations for the design and implementation of future interventions explored. The data collected from focus group discussion and Thematic Analysis (Braun & Clarke, 2006) provided valuable insights into the aspects of immersive narratives that were most impactful in fostering social awareness and addressing gender

equality, allowing for the formulation of recommendations for future interventions.

By utilising a combination of focus group discussion, Thematic Analysis (Braun & Clarke, 2006), and an Arts-based qualitative approach, this research project comprehensively addressed the research questions and provided in-depth insights into the role of immersive narratives in understanding and engaging with gender equality issues.

1.3.1 Theoretical Framework

To explore the use of immersive narratives for social awareness focused on gender equality this project chose to be framed within the Social Constructivism theoretical framework, combined with concepts from the feminist theoretical approach.

The Social Constructivism theoretical framework is particularly relevant to this research as it recognizes, according to Piaget (1950), that gender is a social construct and that gender inequality is perpetuated through cultural norms, social practices, and political and economic structures, and social interactions create and sustain the subjective realities that shape individuals' experiences. This framework acknowledged that individuals' experiences of gender are shaped by their interactions with the world around them and those can be influenced by media, including storytelling (Luckmann, 1966).

In addition, understanding all the complexities surrounding the notions of sex and gender, the content of the artistic installation challenges young adults to reflect on traditional notions of gender roles. It proposes a discussion about the intricate relationship between societal constructs of gender and their impact on human interactions and societal structures (Oakley, 1972) by displaying to participants a storytelling constructed from real testimonials from women who have suffered some kind of harassment.

By examining how young adults interact with immersive narratives and how those interactions shape their perceptions of gender equality, this research contributes to the studies of new communication technologies, in the field of media studies and interactive media tech and also the cultural production sector, reflecting on a deeper understanding of how social interactions and media can shape individuals' social concepts understanding. Through this perspective, it could be possible to develop new strategies for engaging young adults in critical and reflective discussions about gender equality and promoting positive social change.

1.4 Expected Contributions

This project has as expected contributions the appointment of social matters of extreme relevance, the opportunity to position immersive narratives in transdisciplinary contexts, and the development of a framework to be implemented in future projects aimed at social awareness and impact through social innovation.

1.5 Dissertation Structure

This dissertation has seven chapters in total, and it is structured as follows:

Chapter 1 holds the introduction to contextualise the study, its theoretical framework, the methodology to be implemented, context, motivation, purpose and research goals and the expected contributions of this research.

In Chapter 2, the State-of-the-Art review is developed and relevant related works are presented, including the main foundational theories considered for this research, from narratives - overviewing concepts of storytelling and engagement - passing through immersion - with immersive narratives and memory and information retention concepts, through social awareness - briefly overviewing empathy and standing point theories - to the relationship between immersive narratives and social awareness, including the definitions of positive computing; installation art and *site-specific* immersive theatre.

Chapter 3 goes through the methods utilised for the field research of this study, including an overview of the Arts and Focus Group based method, details of the research design, procedures and instruments developed to be implemented, the data analysis strategy, sampling, and the project development timeline.

As for Chapter 4, it contains the step by step in details of the development and implementation of the site-specific immersive installation experiment designed for exploring the research questions, containing a description of the project research development.

Chapter 5 presents the thematic results analysis, relevant findings and discussion, which mentions the impacts of the applied methodologies, insights, along with the degree of satisfaction regarding the set objectives. In Chapter 6, projections for future projects and conclusions are described, commenting on the overall implications of the research, the goals achieved and next steps to be followed and possible paths to further explore the subject in question. Finally, in Chapter 7 all references considered for this project are included for consultation and assistance to future projects with similar areas of interest.

2. State-of-the-Art Review

This chapter goes through previously developed literature within the theoretical framework of this research focused on exploring the use of immersive narratives for social awareness within the gender equality frame and in the context of site-specific immersive theatre and art installations. The review of the State-of-the-Art is divided into six main sections - Narratives, Immersion, Social Awareness, Gender Equality and Immersive Narratives and Social Awareness - all of which define the grounding theories considered as basis for this research - in addition, a Case studies section is also included, to illustrate previous related works that present similarities with the subject of this research, for closer observation and study reference.

Overall, the main goal of this State-of-the-Art Review was having a deeper understanding of theories and projects focused on the relationship between marginalised individuals within the gender inequality, multimedia, and arts context, highlighting techniques, concepts and methods utilised, in order to observe literature gaps to be further explored by this project.

The main field studies considered for the structure of this State-of-the-Art Review are Media and Communications, Cultural Studies, Performance Studies, Gender and Women's Studies and Interactive Arts and Technology.

It has been essential to include the Media and Communication Studies in the frame of this research - focusing on the analysis and understanding of media systems, communication theories, and the impact of media on society - to ground the exploration of the relationship of storytelling techniques and individuals' responses to them. As, according to Jenkins (2006), entertainment is not the only thing that flows through multiple media platforms. Life, relationships, memories, fantasies, and desires also flow through media channels. Content is received by viewers in fragments from the media flow and transformed into resources through which individuals understand their everyday lives. Each person articulates their own experience, becoming responsible for assembling the narrative of that work for themselves, through associations between the content and their own memories.

As for Cultural Studies, it has been included as one this project's field of study, as cultural practices are not just mirrors of the world, they actively shape it (Hall, 1997).

Therefore, it became an essential integration to examine how immersive storytelling can engage diverse audiences, challenge cultural stereotypes, and promote inclusive narratives within immersive environments.

The gender equality frame of the research subject inherently included Women's Studies in fields of study as well, for the direct connection to the theme and for being an interdisciplinary field that explores the social, cultural, and political dimensions of gender. According to hooks (1984), it advocates for a transformative feminism that goes beyond theory to inspire activism and empowerment, encouraging readers to engage in practical actions for social change.

And, finally, the reason why the project was also framed within the fields of Performance Studies and the Interactive Arts and Technology is because the focus is also to explore the subject within the Arts and Culture context. Both fields are directly connected to the aim of investigating how site-specific theatre, immersive storytelling, and positive computing can be integrated into interactive art installations that challenge societal norms and provoke critical thinking, amplifying marginalised voices.

2.1 Narratives

Narratives have been in the world for ages, there is not, there has never been anywhere, any people without narrative; all classes, all human groups, have their stories (Barthes & Duisit, 1975). Stories are universal and as old as human civilization. However, it was only in the 20th century that thinkers began to observe that everyone speaks, thinks, and experiences their lives in narrative form (Launer, 2009). Throughout history, it has been one of the main forms of societal communication, being a resource for making sense of experience, ordering, and making meaning out of the events of one's life (Ricoeur, 1984). According to Duarte (2010), the right narrative can create an emotional bond with your audience that inspires them to act.

Looking to explore the possibilities of applying immersive narratives for raising social awareness in individuals, it is also fundamental to include narrative as a mode of storytelling that serves to inform, entertain, or both (Bruner, 1986).

As this research will dive into immersive narratives to explore the research questions, it is just as essential to have a deeper understanding of the concepts of creative storytelling and the relationship between narratives and audience engagement, which will be covered in the following subchapters.

2.1.1 What Can Be the Power of Storytelling?

Storytelling is an art form that involves the use of words, images, and sounds to create narratives that capture the imagination and evoke emotional responses in the audience (Green & Brock, 2000). It involves using your imagination to breathe life into a message, idea, or concept, making it more interesting and memorable for your audience (Baer, 2013).

A great story captures the audience's attention and creates an emotional connection that can drive engagement and action (Sachs, 2012), and can create a sense of shared experience between the storyteller and the audience, leading to greater engagement and understanding of a certain topic being presented to them (Clear, 2018).

According to Sachs (2012), considering that Storytelling is, essentially, about taking an idea and turning it into a story that people will care about, that they'll want to share with others and will inspire action when combined with immersive technologies, it could have the potential to be a powerful tool to stimulate social awareness, if and when applied into a narrative that addresses topics as gender equality, for instance.

The approaches of creative storytelling combine a participatory, collaborative methodology with the creative use of technology to generate stories aimed at catalysing action on pressing social issues. They are important, as they contain all these elements, to help respond to key political, technological, and cultural trends in societies. Visual methodologies allow participants to be embodied, intuitive, and step away from their analytical selves (Sachs, 2012).

It is possible to assume that a story could engross the story receiver in a transformational experience, with the power and potential to fundamentally affect individual attitudes (Green & Brock, 2000). There is something important about the intensity of the shared creative experience, which allows us to tap into what Foucault (1980) named 'subjugated knowledge'. According to the author, the term refers to forms of knowledge that are excluded or marginalised by dominant discourses, such as the knowledge produced by women, racial minorities, or other oppressed groups. He argues that these forms of knowledge can challenge and subvert dominant power structures, and springs from emotions and imagination and ordinarily are hidden under dominant discourse.

In addition, Foucault (1980) also argues that recognizing and valuing subjugated knowledge is important for challenging dominant power structures and the hegemony of dominant knowledge systems, to foster more democratic and equitable forms of knowledge production and dissemination. Having that context combined with this research topic of gender equality and the use of technology to include the participants in an immersive environment, tapping into their subjugated knowledge, could be a perfect match to generate social awareness.

2.1.2 Engagement and Its Social Effects Possibilities

After understanding which concepts of narratives and creative storytelling are being considered by this research, presented earlier in this chapter, now it is key to explore the concept of audience engagement, which is complementary and will appear multiple times throughout this study, when considering the relationship between immersive narratives and individuals' stimulation to debate social topics such as gender equality.

According to Vreede et al (2019), engagement has first surfaced as a key psychological concept that can affect human behaviour and choices across many domains including education, arts, media, employment, leisure, marketing, among others. An engaging experience is one that can hold people's attention.

The Oxford dictionary defines engagement as an arrangement to do something or go somewhere at a fixed time, in the context of the activity (Steinhardt et al, 2022). But what should be relevant and considered at this point for this study is that the importance of engagement is reflected across multiple disciplines and, even though the contexts differ, they all appear to reveal a similar pattern: engagement in the material or task at hand leads to positive outcomes for the user (Dewing & McCormack, 2015).

According to Keith & Griffiths (2020), the reasoning behind integrating stories into the engagement model is based on research that suggests that storytelling is highly effective at engaging individuals and transforming beliefs, attitudes, and behaviours. This collaborative creativity also involves common interests, role fluidity, transposable expertise and knowledge, collective empathy, and finally a strong shared artistic motive to convert collaborative work into new visions. Fictional narratives have been shown to have persuasive effects on individuals' attitudes and beliefs (Appel & Richter, 2007), for instance.

In a closer look into the dynamic between narratives and audience engagement, it is interesting to consider the studies developed by Green & Brock (2000) that indicate the efficiency of the relationship between narratives and individuals' engagement is "strong and long-lasting". By implementing a 'Transportation' research mechanism - defined as absorption into a story, that entails imagery, affect, and attentional focus - whereby narratives can affect beliefs, they conducted a series of experiments that involved exposing participants to different narratives across various contexts. In which participants were carefully selected and randomly assigned to different conditions to ensure a well-controlled study. Green & Brock (2000) experiments demonstrated that extent of transportation augmented story-consistent beliefs and favourable evaluations of protagonists and highly transported readers found fewer false notes in a story than less-transported readers.

2.2 Immersion

In order to move forward, it is essential to acknowledge the concept of immersion that will be part of the fundamentals of this research. According to Bailenson (2018), immersion is the degree to which a virtual or real-world environment can provide a sense of presence, engagement, and agency, such that the participant is able to act and respond to the environment in a meaningful and effective way. Immersion involves a deep and sustained engagement with an activity or environment, such that one's cognitive and affective responses are fully engaged and aligned with the experience (Calvo & Peters, 2014).

It is important to consider Mitchell (2010)'s affirmations, which comment on how through their nascent efforts to create intelligent, holodeck-like spaces, artists and computer scientists have discovered that human perception of reality relies on a large, complex combination of factors. And, in the past fifty years, many of these factors were employed in a variety of ways to create aesthetic experiences that differ markedly from original attempts at virtual realism. Mitchell (2010) complements, by reinforcing that the sensation of "being there" depends heavily upon sensory absorption within the environment. One must feel immersed in the space and physically a part of it. Sensory immersion is fundamental to our relationship with the natural environment.

The perception of immersion involves a sense of presence, engagement, and emotional involvement in a virtual or real-world environment, such that the participant

loses awareness of the outside world and feels as if they are actually there (Slater and Wilbur, 1997).

Ultimately, according to Cruz-Neira (2018), immersive technologies have the potential to revolutionise the way we communicate, learn, and interact with the world around us, transforming the very fabric of society. The development of immersive media technologies throughout the years at a very rapid pace provides new opportunities for creating positive social change (Breves, 2020), making it extremely relevant to be considered within the context of this project.

2.2.1 Immersive Narratives

This subchapter will go through what are immersive narratives within the context of this research. As mentioned previously, nowadays stories are endlessly experienced, from leisure time through work, politics, education, and through increasingly personalised, narrativized and responsive advertising campaigns (Gröppel-Wegener & Kidd, 2019).

Taking into account the context of how society deals with media and technology, immersive narratives are a form of storytelling that engages the audience on a deeper level, using technology to create an experience that is interactive, multi-sensory, and could be considered as part of the participatory culture (Stapleton, 2018).

The participatory culture is a shift from a culture of consumption to a culture of creation, where users play an active role in shaping the media landscape. And participatory performance allows the audience to explore identities, social situations or even imagine new ways of being (Boal, 2005).

The immersive narratives are designed to elicit emotions and responses from the audience, and they do this by placing the audience inside the story rather than just presenting it to them (Bushnell, 2019). According to Bartsch et al (2014), these emotional media experiences can lead to cognitive, affective, and behavioural changes through the stimulation of reflective thoughts.

2.3 Social Awareness

Social awareness refers to an individual's ability to perceive and understand the emotions, needs, and perspectives of others, as well as to recognize and respond to social and ethical issues. It involves recognizing and understanding the impact that one's actions have on others and being able to respond effectively in social situations (Mayer & Salovey, 1997).

Another relevant concept for this study, that has great connection to social awareness and potentially will be useful during the findings of the field research, is cognition. By definition it is considered a set of mental processes by which individuals acquire, process, and use information (Neisser, 1998). In more detail it is the mental activity involved in the acquisition, storage, retrieval, and use of knowledge (Anderson, 2015).

There are several other concepts that have great potential to complement and assist in raising the social awareness of individuals. For the purpose of this study, empathy and the standing point theory were the ones chosen to be considered, which following sections will look into.

2.3.1 Empathy

According to Davis (1983), empathy refers to the ability of identifying with and understanding another person's feelings or difficulties, also involving the ability to understand the emotions of someone else by vicariously experiencing that person's emotions. Overall, empathy is about connection and opening up to the possibility that there is a commonality in all human experience, that our feelings and experiences are universal (Jamison, 2014).

In sum up, empathy is a complex construct that includes cognitive, affective, and behavioural components, as well as the ability to both understand and respond to the emotions of others (Eisenberg & Eggum, 2009).

It has been included in this State-of-the-Art Review, as the combination of social awareness and empathy used in immersive narratives might be a solid path moving forward in exploring the response of individuals when in contact with themes such as gender equality through immersive narratives.

2.4 Gender Equality

According to the United Nations Development Programme (2013), gender equality is the equal rights, responsibilities, and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that their rights, responsibilities, and opportunities will not depend on whether they are born male or female. Complimentary to that definition, The World Health Organization (2018) considers gender equality as the full enjoyment by women and men of equal rights and opportunities for participation, decision-making, and leadership in all spheres of life.

And although Hall (1997) affirms that representation is central to the process by which meaning is produced and exchanged in society. And Mcrobbie (2009) complements it by stating that media representations play a crucial role in the construction of gender identities and relations. On the other hand, the proliferation of popular feminist discourse and representation does not necessarily indicate a more equal or just society (Banet-Weiser, 2018).

The relationship between popular feminism and popular misogyny is complex and contradictory, reflecting the ongoing struggle over gender equality in contemporary culture (Banet-Weiser, 2018). It should also not be left out from this section Wajcman's (1991) observation that technology is often not liberating for women, as it may reinforce traditional gender roles and exclude them from certain types of work and participation in society as a reminder of what is yet to be conquered. The non-neutrality of media and technology in the gender equality discussions is extremely relevant. According to Sharma and Singh (2019), media and technology are not passive tools, but rather have the potential to reinforce existing power relations in society.

In order to achieve gender equality, it is needed to create opportunities for women to access and engage with technology and media, and also ensure that they are not subjected to discrimination or bias in these fields. And that is why exploring further possibilities that might facilitate the overcoming of challenges towards a more equal society is extremely relevant. Having that in mind, brings this section to a concept that relates directly to this discussion: the Standpoint theory, which will be covered in the upcoming subchapter.

2.4.1 The Standpoint Concept: A Brief Overview

The standpoint refers to a particular perspective or viewpoint, which is shaped by one's experiences, social identity, and positional power. Also, it is a place from which to view and understand the world, a position from which one speaks and makes claims, a perspective that is not neutral but partisan as it comes from one's life experiences (Smith, 1987).

When referring to the Feminist Standpoint concept, there are many theories to be considered, there has been three-waves so far of female researchers focused on this topic. For this research it is to be considered the definition according to Hartsock (1983), where standpoint refers to the way a person or group understands the world that is grounded in their lived experiences, cultural and historical background, as well as their location in the social hierarchy.

Overall, standpoint could be considered as a mechanism to expose all forms of domination and erase them. And to observe the multiple forms of oppression that depreciate women (Hartsock, 1983).

Gathering all the previous information from this subchapter, shows that it is essential to develop the collective awareness that gender equality is a matter that needs to be addressed urgently, as it affects not just women, but society. And by doing so, society can begin to challenge these assumptions and promote more inclusive and equitable forms.

2.5 Immersive Narratives and Social Awareness

As mentioned earlier, according to Boyd (2015), Jenkins (2006), & Ito (2015), there has been a boost in communication practices for social change, and a variety of agencies in which voice, citizenship, and collective action have centre stage as core values, principles, and practices. Through the use of immersive narratives, educators can provide students with opportunities to engage in critical thinking, problem-solving, and the development of empathy, particularly when addressing complex social issues (Vorderer, Klimmt, & Ritterfeld, 2004), to give just one example of how the relationship between immersive narratives and social awareness can be established.

According to Hertwig et al (2004) direct experiences with multi-sensory stimuli have proven to be more influential on user behaviour than indirect equivalents, such as text-based descriptions. Following up on that path of the relationship between

immersive narratives and social awareness, as technology continues to evolve constantly in the world, Covaci et al (2018) state that multimedia systems have the potential to make more efficient use of human perceptual and cognitive capabilities, as the human brain has evolved in a multisensory environment.

Ultimately, it is interesting to observe if the more significant the interactivity is perceived, the greater the appreciation. And the more appreciation is felt, the greater the chance that this feeling will turn into prosocial behaviour (Steinemann et al., 2017). The use of immersive technologies in performances, plays, art installations and live events can transform the traditional relationship between performer and audience, creating new forms of interactivity, participation, and immersion (Kenderdine et al., 2019).

As the concepts of narratives and immersion have been defined in previous chapters, to continue the research, it is time to take a look into the combination of immersive narratives and social awareness, therefore, in the upcoming sections, there will be a brief overview of main concepts, as positive computing, the relationship between installation art, urban spaces and social debates, as well as site-specific immersive theatre.

2.5.1 Positive Computing

Positive computing offers a new design paradigm for interactive technology, grounded in humanistic and positive psychology, to enable people to experience technology as empowering and supportive. It focuses on augmenting human abilities and promoting flourishing rather than compensating for human limitations and reducing problems. (Calvo & Peters, 2014).

According to Riva & Gaggioli (2015) and Epstein (2015), it involves designing technology that enhances positive emotions, promotes healthy behaviours, psychological well-being and fosters social connections.

As much as it would be amazing to explore even further this concept, not to extend too much and diverge from the main focus of this study, in sum up, it can be said that positive computing has the potential to transform the way we live, work, and interact with each other (Epstein, 2015). This emerging field involves a partnership between psychology, social sciences, and technological development, and offers great potential for enhancing human life.

2.5.2 Installation Art, Urban Spaces and Social Debates

As He et al (2021) mentions, installation art involves the intersection of multiple dimensions, such as creative thinking, realistic environment, historical changes, and more. It often intervenes in urban public spaces in an artistic way. And it expresses itself not by directly showing or telling, but having a certain suggestion and mapping function, with multiple interpretations being generated due to the influence of the different life experiences of the individuals watching it.

The more public initiation of installation artworks could be considered the French artist Marcel Duchamp produced works “Bicycle Wheel” and “Fontain” in 1951 and 1950, respectively, as these works of art attracted the attention of avant-garde artists and the art criticism industry. At that time, installation art works admired nature, randomness, freedom and subverted traditional creative concepts (He et al, 2021).

According to He et al (2021), from the 1960s to the early 1990s, installation art emerged and continued to arise, expanding exhibitions from museums to the use of abandoned factory buildings, simple warehouses, street sides, and walkway corners, embellishing the urban landscape and becoming the daily life of the general public. In the 1980s all the way into the 1990s, the media and topics involved in installation art involved many aspects of contemporary people’s lives and thinking, such as environmental protection and world peace, multiple cultures, ethnic conflicts, just to name a few examples.

For consideration of this research, an important characteristic of an installation artwork is how it manages to convey its meaning through interactivity with the audience. These meanings can awaken people’s attention to space, tell the problems faced by the space, or tell a related historical memory of the space. The awakened memories and the conveyed meanings increase the emotional communication between people and the space, just as Anthony Johnson put forward a point of view, the installation can create a novel environment, promote the memory of the audience, and form a certain life experience in the form of memory. The formation of public life experience further strengthens the understanding of the installation (He et al, 2021).

In the process of installation art interaction, the audience changes from original viewers to art designers through interaction with different materials and media. Interactivity strengthens the audience’s sense of participation in public

space and strengthens the audience's sense of presence in urban public spaces (He et al, 2021).

Overall, it could be said that an installation artwork itself is a manifestation of human thinking, being able to make social and economic activities resonate with it. It is an art form which can not only reflect the development of urban society, history, and culture, but also reflect people's basic needs (Yingbo, 2020).

2.5.3 Site-specific Immersive Theatre

A site-specific theatre has great synergy with installation art, mentioned in the previous section, as it is a form of cultural intervention that transforms the city into a stage and invites the audience to see the urban environments in new and imaginative ways. It challenges traditional notions of performance and spectatorship, creating a sense of collective participation and co-creation between the audience and the performers (Pearson, 2016).

According to Fischer-Lichte (1995), site-specific plays can create unique and intense experiences for the audience, challenging their perceptions and inviting active participation - which is about giving audiences agency and choice, allowing them to shape the direction of the performance and create their own unique experience. Through site-specific performances, theatricality can be harnessed to transform both physical and social spaces, inviting the audience to reconsider their relationship with their environment.

Another important concept to better understand due to the purpose of this study is the immersive theatre, which is a hybrid form that blurs the boundaries between theatre, installation art, and participatory events, offering new and exciting possibilities for creative expression (Bial, 2017), by engaging the audience on a deeper level, activating their senses, emotions and inviting them to become active participants in the performance (Ravenhill, 2016). It creates a heightened sense of presence and intimacy, breaking down the barriers between performer and spectator, and allowing the audience to experience the performance in a more visceral and immediate way (Kattenbelt, 2016).

One of the defining characteristics of immersive theatre is its emphasis on experiential over representational, which is not just a form of entertainment, but a means of exploring and interrogating the world around us (Wilsher, 2017). Also, according to Kershaw (2011), the importance of physical presence in immersive theatre cannot be

overstated, as it allows for a direct and immediate connection between performer and audience that cannot be replicated through digital means. It is a means of disrupting the status quo, challenging dominant narratives and power structures, and promoting social and political change. Sensory immersion is at the heart of immersive theatre and can be achieved through a range of techniques, from sound and lighting to taste and smell.

A cultural product that is a combination of site-specific and immersive theatre can be an extremely powerful social tool. As storytelling in immersive theatre is often non-linear and fragmented, offering audiences a multiplicity of perspectives and interpretations. And interactivity allows audiences to participate in the creation of the narrative and engage with the performers in new and meaningful ways (Wilsher, 2017). According to Pearce (2018), site-specific theatre offers a chance to create a unique theatrical experience, being able to transform the space into a living, breathing theatrical world. It is a means of activating the urban landscape and creating a more dynamic and responsive relationship between people and place (Govan et al., 2016). Therefore, the combination of both focused on addressing social topics could turn into a powerful tool to raise awareness about a variety of pressing issues from the audience.

2.6 Case Studies

In this chapter, we will examine a few case studies that showcase the use of immersive narratives in different theatrical productions, installations and performances. They provide valuable insights into the potential of immersive site-specific theatre and installation artworks to address social issues and promote social awareness from their own different perspectives. The strategy was to observe more closely and select the projects that could be looked into as reference from various perspectives, either from the immersion one, or the site-specific / installation format, all the way to the main topic of gender equality.

By analysing the selected case studies, the aim is to gain a deeper understanding of different possibilities on how immersive narratives could be effectively employed to engage audiences and spark conversations about gender equality, and also observe possible existing gaps that could turn out to be opportunities to be explored within the context of this research.

During the research for potential references, it was notable the lack of immersive site-specific narratives focused specifically on gender equality. The following case

studies have been chosen for their relevance and potential insights: "The Dinner Party"(1974) by Judy Chicago, "Sleep No More"(2009) by Punchdrunk, "Learning Curve"(2016) by Third Rail Projects, "Sleep Over"(2018) by Geraldine Pilgrim, "The Jungle"(2018) by Joe Murphy and Joe Robertson, "The Burnt City"(2022) by Punchdrunk, "Emilia"(2018) by Morgan Lloyd Malcolm, "Hotel Medea"(2009) and "Binaural Dinner Date"(2016) by Zu-uk.

“The Dinner Party” by Judy Chicago, an art installation premiered in 1974, celebrates the achievements of women throughout history. Though not fully immersive, it sets the tone for exploring gender equality through artistic representation at a physical location. As immersive as "Emilia" by Morgan Lloyd Malcolm, a stage play from 2018, that celebrates the life and achievements of Emilia Bassano, and demonstrates how immersive storytelling in a traditional theatrical format can raise awareness and promote discussions on gender equality.

Figure 1

Image of “The Dinner Party” (1974), by Judy Chicago



Note. Figure 1, B. (2023). Image of “The Dinner Party” (1974), by Judy Chicago. Bee1120 [Photograph]. https://upload.wikimedia.org/wikipedia/commons/7/73/The_Dinner_Party.jpg

Figure 2

Image of “Emilia” (2018), by Morgan Lloyd Malcolm



Note. Figure 2, T G (2018). Image of “Emilia” (2018). The Guardian [Photograph]. <https://www.theguardian.com/stage/2018/aug/16/emilia-review-speculative-history-of-shakespeares-lover-brims-with-wit-and-rage>

Meanwhile, "Sleep No More", by Punchdrunk, is a hybrid immersive theatre experience from 2009, which reimagines Macbeth in a hotel setting, utilising multimedia elements to create an interactive and mysterious atmosphere. It demonstrates the power of immersive storytelling in engaging adult audiences in a site-specific theatre environment. And "Learning Curve" by Third Rail Projects is a physical immersive theatre production from 2016, that explores education and personal growth. Through the use of interactive props, it provides insights into the potential of immersive narratives to address social issues in a thought-provoking manner that takes the audience from their comfortable spectator seat and includes them into the story.

Figure 3

A fragment of a Sleep No More (2009) Scene, author Autopilot



Note. Figure 3, A. (2023). Frame of a Sleep No More (2009) Scene, author Autopilot [Photograph]. Autopilot. https://upload.wikimedia.org/wikipedia/commons/a/ad/Sleep_No_More_-_Sophie_Bortolussi.jpg.

Figure 4

“Learning Curve” (2016) took over a Chicago Public School



Note. Figure 4, C. T. (2023). “Learning Curve” (2016) took over a Chicago Public School [Photograph]. The Chicago Tribune.

As for "Sleep Over" by Geraldine Pilgrim, a site-specific performance art piece from 2018, blurs the line between reality and dreams. It offers an immersive overnight experience that encourages exploration and self-reflection, providing a unique perspective on gender equality. "The Jungle" by Joe Murphy and Joe Robertson, a physically immersive theatre experience from 2018, depicts the experiences of refugees in Calais, France. It highlights the power of immersive narratives in fostering empathy and understanding towards marginalised communities.

Figure 5

“Sleep Over” (2018) overview, by Geraldine Pilgrim



Note. Figure 5, C. T. (2023). “Sleep Over” by Geraldine Pilgrim [Photograph]. <https://pbs.twimg.com/media/Fg8wGaTWAAI7iPU.jpg>

Figure 6

"The Jungle" (Murphy and Robertson, 2018)



Note. Figure 6, M. B. (2023). *"The Jungle" (Murphy and Robertson, 2018)*. [Photograph]. Marc-Brenner.

"The Burnt City" by Punchdrunk, a hybrid immersive theatre production from 2022, explores the mysteries of an ancient civilization. It showcases the potential of immersive narratives to uncover hidden histories and engage adult audiences. In many ways it is similar to "Hotel Medea", from and "Binaural Dinner Date" by Zuk, respectively from 2009 and 2016, showcase the potential of multimedia and interactive theatre in engaging adult audiences in explorations of mythology, tragedy, and social interactions.

Figure 7

"The Burnt City" (2022), a hybrid immersive theatre, photo by The Guardian



Note. Figure 7, T. G. (2023). *"The Burnt City" (2022)* [Photograph]. The Guardian.

Figure 8

"Hotel Medea"(2009), by Zu-uk



Note. Figure 8, T. L. (2023). "Hotel Medea"(2009) [Photograph]. The Londonist.

Figure 9

"Binaural Dinner Date"(2016) by Zu-uk



Note. Figure 9, T. L. (2023). "Binaural Dinner Date"(2016) by Zu-uk [Photograph]. Zu-Uk.

2.6.1 Comparative Analysis of Case Studies

Table 1

Comparison of Multimedia Narratives Main Characteristics

Play Title	Audience	Format	Platform	Theme	Description	Creator	Release Year	Content Type
The Dinner Party	General public	Installation	Physical	Feminism, History	Celebrates women's achievements throughout history	Judy Chicago	1974	Art installation
Sleep No More	Adult	Immersive Multimedia theatre	Hybrid	Mystery, Suspense	Interactive retelling of Macbeth in a hotel setting	Punchdrunk	2009	Theatre experience
Learning Curve	General public	Immersive theatre	Physical	Education, Growth	Explores the education system and personal growth	Third Rail Projects	2016	Theatre experience
Sleep Over	General public	Site-specific	Physical	Exploration, Art	Immersive overnight experience blurring reality and dreams	Geraldine Pilgrim	2018	Performance art
The Jungle	General public	Immersive theatre	Physical	Refugee crisis	Depicts the experiences of refugees in Calais, France	Joe Murphy, Joe Robertson	2018	Theatre experience
The Burnt City	Adult	Immersive Multimedia theatre	Hybrid	Mystery, Archaeology	Uncovers the secrets of an ancient civilization	Punchdrunk	2022	Theatre experience
Emilia	General public	Play	Physical	Feminism, History	Celebrates the life and achievements of Emilia Bassano	Morgan Lloyd Malcolm	2018	Stage play
Hotel Medea	Adult	Multimedia theatre	Hybrid	Mythology, Tragedy	Reimagines the story of Medea in a hotel setting	Sound & Fury	2009	Theatre experience
Binaural Dinner Date	Adult	Interactive theatre with binaural audio	Physical	Social Interaction	A blindfolded dinner experience exploring relationships	Zu-uk	2016	Interactive theatre

The table provides a comparative analysis of the selected case studies, considering various aspects such as target audience, format, multimedia usage, platform, theme, materials, description, director, creator, year of premiere, and content type. By examining the approaches taken by each production, we can identify key elements and

strategies that may inform the design of our own site-specific immersive theatre experiment focused on gender equality. This analysis serves as a foundation for understanding the diverse approaches to develop immersive narratives to address gender equality, as mentioned earlier in this chapter.

Analysing the case studies several common elements emerge. In terms of format, the case studies encompass a wide range of immersive experiences, including installation, immersive theatre, site-specific performances, and interactive theatre. The platform varies between physical, virtual, and hybrid, indicating the adaptability of immersive narratives across different settings. The common theme of social awareness is prevalent throughout, with a particular focus on feminism, history, education, exploration, refugee crises, and social interactions. Materials used in these productions span from intricate set designs and multimedia elements to scripts and stage design. The content types encompass art installations, theatre experiences, performance art, stage plays, multimedia theatre, and interactive theatre. This comparison reveals the versatility of immersive narratives in conveying social messages and engaging audiences across diverse formats, platforms, themes, materials, and content types.

The information gathered through comparing these case studies also provides valuable insights that can help bridge a literature gap. By examining the commonalities and unique aspects of the case studies, it was identified the most effective elements for engaging audiences and promoting social awareness. For example, the use of immersive set designs and multimedia elements in productions like "Sleep No More" and "The Burnt City" creates an immersive and visually captivating experience. Incorporating site-specific elements, as seen in "Sleep Over" and "The Jungle," allows for a deeper connection between the narrative and the physical space. The emphasis on exploration and social interactions in "Binaural Dinner Date" and "Hotel Medea" highlights the potential for interactive and participatory experiences. By combining these elements, a fresh and original immersive narrative could be developed that actively involves audiences in the exploration of gender equality issues, fostering empathy, understanding, and dialogue. This narrative could utilise immersive set designs, multimedia elements, site-specific elements, and interactive components to create a thought-provoking and impactful experience that raises awareness about gender equality.

2.7 Conclusion

The State-of-the-Art Review has explored the use of immersive narratives for social awareness, specifically focusing on the context of gender equality. And it has highlighted several key concepts, including social awareness, empathy, gender equality, positive computing, installation art, and site-specific immersive theatre. By examining the relationship between immersive narratives and social awareness, this review has demonstrated the potential of immersive technologies to foster critical thinking, problem-solving, and empathy development in addressing complex social issues.

The literature has emphasised the importance of social awareness, which involves perceiving and understanding the emotions, needs, and perspectives of others, as well as recognizing and responding to social and ethical issues. Empathy has been identified as a crucial component of social awareness, allowing individuals to connect with and understand the emotions of others. Gender equality has also been highlighted as a significant social issue, emphasising the equal rights, responsibilities, and opportunities of women and men and the need for inclusive and equitable forms of representation in media and technology.

Furthermore, the review has explored how by providing direct experiences and multi-sensory stimuli, immersive narratives have been shown to have a greater influence on user behaviour and emotional responses compared to indirect equivalents. The combination of immersive technologies offers new forms of engagement, interactivity, and participation, allowing audiences to shape the direction of the narrative and engage with the performers in meaningful ways. Positive computing has also emerged as a promising design paradigm, focusing on enhancing positive emotions, psychological well-being, and social connections through interactive technology.

This State-of-the-Art review has highlighted the potential of immersive narratives for social awareness, specifically in the context of gender equality. The combination of immersive technologies, empathy development, positive computing, installation art, and site-specific immersive theatre holds promise for creating transformative experiences. By leveraging the power of narratives, storytelling,

audience engagement, and immersion, this chapter indicates that it is possible to create impactful experiences that promote social awareness and encourage action.

However, it also indicates that there are still literature gaps and elements that require further exploration, such as the specific emotional responses evoked by artistic interventions; the optimization and use of site-specific immersive theatrical installation to explore gender inequality challenges in different narrative formats; and the influence of immersivity levels of narrative formats - such as text, audio, and artistic immersive installations - on young adults' opinions regarding gender inequality. It is possible that during fieldwork other questions may arise.

In conclusion, currently, based on the perspectives analysed, it seems to exist a valuable opportunity to position immersive narratives in transdisciplinary contexts (Arts, Technology and Social Awareness), to fill the gap in the literature and develop a framework to be applied in future projects for social impact.

3. Methods

This chapter provides an in-depth exploration of the research approach employed to investigate the perception of gender bias among young adults through immersive storytelling. The chosen methodology is qualitative in nature, aiming to offer a comprehensive understanding of the topic at hand.

According to Ritchie & Lewis (2003), the qualitative approach allows researchers to delve into the rich details of participants' experiences and perspectives, enabling a nuanced analysis of the phenomenon under investigation. It is important to note that by immersing young adults in the narratives, the focus of this project is aimed at gaining a deep understanding of participants' experiences, thoughts, and emotions related to gender bias as well as how much the narrative format chosen influences the outcome.

In order to structure within art and focus group-based method, the fieldwork will be a Focus Group session divided into two moments: firstly, participants will join a three-phase multimedia site-specific installation experiment, and then a discussion will be held, audio-recorded for data collection and further transcribed *verbatim*, followed by a Thematic Analysis by Braun & Clarke (2006). See more details in Subchapter 3.5.

3.1 Research Design

The development of the research design was guided by a meticulous examination of the existing research literature and theories outlined in Chapter 2 (State-of-the-Art Review), which facilitated the understanding of the subject matter and enabled the formulation of a well-rounded research design. By incorporating insights from previous studies, the goal was to build upon existing knowledge and contribute to the field of immersive narratives for social awareness.

Influenced by the Main Research Question (see Subchapter 1.2), which serves as a guiding force throughout the study, the research design was also carefully developed to ensure the collection of relevant data. It directs the focus towards specific areas of investigation, looking into maximising the relevance and effectiveness of the study.

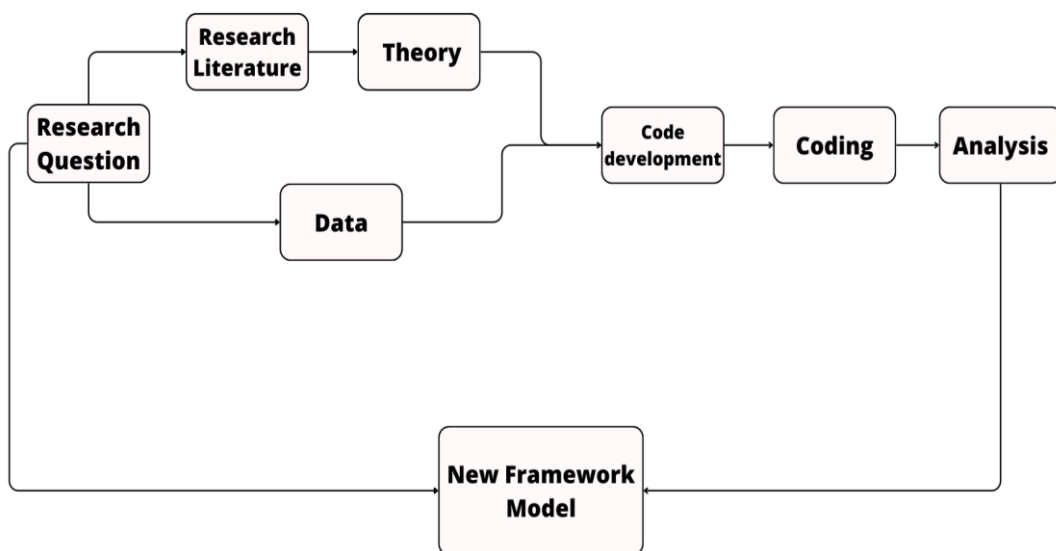
To capture the multifaceted nature of immersive narratives and to gain a holistic understanding of their impact on social awareness, a combination of Arts-based and

focus group methods was employed. This hybrid approach allowed for a comprehensive exploration of the subject matter, integrating both creative expression and group discussions. Both methods will be explored in more detail in the following two subchapters.

The research design presented here integrates Arts-based methods, focus group discussions, and Thematic Analysis (Braun & Clarke, 2006) to explore the realm of immersive narratives for social awareness. The Arts-based concepts considered were the ones by Barone & Eisner (2012); Ritchie & Lewis (2003) and the focus group concept by Bloor et al. (2001), to be further explained in the next sections (see Subchapters 3.2 and 3.3, respectively). They have been considered since the early stages of the research design due to their importance for the overall outcome of this study. By combining the arts-based and focus group approaches, the aim is to generate valuable insights for the development of a framework, to be implemented in further research on immersive narratives for social awareness, independently of the topic selected to be explored.

Figure 10

Research Design Process



Note. Figure 10. Research Design Process [Image]. From the Researcher Personal Collection.

The research design process adopted for this study, as depicted in Figure 10, follows a comprehensive and systematic approach. It commenced with the formulation of a research question, serving as the fundamental basis for the entire research endeavour (see 1.2). Subsequently, the research design process encompasses the data collection, engagement with existing literature, development of a coding framework using Thematic Analysis (Braun & Clarke, 2006), actual coding, and further analysis. This offers valuable insights, enabling the identification of emerging patterns and relationships.

This design process exemplifies a robust and rigorous approach to conducting research, and it ensures that the study is guided by a well-defined research question, supported by empirical evidence, and enriched by existing theories and frameworks (Barone & Eisner, 2012). The outcome has the potential to be a meaningful contribution to the advancement of knowledge within the field of this dissertation.

3.2 Arts-based Research

According to Barone & Eisner (2012) and Wang et al. (2017), Arts-based research uses artistic forms and expressions to explore, understand, represent, and even challenge human experiences. Considering this project is allocated into the Culture and Arts specialisation of the Multimedia master's from University of Porto, as well as the researcher's own professional background - as an artistic director, producer and artist - in combination with the subject here studied, it has been decided to use an Arts-based research method for this study.

According to De Jager et al. (2017), by recognizing the power of the arts in exploring complex phenomena, it is possible to capture subjective experiences, and alternative modes of understanding. By choosing the Arts-based path, the goal is to take advantage of its ability to evoke emotions, engage the senses, and create connections with the participants through an active participation approach, fostering deeper engagement and understanding of the research topic (De Jager et al., 2017).

Complementing this idea on how powerful Arts-based research can be in exploring social phenomena, Wang et al. (2017) affirm that socially engaged research practice can be understood as a type of research that emerges from the joint efforts of collaborators, participants, and stakeholders. It involves active dialogue, immersive experiences, and collective involvement across various stages of the research process,

such as the formulation of research inquiries, data generation and analysis, and the presentation of research findings. Still according to Wang et al. (2017), the primary objective of this approach is to foster greater audience engagement and bring about positive transformations within participants, communities, or society at large.

Taking all that has been said in this Subchapter in consideration, artistic methods will be used as part of the research design, incorporating a multimedia installation as a central component. The installation will consist of various artistic elements, including audiovisual and audio content, as well as textual components. By combining different artistic mediums, such as visuals, sounds, and text, the installation aims to create a rich and immersive environment that engages multiple senses and stimulates emotional responses. The audiovisual and audio components will evoke a sensory experience, capturing the attention of participants and inviting them to explore and engage with the research material. The textual elements, such as narratives and storytelling, will provide a framework for organising and presenting the research findings in a compelling and meaningful way (Barone & Eisner, 2012). By utilising an installation with audiovisual and audio content, complemented by Narrative Inquiry activities (Riessman, 2008) - for more details see Section 4.1.2.2 -, this Arts-based approach aims to create an immersive and transformative research experience, facilitating a comprehensive exploration of the research topics from both artistic and narrative perspectives.

The incorporation of Narrative Inquiry (Riessman, 2008) activities further enhances the Arts-based approach by encouraging participants to share their own stories, experiences, and perspectives related to the research topic. According to De Jager et al. (2017), this interactive and participatory element fosters deeper engagement, promotes dialogue, and allows for the exploration of subjective experiences and alternative modes of understanding.

This will be complemented by a Focus Group method for deeper exploration of the subject in question at this study.

3.3 Focus Group

As just mentioned, a Focus Group discussion will be held after the 3-phases multimedia narrative intervention to facilitate group interactions and generate collective insights on the impact of immersive narratives on young adults' perceptions, attitudes, and commitment.

In the Focus Group, each participant presents their own views and experience, but they also hear from other participants. They listen, reflect on what is said, and in light of this consider their own standpoint further. They will ask questions of each other, seek clarification, comment on what they have heard, and prompt others to reveal more. As the discussion progresses, one person's response becomes sharpened and refined, and moves to a deeper and more considered level (Ritchie & Lewis, 2003).

This method was chosen with the intention to allow a deeper exploration and data collection of participants reaction (Bloor et al, 2001) to the art installation, and compare the narrative formats (text, audio and audiovisual), as well as information on the structure and multimedia artefacts used for the fieldwork.

A further feature of focus groups is the spontaneity that arises from their stronger social context. In responding to each other, participants reveal more of their own frame of reference on the subject of study. The language they use, the emphasis they give, and their general framework of understanding is more spontaneously on display (Ritchie & Lewis, 2003). As all this emerges from discussion within the group, the perspective is less influenced by interaction with the researcher. This stronger social context offers an opportunity to see how ideas and language emerge in a more informal setting, with a more observational role from the researcher, shaped through conversation with others (Ritchie & Lewis, 2003). It reflects the social constructions - normative influences, collective as well as individual self-identity shared meanings - that are an important part of the way in which we perceive, experience, and understand the world around us (Bloor et al., 2001).

The structure for this research design was composed as suggested by Ritchie & Lewis (2003), meaning the focus groups will meet once, for a period of approximately an hour and a half to two hours. And the group discussion settings will take the form of a workshop, with a more structured agenda involving specific storytelling activities.

3.4 Procedures

Firstly, a social demographic survey will be filled by participants (see attachment 1.1). Then, considering that on research such as this one, based on art-based methods, in addition to context and the art format used, both elements that can have a significant impact on it, perhaps even more important and influential is the interactive nature of the process (Wang et al.,2017), a Focus Group Session will be conducted. It

will consist of a three-phase multimedia site-specific installation experiment with selected participants followed by a focus group discussion for data collection. In Chapter 4 there will be further details about the focus group session structure. But here we present in advance the overall procedures that are going to be used.

The multimedia narrative formats included in the site-specific installation experimented with participants during the Focus Group Session aims to observe the stimulation of their understanding and reflection on gender inequality challenges through the art-based method.

The three phases of the experiment consist of:

- Phase 1 - A text-only narrative content;
- Phase 2 - An audio content;
- Phase 3 - An audiovisual artistic installation.

Each phase contains the same content presented in a different narrative format. Subsequently to the three-phase multimedia site-specific installation experiment, the focus group discussion will take place for further subject observation and data collection of participants' experiences, emotions, and opinions (De Jager et al., 2017). It is aimed to delve deeper into the emotional and immersive impact of the different narrative formats and the potential influence of immersivity in individuals, analyse the experience environment and if participants' perspectives change or not about the gender inequality topic (Bloor et al., 2001). All data will be collected from audio-recording of the focus group discussion and researcher's notes.

Finally, as according to Morgan (1996), the focus group method is more a way of thinking than a fixed set of techniques - and it is extremely important to evaluate the structure of a focus group session to ensure that it facilitates effective and productive discussions - a post-experience survey - with a Likert Scale method implemented for the questions - will be conducted to evaluate the structure, topics, and overall perceptions of participants regarding the focus group session.

The Likert scale is a widely used method for measuring attitudes, perceptions, and opinions of respondents. It consists of a series of statements or questions that participants rate on a scale, typically ranging from "strongly disagree" to "strongly agree." The scale allows respondents to express their degree of agreement or

disagreement with each statement, providing researchers with quantitative data for analysis (Babbie, 2016).

By utilising an adapted Likert scale formed by a close-ended questionnaire, in which individuals have to choose a number between 1 to 5 - in which, 1 means 'Terrible' and 5 means 'Excellent' - valuable insights are expected to be gained, enabling adjustments to be made for future sessions.

3.5 Data Analysis

According to Adu (2019), coding is not about reducing the complexity of the data, but rather to make sense of it in a meaningful way. The chosen qualitative method to analyse collected data is Thematic Analysis (Braun & Clarke, 2006), and the goal of choosing it as the path for this project is to have richer, more nuanced interpretations of the data, as different perspectives and insights are brought to the process.

According to Maguire & Delahunt (2017), a thematic analysis allows for a systematic exploration of the qualitative data and provides a deeper understanding of participants' thoughts, feelings, and insights regarding gender equality. As for the procedure of the analysis, this project will be identifying recurring themes, patterns, and perspectives in qualitative data. By transcribing and coding the focus group discussions, assigning codes to segments of the data that represent common ideas or topics. These codes will then be organised into broader themes, capturing the key concepts or issues discussed by the participants. The resulting themes will be presented and supported by relevant quotes from the focus group discussions, aiming to add richness and depth to the analysis.

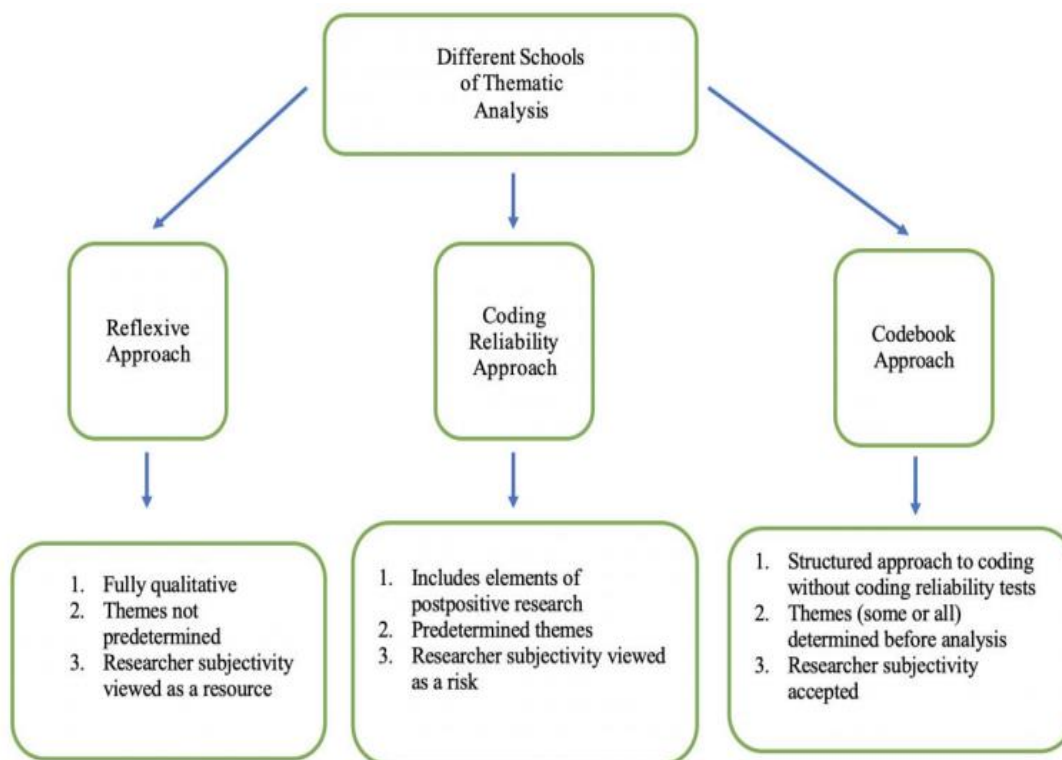
It is important to consider that according to Morgan (2022), researchers have many misconceptions about thematic analysis, which can lead them to produce poorly designed studies. For example, they may follow the procedures of two types of this method that do not align with each other. In order to guarantee this research does not follow the same misleading path and is able to choose the most fit procedure to the established goals set with a trustworthy data analysis, the main schools of thematic analysis were looked into.

According to Clarke & Braun (2013) and Morgan (2022), there are three schools of thematic analysis: Reflexive approach, the coding reliability approach, and the Codebook approach. Due to the aim of our research question, this project is considering

the reflexive inductive approach of thematic analysis instead of a theoretical one (Maguire & Delahunt, 2017). Which means only coding each segment of data collected that is relevant to or captures something interesting about the research question, rather than coding every piece of text. In addition, open coding will also be used; meaning there are no pre-set codes, they will be developed and modified as the coding process evolves, as presented by Maguire & Delahunt (2017) and Morgan (2022).

Figure 11

The Three Thematic Analysis Approaches, according to Braun & Clarke (2006)



Note. Figure 11. Reprinted from Understanding Thematic Analysis and the Debates Involving Its Use by Morgan, H., 2022. The Qualitative Report, 27(10), 2079-2091.

This research will follow Braun & Clarke’s (2006) six-step framework for thematic analysis development, which allows for a thorough analysis of the collected data guided by the main research question: *How can young adults be stimulated to debate the challenges of gender inequality through the use of immersive narratives?*

Figure 12

Braun & Clarke's (2006) six-step framework for a thematic analysis

Step 1: Become familiar with the data,	Step 4: Review themes,
Step 2: Generate initial codes,	Step 5: Define themes,
Step 3: Search for themes,	Step 6: Write-up.

Note. Figure 12. Braun & Clarke's (2006) six-step framework for a thematic analysis representation [Photograph]. Researcher Personal Collection.

3.6 Sampling

As this research focuses on qualitative investigation, non-probability sampling techniques were utilised to select the study population. Specifically, the convenience sampling method, due to its suitability, as it involves selecting participants based on their proximity or availability, which aligns well with the project's location and the limitations of the timeframe (McRobbie, 2009). That being said, the participants in this study consist of young adults (age 18-40) and students at the University of Porto.

It is important to acknowledge that convenience sampling may introduce biases into the research findings, as the sample may not be fully representative of the broader population. Nevertheless, the decision to focus on a young demographic was deliberate and driven by the research objectives - which was about carrying out a creative exploration of the studied phenomenon and the subjective experiences, personal perspectives, and broader cultural meanings. Thus, the subjective, emotional, and aesthetic aspects were central to understanding the object of study. While the findings cannot be generalised to the entire population, they still provide valuable insights into the specific group under investigation. According to McRobbie (2009), youth culture provides a space for the negotiation and contestation of gender norms, meaning they could be more willing to review pre-conceived concepts when in contact with different information about a certain topic. Therefore, by engaging young adults in this research, the aim is to understand how immersive narratives can influence their perceptions and challenge preconceived concepts related to gender equality issues.

To ensure a comprehensive understanding of the subject matter, the participants in this study encompass individuals with diverse genders, sexual orientations, and cultural origins. Inclusion of individuals who self-identify within different gender and sexual

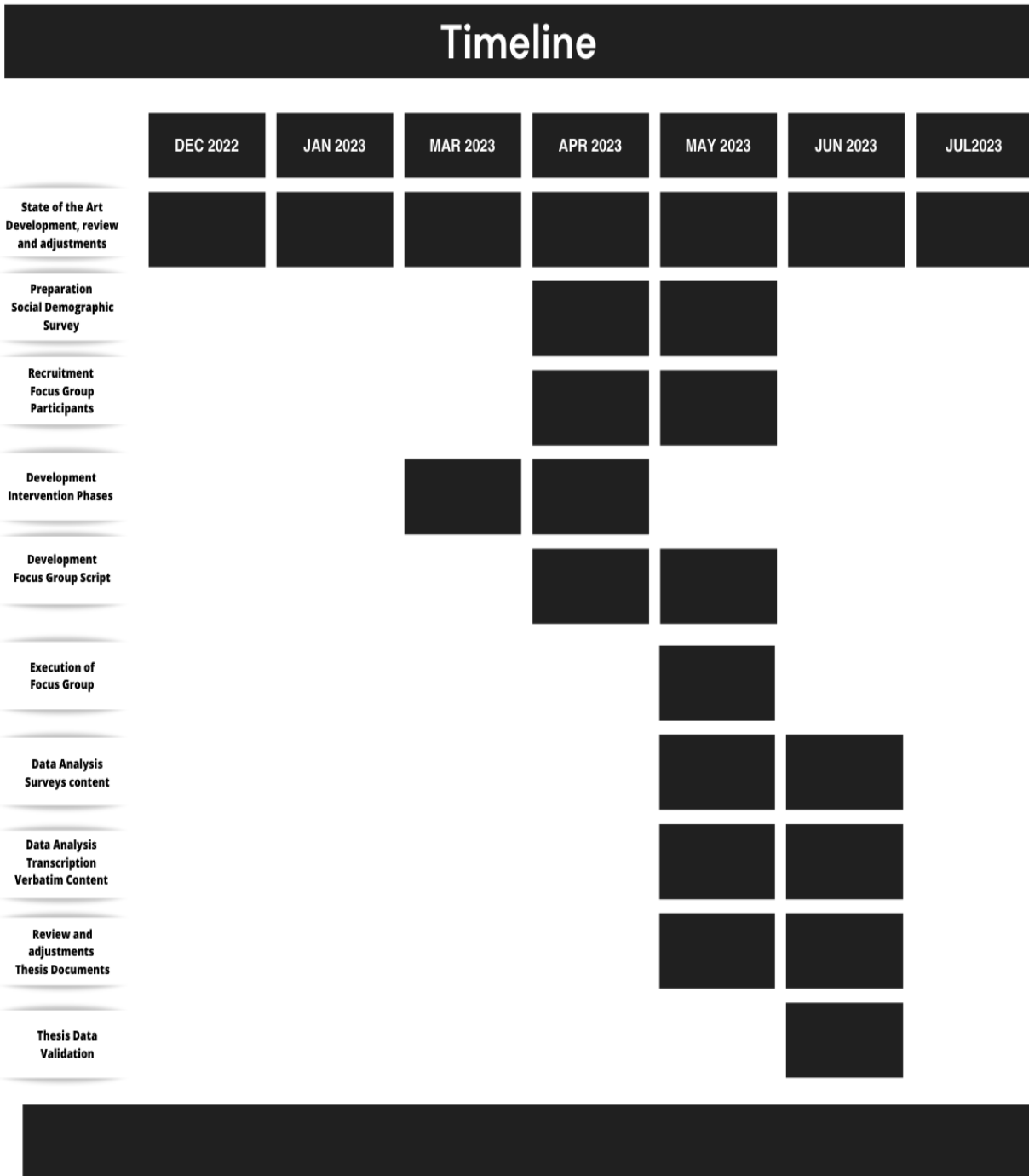
orientation categories is of paramount importance for the observational purposes of this research. By incorporating a range of perspectives, we can gain a more nuanced understanding of the potential impact of immersive narratives on social awareness and gender equality issues. A thorough display of the participants profile can be accessed by looking into Table 5, located further along, in the Section 4.1.4 (Participant's Recruitment Section) of this study.

3.7 Timeline

This section presents the estimated timeline for the entire end-to-end of this research, from conception, passing through the research question development, literature research and design to conclusions, future perspectives, and thesis data validation.

Figure 13

Project Overall Development and Implementation Timeline



Note. Figure 13. Project Overall Development and Implementation Timeline [Image]. From the Researcher Personal Collection.

4. The Site-Specific Immersive Installation Experiment

This chapter explores the development, implementation, and results achieved by a site-specific immersive installation experiment developed based on the State-of-the-Art Review (Chapter 2), combined with the arts-based and focus group methods, and driven by the research question, as mentioned in Subchapter 3.1 (Research Design).

As also already previously mentioned, the goal was to use an immersive narrative experiment to observe participants' engagement with the content presented in a multisensory and interactive manner, specifically exploring if it facilitates or not emotional responses, empathy, and a deeper understanding of the subject matter. The thematic analysis of the collected data will provide insights into the participants' experiences and contribute to a comprehensive understanding of the effectiveness of the immersive narratives.

4.1 Development

The development of the site-specific installation experiment involved multiple stages to ensure a comprehensive understanding of participants' perspectives on gender bias and to assess the impact of immersive narratives. Overall, this stage of this site-specific installation experiment took around two months to be completed. Here we will examine in more detail how each step was formulated from participants selection, through the focus group structure all the way to the post-experience survey.

The participants' selection demanded an extra effort to engage as diverse a group as possible within the students from the University of Porto, which will be discussed in the following subchapter. The pre-Focus Group social demographic questionnaire played a crucial role in establishing participant characteristics, capturing baseline perspectives, and controlling for pre-existing biases. The focus group session, comprising a three-phase multimedia experience and a post-testing collective discussion, aimed to assess the impact of immersive narratives on social awareness regarding gender equality for data collection. Thus, the post-focus group discussion

intended to gather participants' feedback on the structure, topics, and overall perceptions, to identify areas for improvement and make necessary adjustments for future sessions.

4.1.1 Creating the Pre-Focus Group Questionnaire

As mentioned earlier, the Pre-Focus Group questionnaire was developed to serve as an important social demographic information tool for characterising the participant sample, establishing baseline perspectives, and controlling for pre-existing biases, thereby providing valuable insights into the effectiveness of immersive narratives for social awareness.

This questionnaire is composed of a total of 16 questions, spread amongst five sections (see Appendix B), defined by a wide research of other social demographic surveys models already validated by academic references. In the context of this research, it will be used specifically for:

- Establishing participant characteristics such as age, self-gender identification, place of origin, and educational background. This information is important for identifying any potential biases or variations in responses based on demographic factors;
- Baseline assessment of perspectives on gender bias: Likert Scale questions (check Subchapter 3.4 for more details) related to the participants' general perspective on gender bias and previous immersive experiences prior to the experiment in place for this study. This allows them to capture the initial attitudes, beliefs, and awareness levels of participants. By collecting this information, it helps ensure that any changes observed in participants' attitudes and perceptions are attributed to the experience rather than pre-existing beliefs.

Considering the timeline of the project and participants availability, to facilitate the process and guarantee a higher number of responses, this questionnaire was developed online using Google Forms. As soon as participants confirm, they individually receive by email a link to fill this questionnaire.

4.1.2 The Focus Group Session Plan

As aforementioned in this research (check Chapter 3), the Focus Group session includes a three-phase multimedia site-specific installation experiment followed by a post-testing collective discussion. The aim is to gather qualitative data through audio recording, researcher's notes, and photographs, to support the analysis and interpretation of the findings.

This testing structure enables participants to provide immediate feedback. The insights were gathered to explore and try to identify any patterns or variations in participants' reactions across different narrative formats (Ritchie & Lewis, 2003).

Table 2

Focus Group Session Planned Timecode

Task / Stage	Duration (min)
Environment setup	30
Phase 1	6
Interval and next phase setup	5
Phase 2	6
Interval and next phase setup	5
Phase 3	6
Focus Group Discussion	60
Total Duration	<i>118 min (~1.9 hours)</i>

4.1.2.1 The Experiment Structure

The use of immersive narratives in a three-phase experiment - text, audio, and audiovisual art installation - was defined because it allows participants to engage in various ways with the content in a multisensory and interactive manner. Immersive narratives have the potential to evoke emotional responses, empathy, and a deeper understanding of the subject matter (Calvo & Peters, 2014). And by providing participants with different narrative formats, makes it more viable to assess the impact

and compare the effectiveness in individuals of different immersive storytelling modalities in conveying the message.

As past empirical observation had shown that an immersive narrative in theatre could be effective in generating debates and reflective thoughts on the audience regarding gender equality (See Appendix A), through the experience with the play *InCômodos* - for details see Section 1.1 -, there was the desire to explore more deeply if the use of immersive narratives for social awareness in gender equality could be actually effective. To accomplish that, by altering a bit of the environment for the experience and applying a similar storytelling in the context of an art installation instead of site-specific theatre, the selected narratives for the field research were:

- Phase 1 - A transcribed adapted text from the original audio content of the Hearing scene of the play *InCômodos* - see Appendix C - and two clothing lines hanged one in each wall in the room with A4 posters of woman testimonials originally from *InCômodos*;
- Phase 2 - The original stereo sound audio content of the Hearing scene of the play *InCômodos* - see Appendix D - and two clothing lines hanged one in each wall in the room with A4 posters of woman testimonials;
- Phase 3 - An adapted audiovisual version of that same audio content combined with the video from the Sight Scene of the play *InCômodos* (2018) - see Appendix E - and two clothing lines hung one in each wall in the room with A4 posters of woman testimonials.

Besides the original stereo sound audio content of Phase 2, used exactly as it was created for the play *InCômodos* - see Section 1.1 for more details - containing real women testimonials recorded by actresses mixed with real life sounds such as sirens, pans in the oven, knocks on doors and others -, the contents for Phases 1 and 3 were adapted and edited for this experiment. The text was an actual transcribed *verbatim* done to a Word document, of approximately 2min30s of the Phase 2 audio content, to fit into a single A4 page to maintain a constant dynamic timeframe for the realisation of all stages together. The audiovisual content for Phase 3 took longer to be finished, as it had to be edited to become a combination of the original Phase 2 audio with a pre-existing video from the Sight Scene of the play *InCômodos* (2018). The Adobe Premiere software was the one used for the video edition. In addition to the sound inclusion, a

few video parts were edited to fit the audio narration for storytelling impact purposes, based on professional experience by the researcher as an artistic director.

Apart from the storytelling itself, it was essential to define the multimedia narrative formats and when each would be used. The idea was to insert more immersive layers and multimedia stimulation at each phase, therefore, first would be the text, then audio and, finally, the complete audiovisual immersive site-specific installation would take place.

Firstly, for Phase 1, with the text, it was defined each participant would have their own piece of paper to read with the transcribed women testimonials, which implies the number of copies would be based on how big it was the sample selected for participation. Plus, two clothing lines were spread each one in one of two walls of the room, with A4 black and white posters of women testimonials, for interactivity purposes if wanted by the audience. These A4 black and white posters are originally from *InCômodos*, they each have consent forms to be used for educational purposes and were reprinted for this experience. They do not have colour on purpose, to be affected by the audiovisual projections in Phase 3.

For Phase 2, the clothing lines spread in two sides of the room, with A4 black and white posters of women testimonials remain exposed. The audio content is added, and the room is blacked out. The use of the original stereo sound audio from the play *InCômodos* (2018) would already give a perception of space if used as it has been originally conceived. Stereo sound refers to the technique of recording, reproducing, or transmitting audio using two or more independent audio channels, which creates a sense of spatial dimension and separation by delivering different audio signals to the left and right ears of the listener. This allows for a more immersive and realistic audio experience (Rumsey, 2001). That being said, as the goal here is to go even further in immersion, the existing stereo sound is reproduced as a surround sound to generate a three Dimensional (3D) feeling for whoever is listening to it. And for that sensation to be transmitted to participants, a spatial audio should be created from that original audio. A spatial audio is mainly used for some sort of spatial interactivity in a 'reproduced world' or virtual environment (Rumsey, 2001). As well as to include the feeling of envelopment, that enables the sensation of one being surrounded by sound, precisely

creating the sense of immersion and spatial realism, to reproduce the spatial cues that make the listener feel enveloped in a three-dimensional auditory space (Toole, 2009).

In Phase 3 the final immersive layer of this experiment is added, with the inclusion of the audiovisual content projected into the room walls, combined with the spatial audio from Phase 2 and the addition of physical elements aimed at transforming the space even more into an installation artwork. In this experiment the elements are a white dress hanging in the middle of the room and being trespassed by the video projection, which creates a new three-dimensional image layer, the Phase 1 and the clothing lines with A4 posters with the woman testimonials for the audience to interact with if wanted.

Table 3

The list of contents for each phase of the Experiment

Phase 1	<ul style="list-style-type: none"> • A transcribed text for each participant with woman testimonials + • Two clothing lines with printed posters, each with a different woman testimonial in it
Phase 2	<ul style="list-style-type: none"> • Phase 1 + • A blacked-out room + a stereo sound audio content with woman testimonials +
Phase 3	<ul style="list-style-type: none"> • Phase 1 + Phase 2 + • An audiovisual content projected in the walls of the room + room composing elements (a white dress in a hanger in the middle of the room)

Once chosen the content and narrative formats to be used in the experiment, it was necessary to define the environment that this field research should take place in. According to the World Health Organization (WHO, 2021), more than one in four women (26%) with 15 years of age and older have suffered violence by a partner at least once. Considering the 2018 latest population data from World Population Prospects, 641 million women are estimated to have been affected. Considering that number and the context of analysing within a site-specific environment, ideally the room for this experiment would be a room inside a domestic house.

4.1.2.2 Developing the Script: Focus Group Discussion

As for the post-experiment Focus Group discussion, it serves as a valuable method for gathering deeper insights into the impact of immersive narratives on young adults' perceptions, attitudes, and commitment to gender equality. Through open-ended discussion prompts and activities, participants are encouraged to share their personal perspectives, thoughts, beliefs, and experiences related to gender equality and their own reactions perspectives about the experiment with the three-phase multimedia site-specific installation (Bloor et al, 2001).

Upon preparation by reading literature and validating Focus Group discussions methods mentioned in Chapter 3 (see Subchapter 3.3, Focus Group), the script was developed. It is conceived for a one-hour duration (60 minutes), composed by an Introduction activity, an ice-breaker activity, a Narrative Inquiry (Riessman, 2008) activity, and prompt questions focused on their perception about the experiment itself, the experiment environment and to analyse if their perceptions on gender bias were influenced or stimulated at any point.

The second activity consists of each participant anonymously writing down on a post-it an emotion that was evoked by the participation on the previous experiment, to be deposited in a jar, from which the facilitator will draw randomly up to 5 post-it's to have all the group commenting about the emotions mentioned. The narrative inquiry activity consists of each participant anonymously writing down on a blank piece of paper their individual opinion on "*What is gender equality?*" to be deposited in the same jar as before, for future analysis, even comparing their answers on the pre-experiment survey to these ones, done afterwards. This activity has been included considering that narratives are not merely a recounting of events but are shaped by social, cultural, and historical contexts. The aim is to uncover the underlying themes, patterns, and structures within narratives, as well as the ways in which individuals construct and negotiate their identities, relationships, and meanings through storytelling (Riessman, 2008).

Finally, 14 questions were prepared to be asked to the group by the facilitator aiming to cover topics about the experiment, the environment where it happened, the immersion aspect of it and the participants perceptions on the main content topic of gender equality. And for closure, the facilitator will give five minutes for final

considerations in case any participants would like to make additional comments or suggestions regarding the Focus Group Session, including either the experiment and/or the Focus Group Discussion itself, for adjustments to be implemented into future opportunities.

This qualitative approach is expected to provide a more nuanced understanding of the participants engagement with the immersive narratives and its content. The analysis of the focus group discussion data will enable us to identify common themes, patterns, and perspectives, contributing to a comprehensive understanding of the participants' experiences.

Table 4

The Questions Developed for the Discussion Time of Focus Group

Questions

How would you describe your overall experience?
Did you find each stage (text, audio, installation) effective in stimulating your engagement and thoughts about gender inequality? Please explain why or why not.
Which stage of the artistic intervention had the most impact on you in terms of promoting discussion and debate about gender inequality? Why?
Can you recall any specific moments or aspects that made you reflect on the challenges of gender inequality more profoundly?
Were there any elements or aspects of the artistic intervention that could have been improved to better stimulate the debate about gender inequality among young adults?
Were there any specific elements or techniques in the text Phase (1) that captured your attention or made you think deeply about the challenges of gender inequality?
Did the addition of audio in the second Phase enhance or alter your perception regarding gender inequality?
In what ways did the artistic installation in the third Phase contributed to a deeper understanding or engagement with the topic of gender inequality?
How would you describe the environment in which the intervention took place?
Were there any particular themes or aspects of gender inequality that you felt were missing or underrepresented in the artistic intervention? If so, what were they?
Did the artistic intervention influence or change your perspective on gender inequality in any way?
What topics or themes related to gender inequality would you like to see addressed in immersive narratives?
Do you think immersive narratives have the potential to create long-lasting impact and change regarding gender inequality? Why or why not?
How likely are you to engage in further conversations or activities related to gender inequality because of this artistic intervention? Please explain your response.

4.1.3 Conception of the Post-Experience Survey

This post-experience survey was developed with close-ended questions based on the Likert scale model (see Subchapter 3.4). Participants will be asked to provide feedback on various aspects, such as the clarity of instructions, the organisation of topics, the relevance and depth of the topics covered, and the allocation of time. This feedback helps identify any areas that require improvement, such as better facilitation techniques or adjustments to the session's timing.

Capturing the overall perceptions of participants regarding the Focus Group Session is crucial for assessing its success. Participants will be given the opportunity to rate their level of satisfaction, engagement, and the extent to which their opinions were valued. This feedback provides a holistic understanding of participants' experiences, enabling adjustments to be made to enhance future sessions and ensure participant satisfaction (Find post-experience survey model in Appendix F).

To facilitate access and dynamics during the experiment, these three questionnaires were developed separately, each being an online Google Forms. By the end of the Focus Group Session, participants receive a link to individually fill the evaluation survey.

4.1.4 Participants Recruitment

As mentioned previously in Chapter 3 of this study about Sampling (section 3.6), participants' selection will be done by convenience due to the timeframe for the development of this project. The sampling was composed by young adults, students at the University of Porto (U. Porto), from all genders and sexual orientations. Considering the chosen method of focus group, it should not be a larger sample than 15 participants, according to Ritchie & Lewis (2003). The recruitment process for participants selection had an overall expected duration of two months. Although it proved to be more challenging than planned, this timeline was respected.

For the selection of participants a few strategies had to be used. The first one was emailing the student body of the U. Porto Engineering, Economics, Education, Fine Arts and Literature faculties, which the researcher had access to, and posting in social media (Instagram and Twitter) a flyer convocation to students from U. Porto to participate. Then, networking through WhatsApp using the existing relationships with other students from the university that fit the searched profile.

All planned strategies were implemented, but the engagement and response from students were lower than desired. The most important aspect to highlight is that even so, there was enough quorum gathered to enable the focus group experiment to be accomplished.

The first recruitment attempt was to send an open call by email. Overall, there were five waves of the email invitation, each one sent out from the institutional email of the researcher directly to a respective mailing including all students from the faculties of Engineering, Economics, Education, Fine Arts and Literature, due to the open access the researcher has to these institutions from the U. Porto as previously mentioned. However, even with two emails being sent out (another one of reinforcement, with the same message, was sent a week later), in three weeks there was no response received. There is a probability that this was due to the high volume of emails each student receives daily in their inbox, many may get lost in the middle of the mix. A reinforcement support was asked to the Secretariat of the Multimedia Masters, and not even then there was a response to the open call by email.

In parallel, as the email invitation was presenting itself as challenging for engagement, the next target was to have the invitation sent to students from the university through the groups in the application WhatsApp. This invitation strategy was implemented to a total of three major student groups, with over 100 people in it each. Positively, this had a lot more engagement than the previous attempt, as many students responded. But sadly, most of them were not available for the experiment because of timing, it was competing with Courses final exams and/ or students working hours. This took approximately a week to be accomplished, considering that it is necessary to send the message and wait for the response at each group, reinforce it, wait for interested people to check their schedules, etc. Which asked for a new approach to be set in place.

At this point, an individual invitation was sent out to the researcher's colleagues, so they could either take part in the experiment or name someone that would and could be available. The invitation messages were the same as the ones sent previously in the WhatsApp groups but sent privately to each person. If on one hand this limited a bit of the diversity of the sample, it proved to be extremely efficient. Over 20 people engaged positively and were interested in participating, but due to schedule limitations and the focus group model, the final number of participants was set in a total of 11.

Even though it ended up compromising a bit of the diversity possibilities of the sample, still amongst the 11 participants it was possible to manage the inclusion of a pool of diverse individuals from the perspectives of gender, sexual orientation and place of origin. Most participants did not know each other, but they all had a previous contact with the researcher, being her classmate at some point.

Upon confirmation as participants, everyone from the focus group received a version of the consent form (see model in Appendix G) with details of the experience, assuring confidentiality for all information shared, anonymity and insurance that the entire field research follows main ethical considerations, preserving the well-being of its participants. All participants should sign and return the consent form to the researcher at the experiment day.

Table 5

Overview of the recruited participant's profile

Participants	Gender	Origin
Participant 1	Man	São Paulo
Participant 2	Woman	Lisbon
Participant 3	Man	Belo Horizonte
Participant 4	Woman	Rio de Janeiro
Participant 5	Woman	Rio de Janeiro
Participant 6	Woman	São Paulo
Participant 7	Woman	Rio de Janeiro
Participant 8	Man	Mato Grosso do Sul
Participant 9	Woman	Santa Maria da Feira
Participant 10	Woman	Vila Nova de Gaia
Participant 11	Woman	São Paulo

4.2 Implementation

This chapter examines the implementation process of the field research for this study, focusing on critical elements that contribute to its successful execution. It aims to provide a comprehensive understanding of the implementation process by exploring the execution of the Focus Group session, including experiment and the collective discussion. Additionally, it also goes through the positive outcomes and limitations of each stage, such as potential biases and group dynamics, comparing the planning with execution. Finally, the chapter presents Thematic Analysis and findings, offering

valuable insights and contributing to the existing body of knowledge on the research topic.

In more detail, there will be an in-depth examination of the environment setup, discussing the considerations made to create an optimal setting for the session; details of the equipment used, outlining the tools and technologies employed to facilitate effective communication and data collection. Moving forward, an overview of the actual conduct of the experiment, detailing the procedures and protocols followed to ensure consistency and reliability in the research outcomes. And the exploration of the critical stage of the discussion includes highlighting the dynamics and interactions among the participants as they engage in an open dialogue regarding the research topic and the experiment itself.

It is important to note that although video and photo records have been made, there are few included in this project of the experiment in place due to the agreement to respect ethical guidelines and maintain the participant's confidentiality.

4.2.1 The Equipment

The choice of equipment plays a significant role in the success of the experiment, as it influences the level of immersion provided to participants when combined with both the storytelling content, narrative formats, and environment. Ideally, to generate a full immersive experience, the equipment list would include the use of motion capture equipment and software's and immersive cave interactive features. Due to a time limitation for the researcher to either learn how to apply that equipment or establish a partnership with other researchers who dominate them, this has been included in Chapter 5 as additions to complement the experiment for future applications and will be explained in detail then. The experiment will be implemented with the available equipment at disposal in the Multimedia master's AV Media Lab.

The equipment used for this experiment were:

- 2 Mackle HR624 MKII sound columns
- 2 JBLs Flip Essential 2 Bluetooth portable Speakers
- 1 Audio Zoom 6 Recorder
- 1 Xiaomi 12 mobile phone
- 2 Epson EMP-X3 projectors
- Laptops: 1 Lenovo IdeaPad S145 + 1 Predator Helius 300 + 1 Mac midi 2012

4.2.2 The Environment

As mentioned in the Development section (4.4.3) of this project, ideally the experiment would take place inside the room of a residential house. And that is something that can still be explored in future researches with the same goals as this one, as it will be mentioned in the conclusion and future perspectives chapter, but due to scheduling limitations - as the focus group session had to be allocated within the timeline of this dissertation's development and delivery - the concept was adapted to facilitate its viability, and by consequence, the experiment had to be transferred into a classroom of the University of Porto, and the room setting was adapted as well, to maintain the site-specific aspect of the research.

The room itself was then chosen by contacting the Multimedia master's secretariat office at U. Porto by email and requesting for a room that would need to be used for both rehearsals and execution. Only then the experiment setting could be built, tested, ready and validated for the execution of the Focus Group Session on another day. That is when another limitation came up. Due to being the final exams season, most of the rooms were already scheduled and occupied for an entire 2-week period, with very limited options to choose from even though U. Porto is huge and spread around the Porto city, in Portugal. After much searching, and a few attempts that did not include the same room for testing and execution, they managed to find a room that had availability for two days in a row, had a medium size, with capacity to up to around 50-60 students, in the Faculty of Engineering, Block B, room B214.

Figure 14

Part of the Experiment Room During Phase 1

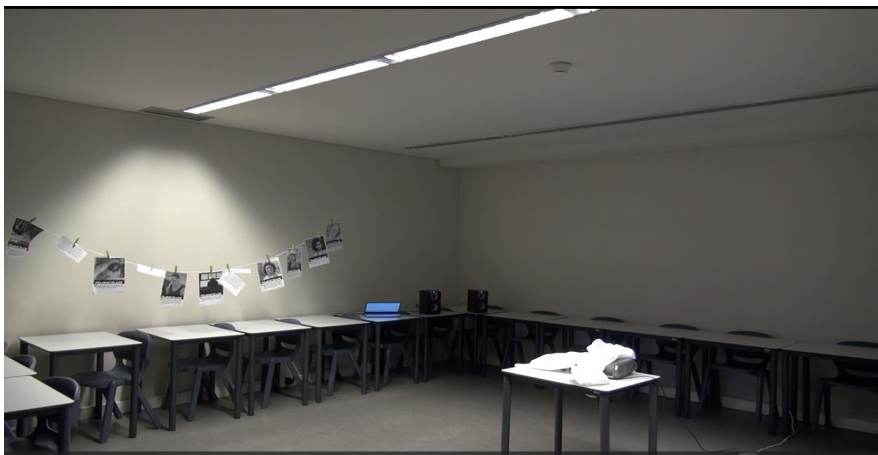


Note. Figure 14. Part of the Experiment Room during Phase 1 [Photograph]. From the Researcher Personal Collection.

As the University of Porto has a considerable number of places for installations, it was assumed that it would be easy to schedule a room for this project implementation, which proved not to be the case, as mentioned. In future research the allocated time to book a room for the experiment must be considered in a higher priority, having at least two to three months in advance for this stage of the process, in order to avoid environmental limitations such as the lack of proper installation spaces for implementation.

Figure 15

Experiment Room Ready to Start Phase 1



Note. Figure 15. Part of the Experiment Room during Phase 1 [Photograph]. From the Researcher Personal Collection.

Having a limited time to build and test the setting, the first day was entirely focused on observing, analysing, and studying the room and figuring out the best set up format of both content, equipment and where the audience would be allocated for best optimization of the experience. The room was only booked for one (1) hour, which made rehearsal rushed, and demanded the researchers experience as an artistic theatre director to be put in place to organise the structure of the experiment followed by the focus group discussion. Also, it could have been done faster and more optimised if prepared by more people, just one person setting things up made the preparation time much longer, as there are many details as the clothing lines setup, the projectors, arranging the students table to the corners of the room - to open space for audience to be in the middle, covering the windows lights with black fabric - to block any external lights and assist on the immersive experience, testing all projectors, laptops and sound systems.

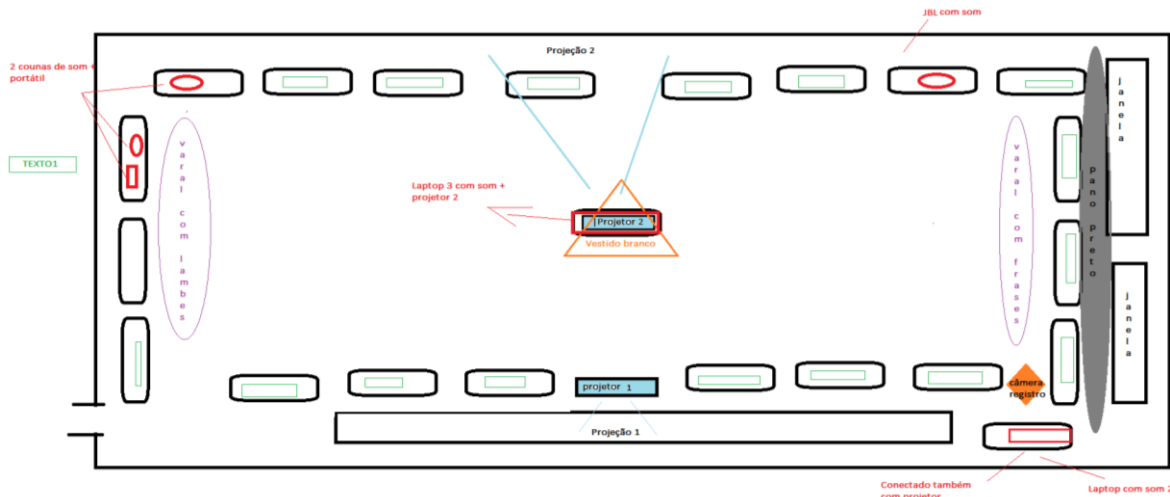
One of the limitations for this initial part was the size of the black fabric, as there was no availability in the room to be used for previous measurement of the space, it ended up being a bit too small to cover the entirety of the windows, leaving a small piece uncovered and letting external light invade the room. But there was nothing to be done and as it was small, it did not seem that it would disturb the experience.

Now it was time to allocate the sound systems throughout the room. As mentioned previously (in section 4.2.3.1 Developing the Experiment), the goal was to create a spatial audio that surrounds the room and immerses the participants in the experience during Phase 2 of the experiment. Another setback that was identified was how to make the sound experience happen as initially had been conceived, as there was no availability of other sound columns in the university Multimedia Lab besides the two (2) Mackle HR624 MKII columns already in use. But, as a stereo sound is generally created with a network of at least two speakers located at a regular distance from a listener, with the use of some creativity to adapt the idea, a surround dynamic sound filled the room. For that to happen, along with the two (2) Mackle HR624 MKII columns connected to each other, an additional pair of JBLs owned by the researcher were added in opposite sides of the room to create a 360° feeling to it, both operated by the researcher through a Xiaomi 12 mobile phone Bluetooth. As it would be almost impossible to hit the play button in all the audios at once, each play button was released in different times, with less than two seconds apart from each other, but including an unpredicted even more interactive layer to the experience, as it created an echo feeling in the room and multidirectional audio stimulation.

Next it was time to set up and check the projectors. One of them was already there and could not be reallocated, being fixed in the ceiling close to the whiteboard of the classroom, which defined the adjustments of all the other elements for the room setting accordingly. The second projector was set in the middle of the room, pointed to the exact opposite wall located in front of the first one. Each projector was tested, and it was working perfectly, and each was connected to a respective laptop to be used for Phase 3 of the experiment. After testing, everything still had to be taken down so as not to disturb a class that would be happening just right on the next slot schedule. To facilitate the re-building of all elements on the next day, a very simple clear sketch was done with the main allocations.

Figure 16

Focus Group Session - Room overview sketch



Note. Figure 16. *Focus Group Session - Room overview sketch* [Photograph]. From the Researcher Personal Collection.

If the effort to set everything up again by the next day could be avoided, it would save a lot of energy that can be implied in the actual execution of the experiment. Once again, the timeframe was limited for all the setup of the session, the room would be available for the period of two hours in total, to have everything done.

In order to optimise the building time of the room, the clothing lines with the A4 posters with women's testimonials were prepared on the previous day, just before rehearsal, and taken on the experiment day to the university already set to be hanged in two of the four room walls, one in each. Once the room was cleared by the previous class occupant, those were the first things to be hung up in the ceiling on each side of the room, along with the black fabric that would cover the entrance of light from the windows. The fabric which, as mentioned earlier by this section, still leaves a tiny part uncovered and entering external light.

Then the students table were set to the side, close to the classroom walls, projectors were put in place, as the sound systems and Bluetooth connection, everything was tested and working, finally, the 11 A4 page copies of the woman testimonials for Phase 1 were set one in each student table to have the room 100% ready for the first phase of the experiment. The room setup took 30 minutes in total, leaving 1 hour and a half for the entire Focus Group Session. All participants were outside of the room during preparation.

4.2.3 The Experiment

Right after the environment was set and tested doing the same procedure as done on testing day, mentioned in detail at the previous subsection, it was time for the site-specific immersive installation experiment to begin. All participants arrived on time, and while the room was being organised, they were double checking if they had already filled the pre-Focus Group social demographic questionnaire - which had been sent three days in advance to them through an online Google Forms link by WhatsApp and will be discussed in more details in the following section 4.3.3. Every participant also received, read, and signed their individual consent form upon arrival, on a table set up outside of the room entrance, before any activity could be started.

As mentioned in earlier chapters, the experiment was divided into three phases, with the goal to explore different immersive narrative formats for further comparison between them and observation of the participants' individual relationship and perceptions of each format.

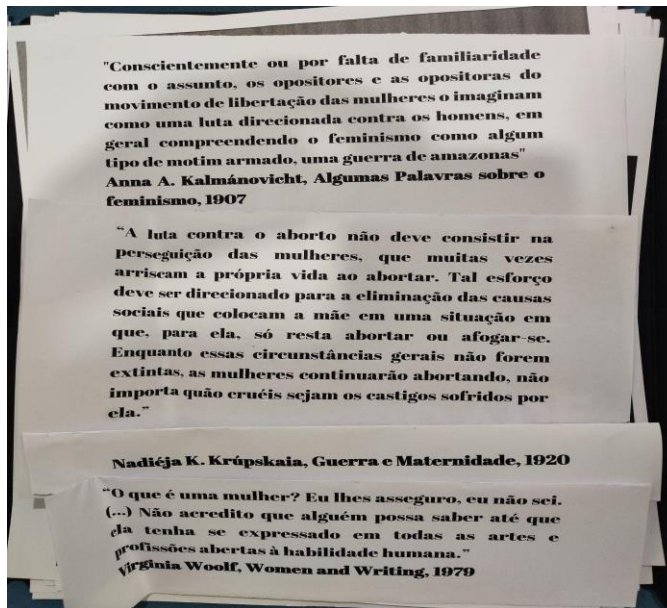
4.2.3.1 Phase 1: Text Only

For the first Phase, the printed copy of the transcribed adapted text from the original audio content of the hearing scene of the play *InCômodos* was placed in students' tables, a total of 11 copies, one per table, and the two clothing lines hanged one in each wall in the room with A4 posters of woman testimonials originally from *InCômodos* (2018) was placed. All participants were allowed and invited into the experiment room and received the instruction to each get one copy of the text and read it individually, anywhere they want inside that space, they were free to either walk, sit or stand while reading it. Half the participants chose to sit and the other half to stand, and only one participant after finishing his reading decided to walk around the room, get closer to the clothing lines and read a bit of the testimonials hanging in there as well. All the others just after finishing the copy read went to deliver the piece of paper to the researcher and asked what they should do next. As indicated, all participants left the room, so it could be organised for the second phase.

The time predicted for all of them to complete this first task was a total of six minutes, but this was not mentioned to them so each could take their own time to go through the content. Even so, this stage was completed within the planned time, in a total of approximately four minutes, two minutes less than planned.

Figure 17

Sample of the text hung in the clothing lines



Note. Figure 17. Sample of the text content hung in the clothing lines [Photograph]. From the Researcher Personal Collection.

4.2.3.2 Phase 2: Audio is Inserted

After Phase 1, there was a five-minute interval before the start of Phase 2. Participants left the room and waited in the corridor, as the equipment was checked in order to guarantee the Bluetooth connection was okay with the JBLs and the laptop connections were also functioning well with the sound columns. The light of the room was turned off to guarantee the blacked-out environment, increasing the immersivity for this next phase.

Once everything was set, participants were invited back into the room, the only instruction received was they could position themselves anywhere in the room, being the middle of the room the only space available. It was interesting to notice that all 11 participants stood close to each other, although there was space for them to spread around.

When all participants were settled in the room, the audio play buttons were activated, releasing first the audio content from the two MACKLE HR624 MKII columns, then the JBLs with the same content coming from opposite sides of the room, two seconds later (See Appendix H). This stimulation of sounds coming from multiple sides of the room apparently generated participants reactions, two female participants

were seen dropping tears of their eyes, and everyone was moving at least one part of their body more compared to Phase 1, despite still being frozen on the same spot all the way through the six minutes duration of this phase.

Figure 18

Experiment Phase 2 Ongoing



Note. Figure 18. Registration of Phase 2 in place with participants. [Photograph]. Researcher Personal Collection

Once the content finished, none of the participants initially moved from their standing place and no one said a word about Phase 2 while still in the room. The researcher opened the door, everyone left in silence in the corridor. And immediately the room was closed to be prepared for the third and last phase of the experiment.

The estimated time for the completion of this stage was six minutes. It ended up taking 6min45s when including the dislocation time from participants entering and leaving the room. Still, as Phase 1 was faster than expected, there was no impact in the overall experiment. The interval between Phases 2 and 3 had the same time duration as the previous one: five minutes.

4.2.3.3 Phase 3 - The Inclusion of Audiovisual and Physical Elements

During the already mentioned break to organise the room, projects were on, connected to the two available laptops. With that, the sound content in the video being the exact same as reproduced in Phase 2, now they would come straight from the video sources to be reproduced by the two MACKLE HR624 MKII sound columns, complemented by the sound content played from the Xiaomi 12 mobile phone straight to the JBLs, controlled via Bluetooth. The same video content was being projected into two opposite walls, complementing the two walls that already had the clothing lines

with the A4 hanging posters. A white dress in a hanger was put in the middle of the room, which served as another component to the installation and to disguise the project in the middle of the room, with the goal of not diverting the attention of participants. As mentioned in a previous chapter, the dress was white to be integrated as much as possible with the projection, that once functioning passes right through it. The lights of the room were once again turned off.

This phase took two minutes longer than expected to be ready, a total of seven minutes, because the projectors automatically turned themselves off instead of being on pause and took longer to turn them on. Once everything was set, participants were invited once again back into the room and given instructions that they could place themselves anywhere they would like. This time, due to the indication that there was going to be projections, they spread around the room a bit more, but still divided into two major groups on each side.

When all participants were in the room and seemed to be settled, as the researcher had both laptops close to her, both the play buttons for the projections were hit. And two seconds later the JBLs sound content was also activated, creating a similar sound sensation to Phase 2.

Figure 19

Photographic Documentation of the Phase 3 Preparation



Note. Figure 19. Photo taken automatically of the Experiment Environment in Phase 3 preparation. [Photograph]. From the Researcher Personal Collection.

Everyone appeared to be paying close attention to the video projections, and barely moving throughout the space. They were mostly passive receiving the multimedia storytelling content, then actively interacting with the room and its elements (clothing lines, dress) while the content was being reproduced. Due to time limitations of the room booking, the video had to be abruptly ended at four minutes of showing, instead of the planned six minutes, but as most of the video was shown, the two-minute reduction of this phase apparently had minimal impact in the entire experiment and in individual participation. Once the video was finished, the researcher turned the light of the room back on, differently than on Phase 2, where lights remained off and participants were kindly asked to leave the room.

There was nothing particularly noticeable about participants' reactions to this third phase, despite once the lights were on, a few very low unheard comments were made among a couple of participants. Now it was time for the Focus Group Discussion.

4.2.4 The Focus Group Discussion

As soon as the site-specific immersive installation experiment was concluded, the chairs from the students table that were on the corners of the room were brought to the centre, with the assistance of the participants, as each one grabbed the chair they would be sitting on, forming a U-shape. It was not a full circle due to the intention of having everyone able to see the PowerPoint presentation used as the Discussion Guide. All 11 participants agreed on staying in the room and participating in this part of the Focus Group Session. The room reorganisation took less than two minutes with the assistance of all the participants.

The Focus Group discussion started with a very quick introduction by the researcher that acted here as the facilitator, reinforcing that all the information provided would be confidential and reinforcing that everyone should be aware that this part of the Session would be audio recorded. As all were in accordance, the introductory first activity started. Each participant was asked to talk a little bit about themselves, they had one minute to present their own name, origin, gender self-identification and sexual orientation and something they really enjoyed doing. The aim was to start off helping participants feel more comfortable sharing more information about their experience during the installation experiment.

Table 6*Participants Self-introduction Sum up*

Participants	Self- Identified Gender	Sexual Orientation	Origin Location
Participant 1	Man	Gay	São Paulo
Participant 2	Woman	Heterosexual	Lisbon
Participant 3	Man	Heterosexual	Belo Horizonte
Participant 4	Woman	Exploring	Rio de Janeiro
Participant 5	Woman	Bisexual	Rio de Janeiro
Participant 6	Woman	Lesbian	São Paulo
Participant 7	Woman	Heterosexual	Rio de Janeiro
Participant 8	Man	Bisexual	Mato Grosso do Sul
Participant 9	Woman	Bisexual	Santa Maria da Feira
Participant 10	Woman	Heterosexual	Vila Nova de Gaia
Participant 11	Woman	Exploring	São Paulo

The introductions took a total amount of 10 minutes duration and assisted on making participants more relaxed and integrated with each other. At this point it was noticeable which participants were shier than others and which would be more willing to share their perceptions and actively participate and which could require a bit more incentive.

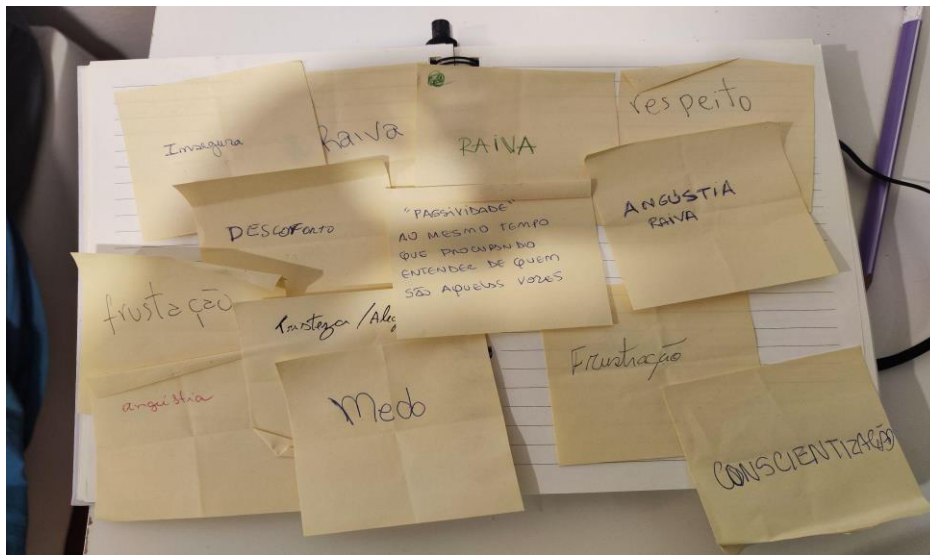
This was followed by Activity 2, in which everyone received post-its and each one had to write down anonymously their answer to the question “*What emotions were awakened in you by the experiment?*” Ideally, each person could include one emotion, they could not share their answers with other participants, and should then fold the post-its and deposit it in a jar placed in the middle of the U-shaped setting. Once everyone had deposited their answers, four emotions were randomly drawn by the facilitator from the jar and discussed by the entire group, collectively. The goal was to have an icebreaker activity that would optimise time and already collect data about participants perceptions and reactions about the experiment and the gender equality topic. The facilitator drew from the jar the following emotions mentioned by participants as awakened by the experiment, to be discussed collectively:

- Respect
- Frustration
- Anger
- Fear

By observation and the researcher notes about individuals' reactions and the group relationship it seems as if talking about their emotions collectively had the group deeper reflecting on how the overall experiment affected them personally, and it got participants organically discussing the gender equality topic without the need for the facilitator to push it. Commenting on the awakened emotions, without knowing who had written which, appears to have made everyone more open to complement each other's thoughts. This was one of the longest activities of the Focus Group Discussion with a great engagement by most people, having a 20-minute approximate duration. It brought a ton of insights regarding the participants' perspectives on the experiment structure just as much as the narrative formats and raised their perceptions on gender equality, which leads to the third activity done.

Figure 20

Activity 2 Post-its - What emotions were awakened by the experiment?



Note. Figure 20. Sample of the text content hung in the clothing lines [Photograph]. Researcher Personal Collection.

The third activity was aimed at having an overview of participants' perspectives about gender equality, by having them answer the question “*What is gender equality to you?*” on a blank piece of paper anonymously and depositing on the same jar as activity two. This took approximately five minutes and assisted on gathering by narrative inquiry important information on participants perspectives about the main subject of this research. According to Riessman (2008), Narrative Inquiry is a research approach that explores and seeks to understand the experiences, meanings, and interpretations of

individuals through the lens of storytelling. It recognizes that humans are inherently storytellers, and through their narratives, they construct and make sense of their lives, identities, and social interactions. Therefore, when collecting participants' personal takes on the gender equality subject, through the stories or narratives shared by themselves. The focus is on capturing the richness and complexity of individuals' experiences and the multiple perspectives embedded within their stories (Riessman, 2008).

The collected responses from participants at activity three instantly show some patterns and repetitions content wise, to be included and further analysed by thematic approach. Finally, it was time for the facilitator to ask the prompt questions focused on gathering information regarding the experience structure, the environment, the participants perceptions and suggestions, to collect the main data for further analysis focused on the research questions previously stipulated that guided this entire field research.

The stipulated total time duration for the Focus Group Discussion of 60 minutes (see Table 2) was already being extended due to a request and agreement between all participants in order to complete the entire experience as it had been planned. In addition, the previous activities already provided information by participants regarding the wanted topics, having that under consideration, although the main questions developed for this part of the Focus Group Discussion (see table 4) were included in the PowerPoint presentation, they were optimised by the researcher focusing on the balance between the discussion dynamics, participants engagement - that had been great so far and could decrease if the initiative took longer -, and the time remaining to release the room.

The optimization of the developed questions meant merely that they were adapted, and a smaller number of the original ones were indeed selected to be asked by the facilitator during activity four of the Focus Group Discussion, considering the timeframe available to implement the experiment.

The selected questions were the following:

- *How would you describe the experience as a whole?*
- *From the perspective of the experience itself, the structure: Does anyone have anything to add? Did you feel that each stage was stimulating for you to discuss gender equality, for example? If yes, why? If not, why not?*
- *Is there any specific moment of the experience that you think was more impactful for each of you in terms of reflection? Any moment that you remember, whether it's from the text, audio, or all three layers together?*
- *Is there any element that you think could be added for us to delve even deeper into the gender equality debate?*
- *How did adding the audio affect the experience? And how did the third moment contribute to deepening the debate on this topic?*
- *Is there any theme, any subject that you think was missing from this experience and that you would like to see addressed in this experience?*
- *Did the experience change in any way or influence your perspective on the topic?*
- *Do you think immersive narratives have the potential to create lasting impacts on the subject of gender equality? If so, what's the potential?*
- *Do you think immersive narratives could be applied to other topics beyond gender equality, to any other social theme?*

All participants interacted and provided valuable insights from all the questions asked, allowing to gather a considerable amount of data for the analysis that will be covered in the next section of this chapter. As it is expected in a larger Focus Group, some people interacted more than others. For example, speakers 7, 9, 10 and 11 demonstrated to be contributing more overall, but whenever they spoke, they had extremely insightful inputs to provide. Managing all 11 participants was a bit challenging but they were all really engaged and interested in taking part in the experiment, which facilitated the moderation of the Focus Group by the researcher. This was a low moderation (Bloor et al, 2001), focused on observing if participants' answers were providing relevant data to the questions asked and encouraging that everyone would provide insights on the topics discussed. The number of participants was the limit

for a one-person management to be properly done, if there were more people participating, it would be necessary to have assistance.

Along the discussion, something that appears to have somehow influenced how much a participant contributed, besides their place of origin, was the language differences between Portugal and Brazil that sometimes impacted on full understanding of the conversation topic, as mentioned by participants themselves. Although there was no evident power hierarchy amongst themselves.

After 90-minutes of conversation, the Final Considerations part arrived at last, very brief additional comments were made, and the Focus Group Session was then ended by the facilitator with thanking notes for everyone's participation.

5. Experiment Analysis, Results and Discussion

This chapter presents the thematic analysis of participants' experiences with immersive narratives for social awareness in gender equality, its findings, and a follow-up discussion section. The analysis follows the step-by-step procedures outlined by Braun & Clarke (2006) and aims to gain insights into the impact of immersive narratives on individuals' understanding and engagement with the gender equality topic. Additionally, it explores participants' perceptions of the effectiveness of such narratives in raising social awareness and promoting dialogue about the gender equality theme. The findings provide valuable insights into the emotional and cognitive responses evoked by immersive narratives, participants' reflections on the strengths and limitations of the experience, and the role of discomfort and empathy in fostering a deeper understanding of gender equality issues. In the discussion section (see Section 5.3), the results of the Thematic Analysis (Braun & Clarke, 2006) were debated in relation to the research questions and concepts explored in the State-of-the-Art Review (see Chapter 2). It provides a comprehensive assessment of the relationship between research goals and the collected data, highlighting the implications of the findings and addressing the recommendations provided by participants, proposing avenues for future research and interventions in the field of immersive narratives for social impact.

5.1 Thematic Analysis

As mentioned in Chapter 3 of this research, once the Focus Group Session is completed, all the data collected - which includes the researchers notes, photographs, post-its and the Focus Group Session transcription - went through a thematic analysis for results to be gathered, ensuring a comprehensive approach. This section goes through the step-by-step of the Thematic Analysis (Braun & Clarke, 2006) procedures followed by achieved findings.

The initial data analysed encompassed both the transcribed post-it responses and the focus group transcription, as the post-it activity was an integral part of the group discussion. However, the pictures taken during the focus group session and the experiment were excluded from the analysis due to the need to prioritise privacy and

confidentiality. Only a select few pictures that adhered to ethical guidelines were included in the dissertation as documentation. Additionally, the researcher's notes were considered and compared to the focus session transcripts to examine the alignment between researchers' and participants' perceptions of one another, enhancing the richness of the analysis.

Initially, all the audio recorded information collected at the Focus Group session was transcribed *verbatim* into a Word text document in Portuguese - as all participants were students from the University of Porto, in Portugal, and from Portuguese or Brazilian nationality - then translated to English (View the English translated transcript *verbatim* in Appendix I).

This thematic analysis followed the Braun & Clarke's (2006) six-steps framework, adapting the sixth step from "Report" into being the findings section of this dissertation. Each step was described in detail through the following subsections. To view the full thematic analysis coding table, check Appendix J.

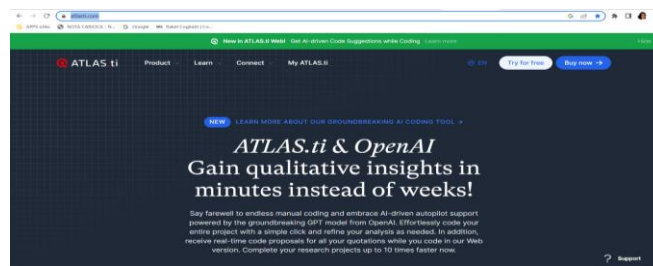
5.1.1 Step 1: Familiarising with the Data

In order to thoroughly perform a Thematic Analysis (Braun & Clarke, 2006), it is essential to deeply know your body of data. At this stage, the English transcription *verbatim* text was read multiple times to start familiarising with the data collected through the Focus Group Discussion.

Afterwards, the document was uploaded into the ATLAS.ti*¹ software - its web version was used to assist on the start of the preparation for the initial data coding, which was done by having the content run through its Artificial Intelligence (AI) coding and then manually analysed again by using an Excel spreadsheet.

Figure 21

Overview of ATLAS.ti landing page

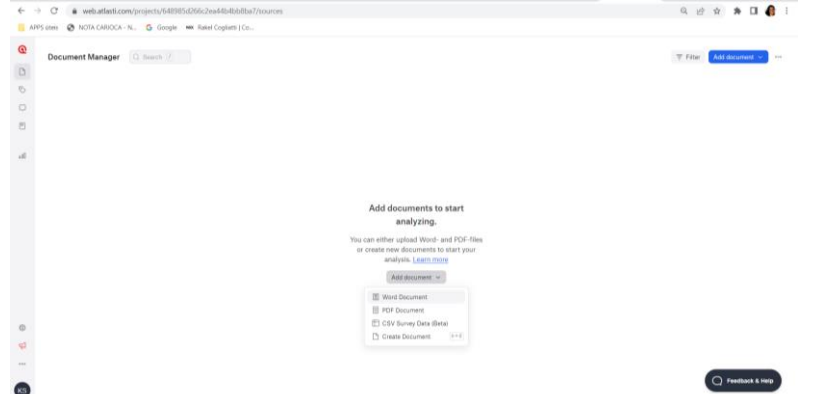


Note: Figure 21. Printed from <https://atlasti.com/>

¹ ATLAS.ti software - This is an OpenAI-powered computer-assisted qualitative data analysis software. (n.d.). *The #1 Software for Qualitative Data Analysis*. ATLAS.ti. <https://atlasti.com/>

Figure 22

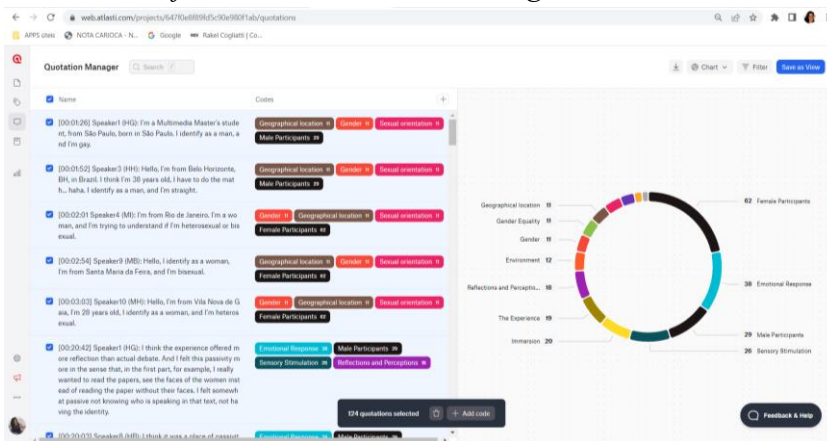
Uploading the Focus Group discussion transcribed text document



Note: Figure 22. Printed from <https://atlasti.com/>

Figure 23

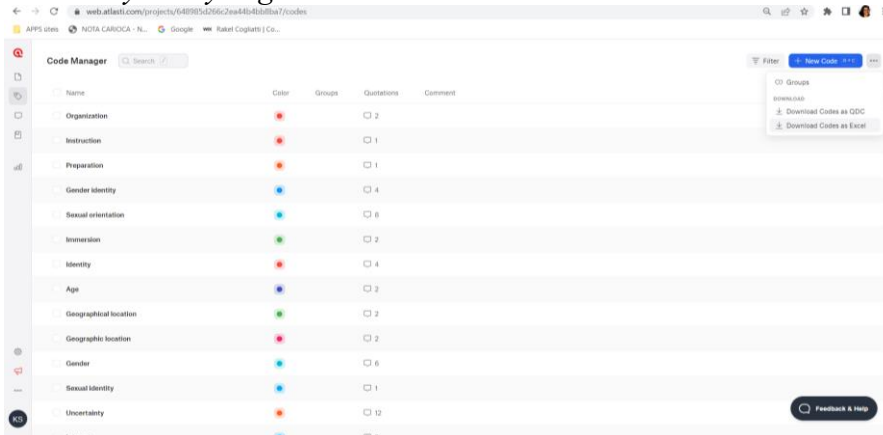
ATLAS interface with main initial coding



Note: Figure 23. Printed from <https://atlasti.com/>

Figure 24

Downloaded Excel Spreadsheet with Generated Codes to use for Manually Analysing the Data



Note: Figure 24. Printed from <https://atlasti.com/>

This first familiarisation with the data was helpful in highlighting which content from the transcribed Focus Group Session was indeed relevant. From the entire transcribed text, a total of 155 quotes were initially selected (For details on the quotations chosen, go to the tab “*Selected quotations*” in Appendix J).

The quotations to be considered for the Thematic Analysis (Braun & Clarke, 2006) were selected from the Focus Group Session transcription based on the following criteria:

- Relevance to the Research Questions - those that directly addressed the objectives and themes of the study;
- Richness of information - the ones that provided in-depth and insightful information, contributing to the understanding of the research topic;
- Representativeness - those that portrayed diverse perspectives and experiences within the focus group were considered to ensure a comprehensive analysis;
- Clarity and coherence - the ones that were easily understood were given preference to facilitate accurate interpretation and analysis;
- Significance and impact - those that captured unique or significant viewpoints, experiences, or insights were chosen to highlight important findings and themes in the study.

5.1.2 Step 2: Generating Initial Codes

In this phase, data started to be organised in a meaningful and systematic way. According to Maguire & Delahunt (2017), coding reduces lots of data into small chunks of meaning. The initial coding of the transcribed text of the Focus Group Session done by the AI Coding from ATLAS.ti, generated a preliminary list of ideas related to the collected data that had over 207 different items. All of these were allocated on the thematic analysis coding table made in an Excel spreadsheet, to be manually analysed one by one, re-filtered, and then organised into significance groups, giving the initial codes to the data (Javadi & Zarea, 2016).

Due to the high volume of generated idea suggestions from the AI Atlas.ti tool, a manual review was done, reducing the codes to 136. The exclusion of data during the manual review was guided by the following criteria:

- Relevance, where only data directly addressing the research questions were included;
- Lack of relevance: Data that did not directly address the research questions or objectives of the study. And irrelevant or off-topic responses that did not contribute to the research findings;
- Redundancy: In cases where there was a high level of redundancy or repetition, data was excluded to avoid duplication of themes or concepts. Redundant data could unnecessarily inflate the analysis without adding substantial new insights;
- Ethical considerations: Data that violates ethical guidelines, such as confidential or sensitive information and could compromise the privacy of participants were excluded. Protecting the rights and well-being of participants was a paramount in this research.

Figure 25

Overview - Mapping of the Initial List of Codes After a First Review

Note. Figure 25. Printed from Thematic Analysis Spreadsheet (Appendix J), tab Overview - [Photograph]. From the Researcher Personal Collection.

The researcher exercised both discretion and judgement in applying the previously mentioned criteria consistently throughout the coding phase to ensure the integrity and validity of the analysis (To check details of the content in Figure 29, check Appendix

J). Each of those significance groups contained an already reviewed version of the codes from the initial list mentioned in section 4.4.1. Still, it was a significant number, to facilitate analysis, these codes were grouped as significance groups.

The following significance groups were created:

- Group 1: Gender Identity and Sexual Orientation
- Group 2: Emotional and Psychological Responses
- Group 3: Immersive Experience and Sensory Stimulation
- Group 4: Social Awareness and Engagement
- Group 5: Communication and Interaction
- Group 6: Justice and Equality

Figure 26

Initial Significance Groups with its Allocated Codes

Group 1: Gender Identity and Sexual Orientation	Group 2: Emotional and Psychological Responses		Group 3: Immersive Experience and Sensory Stimulation	Group 4: Social Awareness and Engagement		Group 5: Communication and Interaction	Group 6: Justice and Equality
Gender identity	Emotions	Questioning	Immersion	Identity	Engagement	Misunderstanding	Structural violence
Sexual orientation	Uncertainty	Compassion	Multisensory stimuli	Age	Active participation	Miscommunication	Social impact
Gender	Fear	Emotional intelligence	Impact of audio stimuli	Geographical location	Sharing information	Difficulty understanding	Justice: Social justice
Sexual identity	Inhibition	Emotional response	Impact of visual stimuli	Geographic location	Invitation	Language Barrier	Justice: Economic justice
Gender inequality	Discomfort	Excitement	Impact on emotions	Interest	Participation	Language and communication	Justice: Political justice
Heteronormativity	Empathy	Hesitation	Over-stimulation	Hobbies	Openness to experience	Cultural difference	Inclusivity
Gender roles	Frustration	Seriousness	Overwhelmed	Openness	Personal development	Semantics	Social Justice
Gender equality	Helplessness	Distractibility	Imagination stimulation	Self-reflection	Therapy	Clarification	Marginalization
Gender discrimination	Surprise	Simplicity	Vivid imagery	Planning	Avoidance	Cross-cultural differences	
	Emotion	Inattention	Experience sharing	Video Analysis	Personal Development: Body image	Cultural adaptation	
	Feeling of helplessness	Negativity	Sensory preference: Preference for tactile experience	Respect	Personal Development: Self-care	Perspective taking	
	Exhaustion	Gratitude	Audio perception	Confidentiality	Environment Evaluation		
	Negative Experience	Appreciation	Sensory perception	Safe space	Asking question		
	Inadequacy	Thankfulness	Sensory stimulation: Sensory input	Discussion	Observation		
	Ambivalence	Happiness	Sensory immersion	Passivity	Sense of belonging		
	Contradiction	Relieved	Memorable experience	Indifference	Cultural familiarity		
	Anger		Sensory Experience	Preference	Architecture		
	Anxiety		Memory retention	Reflection	City planning		
	Apathy		Broad applicability	Memory	Community engagement		
	Curiosity		Sensory immersion: Imagination stimulation	Discussion prompt	Focused attention		
	Speculation		Sensory immersion: Sensory Experience	Encouragement	Engaged		
	Ambiguity		Sensory immersion: Memory retention	Suggestion	Environment		
	Negative emotion		Repetition	Exploration	Management		
	Grossed out		Sensory stimulation: Reduced visual stimulation	Seeking information	Safety		
	Doubt		Sensory preference: Sense of place	Understanding	Home		

Note. Figure 26. Printed from Thematic Analysis Spreadsheet (see Appendix J) Initial Significance Groups with its Allocated Codes. From the Researcher Personal Collection.

5.1.3 Step 3: Themes Searching

According to Maguire & Delahunt (2017), if you have a very small data set (e.g., one short focus-group), as it is the case of this research, there may be considerable overlap between the coding stage and this stage of identifying preliminary themes. And that is precisely what happened.

After examining the codes and identifying that some of them indeed clearly had synergy among each other and fitted together into themes similar to their significance group allocation, the following six initial themes were defined:

- Theme 1: Gender Identity and Sexual Orientation
- Theme 2: Emotional and Psychological Responses
- Theme 3: Immersive Experience and Sensory Stimulation
- Theme 4: Social Awareness and Engagement
- Theme 5: Communication and Interaction
- Theme 6: Justice and Equality

These predefined themes address the potential impact of immersive narratives on individuals' understanding and engagement with gender equality issues. The "Gender Identity and Sexual Orientation" theme suggests that immersive narratives may influence perceptions and experiences related to gender and sexual identity. The "Emotional and Psychological Responses" indicates that immersive narratives could evoke a range of emotional and psychological reactions, which may shape individuals' understanding and engagement. As for the "Immersive Experience and Sensory Stimulation" it is directed into the role of multisensory stimuli and sensory immersion in creating impactful experiences that contribute to understanding and engagement. Meanwhile, the "Justice and Equality" theme recognizes the broader societal context and structural factors that contribute to participants' evaluation of effectiveness. And the "Social Awareness and Engagement" theme indicates that participants' engagement, active participation, and sense of social justice may influence their perceptions. Finally, the "Communication and Interaction" theme emphasises the role of effective communication and cross-cultural understanding in participants' perceptions, and the "Social Awareness and Engagement" encompasses factors such as identity, openness, and active participation, which may be influenced by immersive narratives.

Figure 27

Initial Themes Searching and Codes Table

Theme 1: Gender Identity and Sexual Orientation	Theme 2: Emotional and Psychological Responses			Theme 3: Immersive Experience and Sensory Stimulation		Theme 4: Social Awareness and Engagement			Theme 5: Communication and Interaction	Theme 6: Justice and Equality
Gender identity	Emotions	Emotion	Questioning	Immersion	Memory retention	Identity	Reflection	Avoidance	Misunderstanding	Structural violence
Sexual orientation	Uncertainty	Feeling of helplessness	Compassion	Multisensory stimuli	Broad applicability	Age	Memory	Personal Development: Body Image	Miscommunication	Social impact
Gender	Fear	Exhaustion	Emotional intelligence	Impact of audio stimuli	Sensory immersion: Imagination stimulation	Geographical location	Discussion prompt	Personal Development: Self-care	Difficulty understanding	Justice: Social justice
Sexual identity	Inhibition	Negative Experience	Emotional response	Impact of visual stimuli	Sensory immersion: Sensory Experience	Geographic location	Encouragement	Environment Evaluation	Language Barrier	Justice: Economic justice
Gender inequality	Discomfort	Inadequacy	Excitement	Impact on emotions	Sensory immersion: Memory retention	Interest	Suggestion	Asking question	Language and communication	Justice: Political justice
Heteronormativity	Empathy	Ambivalence	Hesitation	Over-stimulation	Repetition	Hobbies	Exploration	Observation	Cultural difference	Inclusivity
Gender roles	Frustration	Contradiction	Seriousness	Overwhelmed	Sensory stimulation: Reduced visual stimulation	Openness	Seeking information	Sense of belonging	Semantics	Social Justice
Gender equality	Helplessness	Anger	Grossed out	Imagination stimulation	Sensory preference: Sense of place	Self-reflection	Understanding	Cultural familiarity	Clarification	Marginalization
Gender discrimination	Surprise	Anxiety	Relieved	Vivid imagery	Sensory stimulation: Sensory input	Planning	Engagement	Architecture	Cross-cultural differences	
	Distractibility	Apathy	Doubt	Experience sharing	Sensory immersion	Video Analysis	Active participation	City planning	Cultural adaptation	
	Simplicity	Curiosity	Appreciation	Sensory preference:	Memorable experience	Respect	Sharing information	Community engagement	Perspective taking	
	Inattention	Speculation	Thankfulness	Audio perception	Sensory Experience	Confidentiality	Invitation	Focused attention		
	Negativity	Ambiguity	Happiness	Sensory perception		Safe space	Participation	Engaged		
	Gratitude	Negative emotion				Discussion	Openness to experience	Environment		
						Passivity	Personal development	Management		
						Indifference	Therapy	Safety		
						Preference	Home			

Note. Figure 27. Printed from Thematic Analysis Spreadsheet (Appendix J), tab Initial themes searching and codes table. Researcher Personal Collection.

5.1.4 Step 4: Review Codes and Themes

Once the initial theme searching was finalised to move forward, codes and themes were reviewed to look for any missing points or irrelevant results. According to Javadi & Zarea (2016), this phase was done in two levels:

- In the first level, going back to the extracted codes of each theme and seeing whether these codes formed a consistent pattern. According to Maguire & Delahunt (2017), themes should be coherent and distinct from each other. Considerations for this phase included:
 - Do the themes make sense?
 - Does the data support the themes?
 - Is too much being fit into a theme?
 - Themes overlap, are they really separate themes?
 - Are there themes within themes (subthemes)?
 - Are there other themes within the data?

This provided an idea about how many codes were being used multiple times, duplicated, and which ones of them served no purpose, therefore were discarded.

Then, according to Javadi & Zarea (2016), the second level was set in place, in which a process similar to the first was done but validating the themes regarding the whole data in the entire data set. At the end of this level there was more clarity on what differentiates the themes, how they are matched and the whole story they tell about the data.

After considering all the codes and themes reviewed on both levels, adjustments were made, trying to acquire a deeper level of insights and avoid a superficial analysis of the collected data, which is a common misconception of researchers, according to Morgan (2022) and Maguire & Delahunt (2017). During this stage a second round of review was also done to the selected quotes, considering the criteria mentioned before (see Section 5.1.2), mainly were excluded duplicates and redundancy, which reduced the initial 155 quotes selected from the transcribed Focus Group Session to a total of 82 final quotes selection.

Then, the themes were reduced to a total of four, as follows:

- Theme 1: Emotional and Cognitive Response
- Theme 2: Perceptions of Effectiveness
- Theme 3: Factors Influencing Perceptions
- Theme 4: Strengths and Limitations

Based on the information gathered and analysed, the initial proposed themes appeared to align well with the focus of the master's thesis, as they encompass the exploration of immersive narratives for social awareness, specifically in the context of gender equality. However, they cover a range of aspects, including emotional impact, perceptions of effectiveness, influencing factors, and strengths and limitations. These themes provide a comprehensive framework to analyse the data and address the research questions effectively.

Figure 28

Overview - Reviewed List of Themes

Theme 1: Emotional and Cognitive Responses			Theme 2: Perceptions of Effectiveness	Theme 3: Factors Influencing Perceptions	Theme 4: Strengths and Limitations
Emotions	Negative	Happiness	Perception	Immersion	Potential strengths
Empathy	Feeling of helplessness	Questioning	Evaluation	Personal relevance and identification	Enhancing engagement and participation
Frustration	Inadequacy	Compassion	Impact	Engagement with diverse perspectives	Facilitating conversations and dialogue
Helplessness	Ambiguity	Emotional intelligence	Persuasion	Interactivity and participant agency	Reflection and self-awareness
Surprise	Doubt	Emotional response	Recognition	Social and cultural context	Accessibility and inclusivity considerations
Anger	Questioning	Excitement	Assessment	Previous experiences and knowledge	Ethical considerations
Anxiety	Compassion	Hesitation	Challenging stereotypes and biases		
Apathy	Gratitude	Seriousness	Provoking dialogue and discussion		
Curiosity	Appreciation	Distractibility			
Ambivalence	Thankfulness	Negativity			
		Gratitude			
		Appreciation			

Note. Figure 28. Printed from Thematic Analysis Spreadsheet (Appendix J). Overview - Reviewed list of Themes. Personal Collection. Researcher Personal Collection.

5.1.5 Step 5: Themes Definition

This was the final refinement done, aimed at identifying the ‘essence’ of what each theme is about. They were defined in this phase, always open to the need of having to be reviewed again while the analysis is ongoing. To reach the themes essences it was necessary to reach what they are about, what aspects of the data are covered by them, and check how / if the existing data would corroborate the predefined themes (Braun & Clarke, 2006).

After a thorough examination of each theme and its allocated codes in context with the collected data, the four themes were confirmed as being indeed: ‘Emotional and Cognitive Response’; ‘Perceptions of Effectiveness’; ‘Factors Influencing Perceptions’ and ‘Strengths and Limitations’. These themes encompass the exploration of immersive narratives for social awareness, specifically in the context of gender equality. They cover a range of aspects and provide a comprehensive framework to analyse the data and address the research questions effectively.

Finally, themes were defined, not having major changes from the first suggestions, but developing a description to each to guarantee a proper use as reference for adequate allocation of the participant's quotations, as follows:

- 'Emotional and Cognitive Response': Focuses on the emotional and psychological responses elicited by immersive narratives. It includes codes related to emotions, empathy, frustration, helplessness, curiosity, and more. This theme is relevant to understanding how individuals' experiences with immersive narratives contribute to their understanding and engagement with gender equality issues.
- 'Perceptions of Effectiveness': Explores how participants perceive the effectiveness of immersive narratives in raising social awareness and promoting dialogue about gender equality. It includes codes related to perception, evaluation, impact, and recognition. This theme directly addresses the research question of participants' perceptions of immersive narratives in relation to gender equality.
- 'Factors Influencing Perceptions': Examines the factors that contribute to participants' perceptions of immersive narratives. It includes codes related to immersion, personal relevance, engagement with diverse perspectives, and social and cultural context. This theme is crucial in understanding the nuances of participants' experiences and the contextual factors that shape their perceptions.
- 'Strengths and Limitations': Explores the potential strengths and limitations of utilising immersive narratives for promoting social awareness and driving meaningful conversations about gender equality. It includes codes related to potential strengths, enhancing engagement and participation, accessibility, and ethical considerations. This theme addresses the research question of identifying the strengths and limitations of using immersive narratives for social awareness.

Table 7

Themes Definitions Overview

Theme 1: Emotional and Cognitive Response	Theme 2: Perceptions of Effectiveness	Theme 3: Factors Influencing Perceptions	Theme 4: Strengths and Limitations
<ul style="list-style-type: none"> ● Emotional responses to immersive narratives ● Changes in attitudes, beliefs, and perceptions ● Increased empathy and understanding. ● Cognitive engagement and reflection ● Development of critical thinking skills ● Emotional connection to gender equality issues 	<ul style="list-style-type: none"> ● Participants' evaluation of immersive narratives as a tool for raising social awareness ● Perception of the impact of immersive narratives on knowledge acquisition ● Assessment of the persuasive power of immersive narratives ● Recognition of the potential of immersive narratives to challenge stereotypes and biases. ● Assessment of the ability of immersive narratives to provoke dialogue and discussion 	<ul style="list-style-type: none"> ● Immersion and presence in the narrative experience ● Personal relevance and identification with characters or situations ● Engagement with diverse perspectives and narratives ● The role of interactivity and participant agency ● Social and cultural context influencing perception and interpretation. ● The influence of previous experiences and knowledge on perceptions 	<ul style="list-style-type: none"> ● Potential strengths of immersive narratives for promoting social awareness ● Enhancing engagement and participation in gender equality issues ● Facilitating meaningful conversations and dialogue ● Encouraging reflection and self-awareness ● Limitations and challenges of using immersive narratives for social awareness. ● Accessibility and inclusivity considerations ● Ethical considerations and potential unintended consequences

All relevant quotes - that had already gone through a first selection (see Section 5.1.1) and coded - were now re-allocated themes accordingly (For access to the complete allocation check Appendix J, tab “*Review - 2nd Quotes Selection*”).

Here are a few examples of quotations that endorse each theme and supported the themes definition:

- For ‘Emotional and Cognitive Response’ one of the quotes allocated was from Participant 8, *"I think it was a place of passivity as a man, discomfort and passivity, just standing there to receive uncomfortable information and feelings."* And another was from Participant 10, that adds *"You put yourself in the shoes of all those women, you're living what they're feeling, and based on experience, it bothers you as well."*

- For ‘Perceptions of Effectiveness’, a couple of the quotes allocated were *“I think it brought a different perspective to some things that I hadn't thought about before...”* (Participant 3) and *“...It puts you in an uncomfortable position, it impacts you in a different way than just seeing a story and not thinking about it... Because when you see the news on TV, you don't pay much attention, you just move on to the next one”* (Participant 7).
- In the theme ‘Factors Influencing Perceptions’, some of the quotes allocated were *“For me, the audio affected me a bit more, you know, more through the senses. Also, the external noises to what people are saying created a different construction that impacted me a lot...”* (Participant 5). And Participant 9 quotes that mentions *“...I think as more layers were added, I felt more and more uncomfortable with the experience.”*
- The ‘Strengths and Limitations’ theme includes quotes focused on the experience such as Participant 1 affirmation: *“I think the idea of immersion works when it's sensory... I think this sense of agency can work very well. But I believe the sensory aspect is key when we talk about immersion.”* And comments on warnings, as suggested by Participant 4 *“I think it's as powerful as communication that there should be an advertisement every time there's an audience.”*

5.2 Findings

This section presents the data collected from the pre and post Focus Group Surveys, its insights, and provides a concise, coherent, logical account of the data within and across themes (Braun & Clarke, 2006). The aim of this analysis was to gain insights into how individuals' experiences with immersive narratives contribute to their understanding of and engagement with the gender equality topic, as well as how participants perceive the effectiveness of such narratives in raising social awareness and promoting dialogue. Additionally, the analysis explored key insights and recommendations for the design and implementation of future immersive narrative interventions aimed at fostering social awareness and addressing gender equality issues. It drew on the themes that emerged from the data, supported by direct quotes from the participants.

5.2.1 Results from Pre and Post Focus Group Surveys

As mentioned by previous sections, the Pre-Focus Group session questionnaire (for more detail information, check Section 4.2.1) was aimed at gathering social demographics data from participants and the Post-Focus Group Survey (for more detail information, check Section 4.2.4) wanted participants individual evaluation of the Focus Group session, to gather valuable data to be included in the analysis for further improvement of the group session structure itself for future implementations. All questionnaires were implemented online in Google Forms, to facilitate data gathering and participants individual access to them, as planned, through link sharing. And there were no setbacks or limitations for participants to fill the questionnaires.

5.2.1.1 Pre-Focus Group Survey Results

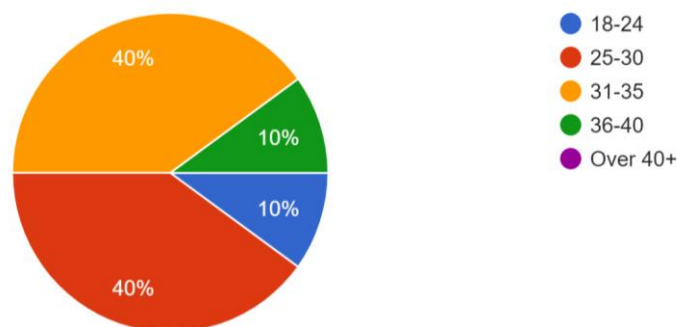
The Pre-Focus Group questionnaire gathered social demographic information about the participants (see Table 6) and information about each participant's previous knowledge about gender equality and immersive narratives, two main topics of this research. The social demographic data collected from this pre-questionnaire showed that the age range was balanced between participants, 40% being in their 25-30 years old and another 40% between 31-35 years old. From the 20% left, 10% were between 18-24 and 10% were between 36-40 years old. Regarding gender self-identification, 70% were female and 30% male. Considering the level of education, 40% had a master's degree while 60% are on a bachelor's degree level.

Figure 29

Overview of the participants age range

What is your age range?

10 responses



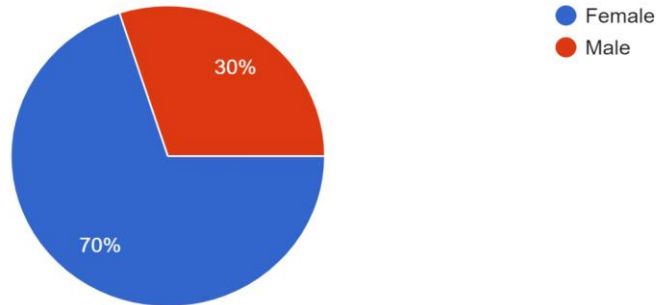
Note. Figure 29, Reprinted from Pre-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 30

Overview of participants gender self-identity

What is your gender identity?

10 responses



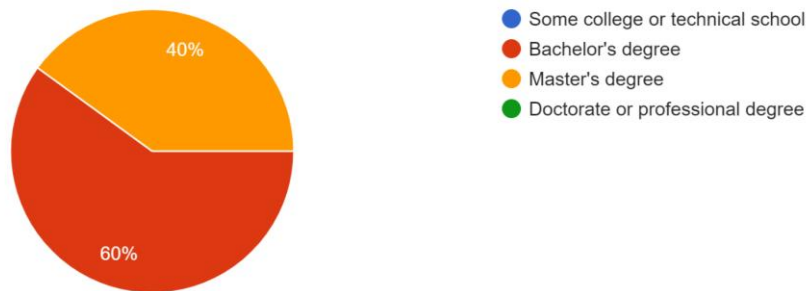
Note. Figure 30, Reprinted from Pre-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 31

Overview of participants level of education

What is your highest level of education completed?

10 responses



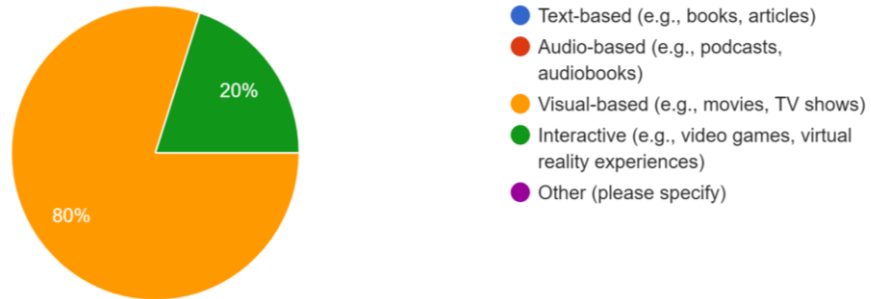
Note. Figure 31, Reprinted from Pre-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

As for the data collected about participants' previous knowledge and preferences about immersion and gender equality, the results were: 80% prefer to engage with visual-based (e.g., movies, TV shows) storytelling content and 20% with Interactive (e.g., video games, virtual reality experiences) ones. Half the participants (50%) had never been in any previous immersive narrative experiences and the other half (50%) had been previously, but only a few times.

Figure 32

Overview of participants preference on storytelling engagement

Which narrative format do you prefer when engaging with storytelling content?
10 responses



Note. Figure 32, Reprinted from Pre-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 33

Overview of participants previous immersive experiences

Have you participated in any previous immersive narrative experiences?
10 responses



Note. Figure 33, Reprinted from Pre-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023

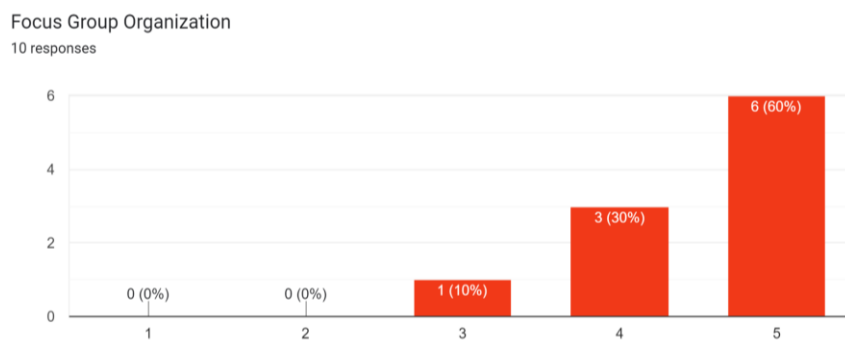
5.2.1.2 Post-Focus Group Survey Results

The Pos-Focus Group questionnaire (for more detail see Section 4.2.3) focused in getting participants evaluation of the Focus Group Discussion using an adapted version of the Likert Scale approach - In which they had to choose from 1 to 5: 1 meaning "Terrible" and 5 meaning "Excellent". Valuable insights were gathered that allow improvements in the structure for future implementation. Only one participant did not fill this form due to technical complications.

The majority of participants considered the Focus Group Organization and Facilitation “Excellent”. When evaluating the environment in which it took place 40% chose a ‘4’ on the Likert Scale and 60% chose ‘5’, the top response possible. As for the Structure of the Discussion, 80% thought it was Excellent while 10% chose ‘3’ and 10% choose ‘4’. The most divided answer amongst participants evaluation of the Focus Group Discussion was about their own engagement. A total of 20% of participants chose ‘3’, 50% chose ‘4’ and 30% chose ‘5’. The additional comments shared through the survey were about having more time for the debate and discussion among everyone and having more race diversity in the group.

Figure 34

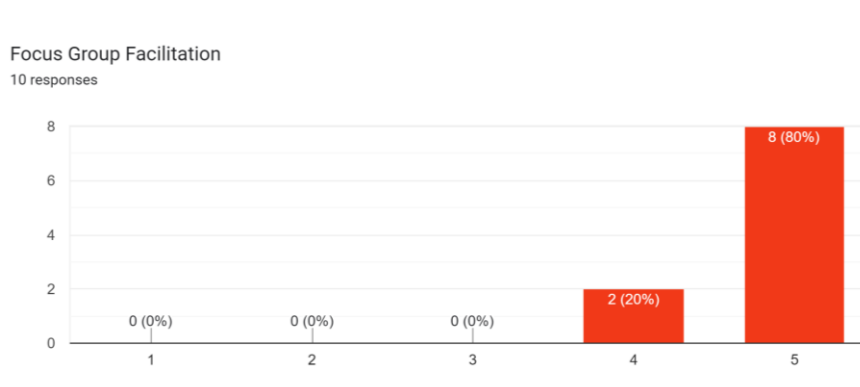
Participants Evaluation - Focus Group Organization



Note. Figure 34, Reprinted from Post-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 35

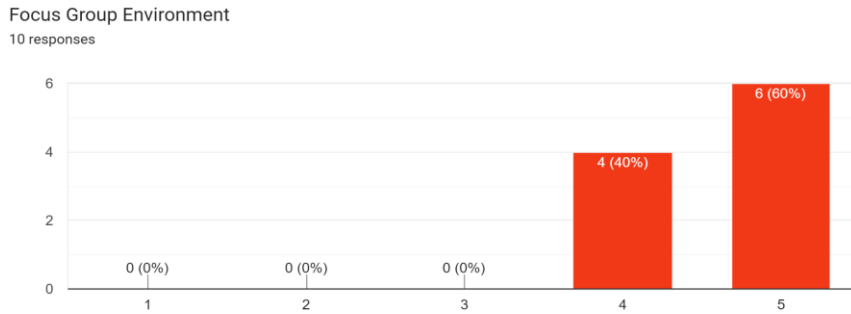
Participants Evaluation - Focus Group Facilitation



Note. Figure 35, Reprinted from Post-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 36

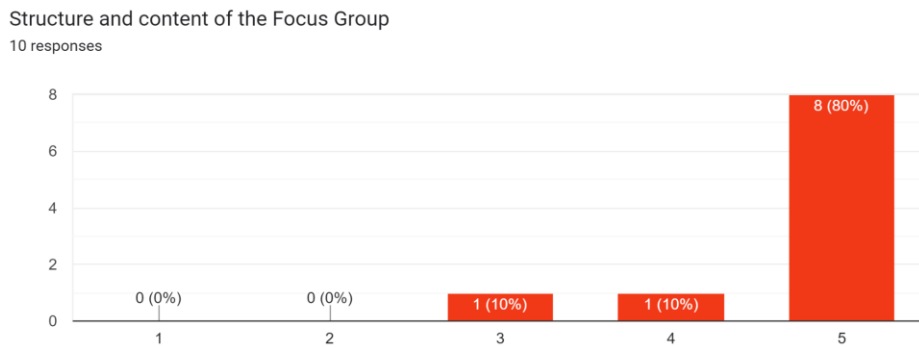
Participants Evaluation - Focus Group Environment



Note. Figure 36, Reprinted from Post-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 37

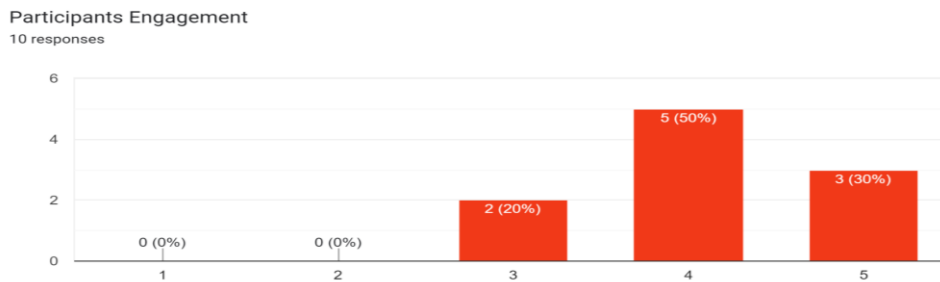
Participants Evaluation - Structure and Content of Focus Group



Note: Figure 37, Reprinted from Post-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

Figure 38

Participants Evaluation - Other Participants Engagement



Note: Figure 38, Reprinted from Post-Focus Group Survey - Immersive narratives for social awareness Google Forms responses. June 2023.

5.2.2 Main Insights

Participants' experiences with the immersive narrative evoked a range of emotional and cognitive responses. They expressed feelings of curiosity, engagement, frustration, and introspection. One participant highlighted the impact of the experience, stating, *"...we're really used to being in a passive position, and when you have this experience, you step out of your comfort zone to truly participate. And I think it works because when we participate in other, well, other topics, we always carry them to try to bring that information to other people's awareness"* (Participant 8). Other participants noted a change in perspective, stating, *"Initially, I didn't think so, but speaking in the sense of being a woman as well, upon further consideration, it did change(me)..."* (Participant 9). These quotes illustrate the profound effect that the immersive narrative had on participants, stimulating deep personal reflections, and challenging their preconceived notions.

Participants provided valuable insights into their perceptions of the effectiveness of immersive narratives in raising social awareness and promoting dialogue about gender equality. They noted the impact of immersive elements, such as the insertion of new immersive layers as the audio, and commented on how it affected them or not, one participant said *"It did! It reached me in a more visceral way, I think. That's the story for me: the fewer layers, the more reflective, the more layers, the more visceral and impactful in that sense"* (Participant 3). The participants recognized the narrative's ability to engage them and effectively convey messages. They emphasised the importance of storytelling, as Participant 3 also stated, *"I was more struck by the story"*, and another one added *"I think just the fact that it's immersive takes you out of the ordinary and puts you in the other person's shoes, and that transforms you"* (Participant 6).

Several factors emerged as influential in shaping participants' perceptions of immersive narratives. Participants identified discomfort and empathy as key factors that expanded their understanding of discomfort and allowed them to empathise with the characters, as one participant mentioned *"it puts you in an uncomfortable position, it impacts you in a different way than just seeing a story and not thinking about it..."* (Participant 7). Another participant noted, *"How was it to live this experience? Yes, I put myself in the place of all these women... I was able to empathise with her and*

understand what she was feeling" (Participant 10) - referring to a woman's audio testimonial - while a third one mentioned *"I think it aligns with what we said at the beginning, right? The respect for people having the courage to report and talk about it because unfortunately it still has to be a subject"* (Participant 5). The role of discomfort and empathy in facilitating a deeper understanding of gender equality issues indicates the importance of emotional engagement and perspective-taking within immersive narratives.

Participants reflected on the strengths and limitations of the immersive narrative experience. One participant mentioned the challenge of maintaining concentration, stating, *"...it's really hard to concentrate. If I were at home, I would be looking at things around me"* (Participant 11). Another participant acknowledged the personal engagement that the experience fostered but emphasised the need for a broader perspective, stating, *"I think it depends on a lot, because I came here to do business...and it doesn't bring a militant engagement; it brings a personal engagement, I don't know how to explain it."* (Participant 4), and Speaker 1 added *"I think it could be a frustration within the experience itself, in the sense that when you want to listen to a text, suddenly a sound comes up and you try to pay attention. Then you can't see the face in the video. So, it's almost a frustration of wanting to give attention but not being able to, because there are other things going on. And that makes you realise it's intentional. And that also happens to those women. So, it's frustrating. You wanted to pay attention to the voices, but intentionally were not able to."* These insights highlight the strengths of immersive narratives in capturing personal engagement while also emphasising the importance of a broader, contextual understanding of gender equality issues.

Participants' observations regarding the entire experience further complement the analysis. Participants 4 and 6 described the experience as *"uncomfortable"*, *"agonising"* or *"unbearable"*: *"It reached a point for me where I thought: A little more of this experience and I'm out. It becomes unbearable at a certain point."* (Participant 4). The absence of visuals in the audio in Phase 2 allowed participants to imagine and empathise with the experiences, while the anonymity of the video enabled them to relate the stories to people they know. The sensory elements, such as audio and digital noise, amplified discomfort, and immersion, making the experience more impactful and

memorable, as this participant mentioned *“I think it opened up my understanding of discomfort, you know? By hearing other testimonials because I know they are testimonials that also intersect with my life and my reality, ones that if I haven't seen or experienced myself, probably my friend has”* (Participant 5). The multi-layered narrative with different voices and perspectives contributed to a richer experience, providing a transformational perspective by placing participants in others' shoes.

Additionally, the immersive nature of the experience prompted participants to reflect on their own behaviours and roles in oppressive situations, a male participant affirmed *“I think the frustration would be associated with the fact that some of them are there and I have never identified them as problematic. Not that they aren't problematic, but because I didn't know that it's part of their routine. And that it affects them (women) so much”* (Participant 3). And right after, another male participant added *“when there was that other question about 'what is gender equality?' I felt very much in a position of maybe neglect, of thinking that I know. Actually, I don't know(..) it's not equal for everyone or something like that. It's much more than that. And I felt in a position to seek and participate more when no one really knows what the answer is. But the truth is, we come in thinking we know where it comes from, but actually, I don't”* (Participant 8). The participants suggested including trigger warnings or advertisements to alert the audience to the content and incorporating testimonials or stories specific to different geographical locations to enhance the impact, as the focus group reinforces the literature review indication that someone's cultural context influences their perceptions of the experience itself and the content presented to them.

Despite some limitations, the overall engagement and active participation facilitated by the immersive nature of the experience were highly valued by the participants, as this one said, *“I think immersion puts you in different positions, and I think that helps it be something that I won't forget in five minutes, it's a bit more memorable because it makes me feel in different places”* (Participant 5).

5.3 Discussion

The findings from the Thematic Analysis (Braun & Clarke, 2006) provided valuable insights into the use of immersive narratives for social awareness in gender equality. In this section, firstly the results from the pre and post Focus Group Session are commented on, and then the research questions of this dissertation restated for an

assessment and evaluation of the relationship between research goals and all the data collected. In addition, these research findings were compared with the concepts from the State-of-the-Art Review chapter, including narrative and storytelling, audience engagement, immersion, social awareness, standpoint concept, and positive computing.

The pre-social demographic survey (see Sections 4.2.1; 4.5.1) indicated that having a balanced age distribution makes the findings relevant to a broad range of young adults. The predominance of female participants highlights the importance of engaging diverse perspectives in discussions on gender equality. The participants' educational backgrounds demonstrate a mix of advanced and undergraduate degrees, ensuring a diverse knowledge base.

The positive evaluation done by participants at the post-Focus Group Discussion survey of the focus group organisation and facilitation suggests that the research methodology was effective in creating a conducive and engaging environment. The constructive feedback received from participants are valuable for future implementations, particularly regarding the need for more time for discussion and the importance of enhancing racial diversity within the group. It emphasises the significance of incorporating diverse voices and perspectives in future research and interventions aimed at promoting discussions about gender equality and social justice. The recruitment process strategies have a great impact on how diverse a sampling can be, which reinforces the need of having a proper amount of time for invitation and networking of participants.

5.3.1 RQ1: Perceptions of Effectiveness

The Research Question 1 (see Section 1.2) aimed at exploring how participants perceived the effectiveness of immersive narratives in raising social awareness and promoting dialogue about gender equality.

The analysis of participants' comments and reflections indicated that they were impacted by the immersive nature of the artistic installation, expressing surprise and noting unexpected emotions emerging depending on the immersion layer and narrative formats. Participants reported a more emotional response as more immersive narrative layers were incorporated into the experience. Compared to non-immersive experiences, they were more stimulated to debate the topic of gender equality and reflect on their own self-concepts regarding it.

The identified themes in relation to Research Question 1 (RQ1) include:

- **Immersion and Attention:** Participants noted that immersive narratives captured their attention and focused their awareness on gender equality issues. The immersive elements, such as audio and sensory experiences, played a crucial role in enhancing participants' engagement and receptiveness to the narratives.
- **Personal Connection:** Participants felt that immersive narratives allowed for a personal connection to the topic of gender equality. The narratives evoked emotional responses and facilitated a deeper understanding of the challenges faced by different genders. This personal connection enhanced participants' emotional engagement and empathy towards the experiences portrayed.
- **Authenticity and Realism:** The effectiveness of immersive narratives was attributed to their ability to portray realistic experiences and challenges related to gender equality. Participants appreciated the authenticity of the narratives, which helped them relate to the stories and recognize the relevance of gender equality issues in their own lives.
- **Empathy and Perspective-Taking:** Immersive narratives fostered empathy and facilitated perspective-taking among participants. By immersing themselves in the narratives, participants gained a deeper understanding of the lived realities of individuals affected by gender inequality. This perspective-taking led to increased empathy and a greater motivation to address gender-based discrimination.

5.3.2 RQ2: Strengths and Limitations

The data analysis also revealed key findings regarding the Research Question 2 (RQ2), about what the potential strengths and limitations of utilising immersive narratives as a tool were for promoting social awareness and driving meaningful conversations about gender equality (see Section 1.2).

Participants discussed the impact of immersive narratives on their emotional engagement, the creation of discomfort, and the potential for bias or misrepresentation. They also expressed thoughts on the balance between personal safety and challenging conversations.

The analysis disclosed the following interesting findings:

- **Emotional Impact:** Immersive narratives had a strong emotional impact on participants, eliciting empathy and driving meaningful conversations. The immersive elements and personal connections created through the narratives contributed to the emotional engagement and resonance experienced by participants.
- **Engaging and Memorable:** Participants found immersive narratives to be engaging and memorable. The multi-sensory nature of immersive experiences, coupled with the personal connections established, enhanced the likelihood of continued discussions and reflections on gender equality.
- **Multi-Sensory Experience:** The inclusion of sensory elements, such as audio and digital noise, heightened the effectiveness of immersive narratives in conveying the complexities of gender equality. The multi-layered narrative approach, with different voices and perspectives, provided a rich and impactful experience for participants.

On the other hand, limitations were also identified:

- **Potential for Bias:** Participants acknowledged the potential for biased narratives or misrepresentation of gender equality issues in immersive experiences. It is essential to ensure that immersive narratives present diverse and authentic representations of gender experiences, avoiding the reinforcement of stereotypes.
- **Interpretation and Subjectivity:** Individual interpretations of immersive narratives varied, potentially influencing the effectiveness of the message conveyed. Designers of immersive narratives should consider the diverse perspectives and backgrounds of participants to create inclusive and impactful experiences.

5.3.3 RQ3: Design and Implementation - Insights and Recommendations

The Research Question 3 (RQ3) focused on what the key insights and recommendations for the design and implementation of future immersive narrative interventions were. Participants shared their perspectives on the design and implementation of future immersive narrative interventions aimed at fostering social

awareness and addressing gender equality issues. They discussed the importance of diverse representation, addressing intersectionality, incorporating interactive and participatory elements, ethical considerations, and adopting an educational and empowering approach.

The identified themes in relation to RQ3 gathered by data analysis included:

- **Diverse Representation:** Participants emphasised the importance of diverse and authentic representations of gender experiences in immersive narratives to promote inclusivity and avoid reinforcing stereotypes.
- **Intersectionality:** There was a call for addressing intersectionality in immersive narratives to capture the complexities of gender equality and ensure inclusivity for marginalised groups.
- **Interactive and Participatory Elements:** Incorporating interactive and participatory elements in immersive narratives was seen as valuable for engaging participants and fostering meaningful dialogue.
- **Ethical Considerations:** Participants highlighted the need for ethical guidelines and responsible storytelling practices in the design and implementation of immersive narrative interventions.
- **Educational and Empowering Approach:** Immersive narratives should not only raise awareness but also provide educational resources and empower individuals to act towards gender equality.

5.3.4 Main Research Question: Impact and Empowerment

The Main Research Question (MRQ) was aimed at understanding how participants' experiences with immersive narratives contributed to their understanding and awareness of gender equality issues. Immersive narratives created an emotional connection, allowing participants to empathise with the experiences portrayed and resulting in a shift in perspective regarding gender equality. Immersive narratives also facilitated dialogue among participants and empowered them to act and advocate for gender equality. The analysis of participants' experiences with immersive narratives revealed their increased awareness and sensitization towards gender equality issues. Which due to the complexity of the theme and small sample size, does not mean this will necessarily turn into action, it only indicates an interesting outcome. It does show,

however, potential for future deeper research focused on analysing the longevity of the experiment generated awareness towards a social theme.

The key findings in relation to the Main-Research Question (MRQ) included:

1. **Increased Awareness and Sensitization:** Participants reported that their experiences with immersive narratives heightened their awareness and sensitization towards gender equality issues, providing them with a deeper understanding of the challenges and inequalities faced by different genders.

2. **Emotional Connection:** Immersive narratives created an emotional connection with the participants, allowing them to empathise with the experiences portrayed. This emotional connection contributed to a greater understanding of the lived realities of individuals affected by gender inequality.

3. **Shift in Perspective:** Participants mentioned that their experiences with immersive narratives resulted in a shift in perspective regarding gender equality. They recognized the importance of equality and the need for collective action to address gender-based discrimination and biases.

4. **Facilitation of Dialogue:** Immersive narratives acted as catalysts for meaningful discussions among participants. The shared experience of engaging with immersive narratives encouraged dialogue, allowing for the exchange of diverse perspectives and the exploration of various aspects of gender equality.

5. **Empowerment and Agency:** Participants expressed that immersive narratives empowered them to act and advocate for gender equality. These experiences provided them with a sense of agency and inspired them to challenge societal norms and promote positive change.

The findings from this research contribute to the existing body of literature on immersive narratives for social awareness, providing valuable insights for designing immersive experiences that effectively convey messages and engage participants regarding social themes such as gender equality. The identified strengths and limitations offer guidance for future developments in this field, while the key insights and recommendations provide practical implications for the design and implementation of future immersive narrative interventions aimed at fostering social awareness and addressing gender equality issues. Further research can build upon these findings to

refine the use of immersive narratives as a powerful tool for promoting dialogue and fostering social change related to gender equality and other relevant social themes.

The overall thematic analysis results align with the theme of narrative and storytelling. Participants in the study emphasised the importance of storytelling in immersive narratives for promoting social awareness and driving meaningful conversations about gender equality. The immersive narratives allowed participants to connect personally with the topic, enhancing their understanding and emotional engagement. This finding supports the notion that narratives play a significant role in shaping individuals' perceptions and experiences.

Also, the analysis results contribute to the theme of audience engagement. Participants reported that immersive narratives captured their attention and stimulated their engagement with the topic of gender equality. The emotional impact of immersive narratives was found to be a key factor in driving meaningful conversations among participants. These findings highlight the potential of immersive narratives to actively involve the audience and create an interactive and participatory experience.

The theme of immersion is also supported by the Thematic Analysis (Braun & Clarke, 2006) results. Participants noted that immersive narratives, with multiple layers and formats, evoked a stronger emotional response and facilitated a deeper understanding of gender equality issues. The multi-sensory nature of immersive narratives heightened their effectiveness in conveying the complexities of gender equality. This finding aligns with the concept that immersive experiences have the ability to transport individuals into different worlds and elicit emotional and cognitive responses.

Furthermore, the thematic analysis provides insights into the theme of social awareness. Participants reported an increased awareness and sensitization towards gender equality issues as a result of their experiences with immersive narratives. The narratives acted as catalysts for meaningful discussions and facilitated the exploration of diverse perspectives on gender equality. This finding supports the notion that immersive narratives can play a significant role in raising social awareness and promoting dialogue on important social issues.

The theme of standpoint concept is also relevant in the discussion of the Thematic Analysis (Braun & Clarke, 2006) results. Participants mentioned that immersive

narratives fostered empathy and perspective-taking, enabling a deeper understanding of gender inequality. This finding aligns with the standpoint concept, which suggests that individuals' social positioning and lived experiences influence their perspectives and understanding of social issues. Immersive narratives provided an opportunity for individuals to step into different perspectives and broaden their understanding of gender equality.

Additionally, the analysis results contributed to the theme of positive computing. Participants expressed that immersive narratives empowered them to take action and advocate for gender equality. The experiences with immersive narratives provided a sense of agency and inspired participants to challenge societal norms and promote positive change. This finding aligns with the concept of positive computing, which focuses on leveraging technology to enhance individuals' well-being and promote positive societal outcomes.

Regarding the research methods used in this study, art-based methods and focus groups were employed to explore participants' experiences with immersive narratives for social awareness in gender equality. The Art-based methods allowed for the creation of immersive narrative interventions that captured participants' attention and a storytelling that stimulated their engagement. The focus groups provided a platform for participants to reflect on and discuss their experiences, contributing to the Thematic Analysis (Braun & Clarke, 2006). The combination of these methods allowed for a comprehensive exploration of the effectiveness of immersive narratives in promoting social awareness.

Overall, this research has achieved its expected contributions. The Thematic Analysis (Braun & Clarke, 2006) of participants' experiences with immersive narratives for social awareness in gender equality has shed light on the potential effectiveness of immersive narratives in raising social awareness, promoting dialogue, and driving meaningful conversations, also providing insights into a few of the strengths and limitations of utilising immersive narratives as a tool for addressing social issues.

This project has contributed to the appointment of social matters of extreme relevance, positioned immersive narratives in transdisciplinary contexts, and developed a framework that can be implemented in future projects aimed at social awareness and impact through social innovation. It underscores the significance of immersive

narratives as vehicles for social awareness, as data analysis appoints the emotional and cognitive impact of immersive narratives, capturing participants' intense reactions and their recognition of the potential for social change. This research contributed to the growing body of knowledge surrounding immersive narratives and their role in fostering social consciousness.

6. Conclusion & Future Perspectives

This master thesis explored the use of immersive narratives for social awareness, specifically in the context of gender equality, having as its main research goal the examination of how young adults' experiences with immersive narratives contribute to their understanding and awareness of gender equality issues.

The findings of this study revealed that immersive narratives have the potential to shape individuals' understanding, engagement, and agency in addressing gender equality issues. Through increased awareness, emotional connection, perspective shifts, and facilitation of dialogue, immersive narratives fostered empathy, motivated action, and empowered participants to advocate for positive change. All of these outcomes have to be considered within the context of a small sample with limited diversity, which indicates an interesting and powerful path that has potential to be consolidated if a future study expands the sampling in a deeper exploration of the subject in question.

Several important topics were also revealed that shed light on the impact of immersive narratives on participants' perspectives and actions related to gender equality. Firstly, participants reported an increased awareness and sensitization towards gender equality issues as a result of their experiences with immersive narratives. These narratives provided a deeper understanding of the challenges and inequalities faced by different genders, allowing participants to develop empathy and a more comprehensive view of the issue. Moreover, the emotional connection established through immersive narratives played a significant role in enhancing participants' understanding of the lived realities of those affected by gender inequality. This emotional connection fostered a sense of empathy and personal investment in the cause, further motivating participants to engage with gender equality issues.

Another noteworthy outcome was the shift in perspective observed among participants. Immersive narratives challenged their preconceived notions and biases, prompting a reconsideration of societal norms and the recognition of the importance of equality. Participants acknowledged the need for collective action and became advocates for positive change in their respective spheres. To understand and truly observe the longevity of this sensitization and desire for action awakened in

participants, a complimentary study is indicated as an interesting path to be taken in the future.

Furthermore, the immersive narratives acted as powerful facilitators of dialogue among participants. Shared experiences provided a platform for meaningful discussions, enabling the exchange of diverse perspectives and the exploration of various aspects of gender equality. This dialogue not only deepened participants' understanding but also encouraged collaborative problem-solving and the formulation of innovative ideas to address gender-based discrimination.

To maximise the effectiveness of immersive narrative interventions, several key recommendations emerged from this study, the main ones being:

- Design narratives that resonate with diverse audiences;
- Ensure authentic and inclusive representation of gender experiences;
- Providing opportunities for collective reflection and action are crucial.

Additionally, a continuous evaluation and refinement of immersive narrative interventions are essential to ensure their relevance and impact.

In conclusion, this master thesis significantly contributed to the understanding of immersive narratives for social awareness, specifically in relation to gender equality. The findings highlight the potential of immersive narratives to shape individuals' perspectives, actions, and agency. By harnessing the power of immersive narratives and implementing the insights and recommendations provided, researchers, practitioners, and advocates can work towards creating a more equitable and inclusive society for all genders by igniting the starting point of expanding the debate and reflection about the theme and its challenges, to then build significant changes from there.

6.1 Future Perspectives

While this study has provided valuable insights, there are opportunities for future research to expand and deepen the understanding of immersive narratives for social awareness in gender equality. Firstly, future studies could explore the long-term effects of immersive narratives on participants' attitudes and behaviours. Employing longitudinal study designs that track participants' attitudes, beliefs, and actions over an extended period can reveal the sustainability and lasting impact of immersive narratives in promoting gender equality.

The integration of immersive narratives within a cave environment is another avenue worth exploring. According to Cruz-Neira (2018), the 'Immersive CAVE' concept proposes an innovative approach to creating virtual environments that provide an unparalleled level of realism and interactivity, in which the boundaries between the physical and digital worlds blur, allowing an innovative form of blending real and virtual experiences. Cave environments equipped with advanced visualisation technologies offer a more immersive and interactive experience. According to Kenderdine et al (2009), the immersive cave is a unique platform for artists and designers, allowing them to create immersive installations and experiences that engage all the senses. By combining immersive narratives with cave environments, researchers can investigate the potential of creating a highly realistic and engaging virtual space that enhances participants' understanding and engagement with gender equality issues. However, challenges such as high costs, technical requirements, and the need for specialised content creation could pose as barriers to widespread adoption and usage of CAVE technology (Manjrekar et al., 2014).

Human-Computer Interaction (HCI) perspectives can also contribute to the development of more user-centred and interactive immersive narrative experiences. According to Mathew et al (2011, p.1), HCI is an interactive computing system that refers to the development and deployment of user-friendly interfaces that enable users to engage and interact with various technological platforms. These systems encompass a wide range of devices, including desktop computers and embedded systems integrated into different devices. The key pillars in the field of human-computer interaction (HCI) revolve around functionality and usability. Functionality pertains to the services offered by a system, often referred to as its functions. Usability, on the other hand, signifies the seamless, effective, and transparent utilisation of a system's functions by the user. Future studies integrating HCI principles and methodologies can lead to the creation of more intuitive and user-friendly immersive narratives, maximising their impact on social awareness.

Another promising direction is exploring the role of embodiment concepts in immersive narrative experiences related to gender equality. Understanding how participants' sense of embodiment influences their understanding, empathy, and agency can provide valuable insights. According to Gallagher (2005), embodiment refers to the

ways in which the physical body is integrated with the cognitive, emotional, and social dimensions of human experience. Embodiment involves not only the biological body but also the cultural and social meanings that are attributed to different bodily characteristics (Sobchack, 2004), and it is not simply a matter of having a body, but of being able to inhabit, manipulate and explore the world through a body (Johnson, 2007). The goal is to create environments and artefacts that support and enhance the cognitive abilities of users, while also respecting the embodied nature of cognition and the situatedness of individuals within their physical and social environments (Baber, 2017), it is definitely an interesting path to follow when further exploring this research subject.

Ultimately, future research can explore the integration of intersectionality and inclusivity within immersive narratives. By incorporating narratives that address the intersections of gender with race, class, sexuality, and other social categories, researchers can promote a more comprehensive understanding of the complexities of inequality. This approach can foster greater inclusivity and empower individuals from marginalised groups to engage in dialogue and action.

All research paths outlined above provide exciting opportunities to further explore the use of immersive narratives for social awareness in gender equality. By integrating cave environments, HCI principles, embodiment concepts, conducting longitudinal studies, and incorporating intersectionality and inclusivity, researchers can advance our understanding of the potential of immersive narratives as a tool for promoting social change. These avenues of research have the potential to contribute to the development of more effective and impactful interventions that foster greater understanding, empathy, and action towards achieving gender equality.

Embarking on the research journey of exploring the use of immersive narratives for social awareness in gender equality has been transformative both personally and professionally. Throughout this study, I encountered various challenges that tested my research skills and fostered growth. Designing longitudinal studies and grappling with the technical requirements were just a few of the obstacles faced. However, each challenge provided an opportunity for learning and development. Through ongoing exploration and collaboration, we can harness the power of immersive narratives to foster understanding, empathy, and action towards achieving gender equality.

In conclusion, this research journey has expanded my understanding of the potential of immersive narratives for social change while highlighting the complexities involved. By addressing limitations and exploring alternative approaches such as CAVE, as well as incorporating cross-cultural perspectives, future research can contribute to advancing knowledge in the field. Through ongoing exploration and collaboration, we can harness the power of immersive narratives to foster understanding, empathy, and action towards achieving gender equality.

7. References

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Appendix A

O Globo Newspaper featuring InCômodos (2018)

Newspaper piece in Brazilian Portuguese with details on what was the play InCômodos (2018) and full coverage of audience reaction after the special session. Access full coverage here:

<https://oglobo.globo.com/rio/bairros/em-cartaz-no-castelinho-do-flamengo-incomodos-discute-condicao-da-mulher-23151313>

CLÁUDIA ESTELLITA, ADVOGADA



A advogada Claudia Estellita reviveu o assédio cometido por um ex-chefe - Bárbara Lopes / Agência O Globo

O espetáculo fez a advogada Cláudia Estellita reviver passagens de sua vida que não gostaria. Foi como revirar um baú do passado. O assédio cometido por um ex-chefe foi uma delas. O machismo e a opressão dentro de casa, outros desses momentos. Situações que, em suas palavras, não são “mimimi” e precisam ser mostradas. Apesar de todo impacto que sentiu, ela afirma que assistiria de novo.

— Os relatos me afetam, são coisas que acontecem e podem acontecer a qualquer momento. Nós, mulheres, estamos muito expostas, e a peça mostra isso de forma bem clara. Fiquei muito incomodada — conta a advogada.

THIERRY BERTIN, GUIA DE TURISMO



O estudante de Relações Internacionais Thierry Bertin conta que ficou incomodado com os gritos da personagem que é abusada sexualmente na peça 'InCômodos' - Bárbara Lopes / Agência O Globo

O estudante de Relações Internacionais Thierry Bertin conta que a instalação cênica lhe proporcionou muitas reflexões. Extremamente incomodado com os gritos da personagem que é abusada sexualmente, ele afirma que pensa em agir caso presencie situação parecida:

— Os gritos davam sentimento de impotência.

Coincidentemente, no dia seguinte da peça, uma amiga contou que escutou gritos no prédio da frente e viu um homem agredindo uma mulher. Ela e os amigos começaram a gritar, falando que a vítima não estava sozinha. Chamaram a polícia, mas ele fugiu. Isso me fez pensar que dá para agir

<https://oglobo.globo.com/rio/bairros/em-cartaz-no-castelinho-do-flamengo-incomodos-discute-condicao-da-mulher-23151313>

8/9

12/27/22, 5:48 PM

Em cartaz no Castelinho do Flamengo, 'InCômodos' discute condição da mulher - Jornal O Globo
ou chamar a atenção do agressor. Não vou fazer justiça com as próprias mãos, mas vou alertar.

Appendix B

Pre-Focus Group Questionnaire Model

Questionnaire for participants to gather social demographic information..

Access: [Pre-Focus Group Questionnaire Model](#)

Pre-Workshop Survey - Immersive narratives for social awareness: gender equality


Welcome!

Thank you for voluntarily accepting to participate in this research.

The focus of this study is to explore the potential of using immersive narratives to debate social themes. The aim is to explore how young adults can be stimulated to debate gender equality in the context of activism with participatory evaluation methods.

You will take place in a 3-phase arts-based experience, followed by a focus group.

All information is confidential and anonymous, respecting all proper ethical guidelines.

rakel.cogliatti@gmail.com [Switch account](#) 

* Indicates required question

Email *

Your email

What is you age range? *

18-24

25-30

31-35

36-40

Over 40+

What is your gender identity? *

- Female
- Male
- Other: _____

What is your place of origin? (city, country) *

Your answer _____

What is your highest level of education completed? *

- Some college or technical school
- Bachelor's degree
- Master's degree
- Doctorate or professional degree

Which narrative format do you prefer when engaging with storytelling content? *

- Text-based (e.g., books, articles)
- Audio-based (e.g., podcasts, audiobooks)
- Visual-based (e.g., movies, TV shows)
- Interactive (e.g., video games, virtual reality experiences)
- Other (please specify)

Have you participated in any previous immersive narrative experiences? *

(Virtual reality, immersive theatre, augmented reality, immersive artistic installation, or others)

- Yes, MANY times!
- Yes, A few times
- No

Next

Clear form

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Google Forms

On a scale of 1 to 5, with 1 being "not at all familiar" and 5 being "very familiar," how familiar *
are you with the concept of immersive narratives?

1 2 3 4 5

Not at all familiar Very familiar

On a scale of 1 to 5, with 1 being "strongly disagree" and 5 being "strongly agree," indicate your *
agreement with the following statement:

"I believe immersive narratives can be powerful tools for addressing social issues, including
gender inequality."

1 2 3 4 5

Strongly disagree Strongly agree

Have you participated in any discussions, activities or projects related to gender inequality? *

- Yes
- No

Have you ever experienced an artistic intervention, such as a performance, exhibition, or *
installation, that aimed to address social issues?

- Yes
- No

After section 3 Continue to next section

Section 4 of 5

Yes, I have participated in gender inequality discussions, activities, or projects!



Description (optional)

If you have participated in gender inequality discussions, activities or projects previously, please
briefly explain how they were done/ structured below:

Long answer text

Section 5 of 5

Section title (optional)



Description (optional)

How comfortable do you feel expressing your opinions and engaging in discussions about gender inequality? 1 being "very uncomfortable" and 5 being "very comfortable" *

	1	2	3	4	5	
Very Uncomfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Comfortable

How Do you respond to thought-provoking or emotionally charged artistic content? 1 being "not emotional at all" and 5 being "extremely emotional" *

	1	2	3	4	5	
Not emotional at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely emotional

Would you like to add any information that this survey has not yet covered before we start the experience?

Short answer text
.....

Thank you!

Your participation is extremely important to this research. All ethical guidelines will be followed and your data is confidential.

Let the experience begin!

Appendix C

The Transcribed Adapted Text of the Original Incômodos Audio

INCÔMODOS TEXT

(In Portuguese)

Mulher1: Parece que só tem duas portas para ser mulher ou você é igual a um homem no visual e na fala, ou você tem que ser um objeto sexual.

Mulher2: Nunca gostei que me chamassem de menina, porque até essa coisa não é falar que você é menina para te diminuir. Dizer que você não tem voz.

Mulher3: O homem não querer ter filhos é normal. Já a mulher é tida como menos humana, menos mulher.

Mulher4: Quando você naturaliza territórios de pobreza, tudo o que acontece nele é naturalizado, inclusive as inúmeras violências. Se 10% da violência que acontece nas favelas acontecesse em bairros nobres, a sociedade já teria se mobilizado de alguma forma.

Mulher5: A cidade é o lugar dos encontros? Ou deveria ser. Embora para a mulher negra sejam encontros mais hostis. A violência da mulher negra é diferenciada, seja a partir do olhar do outro, seja pelos nossos corpos frente à sociedade. O incômodo dos olhares com os turbantes e com as roupas coladas acontece de maneira afrontosa com as nossas vidas.

Mulher6: Quando mudei para o meu novo prédio, sofri preconceito, mas deixei bem claro para todos que temos os mesmos direitos. Nunca deixarei que ninguém me humilhe. Eu me posiciono assim porque passei a me amar e eu me amo muito.

Mulher7: A nossa resistência não é para o deleite do seu olhar. Quando me vir na rua de mãos dadas ou beijando outra mulher. Não é para você que estamos fazendo. Respeite. Desvie seu olhar de fetiche.

Mulher8: A gente evita andar de mãos dadas, ficar se beijando, essas coisas porque estão de medo. Medo. Medo de homofobia. Não é uma questão de não gostar. A gente não faz porque não pode. Eu tinha medo dos meus sentimentos, do toque de.

Mulher9: Outras mulheres, do abraço de outras mulheres. Porque eu não queria ser tratada como lésbica. Eu queria ser tratada como uma pessoa.

Mulher10: O medo acabou se juntando ao sentimento de rejeição que sentia ao perceber a mudança de tratamento da parte de algumas pessoas que me eram caras. Isso tudo por me reconhecer, por me conhecer.

Appendix D

The Original Stereo Audio of the Hearing Scene of InCômodos (2018) play.

(In Portuguese)

Listen here: [Original Audio from Incômodos Play](#)

Appendix E

Adapted video from the original content of the play InCômodos (2018)

(In Portuguese)

Watch here: [Video content adapted from Incômodos](#)

Appendix F

Post-Focus Group Discussion Survey Model

Model of the Survey sent to focus group participants to gather their evaluation of the Focus Group Session to the experiment. Access: [Post-Focus Group Discussion Survey Model](#)

Avaliação - Focus Group

We thank you for your participation in the Focus Group Session.

We kindly ask you to fill the evaluation about your perceptions on the focus Group session below.

This will help us improve the experience for future focus groups and experiments.

You must choose an option to answer each question from 1 to 5, in which 1 means 'Terrible' and 5 means 'Excellent'.

Your opinion is very important to us!

Thank you once again!

Email *

Valid email

.....

This form is collecting emails. [Change settings](#)

Focus Group Organization

We would like to know what do you think about the overall organization of the focus group session.

This includes the clarity of the information provided, punctuality and time efficiency regarding the division to each topic addressed during discussion and activities.

Focus Group Organization *

	1	2	3	4	5	
Terrible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent!

Focus Group Facilitation

We would like to know what do you think about regarding the facilitators ability to conduct the discussion in an adequate way and stimulating the engagement of participants. As well as the facilitators attention to opinions and perspectives from all participants.

Focus Group Facilitation *

	1	2	3	4	5	
Terrible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent!

Focus Group Environment

We would like to know what do you think about the environment for the discussion, if it was of respect and openness to the expression of diverging opinions and the collaboration atmosphere.

How was, in your opinion, the feeling of safety during the discussions.

Focus Group Environment *

	1	2	3	4	5	
Terrible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent!

Structure and content of the Focus Group

We would like to know what do you think about how was the clarity of the goals and purpose of the focus group discussion. Including the discussed topics relevance in relation to the artistic intervention about gender equality.

This includes the organization and sequence of the activities that happened during the focus group discussion.

Structure and content of the Focus Group *

	1	2	3	4	5	
Terrible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent!

Participants engagement

We would like to know what do you think about the diversity and richness of the presented perspectives by participants.

How was, in your opinion, the balance in every member participating in the focus group discussion, the participants capacity of expressing their opinions and reflections in a clear way.

Participants Engagement *

	1	2	3	4	5	
Terrible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent!

Thank you!

Your answers will greatly help us improve the qualite and efficiency of future focus groups.

If ou have any additional comments / suggestions for us, please, do not hesitate to share them.

Ocne again we thank you for sharing your opinions with us!

Additional Comments

Short answer text
.....

Appendix G

The Consent Form Model in English

CONSENT FOR PARTICIPATION IN RESEARCH "EXPLORING THE USE OF IMMERSIVE NARRATIVES FOR SOCIAL AWARENESS: GENDER EQUALITY" INTERVENTION SESSIONS AND FOCUS GROUP

The project "**Exploring the Use of immersive narratives for social awareness: gender equality**" aims to conduct a research study to observe and test a research hypothesis within the scope of the master's degree in Multimedia, related to the use of immersive narratives to influence young adults in social issues, specifically gender equality.

The following entities are participating in this project: Faculty of Engineering, University of Porto.

As part of this study, we intend to carry out multimedia and artistic narrative intervention activities with young adult students, followed by a focus group discussion.

This activity aims to understand:

- How young adults can be stimulated to discuss gender equality through immersive narratives.
- Relevant content to be measured and adjusted to become a replicable framework.
- Participants' expectations and concerns.

The intervention steps and the focus group discussion will be conducted collectively and privately, held in person at the facilities of the Faculty of Engineering, University of Porto.

Materials

We will use a mobile phone for audio recording and taking pictures of artefacts, as well as a camera to capture the interaction between participants and artefacts, which will be later analysed by the research team with the participant's authorization, for further information analysis. This activity should take place in a private, calm, and quiet environment to ensure effective communication.

Procedures

The intervention steps and the focus group session will last approximately 90 minutes.

Data Collection and Analysis

Your personal data will be analysed by the researchers and destroyed three years after the end of the project. The collected data is confidential and anonymized. We will take all necessary measures to safeguard and protect the collected data to prevent unauthorised access by third parties. We would greatly appreciate your participation. Participation does

not involve any material harm or damage, nor any benefits. All materials necessary for this study will be provided. Your participation does not involve any form of payment, will not have any consequences on your work or evaluation, nor will it have any costs for you. Your participation is voluntary, and you can withdraw at any time without any consequences. You can also request the correction or destruction of the collected information at any time. To do so, simply contact us via the provided email below. We greatly appreciate your contribution, which is crucial to our research. The results of this study will be communicated to you if you so desire. For this purpose, we will ask for your email contact.

Participant: I declare that I have read and understood this document, as well as the provided verbal information, and I agree to participate in this research. I permit the use of the data I provide voluntarily, trusting that they will only be used for research purposes and with the guarantees of confidentiality and anonymity provided by the researchers. I authorise the anonymous communication of data to other partner entities of the study for academic and scientific research purposes.

[Optional] I would like to receive the study results:

No

Yes , by email: _____

Participant's name: _____

Participant's signature: _____

Date: ____ / ____ / _____

Project responsible investigator:

Name:

Phone:

Email:

Responsible investigator's signature: _____

Appendix H

Video Recording of the Experiment Phase 2

Video recording of the Experiment Phase 2, where the room was blacked-out and the audio was inserted in the experiment.

Access video recording: [Phase 2 Experiment Video](#)

Appendix I

Focus Group Discussion Scripts

Access the complete English version of the transcription of the Focus Group discussion of this research.

Access: [Translated English Version](#)

Appendix J

Thematic Analysis Table

Check the full thematic analysis steps and procedures done in the Excel Spreadsheet after the use of ATLAS.ti software for the initial coding.

Access: [Thematic Analysis Table.xlsx](#)

Initial Codes

Organization	Inhibition	Gender equality	Crowding	Sexual Assault	Sharing information	Personal development	Ambivalence	Gender and Identity: Age	Engaged Learning: Realization	Cross-cultural communication: Subjectivity	Emotions: Curiosity	Individual differences	Engaged Learning: Seeking information	Respect	Structural violence	Invalidation	Abuse	Social impact
Instruction	Discomfort	Discussion	Facilitation: Discussion facilitation	Questioning	Neuroplasticity: Experience-dependent neuroplasticity	Engaged Learning: Marketing	Contradiction	Urban Studies: Geographical location	Cross-cultural communication: Misunderstanding	Engaged Learning: Preference	Cross-cultural communication: Speculation	Hesitation	Engaged Learning: Understanding	Fear	Desire	Negativity	Trauma	Experiential storytelling: Immersive narratives
Preparation	Respect for diversity	Experience	Topic shift	Creativity	Media influence	Engaged Learning: Feedback	Safety	Urban Studies: Geographic location	Emotions: Attention difficulty	Engaged Learning: Reflection	Emotions: Ambiguity	Active participation	Sensory immersion: Sensory input	Self-doubt	Gender roles	Discussion prompt	Mixed Emotions: Relief	Media perception
Gender identity	Empathy	Passivity	Experience sharing	Marketing	Emotional response	Emotions: Doubt	Home	Gender and Identity: Gender	Engaged Learning: Suggestion	Engaged Learning: Memory	Personal Development: Self-acceptance	Community engagement	Personal Development: Body usage	Anger	Equality	Physical touch	Harassment	Memorable experience
Sexual orientation	Frustration	Indifference	Curiosity	Feedback	Sensory experience	Cross-cultural communication: Language Barrier	Difficulty Concentrating	Gender and Identity: Sexual	Personal Development: Encouragement	Sensory immersion: Multisensory stimuli	Personal Development: Positivity	Focused attention	Engaged Learning: Active participation	Oppression	Gender and Identity: Identity	Emotions: Surprise	Emotions: Indifference	Sensory immersion: Experience sharing
Immersion	Helplessness	Subjectivity	Speculation	Doubt	Engagement	Cross-cultural communication: Miscommunication	Gratitude	Emotions: Uncertainty	Emotions: Over-stimulation	Emotions: Impact of audio stimuli	Emotions: Negative emotion	Engaged	Engaged Learning: Sharing information	Innovative experience	Engaged Learning: Openness to experience	Engaged Learning: Architecture	Reduced visual stimulation	Personal Development: Thankfulness
Identity	Task-oriented	Preference	Ambiguity	Language Barrier	Immersive experience	Cross-cultural communication: Difficulty understanding	Appreciation	Engaged Learning: Interest	Emotions: Overwhelmed	Sensory immersion: Impact of visual stimuli	Sensory immersion: Preference for tactile experience	Environment	Engaged Learning: Rejection	Engaged Learning: Questioning	Cross-cultural communication: Individual differences	Urban Studies: City planning	Abuse and Trauma: Restriction	Justice: Social justice
Age	Surprise	Reflection	Self-acceptance	Miscommunication	Repetition	Engaged Learning: Curiosity	Thankfulness	Engaged Learning: Hobbies	Emotions: Feeling of helplessness	Emotions: Impact on emotions	Personal Development: Body Image	Management: Sensory preference: Cultural familiarity	Environment assessment: Evaluation	Emotions: Questioning	Engaged Learning: Experience	Gender and Identity: Sexual orientation	Openness to experience	
Geographical location	Realization	Memory	Positivity	Difficulty understanding	Sensory Experience	Engaged Learning: Change	Social justice	Abuse and Trauma: Confidentiality	Emotions: Exhaustion	Engaged Learning: Persistence	Personal Development: Self-care	Comprehension: Asking question	Engaged Learning: Engaged	Personal Development: Creativity	Emotions: Positivity	Sensory immersion: Immersion	Urban Studies: Community engagement	
Geographic location	Misunderstanding	Sensory stimulation: Multisensory stimuli	Negative emotion	Causality	Memory retention	Engaged Learning: Influence	Diversity	Personal Development: Safe space	Emotions: Negative Experience	Engaged Learning: Learning	Engaged Learning: Comfort	Excitement	Appreciation of diversity	Justice: Political justice	Engaged Learning: Safety	Engaged Learning: Observational	Personal Development: Diversity	
Gender	Comprehension: Attention difficulty	Stimuli impact: Impact of audio stimuli	Sensory preference: Preference for tactile experience	Change	Mixed Emotions: Broad applicability	Cross-cultural communication: New perspective	Economic justice	Emotions: Emotions	Emotions: Inadequacy	Difficulty interpreting written text	Sensory immersion: Sensory perception	Architecture	Compassion	Personal Development: Inclusivity	Engaged Learning: Home	Cross-cultural communication: Cultural influence	Urban Studies: Media influence	
Sexual identity	Suggestion	Stimuli impact: Impact of visual stimuli	Body Image	Influence	Invitation	Engaged Learning: Growth	Mixed Emotions: Political justice	Personal Development: Self-reflection	Gender and Identity: Gender inequality	Emotions: Unexpectations	Sensory immersion: Sensory perception	Observation	Exploration	Emotions: Hesitant	Emotions: Difficulty Concentrating	Emotions: Sense of belonging	Emotions: Emotional response	
Uncertainty	Encouragement	Stimuli impact: Impact on emotions	Self-care	Mixed Emotions: New perspective	Impact	Engaged Learning: Positive outcome	Inclusivity	Engaged Learning: Planning	Personal Development: Openness	Emotions: Anxiety	Emotions: Inattention	Gender and Identity: Social norms	Clarification	Personal Development: Open-mindedness	Personal Development: Gratitude	Sensory immersion: Cultural familiarity	Sensory immersion: Sensory experience	
Interest	Over-stimulation	Persistence	Comfort	Growth	Understanding	Gender and Identity: Race	Social Justice	Emotions: Emotion	Gender and Identity: Heterosexuality	Emotions: Apathy	Abuse and Trauma: Distraction	Engaged Learning: Impact	Seeking information	Engaged Learning: Third place	Personal Development: Appreciation	Emotions: Helplessness	Engaged Learning: Engagement	
Hobbies	Overwhelmed	Learning	Audio perception	Positive outcome	Sensory stimulation: Sensory input	Cross-cultural communication: Perspective taking	Gender discrimination	Engaged Learning: Video Analysis	Justice: Structural violence	Sensory immersion: Imagination	Emotions: Grieved out	Feminism	Engaged Learning: Exploration	Emotions: Seriousness	Engaged Learning: Discussion facilitation	Engaged Learning: Task-oriented	Urban Studies: Media perception	
Confidentiality	Feeling of helplessness	Comprehension: Difficulty interpreting written text	Sensory perception	Race	Body image	Emotions: Emotional intelligence	Marginalization	Personal Development: Respect	Emotions: Desire	Cross-cultural communication: Perception	Sensory immersion: Vivid imagery	Sense of belonging	Urban Studies: Environment Evaluation	Cross-cultural communication: Topic shift	Engaged Learning: Therapy	Immersive experience	Memorable experience	
Safe space	Exhaustion	Mixed Emotions: Unexpectedness	Inattention	Perspective taking	Social norms	Cross-cultural communication: Cross-cultural differences	Happiness	Emotions: Fear	Personal Development: Self-doubt	Cross-cultural communication: Expectations	Abuse and Trauma: Sexual assault	Personal Development: Personal development	Engaged Learning: Asking question	Abuse and Trauma: Oppression	Engaged Learning: Management	Abuse and Trauma: Trigger warning	Sensory immersion: Imagination stimulation	
Emotions	Negative Experience	Anxiety	Distraction	Emotional intelligence	Personal Development: Appreciation of diversity	Cross-cultural communication: Language and communication	Technology	Emotions: Inhibition	Emotions: Anger	Emotions: Invalidation	Abuse and Trauma: Child abuse	City planning	Emotions: Composition	Emotions: Ambivalence	Emotions: Distractibility	Emotions: Avoidance	Open-mindedness	
Self-reflection	Inadequacy	Apathy	Mixed Emotions: Grieved out	Cross-cultural differences	Gender and Identity: Gender discrimination	Cross-cultural communication: Cultural difference	Engaged Learning: Organization	Emotions: Discomfort	Gender and Identity: Gender roles	Emotions: Negativity	Abuse and Trauma: Abuse	Engaged Learning: Environment	Emotions: Contradiction	Sensory immersion: Sensory Experience	Engaged Learning: None	Gender and Identity: Gender studies	Cross-cultural communication: Clarification	
Planning	Gender inequality	Imagination	Experiential storytelling: Vivid imagery	Facilitation: Language and communication	Abuse and Trauma: Marginalization	Cross-cultural communication: Semantics	Engaged Learning: Instruction	Personal Development: Respect for diversity	Gender and Identity: Equality	Engaged Learning: Discussion prompt	Abuse and Trauma: Trauma	Engaged Learning: Technology	Cultural adaptation	Cross-cultural communication: Broad applicability	Gender and Identity: Feminism	Emotions: Simplicity	Avoidance	
Emotion	Openness	Perception	Sexual assault	Cultural difference	Emotions: Happiness	Urban Studies: Social impact	Engaged Learning: Preparation	Emotions: Empathy	Gender and Identity: Gender equality	Sensory immersion: Physical touch	Emotions: Abuse and Trauma: Harassment	Justice: Social Justice	Engaged Learning: Invitation	Engaged Learning: Participation	Emotions: Excitement	Gender studies	Justice: Economic justice	
Stimuli impact: Video Analysis	Heterosexuality	Expectations	Child abuse	Semantics	Therapy	Sensory immersion: Immersive narratives	Gender identity	Emotions: Frustration	Engaged Learning: Discussion	Abuse and Trauma: Crowding	Harassment	Distractibility	Engaged Learning: Participation	Emotions: Excitement	Gender studies	Participation		

Initial Themes with Codes reviewed and allocated.

Theme 1: Emotional and Cognitive Responses			Theme 2: Perceptions of Effectiveness	Theme 3: Factors Influencing Perceptions	Theme 4: Strengths and Limitations
Emotions	Negative emotion	Happiness	Perception	Immersion	Potential strengths
Empathy	Feeling of helplessness	Questioning	Evaluation	Personal relevance and identification	Enhancing engagement and participation
Frustration	Inadequacy	Compassion	Impact	Engagement with diverse perspectives	Facilitating conversations and dialogue
Helplessness	Ambiguity	Emotional intelligence	Persuasion	Interactivity and participant agency	Reflection and self-awareness
Surprise	Doubt	Emotional response	Recognition	Social and cultural context	Accessibility and inclusivity considerations
Anger	Questioning	Excitement	Assessment	Previous experiences and knowledge	Ethical considerations
Anxiety	Compassion	Hesitation	Challenging stereotypes and biases		
Apathy	Gratitude	Seriousness	Provoking dialogue and discussion		
Curiosity	Appreciation	Distractibility			
Ambivalence	Thankfulness	Negativity			
		Gratitude			
		Appreciation			

Themes Final Definition

Theme 1: Emotional and Cognitive Response	Theme 2: Perceptions of Effectiveness
Emotional responses to immersive narratives	Participants' evaluation of immersive narratives as a tool for raising social awareness
Changes in attitudes, beliefs, and perceptions	Perception of the impact of immersive narratives on knowledge acquisition
Increased empathy and understanding	Assessment of the persuasive power of immersive narratives
Cognitive engagement and reflection	Recognition of the potential of immersive narratives to challenge stereotypes and biases
Development of critical thinking skills	Assessment of the ability of immersive narratives to provoke dialogue and discussion
Emotional connection to gender equality issues	

Theme 3: Factors Influencing Perceptions	Theme 4: Strengths and Limitations
Immersion and presence in the narrative experience	Potential strengths of immersive narratives for promoting social awareness
Personal relevance and identification with characters or situations	Enhancing engagement and participation in gender equality issues
Engagement with diverse perspectives and narratives	Facilitating meaningful conversations and dialogue
The role of interactivity and participant agency	Encouraging reflection and self-awareness
Social and cultural context influencing perception and interpretation	Limitations and challenges of using immersive narratives for social awareness
The influence of previous experiences and knowledge on perceptions	Accessibility and inclusivity considerations
	Ethical considerations and potential unintended consequences