

Facilitating Social Inclusion of Migrant Students through Digital Games: Design Principles and Pitfalls in *Wanderers*

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Abstract: Schools are central in facilitating the inclusion of migrants and refugees in society. However, research from the LIM: Language, Integration, Media project has shown a lack of activities where students from various cultural backgrounds can come to know one other on equal terms. To meet this need, we designed a collaborative puzzle game – *Wanderers* – with the goal of facilitating low-stakes social interaction and cultural exchange between high school students with and without migrant backgrounds. This article outlines this design process and explores the design principles and pitfalls for digital games that support the social inclusion of migrants in a classroom setting. In the study, we use a design-based research methodology to address the research question: what design principles can be used to support social inclusion through cultural exchange in local collaborative play? We outline and discuss the following key design principles for games designed to facilitate social inclusion: 1) Facilitating cultural exchange through “safe topics”; 2) Promoting mutual dependency; 3) Diversity in representation and 4) A stimulating theme. We argue that these design principles can be used to design positive experiences that support the idea of inclusion as a two-way process. However, our discussion also shows how these design principles can also reinforce existing majority/minority configurations, and how conventional game design principles may fall short when applied in this specific context. The paper argues for the importance of low-threshold activities, such as small talk about food and holiday traditions, while also highlighting specific challenges in designing games for social integration.

Keywords: Games for inclusion, Collaborative games in classrooms, Game design principles

1. Introduction

In Norway, schools have been singled out as a main arena for social inclusion of refugees and other migrants (Norwegian Ministry of Justice and Public Security 2016). Yet, the institutional support for developing programs, activities and teaching materials to support this effort is lacking. In the research project *LIM: Language, Integration & Media* we collaborated with teachers, students, schools, and local municipalities to improve the integration of students with migrant backgrounds. From this project we learned that the shift between the introductory program for migrants into regular high school was critical, yet poorly supported. Furthermore, that students with migrant backgrounds had a strong desire to form friendships with Norwegian peers and to be part of the local community, but due to institutional and cultural barriers they often remained sequestered. To address these challenges, the collaborative puzzle-game *Wanderers* was designed to facilitate the introduction of students with different cultural backgrounds in a classroom setting, and to support social inclusion of students with migrant backgrounds. In this paper, we present the main design principles used in *Wanderers* and discuss how a playful and low-stakes approach has value in this setting, while also critically reflecting on potential pitfalls of the design.

Based on design-based research methodology (Reimann 2011), our discussion aims to highlight how well-intended design choices can have undesirable consequences, and to identify some design challenges related to this specific player group (students with and without migrant backgrounds) and context (classroom as space for social integration). Through our analysis we explore the following design strategies: 1) Facilitating cultural exchange through “safe topics”; 2) Promoting mutual dependency; 3) Diversity in representation and 4) A stimulating theme. We will briefly outline the design choices for each category and experiences from play sessions before reflecting on potential risks or unwanted consequences of these strategies.

2. Designing games for social change

Wanderers is designed as an accessible ice breaker activity where migrant and non-migrant collaborate. The game is designed with point-and-click type puzzles about language, food, and traditions in the students’ country of origin to stimulate conversations about cultural background and identity. The game, and the research project it springs out of, is founded in an understanding of learning as inherently social, where the classroom culture, and relationship between students during play, are central both to learning and empowerment (Bleumers et al. 2012; Steward et al. 2013). Unlike many games that are used in a classroom setting, the goal of the game is not

to teach players about a given topic or as training of specific skills. Instead, *Wanderers* functions as a shared focal point and classroom activity where students with and without migrant backgrounds can participate on relatively equal terms with the explicit aim to create social ties between students. So, while the game is being played in a classroom, it may be better understood as a “game for social change” than a “game for learning”, but these lines are blurry. For example, *PeaceMaker* (ImpactGames 2007) was designed to teach players about the conflict in the Middle East, as well as to promote dialogue between people regarding the situation in Israel/Palestine (Gonzalez and Czlonka 2010).

Games for social change has been used to trigger support for a cause (Bogost 2007), inform about ongoing conflicts (Bogost et al. 2010), and to understand complex situations such as climate change (e.g., Red Redemption 2011). Games may also be used to persuade the players of certain perspectives (Bogost 2007), or encourage civic engagement by showing children and youth how to make a change in the neighborhood (e.g., iCivics 2010). There are also examples of games designed specifically for cultural training, which hold promising results. A study on a boardgame for cross-cultural training indicated that “the game benefited participants’ discussions and reflections regarding cultural awareness directly after the game session, and that they retained their attitudes and perceptions of cultural awareness better than participants of the non-game exercise” (Nyman Gomez and Berg Marklund 2018, p.81). The game “Cultural Awareness – Afghanistan Pre-deployment” was also generally well received as a modern tool for assimilating knowledge (Barbieri et al. 2014), and it has been suggested that commercial games, such as *Papers, Please* and *Tropico*, can be more useful in stimulating debates than serious games (Cleger 2015). However, there are also several challenges in designing and using computer games for intercultural exchange in classrooms. For one, commercial games are often developed by game developers from Western countries, white men are vastly overrepresented and often the only choice as protagonists, while characters with minority backgrounds are frequently stereotyped in negative ways (Williams et al. 2009; Penix-Tadsen 2019).

Like all serious games, games for social change must balance enjoyment with desired effect. Flanagan and Kaufman (2016) argue that for a game to be successful (in creating change), the player needs to have a meaningful (though not necessarily entirely positive) experience – prompting to prioritize experience over message. With well-designed gameplay, a game is also more likely to be played again and messaging will be stronger. Flanagan and Kaufman (2016) recommend the following embedded design techniques when designing games with a political or educational purpose (paraphrased by authors):

- Intermixing: Combine on-topic and off-topic content to avoid pushback and a sense of preaching, as games are considered a space for fun and play
- Obfuscating: Use game genres that direct the attention away from the “true” aim of the game (to cause change), and instead emphasize good game play. This also means avoiding overrepresentation of counter-stereotypical examples as they make the message too overt and reactivate the stereotype it attempts to hinder
- Distancing: Use fiction and metaphors to create a gap between the issue at hand and the players themselves
- Delayed reversal: Withholding/delaying information and problems in the game that deals with difficult or controversial topics.

Together, these design principles can be summarized as “Be less obvious”, as they all highlight a need for distance or indirectness to controversial and/or challenging topics and emotions. It is not that games cannot deal with dark or difficult topics, but rather that serious games cannot lose sight of enjoyment and playfulness if the design is to be perceived as meaningful.

3. Methods

Both *Wanderers* (the game) and this paper are part of an interdisciplinary research project; *LIM: Language, Integration, Media*, that investigates pedagogical and technological ways to create innovative learning experiences and new competencies related to migration. In the project, researchers from different fields and backgrounds collaborated with local school partners and NGOs to explore how to foster integration and knowledge about migration in high schools and adult education centers for migrants in the 15 – 25 age range. Central in this endeavor was an understanding of integration as a two-way process where both those who are integrated – and those who are integrating – are subject to change.

The study was inspired by design-based research (Reimann 2011), a methodology with the aim of improving educational practices through iterative design in collaboration with practitioners. An important motivation for this game came from early focus group- and individual interviews conducted as part of the LIM project. This included eight focus group interviews with students of high-school age with participants from Eritrea, Syria, and Norway, and eight focus group interviews with teachers. These interviews identified the shift from specialized to ordinary classes as a critical junction where students received insufficient support. The migrant students had high hopes for new friends and communities when they finally joined the ordinary Norwegian schools, and were especially keen to make Norwegian friends. However, integration often failed, and they found themselves on the outside, or remaining in separate social groups. In addition, for students with migrant backgrounds it was important to be able to share their own culture, and several expressed a desire to talk about traditions and everyday life experiences from their country of origin. The main take away from the initial interviews was a need for activities and spaces to facilitate social interaction where cultural backgrounds were highlighted.

In line with design-based research, our insights regarding students' challenges based on the focus group interviews, in addition to a review of relevant literature, led us to the initial design of the game *Wanderers*, a narratively driven, puzzle-based game created in Unity. The game was designed by the first author in collaboration with computer science students, a music student, and hired artists. In this game, three high-school age students with different backgrounds (*Figure 1*) are invited onto the vessel *Wanderer* without knowing where they currently are and where they are going. Each time *The Wanderer* stops at a new location, the players will have to solve puzzles which will give them hints about their location. The puzzles are inspired by the countries Eritrea, Syria, and Norway, as many immigrants from Norway come from these countries. If they correctly guess which country they are currently in, they can advance to a new destination and new puzzles. The game draws inspiration from *visual novel adventure games* (Cavallaro 2009), and the player follows the characters from a third-person perspective, shown in the game through drawn 2D character sprites. Through a 2D interface, the players navigate the game by clicking objects or navigation elements in the current scene. Dialogue and relevant information is presented to the player through textboxes. Since this was an early version of the prototype, the game was not voice acted, as this would both be time consuming and make it difficult to adjust the game dialogue at a later stage.



Figure 1: The main characters in *Wanderers*, Hani from Eritrea, Tarek from Syria, and Sara from Norway

In this study, we use our own game design experience as data, supported by observation data from the participants' playtest, focus groups and interviews, as well as our own experiences playing, studying and designing games that both does inclusion well and that leaves much to be desired. Our aim is to critically explore the initial design of the game, to aid future iterations of the game and to broaden the body of knowledge concerning games for social inclusion. We arranged a playtest conducted with 10 students at a local high school. These students had diverse backgrounds, mostly from African or Asian countries. Some students had arrived in Norway rather recently and transferred to the class from the introductory program for refugees, and thus had more limited Norwegian language skills, while others had grown up in Norway and spoke Norwegian fluently. The students played together in pairs or groups of three for an hour (the designated time for a complete play-through), and the playtest was followed up with a focus group interview. The game was also presented at several academic conferences and seminars for feedback from a wide range of people.

4. Facilitating cultural exchange through “safe topics”: Safe for whom?

A core aim of *Wanderers* was to create a social and fun space for students with and without migrant background to engage with each other. From work in the *LIM* project we knew that students were lacking arenas and activities that facilitated meetings across cultures and institutions, but how to make a game about this? The answer was derived from interviews and workshops with migrant students where a desire to talk about cultural background and aspects of their lives before migrating to Norway was highlighted. This prompted the idea to focus the game on aspects like food, traditions, and celebrations. Using puzzle-based mechanics the game included puzzles like putting together the right ingredients to create dishes such as kebab karaz and baba ganoush, recognizing traditional dishes from Eritrea, and puzzles about the Norwegian celebration of Christmas. The playtests indicated these topics and puzzles worked well as a conversation starter. Players who had knowledge about traditional Norwegian food explained what unfamiliar dishes were to other players when solving a puzzle about celebrating Christmas (*figure 2*), and when solving puzzles involving creating traditional Syrian dishes, a player with Syrian background shared knowledge about how her family made the dishes and explained the name of the ingredients in Arabic. The focus group interviews after the playtest indicated that puzzles about food and traditions were seen as a good way to get to know other students.



Figure 2: Representing culture and traditions, here from the Norwegian Christmas celebration

Focusing the game on food, traditions and celebrations was primarily a way to stimulate discussions about cultural backgrounds. However, this focus was also chosen because food, traditions and celebrations were considered “safe topics”. As the game is intended to be used as an ice-breaker activity, we wanted the play experience to feel safe and easy to pick up. Even with the potential danger of stereotyping an entire culture into a few dishes and celebrations, the playtests confirmed that being able to talk about something familiar – especially for the students with migrant backgrounds – was an enjoyable experience.

A problem with a focus on “safe topics”, is that it displaces important, but more difficult, conversations about migration and cultural differences. From interviews and workshops, we knew that some students wanted to share their (often traumatic) experiences with both war and migration, while others did not want their migrant identity to be in focus and wanted to showcase the beauty and normality of their culture. We chose “safe topics” to create a space where students with migrant backgrounds were invited to speak about their culture without their culture being seen as “a problem”. Looking back however, we wonder if this choice was made in part to make the game safe, not just for the students, but for ourselves. A recurring theme in the *LIM* project was how Norwegian students and teachers routinely postponed or opted out of key migration topics like the treatment of refugees, the horrors of war, and racism among Norwegians. The reason for disengaging with these topics was usually a variation of “needing to shield migrant students from their trauma”, but a more critical reading showed that this also became a way for teachers and students to shield themselves from having to acknowledge the injustices experienced by their fellow humans. Similarly, it is likely that “safe topics” seemed like a good idea to us as game designers, in part, because it shielded us from having to deal with our players lived experiences of oppression and abuse.

While we still believe that icebreaker activities like playing *Wanderers* is fruitful for social inclusion, it primarily has value in giving students a shared activity that allows them to talk about their culture. For social inclusion to happen in a meaningful sense, more critical work migration and integration is needed in the classroom.

5. Promoting mutual dependency: Risking “a responsibility to know”

From interviews with teachers and students we identified a concern regarding asymmetry in collaborations between students with and without migrant backgrounds. Norwegian students had more power as they knew the language, the Norwegian school system, and likely had stronger digital skills. Students in focus groups further emphasized the importance of meeting each other on equal terms, leading us to adopt *mutual dependance* as a design strategy.

To achieve mutual dependence, the different puzzles were explicitly based on cultural knowledge (food, language, celebrations, traditions) from the selected backgrounds (Norway, Syria and Eritrea) (figure 3). The overall goal was to destabilize Norway and Norwegian as the default context and language, and to promote the cultural knowledge of migrant students as important and necessary. The playtest showed that this was largely successful as discussions happened both in, and across groups, as students were working their way through the puzzles where students who were, e.g., proficient in Tigrinya, had a chance to use their knowledge and be complimented for it.



Figure 3: A puzzle requiring knowledge of Tigrinya in order to place flowers according to their color.

While the use of culturally specific knowledge worked well in our playtests, centering the game on knowledge may also produce negative effects if migrant students do not possess the knowledge in question. Even if the topics are considered “safe”, how solvable they are depends on the students schooling in their home country and how their particular family have chosen to celebrate (or not celebrate) common holidays. This means that what was intended to be empowering design has the potential to create vulnerability. The goal was to change the power balance in favor of the migrant student but may also give the students with migrant backgrounds a responsibility to know (Stivers et al. 2011). If this happens, the game may instead serve to reinforce the majority position of Norwegian students as the ones with knowledge (and power) where knowledge about other cultures is seen as the responsibility of “the other”.

6. Diversity in representation: not stereotypical enough?

Diversity in representation was necessary to create a game that would appeal to students with different ethnic backgrounds and afford them equal opportunities of identification. Fair and thoughtful representation of ethnic minorities is important as they are rarely portrayed in computer games (Williams et al. 2009), and when they are they often rely on and support white supremacist views (Mazurek & Gray 2017). For example, when Arabic countries are included in games, it is often done in the context of games using armed conflict as a backdrop, and the games often portray Arabs as villains through racist stereotypes (Machin and Suleiman 2006; Šisler 2008).

To develop respectful and thoughtful representations, dialogue with the intended players from the ethnic groups involved is necessary. Games that have done this successfully, include *Never Alone* (E-line Media and Upper One Games 2014) where the developers collaborated closely with people from the Inupiat people that

they were portraying, and *Ayiti: The Cost of Life* (Global Kids and GameLab 2006) which was developed in collaboration with Haitian youth (Joseph 2007). As part of the design process of *Wanderers*, inspiration was drawn from interviews with students from Eritrea, Syria and Norway, as well as workshops where students designed their own games and discussions about what kind of representation they would like in games.

When developing *Wanderers*, the designer (first author) decided on a cartoony, manga-inspired style which is often seen in narratively driven, puzzle-based adventure games. This was in line with Flanagan and Kaufman's (2016) advice on obfuscating, where genre conventions are used to downplay the seriousness of the game. In addition, the game itself is inspired by Japanese-style adventure and puzzle games. Staying true to this art style was thus considered a choice that could provide for a more authentic gaming experience (Dickey 2005). A second reason for this graphical style is to *make the familiar strange*. Placing familiar topics in unfamiliar settings, such as fantasy settings, can help us see our own world more clearly or a new light (Pu 2012). This was also one of the reasons for why the setting for the game is a steam-punk inspired vessel that does not draw upon any cultural or geographical iconography.

Interestingly, the art style was well received by the students, yet several students wanted a stronger emphasis on cultural elements reflected in the characters appearance, such as including a character with hijab and national costumes. As repeated in many interviews and workshops, the students wanted their culture to be visible and wanted opportunities to talk about their backgrounds and experiences. However, their desire to include cultural artefacts like the hijab, also illustrates the challenge of creating fair and thoughtful representations. On one hand, creating a character with a hijab would be way to respect and recognize cultural heritage, while on the other – the same hijab could be interpreted as a stereotypical representation of “the other” (especially when considering that the game is developed by a white, Norwegian woman). Looking back on the process, we wonder if our desire to make the intentions “less obvious” also precluded us from giving the type of representations that migrant students desired.

7. A stimulating theme: The story that no one cared about?

Research on game-based learning has emphasized narratives and a stimulating fantasy and narrative to make the game interesting to players (Rieber 1996). A well-designed narrative may lead players to seek solutions to problems (Rieber 1996), intrinsic motivation for learning (Dondlinger 2007) and opportunities for ‘reflection, evaluation, illustration, exemplification, and inquiry’ (summarized in Dickey 2006, p.248). In line with this research, a narrative and fictional world was created and presented to players as an intro-cutscene and as dialogue between characters. When playtesting the game, however, we found that the extensive worldbuilding and storytelling worked against its purpose and pushed players away from, rather than inviting them into, the game.

In playtesting we saw several students simply clicking their way through dialogue, and instead focus on the puzzles, and we learned that for students who has Norwegian as a second language – the text was simply too long and too complicated. To address this, the narrative and dialogue was shortened in revision. It should however be noted that we did not initially consider the game to be text heavy, and the text was deliberately written in simple prose to be more accessible. By including narrative and worldbuilding the game ended up being less accessible to students who did not have Norwegian as their first language and clearly privileged the Norwegian students – contrary to our goal (cf. mutual dependency). Our experience highlights how seemingly obvious and agreed upon game design principles are challenged when designing for specific audiences and situations where multiple languages are used, and where not players have the same levels of literacy.

We are not arguing that narratives are not useful. A study by Bayeck (2019) showed that the games developed by the top African game studios in the region, specifically aiming to reach African audiences, used an expanded understanding of what narrative is, emphasizing gameplay, cut scenes, back stories, lighting, music and promotional material as part of storytelling. It is not that narrative is unimportant, but rather that text is a poor way to build characters and fictional worlds when attempting to support social inclusion of students with different literacy levels.

8. Summary and conclusion: Designing games for low-threshold intercultural meetings

In our discussion of design principles used in *Wanderers* we have emphasized the risks, mistakes, and potential pitfalls. Even though we, as designers and researchers, set out to create a game which was mindful of

representation, power balance and the wishes of the target audience, this article has shown how we still made mistakes in *all* areas. We will therefore argue that while games can facilitate intercultural meetings, the goal of social inclusion presents specific challenges that conventional game design ideals may be unsuited to solve.

The literature on educational games and games for social change tend to emphasize gameplay over message, encouraging designers to avoid the mistakes of edutainment and focus on making fun games, rich worlds, and engaging narratives. While we generally support this endeavor, our experience with *Wanderers* shows that these ideals have the potential to reproduce the power relations they attempt to challenge. For example, how building a rich narrative and fictional world could hinder mutual dependency and disengage students, when it was presented as text – as literacy is a core concern for the target audience. Or how basing a puzzle game on knowledge, even knowledge we consider to be general and “safe”, can place the burden of knowing on the migrant students, giving the majority population free reign in their ignorance. Perhaps most importantly, and most insidious, is how advice about toning down political or ideological content encouraged us to shy away from conversations and topics that needs addressing. By choosing “safe topics” and representations that were not overly political, we succeeded in creating a game that was easy to pick up, encouraged discussions about cultural background and facilitated social bonding for new students in the classroom. However, we also ended up creating a game that may reinforce the general unwillingness of the white majority population in Norway to engage with the injustice of white supremacy, the unfair distribution of wealth between global North and South – and the mistreatment of migrants.

Wanderers has the potential to support students in engaging with each other’s cultural background, and to do so in a relatively safe and playful way. Being aware of the potential risks and unwanted consequences of games brought into the classroom is thus of particular importance, as negative effects may be well mitigated when we know what they are.

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