

Making Room for Play

A play-centric workshop proposal for increasing girls' game literacy and access to games

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Master Thesis in Game Design, 15 hp

Program: Master Programme in Game Design (60 credits)

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June, 2021

Abstract

This thesis addresses the gender-specific game access inequalities that exist between male and non-male children. To do this, it proposes a conceptual workshop design named *SpielRaum*, which aims to offer teens of marginalized genders a safe space to access games. By curating games for free play and combining it with guided discussions and self-reflection exercises, the workshop hopes to facilitate game literacy in a play-centric way. This sets it apart from other game-related workshops for non-male teens, which are also examined. It is found that they tend to be development-centric.

Leading up to the workshop design, the game access disparities are put into context. It is found that implicit and explicit exclusion of non-male people in the games domain leads to a vicious circle of non-participation and non-representation. This in turn contributes to the socialized perception of games as a male medium and disadvantages non-male players in the context of gaming. Further, game literacy is determined as an important game access condition and way of self-defense against marginalizing game content. This is why *SpielRaum* aims to raise non-male participants' awareness for their own marginalization and show them that they can unapologetically claim gaming for themselves.

Key words: Game access, game literacy, game workshop, play-centric, video games, marginalization, gender and games

Abstract

Detta arbete tittar på könsspecifika ojämlikheter vad gäller tillgång till videospel som finns mellan manliga och icke-manliga ungdomar. I undersökningen föreslås en konceptuell workshop som heter SpielRaum, som siktar på att ge tonåringar som tillhör marginaliserade könsgrupper en säker miljö för att därmed göra videospel mer tillgängliga. Genom att samla spel för fritt spelande och kombinera guidade diskussioner med självreflekterande övningar, hoppas workshopen kunna ge ökad kunskap om spel på ett spelfokuserat sätt. Detta gör att den skiljer sig från andra workshop-miljöer för icke-manliga tonåringar, vilket även behandlas i arbetet. Vad som upptäcktes var att de tenderar att vara utvecklingsorienterade.

Under arbetet med workshop-designen sattes skillnaderna runt speltillgänglighet i fokus: det fastställdes att implicit och explicit uteslutning av icke-manliga spelare leder till en ond cirkel av icke-deltagande och icke-representation. Detta bidrar sedan till den sociala uppfattningen att spel är ett medium för män och att icke-män är missgynnade vad gäller spel. Dessutom är kunskap om spel nödvändigt om man ska kunna delta i spel, och kan användas som ett sätt att försvara sig själv mot marginaliserande innehåll i spel. Detta är anledningen till att *SpielRaum* siktar på att öka icke-mäns medvetenhet för sin egen marginalisering och för att visa att de kan delta i spelvärlden utan att be om lov först.

Nyckelord: speltillgång, spelkunnighet, spel-workshop, spel-fokus, videospel, marginalisering, kön och spel

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1 Introduction & Problem Statement

While writing this thesis, I reflected on my introduction to video games and my social environment as I was starting to get more into gaming. What I realized was that as a young girl, I was in the very privileged position of having open-minded parents, a much older brother who handed me down his *PlayStation 2*, and a sister and female friends who also liked games. Were it not for these social circumstances, I might never have been introduced to nor pursued my interest in gaming. And I might never have learned to love this medium, when everything surrounding it seems to be persistently trying to keep girls and women from enjoying it.

In fact, most girls and women in western society face what Emma Vossen calls *cultural* inaccessibility (Vossen 2018) surrounding video games. It is a combination of circumstances that creates this problem, one of which concerns girls' access to video games (or lack thereof). The main goal of this thesis is to propose a new workshop format called *SpielRaum* which hopes to address and counteract this issue. Leading up to this, I aim to draw attention to the unequal level of access to video games that exists between boys and girls¹ and makes intervention necessary in the first place. I also touch upon the many factors that have led to this divide and contribute to its upkeep. Further, I examine similar interventions designed to create game access for children who are marginalized because of their gender. All of this serves to inform the conceptual design of the *SpielRaum*-format.

The game industry has started to change for the better in recent years, in that more awareness is being raised for the need for diversity in games (Cote 2020; Weststar, Kwan and Kumar 2019). However, the field of video games is still dominated by (cis²) men. This fact is reflected in game industry demographics (in 2019, approximately 71% of developers were male, 69% were white (Weststar, Kwan and Kumar 2019)), as well as in the lack of diverse and empathetic representations of non-male characters in many mainstream and indie games. This imbalance of gender distribution in content and industry demographics is only one of many ways in which non-male identities are marginalized. Many of these problems intersect and correlate (addressed in detail in Section 2.1). This hints at a systemic issue with many layers, and therefore many different areas that require intervention.

One such problem area – which this thesis focuses on – is the very beginning of the games career pipeline: initial exposure to video games. Video games can and often do serve as an incentive for children's interest in a career in STEM fields (including game development) (Ball et al. 2020; Çakır et al. 2017; Weststar and Legault 2018). However, access to video games (especially on consoles and PC) at a younger age is not as available to girls as it is to boys. As Weststar and Legault (2018, p. 109) state:

"females usually have secondary access to game devices and they must continually negotiate that access because they often engage in play in the presence or under the sanction of males. In most instances, this stunts the ability of female players to acquire mastery in a game."

¹I will use 'girls'/'women' as a reference to anyone who identifies as such. I am aware that many of the problems described here apply to some people of other marginalized genders as well.

²Cisgender, or cis (as opposed to trans) is the term for people whose gender identity corresponds to their sex and consequentially, the gender they were assigned at birth (see also OED Online (2021)). For example, a person who identifies as a woman and whose biological sex at birth was female is cisgender.

This describes an inability to develop game literacy through practical play, and restrains girls in their efforts to form a relationship with the medium. Similar observations were made by Jenson, Fisher and De Castell (2007), who remark that "boys' early and sustained experience with gaming places them at an advantage with respect to computer competence and confidence". (p. 12) The resulting "game literacy gap" widens with time and makes participation increasingly difficult for "illiterates". In combination with other – partly intersectional – forms of marginalization further down the pipeline (like lack of representation or harassment of non-male players, see Section 2.1), this lack of literacy may deter girls and women even further from pursuing games as a hobby or career.

These conditions highlight a need for safe spaces that enable undisturbed play. The question this thesis researches is thus:

How can we create safe spaces to give access to and facilitate game literacy among teens with marginalized genders?

To answer this question, this paper touches on the manifestations of the game domain's endemic sexism. It discusses the role that the many forms of marginalization play in the under-involvement of non-male people in game community and industry. Section 2.3 examines definitions of game literacy and how it can be facilitated.

For the intervention developed in the second part of this thesis, the focus is on the beginning of the game career 'pipeline'. Chapter 2.4 analyzes similar formats – namely game workshops for teen girls – regarding their methods, goals and outcomes. Most of these formats are *development-centric*, meaning they aim to involve girls in the field by supporting participants in their journey of developing their own game(s).

By contrast, this thesis develops the *SpielRaum*³ format as a method of answering the research question. It draws on the insights and accomplishments of previously developed workshops, but is *play-centric*. This means that its aim is to provide a safe space in which marginalized people can acquire game literacy through free play, peer interaction and reflection.

This format is an attempt to bring equity to children's access to video games of all genres. Effectively, it aims to contribute to the increase of non-male participation in the video games sector. However, as mentioned previously, marginalization of girls and women in gaming is a systemic issue. Therefore, Section 3.2 of this thesis will discuss limitations of such a format, as well as its scope of applicability.

³German play on words; literally "play room", can mean both "leeway"/"elbow room" and "playroom".

2 Background

In the field of games (i.e. development, community and content), marginalization is a complex and intersectional topic. Most mainstream games are and have been targeted towards white, cisgender, heterosexual teenage boys and men. Among other things, this is notably reflected in marketing and advertising (which mainly caters to a stereotypical image of masculinity) (Chess, Evans and Baines 2017) and in the depicted game characters' visual and personality traits.

This is in stark contrast to the actual demographics of video game players. A global games market analysis by market researcher Newzoo registered 2.7 billion players globally in 2020 (Newzoo 2020, p. 17). 54% of players (which amounts to approximately 1.4 billion people) live in the Asia-Pacific region. Furthermore, respectively 14% of players are either European or from Africa and the Middle East. 10% of players hail from Latin America and the minority of players (8%) come from North America. This shows the ethnic diversity of the worldwide player base. As for gender distribution, recent polls register around 40% female gamers (US 2020: 41% female (ESA Entertainment Software Association 2020); Asia 2019: 38% female (Google and Niko Partners 2020); Europe 2020: 45% female)⁴.

Thus evidently, the lack of diversity in the field of gaming is not due to a lack of interest. The sometimes hostile – see the #GamerGate events discussed later in this section – resistance against a diversification of games has frequently been the topic of research (Cote 2020) and reveals systemic issues.

As Patricia Hill Collins points out, oppression is usually multi-faceted. Several factors can contribute to marginalization and influence each other, such as gender, religion, sexuality, race, disability and others (Adams, Bell and Griffin 2007; Collins 1990). A discussion of all dimensions that factor into exclusion in the field of games is outside the scope of this thesis. Instead – while staying aware of the cumulative effects of oppression – I would like to point out that while this thesis focuses on the dimension of gender identity, it does not weigh this dimension over another.

This chapter provides the rationale behind the workshop format proposed in Section 3.1. It illustrates the necessity of video game-related interventions for girls and the impact of similar workshops.

2.1 Games are (made) for Men

The marginalization of women in the video game domain takes on many forms. While there may not always be someone or something *physically* keeping women or girls from playing, a number of circumstances still create barriers that are cultural or psychological in nature. Emma Vossen (2018) describes this as *cultural inaccessibility*. This results in a lack of access to three essential areas within the video game domain:

"Women are prevented from accessing the three crucial aspects of games culture: representation within the games themselves [...], safe and comfortable spaces to play those games [...], and safe and equal participation in the discourse surrounding games [...]." (Vossen 2018, p. 1)

⁴To my knowledge, no research exists yet on the amount of gender-nonconforming (i.e. people with a gender identity other than male or female) gamers on a local or global scale, with existing studies disregarding non-binary gender identities. This lack of awareness illustrates and serves the marginalization of this particular minority, and reveals a research bias/common shortcoming of research (see also Spiel, Keyes and Barlas (2019)).

The circumstances that contribute to this inaccessibility are described in the following. While not all of them are directly linked to the area of research of this thesis, they help put it into context and illustrate the scope of women's and girls' game-related marginalization.

Some forms of marginalization have in common that they are performed by (parts of) the existing gaming community. In this section, I will adopt Vossen's use of the 'capital-G Gamer'-term (as opposed to 'gamer' as a synonym for 'player') to mean "someone who performs the hegemonic masculine tropes necessary to be accepted by other Gamers" (Vossen 2018, p. 5). All of the following were central to the events of #GamerGate, a wave of hostile resistance (mostly by Gamers) against diversification of the game industry and content. Detailed articles dissecting the events of the online hate campaign have for example been written by Chess and Shaw (2015), Mortensen (2018), and Salter (2018).

One problem is the dismissal and delegitimization of female-connoted games. There is active discourse over the legitimacy of specific game genres (for an in-depth analysis of the 'real games' discourse, refer to Consalvo and C. Paul (2019)). Especially so called 'casual games' are often dubbed as 'not real games'. This distinction is used by Gamers – but also by many game critics and within the general game community – to define who gets to assume the gamer-identity (Consalvo and C. Paul 2019; Cote 2020; Vossen 2018). Not coincidentally, it appears to be one of women's most preferred game genres in industry reports (e.g. (ESA Entertainment Software Association 2020; Newzoo 2020)), although that may not necessarily be an accurate assessment (see Eklund (2015)). Nonetheless, 'casual game' is often synonymous with 'women's game' and has a negative connotation (Vanderhoef 2013; Vossen 2018).

This is a problem because it directly denigrates women's interests and invalidates their participation in gaming. Distinctions of 'proper' and 'not real' games serve nobody but the players interested in excluding people that they perceive as a threat to their hegemonial privilege in gaming culture (see also Fron et al. (2007) and Vanderhoef (2013)). Despite (or because of) this, this exclusionary view of games is widespread. As a consequence, it keeps women from identifying themselves as gamers, because they feel that they do not fulfill the necessary 'requirements' (Kahn 2015; Kowert, Breuer and Quandt 2017; Shaw 2013)

Moreover, openly-female participation in online game-communities (for example) is often met with harassment, bullying, or patronizing behavior (more on this topic was written by Lopez-Fernandez et al. (2019), Salter (2018), and Vossen (2018)). This makes online-gaming an openly hostile space for girls and women, which makes uninhibited play difficult and signals extraneousness.

Game production itself seems to be a similarly hostile environment. One of the events that started #GamerGate was the threat of female game developer Zoe Quinn, which kicked off a movement of hate and harassment against game scholars and developers advocating diversity in games (Mortensen 2018).

And also within game companies harassment is a problem: an investigation in 2020 revealed *Ubisoft* as a toxic workplace in which "one in four respondents said that they had either witnessed or experienced workplace misconducts themselves in the past two years" (Gartenberg 2020), with non-binary and female employees being more likely to be affected.

Aside from this direct marginalization in the form of gatekeeping, women and girls are also being excluded through more subtle means that further denote games as a (cis) male-only space: video games did not start out as gendered (Newman 2017). Gender portrayals in advertising and marketing have played an important part in gendering video games as a male medium (Chess 2017; Chess, Evans and Baines 2017; Fron et al. 2007; Newman 2017). For example, if women are present in a game's advertisement at all, they are often not depicted as the main player – a trend that started in the last century (see Newman (2017)) but still prevails (see Chess, Evans and Baines (2017)).

As Chess, Evans and Baines (2017) write: "[t]elevision commercials—one possible entry point into playing a new video game—function as an invitation" (p.53). And the current representations pointedly invite straight, white men. This reinforces prevalent conceptions of technology (including games) as male and also conveys this message to e.g. young girls watching TV.

And even when games are marketed towards women it is often with the implication that female play needs to be productive in order to be valid, which caters to gender stereotypes of women (Chess 2011). For example, *Nintendo* marketed a game towards women by declaring that it is suited to pass (otherwise 'unproductive') waiting time at the doctor's office (Chess 2011).

Moreover, games that are targeted towards girls are often advertised in a very stereotypical fashion, clearly distinguishing them from 'regular' (read: targeted towards men) games⁵ (Cassell and Jenkins 1998). The 1990s saw a 'girls' games movement', which carried this to extremes (Cassell and Jenkins 1998).

In a similar fashion, game scholars have tried to determine gender-specific preferences in video games content, as is discussed by Jenson and De Castell (2010). However – keeping in mind the prescriptive qualities of gender stereotypes (Eckes 2008) – I would like to tentatively suggest that this mostly serves as a depiction of socialized preferences, and should not serve as a basis or justification for gender-specific game design (like it did in the aforementioned 'girls' games movement'). Jenson and De Castell (2010) comment that even though certain patterns can be found regarding 'female gaming preferences', uncritically attributing them to gender and then striving to replicate them in order to make games appealing for girls is not in the interest of gender equity. This disregards the social context in which female play is embedded, and "presupposes by default that, for girls and boys, the video game area represents a "level playing field"" (Jenson and De Castell 2010, p. 60) – this section (and even the existence of this thesis) shows that this is not the case.

Moreover, if there are designated games for girls or women ('girl games'), it marks female gaming as a deviation from the norm, as it is seemingly in need of a separate genre of games. This implies that 'games' without a descriptor are not intended or enjoyable for girls— or people of other genders. Vice versa, it might prescribe to boys (who are the established target audience of most mainstream games) that they should not play or enjoy games that are considered to be 'for girls'. This too cements the current "hegemony of play" (see Fron et al. (2007)).

⁵Of course, there is nothing wrong with girls enjoying 'girl games'. The problem lies with the marketing, and the dissociation of those games from 'regular' games through use of stereotypical gender markers, as is established in the following.

This 'male-by-default' attitude is also found in character design: theoretically gender-neutral/-ambiguous characters often 'turn' male through the presence of similar, female-coded characters. Some examples for this are the characters Pac-Man versus Ms. Pac-Man from their same-named games, Wendy O. Koopa versus the rest of her siblings (the 'Koopalings') who are the children of Bowser from the *Mario*-Franchise, or even *Disney*'s Mickey and Minnie Mouse (when looking outside of games). Such design choices teach players to expect a character to be male, unless otherwise⁶ stated. This labels women as 'other', again implying that they are not the intended audience.

Even when female characters are not tokenized in this way, their design usually lacks diversity. This includes appearance (which is often sexualized) as well as their personality and the roles they play (Cote 2020). There is a lack of female game protagonists, despite there being a demand from male and female gamers alike (Yee 2017). The practice of sexualizing women in media has been shown to be detrimental to women's self esteem, self-efficacy and to negatively affect male appraisal of female competence (Gestos, Smith-Merry and A. Campbell 2018). Above all, these portrayals likely make games less appealing for women, and endorse the notion of women not being the target audience of games.

Furthermore – although this may not be a common problem – women are even omitted from game research itself. Lopez-Fernandez et al. (2019) found that most research surrounding gaming addiction concerns male players only. In 2016, *Ubisoft* published an online gaming survey which did not allow women to take part (see no [@n0wak] (2016) for the viral tweet that drew attention to this). After protest in the media, this restriction was lifted and the company claimed it was due to a technical error (Bradley 2016). Along similar lines, Fron et al. (2007) note that the original controller for the XBox was too big for most women's and children's hands, showing that they were disregarded in the hardware design. As mentioned – beside having other negative side effects – all of this subtly but firmly conveys the message that games are not intended for non-male players.

Lastly, women are also marginalized in the system of game production. As mentioned in the Introduction, female developers are severely underrepresented. This may factor into the dearth of diverse and empathetic representations (Kowert, Breuer and Quandt 2017). Moreover, hardware production as well as promotion comes at the cost of exploitation of women, an issue that has been discussed in detail by Randy Nichols (2013) and Nina B. Huntemann (2013).

This conglomerate of circumstances paints the picture of a hostile, unwelcoming environment that does not encourage or tolerate non-male participation in play, content or discourse. This matches Vossen's assessment at the beginning of this section.

2.2 Girls and games

All of these injustices negatively impact girls and women once they have entered the field of games, but their influence is noticeable even before that. These circumstances affect children's perceptions of who belongs into the space of gaming, and who does not. As has become evident through the previous section, our western society socializes children to think video games are intended for and primarily enjoyed by boys and men.

So much so, that oftentimes girls do not have the same level of access to video games that

⁶In the form of stereotypical female gender markers

their male peers do. In 1985, Edna Mitchell noted that in families with daughters and sons, girls had to negotiate their access to video games with their brothers, because the male siblings were considered the owners of any consoles (Mitchell 1985). The same was found by Jenson, Fisher and De Castell (2007, 2011). As mentioned in the introduction, newer findings by Weststar and Legault (2018) also describe the same phenomenon: if there is a console in a household, it is often male family members who decide the terms of play and female family members often play at the leisure of their father or brother(s). As mentioned above, these dynamics are also normalized by advertising – for example, Chess, Evans and Baines (2017) found that women or girls in video game ads were more likely to be depicted as playing if males were present. This, too, indicates that "there is still an expectation that males are necessary to enable and potentially advocate play" (Chess, Evans and Baines 2017, p. 51).

Thus, access to games is gender-restricted, yet likely precedes involvement in game production: Weststar and Legault (2018) find that the career paths of the (predominantly male) people working in game development have a common denominator: they are usually based on early exposure to and continued participation in gaming, which motivates further education in fields that pertain game development (including computer science). Since access to games for non-male children is constricted, few non-male persons end up in the games industry. This leads to a lack of diversity in the game production.

All of this contributes to a vicious cycle: The current state of video games depicts a 'toxic meritocracy' (see C. A. Paul (2018)) which is biased towards straight, white, cis men and contributes to the marginalization of other genders in the larger context. This is difficult to change if it is not challenged from the inside, yet the state of play works to deter people that are not male from entering the field or changing the status quo. The 'man-made' absence of marginalized genders in the game domain is then seen as a lack of interest by the games industry, which is used to vindicate the lack of representation that is partly responsible for the lack of non-male participation in the first place. This creates a vicious cycle of non-representation, and non-participation or pigeonholed participation, which unjustly excludes already marginalized identities further (Shaw 2013). This loop was also illustrated by Kowert, Breuer and Quandt (2017) in their model of exclusion and sexism in video game content and culture (see Figure 1).

In conclusion, non-male participation in the game domain starts with children, and is essential if the harmful beliefs and marginalizing messages that are conveyed through games and the games industry are to be changed. This is why this thesis focuses on interventions that are held at the stage of initial exposure or access to games. It is with the goal of broadening girls' horizons and helping them overcome inhibitions they might have regarding video games due to social expectations.

2.3 The importance of game literacy

Among these many factors that keep girls from pursuing gaming as a hobby or career, a lack of game literacy may be another.

Definition

To understand the term game literacy, a definition of the superordinate *media literacy* is in order. Media scholar James W. Potter has defined it as the following:

"Media literacy is a set of perspectives that we actively use to expose ourselves

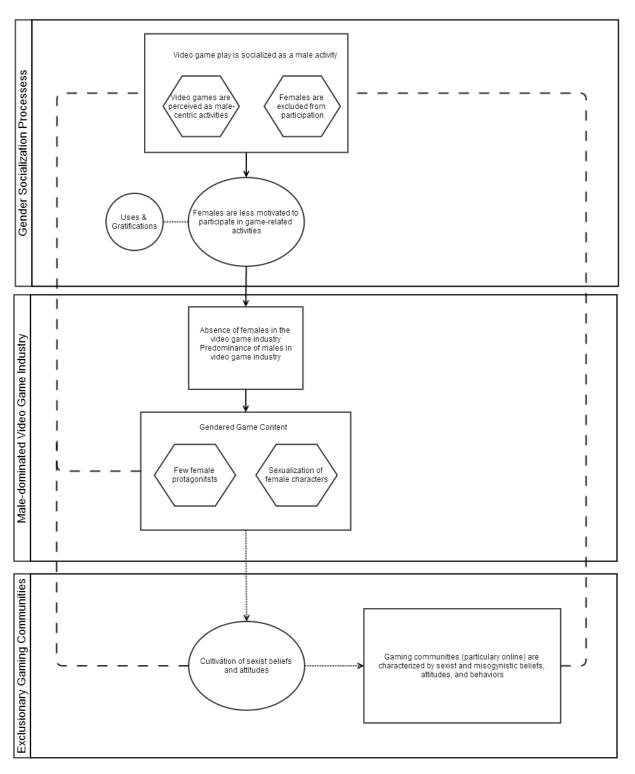


Figure 1: Theoretical model of exclusion and sexism in video game culture, from Kowert, Breuer and Quandt (2017, p. 144). © 2017 Taylor & Francis. Reproduced with permission of The Licensor through PLSclear.

to the mass media to process and interpret the meaning of the messages we encounter." (Potter 2018, p. 23).

Media Literacy therefore describes the skills and contextual knowledge that have been developed by an individual to filter messages and file away information encountered in media. More specifically, Potter describes Media Literacy as a conglomerate of (cognitive processing) skills, knowledge structures, and what he calls personal locus (Potter 2018).

Together, these factors shape aforementioned 'perspectives' from which we perceive media content. Skills (which he establishes as "analysis, evaluation, grouping, induction, deduction, synthesis, and abstracting" (Potter 2018, p. 16)) are used by us to process and select information conveyed through media. This information is then used to build and supplement different knowledge structures, which "provide the context we use when trying to make sense of each new media message" (Potter 2018, p. 22). The third aspect of media literacy, personal locus, acts as a sort of filter for information processing. It describes one's motivation for information seeking. When it is strong, i.e. when someone consumes media with a specific goal or intention, they can process information more deliberately. Awareness for and active shaping of one's personal locus can also help with identifying internalized but extrinsic goals imposed by e.g. advertisements or other media-conveyed messages (Potter 2018). In short, conscious and deliberate media consumption allows for better control over the medium's influence on yourself.

As for game specific media literacy, or game literacy, there have been several approaches to a definition. For example, Zimmerman (2009) as well as Bogost (2008) emphasize games' potential for teaching players about real word systems in a ludic manner. According to Zimmerman's model of gaming literacy, it encompasses three types of literacy applicable to contexts of play, systems, and design. He focuses on the real life applications that literacy in these contexts have, and how games are ideal for teaching them. In his book, James Paul Gee (2007) argues how well designed video games embody principles of learning; how they can teach difficult concepts and encourage creative thinking in ways that are very different from conventional classroom settings. Coming from a linguistic background, he talks about game literacy as the ability to understand and navigate the 'semiotic spaces' that are games. Beyond being able to play a game, this includes the decoding and interpreting of messages it may convey.

These definitions of game literacy mostly emphasize the benefits of gaming, and the educative potential of video games. However, for this thesis's purpose of designing a workshop, I have selected Potter's model as a main reference, as it is specifically designed with the active development and training of literacy in mind. In his book, he also proposes several exercises and questions to train and deepen the different aspects of literacy (see Potter (2018)). While his work refers to media literacy in general, it can be applied to the medium games without a problem. However, I would like to supply some examples for knowledge structures that may be especially relevant in the context of game access. For this, I propose the term "core game knowledge".

Core game knowledge

Core game knowledge shall refer to the sort of basic knowledge that many games seem to draw on in their design. This sort of knowledge is seldom addressed in definitions of game literacy or within games themselves and is instead assumed as known. Yet this implicit presupposition may make it especially difficult to take part in gaming or game

communities without previous experience. Because I have not found sources that dissect this kind of implicit knowledge, I will base my definition on my own observations as a gamer and game scholar. Moreover, when I have introduced friends or family with no prior gaming experience to a game, these were often things they struggled with and illiteracy on this level led to frustration.

Before discussing the details of this aspect, it is important to acknowledge that there are many different types of games, with vastly different input devices, controls and game mechanics. Thus naturally, not every game can be played by everyone, even if they are fairly game literate. However, I argue that over the years, certain concepts (such as "health", "avatar/playable character", "levels" or "inventory") and controls (WASD keys or joystick for avatar movement, touch controls in mobile games) have been established as "standards" of games and gaming and could be considered somewhat universal. So much so that many in-game tutorials will consider them self-explanatory without addressing them further. Many games – even if they introduce innovative or unusual game mechanics – will stick to at least some of those core concepts in their design. Thus, someone with experience in video games might "intuitively" know what buttons to try out, even when faced with an unfamiliar game. They will have certain expectations when given a visual that resembles other games.

This "intuitive knowledge" is what I term core game knowledge. Since, rather than on intuition, it is based on experience and a large frame of reference. It describes the expectations literate players develop based on reoccurring patterns in games they have played; *core* patterns which show up across game genres and titles. This knowledge structure contains the following aspects, which partly overlap:

(Situational) knowledge of common game controls, i.e. knowing what buttons to try out for e.g. in-game movement and/or interaction when faced with a game visual and input device. Furthermore, common key-/button bindings are memorized to the point where the player can use them subconsciously. For instance, when faced with a 2D platform game, someone with high core game knowledge "intuitively" tries to move with the A and D or arrow keys on a keyboard, or the D-pad or control stick on a classic game controller. In a 3D-game, they might try to manipulate the game view (camera) with mouse movement, or know to use a dual control stick scheme⁷. In a mobile game, they know that swiping or drag-and-dropping is commonly used, and so on.

This is related to the ability to recognize affordances. The term "affordance theory" was coined by James J. Gibson (1979) and – broadly speaking – describes the concept that an observer can deduce an object's uses (i.e. what it affords the observer) by its (visual) traits. This perception may depend on the context in which the object is seen, as well as on the observer and their traits, socio-cultural background and current circumstances. For example, to a person on a walk in the forest, a fly agaric may seem to afford poisoning if eaten. Yet in the context of Super Mario, a fly agaric affords "nourishment" (avatar size increases) and affords the player to be hit one additional time before dying.

In the context of games, it refers to the ability to see a game element and deduce its purpose from its design and context. This has also been formulated by Cardona-Rivera and Young (2013). They altered Gibson's theory by adding that a game object's *real*

⁷Modern game controllers commonly have two joysticks, which are often respectively assigned avatar movement and camera movement in games with 3D-perspective.

affordances and the affordances *perceived* by the player may not necessarily coincide. They, too emphasize that a player's expectations play an important role, and that those are likely informed by previous gaming experiences:

"A player's beliefs [of what realistic affordances in a game are] can be informed by what a player has experienced in the game (her perception and attention), as well as be guided by what similar games have typically expected from her in analogous situations (her memory and analogical thinking skills)." (Cardona-Rivera and Young 2013, p. 4)⁸

A player with core game knowledge likely recognizes objects with a glowing outline as interactive. They know that a mid-air platform which has the same texture as the ground a player's avatar is standing on, likely affords standing on as well. They can identify an aggressive in-game character as an enemy, even more so if that character has a health bar (affords attacking/damaging it), and so on. This means that as part of their game (i.e. media) literacy – which trains skills of deduction (see Potter (2018)) – a knowledgeable player can deduce game mechanics based on previously encountered patterns.

However, this skill, too, is tightly linked with another aspect of core game knowledge: knowledge of common concepts and mechanics (including semiotics and terminology) which can be found in many video games across the genres.

Some examples for common game mechanics and concepts are: health, damage, player lives and deaths; inventory; forms of player representation (first person, third person, no avatar, multiple characters...); items/pick-ups; save-points; game, player and enemy levels (and their relation to difficulty); experience points; User Interface (UI) overlay/elements as opposed to in-game objects and events; and (high-) scores.

These concepts are often represented in similar ways in games. For example, a (non-) player character's health is often depicted in form of a health bar symbol. A literate player recognizes a health bar as the visual representation of the character's condition (the symbol's denotation). But they also recognize that it implies the existence of danger in the game and that characters with a health bar can receive damage (the symbol's connotation). They might also deduce that the player themself can deal damage. With this knowledge, the player them has more information to recognize other in-game affordances. For example, if the player character has a health bar, they might recognize that an object with a "plus" symbol on it might represent medicine⁹, and thus afford healing. So this aspect, too is intertwined with another.

In conclusion, core game knowledge encompasses the "universal" game knowledge that many video game players seem to possess. It includes the ability to recognize which form of common controls is appropriate or likely and the skills to use them somewhat subconsciously. It also includes basic knowledge of common game mechanics (health, damage, save-points...) and the ability to recognize them in the game's visual context (in-game affordances). While video games can of course also be fun and played without

⁸On another note, this reveals that the ability to recognize affordances is largely influenced by the design decisions of the visual designers. If a designer themself has limited core game knowledge, they may inadvertently make design decisions that deviate from "the norm" and cause confusion in players.

⁹This example of course only applies if the player has a cultural background where a plus or cross symbol is associated with hospitals, or knows of this association.

it, lack of core game knowledge arguably hampers participation in mainstream gaming, as the majority of players seem to play and act according to it and game design is often based on these concepts.

Gee (2007) talks about the acquisition of game literacy and argues that good games teach these concepts naturally if the player keeps playing them. Potter also suggests that having more generalized knowledge about a medium contributes to increased media literacy (Potter 2018). This could mean that playing different kinds of racing games for example may increase game literacy in this genre, while playing games of different genres may increase general game literacy. Arguably, all of this core game knowledge can naturally be learned just by playing a lot of games, and possibly talking with other players about one's experiences. This is part of what the *SpielRaum*-concept in Chapter 3 wants to facilitate.

However, as established in Section 2.2, non-male children are often denied this very chance to keep playing a game undisturbed and possibly master its controls. Revisiting the quote by Weststar and Legault in the introduction, girls may be deterred from gaming by male family members' encroaching behavior, not getting the chance to practice their skills. This means that they have limited possibilities to develop their own game literacy through building core game knowledge structures.

This lack of core game knowledge may also prevent them from joining the game domain later in their life, as the knowledge gap may have widened so much that interaction with game literate members of the game community may seem overwhelming. In combination with the (possibly internalized) perception of games as male-connoted, this difference in knowledge may permanently turn non-male people away from the medium, despite initial interest. And as Gee describes, literacy can be seen as a form of inclusion: "[s]ince semiotic domains [such as games] are usually shared by groups of people who carry them on as distinctive social practices, [by gaining literacy] we gain the potential to join this social group" (Gee 2007, p. 24). Therefore illiteracy may amount to further exclusion from the game domain.

Moreover, as previously mentioned, media literacy can also help to identify a medium's effects on oneself exercise control over information processing. As established, the medium games conveys many messages of marginalization. Training oneself to recognize and consciously reject those messages may encourage marginalized people to pursue their interest in games nonetheless. This critical view of a medium is also part of media (or game) literacy. The *SpielRaum*-format aims to encourage participants to develop awareness for the medium's role in their marginalization, and how they can respond to it. It aims to help participants discover their own personal locus (see Potter (2018)).

Summary

In summary, game literacy can be seen as an access condition to games. Illiteracy (e.g. in form of a lack of core game knowledge structures) can be grounds for exclusion from the space. Moreover, learning how to critically consume games can help players to identify – potentially harmful – messages that may otherwise subconsciously influence players' worldviews and opinions (such as messages about games being exclusively for men). Thus, in the context of games literacy is especially important for members of marginalized groups: while they may be exposed to marginalizing messages when participating in the

medium, being literate enables them to consciously reject their implications 10 . Simply put, game literacy can help combat marginalization by sensitizing children to marginalizing content and encourage awareness for the impact media like games can have on one's subconscious. This is part of what SpielRaum aims to facilitate.

 $^{^{10}\}mathrm{An}$ interesting topic for further research could be correlations between media literacy and resilience against gender stereotypes/ marginalizing media content.

2.4 Game Workshops for Girls

Especially in the last decade, a lot has been done in terms of video game activism. This section presents a selection of game workshops for girls and scientific articles addressing similar endeavours. Table 1 (on page 15) can be used to look up the details of the referenced workshops. The main reference for this information is cited after every workshop name. For ease of reading, the text will refer to the workshops by their abbreviations where applicable. The upper half of the table summarizes workshops that only happened once, whereas the lower half lists recurring events. Provided are a brief description of each workshop (format), its duration (length) as well as the target group of each intervention (target group) and where it was conducted (location). The capacity column refers to the number of participants (or planned participants for the recurring events). The workshops are sorted by year in ascending order.

A note regarding the selection of workshops: this selection is likely biased due to language barriers. These workshops were advertised and/or written about in either English or German, but interventions in countries of other languages likely exist. Therefore, this list cannot be considered comprehensive, but it still serves the purpose of exploring different approaches to game workshops for girls.

2.4.1 Effects of development-centric workshops

Many of the workshops resemble one another. All of the workshops in Table 1 focus on teaching participants game development. Their objectives are to create a game either as a team (GCW, GCG, GGW, GMG), or individually (Alice 3D summer camp, GDW, Game Incubator). Others do not specify their team size, but also name game creation as their goal.

Unfortunately, few of the workshops provide information about the facilitators. GCG (Denner et al. 2005) and the Game Design Workshop (Çakır et al. 2017) employed female facilitators only and *Girls Make Games* recommends a ratio of one facilitator per five participants for their workshop concept "GMG Around the World", which can be held by volunteers internationally (GMG 2021c).

Although not all of these workshops were part of research, those that were scientifically evaluated have positively impacted their participants in a number of ways. GCW was conducted as part of Spieler, Krnjic and Slany's (2019) research and resulted in increased self-efficacy of the participants. The same was found in participants of Çakır et al.'s (2017) GDW, along with increased self-confidence in game design and programming skills. Further, Spieler, Krnjic and Slany (2019) measured an increased 'sense of belonging' in their participants, which is an important measure considering the alienation girls face in gaming (see Section 2.1). GDW and the Alice3D summer camp also succeeded in increasing participants' interest in computer science or related fields (Çakır et al. 2017; Webb and Rosson 2011).

Moreover, Denner et al. (2005) (GCG) and Çakır et al. (2017) (GDW) found that their game creation workshops provide a chance for self-expression through creative design, and encourage identity exploration (GDW was specifically designed for this purpose and followed identity formation guidelines).

Another benefit of these workshops (which is often actively advertised) is its social potential. The workshops provide a chance for like-minded girls to meet and bond. As already mentioned, this can reinforce non-male participants' sense of belonging in an

	workshop name	format	length	capacity	target group	location	year
	GCW Girls Coding Week (Spieler, Krnjic and Slany 2019)	GD workshop	5× 7h	13	girls aged 11–14	Austria	2005
sans	[GCG] Girls Create Games (Denner et al. 2005)	GD workshop series (after school, summer program)	$\mathrm{s/u}$	max 24	middle school girls	$\overline{\mathrm{USA}}$	2005
уэ эші	[Alice 3D summer camp] (Webb and Rosson 2011)	GD summer camp	2d	64	girls aged 10–13	$\overline{\mathrm{USA}}$	2009
onet	[GDW Game Design Workshop] (Çakır et al. 2017)	GD workshop	1d	21	girls, grade $5-8$	$\mathrm{n/s}$	2015
	Indigicade I (DMG 2021a)	GD workshop	1 m	9	indigenous girls/women aged $13-24$	$\overline{\mathrm{USA}}$	2015
	GGW – Game Girl Workshop (Girls' Game Workshop e.V. 2020a; Khaled 2011)	GD workshop	3–5d	10–20	girls aged 11–16	multiple	since 2010
stnev	Game Incubator Workshops (Pixelles) (Pixelles Montreal 2021b)	GD workshop	8w	max 12	no cis-men, min. 18 y.o.	Canada	since 2011
e gairr	GMG – Girls Make Games (GMG 2021b)	GD summer camp	3m	16–20	girls aged 8–18	multiple	since 2014
nəəı	GMG Around the World [Workshop] (GMG 2021c)	GD workshop	1, 2 or 4h	min 12	girls, aged $8-15$	multiple	since 2014
	Girls' Games Workshop e.V. (Girls' Game Workshop e.V. 2020a)	GD tutorial	1d	max 40	girls aged 12–15	Germany	since 2016

Table 1: Selection of game workshops for girls. GD = Game development. Terms in square brackets are my additions.

otherwise male-connoted space (Spieler, Krnjic and Slany 2019). To some extent, these development-centric workshop formats are comparable to a game jam¹¹ (particularly the Game Incubator), but with added support from facilitators. All-female game jams as a feminist intervention have been investigated by Helen W. Kennedy (2018). She found that the community aspect created by an all-female environment can empower women and increase their sense of belonging and self-confidence. Participants reported that the gender restriction created a safe space which allowed women to participate who had been intimidated by the prospect of joining a mixed gender game jam. As mentioned previously and also by Kennedy, girls may limit themselves in male-connoted environments due to internalized beliefs and stereotypes. Çakır et al. (2017) (GDW) and Denner et al. (2005) (GCG) refer to this as 'personal barriers' blocking female participation and argue that the positive effects of game workshops for girls (such as increased self-efficacy etc., see above) contribute to their removal.

This important sense of communion and solidarity is also emphasized by activist organizations like *Dames Making Games (DMG)* (DMG 2021b), *Pixelles* (Pixelles Montreal 2021a) and *Black Girls Code (BGC)*¹² (BGC Black Girls Code 2021). They are not listed in Table 1 as they do not offer only one specific workshop format (although Indigicade is initiated by DMG). Nonetheless, they advocate the importance of connecting girls and women in games and are hubs for a variety of activist events like lectures, game jams and workshops.

Also relevant for the conceptualization of *SpielRaum* are the methods used for documenting these effects. Prior to the workshop, many facilitators collected information regarding the participants social background and their previous experience with and attitude towards gaming (Çakır et al. 2017; Spieler, Krnjic and Slany 2019; Webb and Rosson 2011). Along with a self-assessment of participants' computing-related skills, attitude was recorded before and after the workshop and then compared (Çakır et al. 2017; Spieler, Krnjic and Slany 2019). Among the tracked values were "students' intrinsic motivators: interest, sense of belonging, self-efficacy, and fun" (Spieler, Krnjic and Slany 2019, p. 680). In GCW, evaluations were even conducted daily (Spieler, Krnjic and Slany 2019). More qualitative data was collected in the form of interviews (Çakır et al. 2017).

2.4.2 Recurring Workshops

Most of the recurring workshops have not been mentioned yet, because they have not been part of research and do not provide data regarding their impact on participants. However, their continued existence and high attendance together with positive reviews from participants is testament to their impact and success. Therefore, this section provides some more insight into the recurring workshops listed in the lower half of Table 1.

The Montreal-based non-profit organization *Pixelles* (founded in 2011) offers a workshop series called "Game Incubator" (see Pixelles Montreal (2021c)). The workshop is offered for free (participants are selected after an application period) with a limit of twelve participants. Their workshop is targeted towards people of marginalized genders over the age of 18, who have little to no experience in making games. For the most recent Game Incubator (VIII), participants were expected to attend a three hour lecture and a four

¹¹A game jam is an event type where participants are given a prompt and need to create a finished game in a short amount of time (e.g. 24 hours) in teams or individually.

¹²BGC's workshops pertain programming in general rather than game development, but they, too contribute to female empowerment in the technical sector and are therefore also mentioned.

hour work session per week (Pixelles Montreal 2021c). With mentoring provided during the work sessions, the goal of the workshop is for each participant to create their own game. The Pixelles state on their information page: "Our mission is to help you teach yourself (among like people) how to make a whole game from start-to-finish, learn some skills and broaden your accomplishments, and to have fun and meet some friends while doing it" (Pixelles Montreal 2021b).

The German non-profit organization Girls' Game Workshop e.V (founded 2016) offers themed one-day sessions for up to 40 participants (see Girls' Game Workshop e.V. (2020a,b)). It is targeted towards girls aged twelve to fifteen. Their workshops start with interactive game development lectures in the morning, after which participants team up and brainstorm game ideas. The ideas are implemented with the help of mentors after lunch, and presented by each team at the end of the day. Their aim is "to inspire girls to become interested in game development" (Girls' Game Workshop e.V. 2020a).

Girls Make Games (GMG) is a program started in 2014. They offer workshops, summer camps and game jams addressed to girls. As of 2012, they have held events in 89 international cities (GMG 2021d). Their current (fee-based) summer camp (GMG 2021a), which is being held virtually due to the pandemic, is separated by age (8–12 and 13–18 years old) and targeted towards girls only. Their concept features one instructor per 5–6 participants. The design is for 16–20 participants. The curriculum includes introductions to game design, programming, art, music and pitching. The goal of the workshop is to develop a finished game in teams of three to five people (GMG 2021b). In addition to the technical knowledge gained, the summer camp lists "Community building" as one of its features (GMG 2021a). It aims to introduce participants to role models in the industry through guest speakers and instructors. They have also developed a curriculum that volunteers can use to hold free one day workshops ("GMG Around the World", see GMG (2021c)).

2.4.3 Limitations

Although these workshops greatly contribute to the emancipation of girls in the field of games, they are not without limitations. Notably, they create some sampling bias: A majority of participants in GDW had already played video games prior to the workshop (Çakır et al. 2017). GMG also state on their website that on average, over a third of participants have prior programming experience (GMG 2021b). Further, Webb and Rosson (2011) write about their Alice 3D summer camp that there might be "a self (or parental) selection bias in the population of girls who attend summer camps like this" (p. 379). Thus, there is the possibility that these game-related interventions primarily attract youths that already have a measure of game literacy, and do not reach those with restricted access to games. This is not necessarily a weakness, but it is a limitation that the *SpielRaum*-concept hopes to address.

Moreover, an interesting effect observed by Khaled (2011) in one GGW instance was that the participants replicated stereotypical "girl games" (including gender-stereotypical themes and design). These were also identified as their primarily played game genre prior to the workshop. This was in spite of having the freedom to create any game they wanted. A similar situation was observed by Denner et al. (2005) in GCG. Khaled suggests that this might be due to the fact that "their very concept of games and how they must be designed was tightly bound to girl games, that is, the games they were most familiar with" (Khaled 2011, p. 417).

Of course, as Khaled also mentions, the girls in this example may genuinely enjoy so-called "girl games". However, this could also be an indication that they have restricted themselves to the niche of games that they are expected to like and that is 'assigned' to them. Due to socialization, they may never have felt the need or gotten the opportunity to explore more genres and claim a space for themselves. This predicament is one that the play-centric workshop proposal in the next chapter aims to tackle. The games selection for the workshop will include games of many different genres with the aim of showing participants that any game or game genre is open to them; that they can claim space even if it was not assigned to them.

2.4.4 After school game clubs by Jenson, Fisher and De Castell

For the creation of a different workshop format, it is important to acknowledge and learn from previous work. As the *SpielRaum*-format does not focus on development, this chapter will not go into detail of the development-centric workshops' teaching methods. However, there have been more play-centric events as part of larger research projects by Jennifer Jenson, Stephanie Fisher and Suzanne De Castell, see for example Jenson, Fisher and De Castell (2007, 2011). They have conducted several after school game clubs in co-ed as well as single-gender settings and gained valuable insights. Many of their experiences are relevant for the development of *SpielRaum* and will be outlined in this section.

One of their main conclusions from observing boys and girls play was that gaming behavior that was often described as typical of girls (e.g. non-competitive play), was not, in fact, attributable to gender (Jenson, Fisher and De Castell 2007). Instead, it corresponded to individual skill level: "once the girls had been afforded genuine access, support, a 'girlsgamer' model, and the right to choose what, when and with whom they would play" (Jenson, Fisher and De Castell 2007, p. 15), any differences in gaming behavior between boys and girls diminished or disappeared. This backs up the importance of interventions like *SpielRaum* that aim to give marginalized children room to play.

Jenson, Fisher and De Castell (2007) addressed another important aspect in their paper: encouraging familiarization with game hardware. They observed that they had never shown the participants how to set up the game consoles and games for play. When the facilitators arrived late one time, it turned out that none of the girls knew how to turn on their consoles, likely because their access at home (if applicable) was also managed by their male family members. Therefore, *SpielRaum* should also encourage participants to familiarize themselves with the technology surrounding the games they want to play. The hardware knowledge surrounding games could possibly be seen as an extension of game literacy, and lack of this knowledge is an access barrier that can easily be removed in the *SpielRaum* setting.

Further, they illustrate the benefits of a game literate facilitator: in the second year of their video game club, they switched the previous non-game literate facilitator in the girls' group to a female research assistant knowledgeable in games. She then provided help in navigating unfamiliar games and game menus, which served to diversify the games the girls played. Before this, they had stuck mainly to one game they were familiar with. The boys' group did not have these troubles to begin with, as most of them had played prior to the workshop and likely either learned the skills beforehand or were able to assist each other.

Additionally, their studies demonstrate the importance of a support network and peers with similar interests. In one of their after school clubs, they split a previously mixed gender group into a female-only and a co-ed group. They observed that many girls that had been dominated by boys and more experienced female players thrived in the female-only group. Meanwhile, a girl that was assigned to the mixed-gender group "attended the mixed-sex gaming club twice then stopped coming, citing the absence of her friends (her support group) and the ongoing dominance of others as reasons for leaving the club." (Jenson, Fisher and De Castell 2011, p. 162). Peer support is also something *SpielRaum* hopes to provide.

These are all valuable insights that need to be kept in mind when designing or conducting a workshop according to the *SpielRaum*-framework in the Chapter 3.

2.5 Summary

To recapitulate: this thesis aims to investigate what keeps non-male teens from developing game literacy, and how we can provide safe spaces to facilitate game literacy development. This chapter has examined the many factors that work to exclude non-male people from the game domain (Section 2.1). These factors have been identified as

- Explicit/direct forms of exclusion (harassment of women in game communities and companies, gate-keeping the 'Gamer'-identity, denigration of female-connoted game genres, and 'ghettoization'¹³ of female play
- Implicit/indirect forms of exclusion (through depictions in and nuances of game advertisements, insufficient representation in game content)
- Discrimination in games production (lack of diversity in game development, omission from games research, exploitation of female workers in hardware production)

It has explained how the resulting lack of non-male participation leads to a vicious circle of marginalization. As one of its effects, non-male children have less access to games than their male peers (Section 2.2). This is why one approach of bringing equity to children's game access is the creation of safe spaces in which non-male interest in games is fostered and normalized.

Section 2.4 examines previous efforts to create such safe spaces. These interventions have succeeded in empowering girls and increasing their sense of belonging in the field of gaming. However, most of the inspected workshops emphasize game development, with the exception of Jenson and colleagues' research, which is elaborated on in Section 2.4.4. One drawback of these development-centric workshops is that they often attract participants who already have some degree of game literacy. Game literacy has been established as an important criterion for participation in the medium (see Section 2.3). In order to also enable game access for non-male teens that may not have been previously exposed to or interested in games, the next section proposes a workshop format which takes a different, play-centric approach.

¹³see also Cassell and Jenkins (1998) and Fron et al. (2007)

3 Methodology: The SpielRaum Workshop

This chapter contributes to the field of Research through Design $(RtD)^{14}$ by developing an intervention for teens of marginalized genders which emphasizes the component of 'play'. To do this, I first outline a workshop concept named SpielRaum developed for a predefined cultural context (see Section 3.1). After critically discussing its limitations and assumed effects in Section 3.2, I reflect on how the design process has deepened my understanding of the problem space, and which insights I have gained through it (Section 3.3).

Due to time constraints, the current COVID-19 pandemic¹⁵, and the scope of this thesis, a conduction of the designed intervention is not possible. However, a conceptual approach as a means of answering the research question serves multiple purposes.

On the one hand, the developed *SpielRaum* concept offers an altered approach to bringing equity to teens' game access. It drafts a safe space where non-male teens can familiarize themselves with games. Even though this workshop is not yet physically implemented, Blythe (2014) argues that fictional case studies can still serve as valid prototypes. The concept can therefore be seen as a template for future play-centric workshops. Moreover, the practical conduction of such a workshop has the potential to generate valuable data, such as more insights into the circumstances surrounding game access in the target group, or insights into game literacy acquisition and its impact on self-efficacy and STEM-interest. Qualitative methods to gather such data are suggested in Section 3.1.4.

Therefore, this chapter answers the research question by proposing one possible version of a space which facilitates game literacy for non-male teens, and suggests means to document its effects during its potential conduction.

On the other hand, a purely conceptual approach to the design of this workshop was chosen intentionally: it necessitates a close and careful consideration of the problem space; potentially more thorough than if the conduction of the workshop had been the end goal of this thesis (see also Blythe (2014)). The focus on theory allows for an in-depth dissection of the problem space. This is necessary in order to understand how to operate in the space, and which factors need to be taken into account. With the awareness gained from this dissection, it is also easier to adjust the *SpielRaum*-framework to different settings.

In this case, the design and research process serves as a tool for engaging with and reflecting on the topic of teens' game access. This approach is based on the fundamentals of RtD. RtD as a term emerged at the turn of the millennium and is often used in Human-Computer-Interaction Research (Stappers and Giaccardi 2017). In its essence, RtD takes the view that the design process itself is a form of research. As Pieter Jan Stappers points out: "The designing act of creating prototypes is in itself a potential generator of knowledge" (Stappers 2007, p. 87).

For example, when designing for a similar socio-cultural setting, auto-ethnographic reflections during the design process can help to better understand and identify the needs and challenges of the target group. The close engagement with the topic of game access and its theoretical background also revealed some of my own internalized assumptions that I had not been aware of (further discussed in Section 3.3). Now that they have been

¹⁴Extensive information about the field of RtD has been collected by Stappers and Giaccardi (2017).

¹⁵The pandemic started at the end of 2019. At the time of writing this thesis (2021), the pandemic is still ongoing and social distancing is required to prevent the spread. Moreover, many schools have switched to distance education, thwarting any plans of an on-site workshop implementation.

identified in advance, they can be addressed in the intervention. These insights also allow facilitators to be more aware of and intentional about the values they teach to the participants. This auto-ethnographic component can help contextualize what a 'safe space' means for this particular target group, and which internalized beliefs may unintentionally threaten a carefree exploration of the medium.

Thus, the research question is also addressed through the conceptualization, as the ideation and design processes produce valuable insights into the cultural nuances of a 'safe space'.

3.1 Workshop Concept

As an alternative to the previous workshops discussed in Section 2.4, which focused more on getting marginalized teens into game development, this thesis proposes a play-centric workshop model called SpielRaum ([ʃpi:lravm]; German for both "playroom" and "leeway" or "elbow room"). Such an alternative could prove especially effective in introducing non-male teens to gaming, because as mentioned above, development-focused workshops tend to attract girls that already have an interest in this field. Therefore, SpielRaum complements these formats and can serve as a point of access to gaming (and game development) and help girls that had no prior interest in games discover the medium.

It is drafted as an after-school program and designed based on a hypothetical case study set in rural south Germany (as this matches the author's cultural background). However, the overall concept is likely applicable to other cultural contexts as well and is designed to be adjustable.

To revisit the pipeline model, *SpielRaum* proposes an intervention at the stage of initial access. Its aim is to make available an environment for girls to develop video game literacy through free play and reflection in a safe environment. It is targeted towards non-male school children aged 12 to 18, with and without prior experience in gaming.

3.1.1 Objectives

The workshop's main goal is to show marginalized youths that video games are a medium they can claim for themselves, even if they are actively being discouraged from doing so (see Sections 2.1 and 2.2). It is an attempt to temporarily disable the cultural barriers that hinder children of marginalized genders in their discovery of the medium, by providing a safe space in which their play is normalized and accepted. Participants are encouraged to freely experiment, play (also in unintended ways) and fail, all within a judgement-free and supportive environment.

The workshop facilitators' role in this is to provide support or explanations where they are desired. Borrowing from principles of good game design as formulated by James Paul Gee (2007), they should aim to give information 'on demand' and 'just in time'. In addition, facilitators must ensure that participants are not encroaching on each others' play where it is not wanted. This is to ensure that every participant has the freedom to explore a game without feeling overwhelmed or (peer) pressured.

In accordance with previous workshops, *SpielRaum* also aims to encourage peer bonding and nurture friendships between participants. Therefore, the event could also be seen as an opportunity for founding friendships based on a mutual interest in video games. These may help to maintain their interest in the long run and alleviate feelings of exclusion from the space. Because as mentioned before, the lack of such 'interest groups' or peer support networks is a factor that can discourage children from gaming.

As mentioned in Section 2.3, something that is likely keeping non-male youths from participating in the medium is a lack of game literacy. The workshop's objective is not to teach participants the 'correct way' to play (which arguably does not exist). Rather, the facilitators assume the role of a mentor, which is likely freely available to non-marginalized children and teens in the form of more experienced players (online, or within their circle of friends or relatives). Through this, participants can naturally develop game literacy through their own play experiences (see Section 2.3). Ideally, during free play the facilitators will not be consulted by the participants anymore once a peer support network develops.

Through this, the workshop hopes to emulate some of the access conditions their non-marginalized peers usually have. In summary, the workshop is an environment where alienating factors are either not present, or critically discussed. The facilitators act as mentors where needed. The profile and responsibilities of facilitators are described in the next section.

As a desired side effect, participants may acquire core game knowledge (see Section 2.3) – although this is not necessarily the main objective. This can help with integration into the current gaming community/environment outside of the workshop, unwelcoming as it may be.

In summary, the workshop has several objectives:

- Providing an opportunity for **exposure and access to games**, also for teens without prior interest or experience
- Providing a **safe space** for gaming, which raises awareness for and rejects the mechanisms that contribute to marginalization
- Empowering teens of marginalized genders in their pursuit of gaming and gamerelated participation, and teaching them to non-apologetically participate in the medium in any way they choose to do.
- Enabling the development of core game knowledge structures
- Facilitating **critical game literacy** by training media literacy skills and personal locus (see Potter's (2018) model in Section 2.3)
- Providing a chance for **bonding** and the formation of peer groups

In the overall context, with this intervention I hope to address the gender-related injustices present in the game domain. By changing the conditions for game access, I hope to motivate more non-male teenagers to participate in gaming and potentially game production. Like many similar endeavours, in the long run this, too, aims to diversify the demographic and content of gaming. It is an effort of disrupting the vicious cycle of non-participation and non-representation illustrated in Chapter 2.

3.1.2 Format

As mentioned above, the workshop format is laid out to be adjustable to different cultural settings. In order to design an effective intervention however, it is essential to be as precise as possible. Therefore – based on my own ethnological background – this instance

of the *SpielRaum* workshop will be designed for a setting in rural Bavaria in southern Germany. Design decisions will be based on an assumed target group that can realistically be expected in this setting. This group can be located within the matrix of oppression, see Figure 2. The Matrix of Oppression shows that a person can both be privileged and oppressed, depending on the social setting. It was originally developed as the "Matrix of Domination" by Patricia Hall Collins (1990). Its purpose was to visualize the levels of power struggle specifically black women in North America face. It has since been extended and occasionally adapted for other social groups. That said, it is a useful tool in this context as the different social identity categories hint at which factors need to be taken into account when applying the *SpielRaum*-concept to a different context. They also influence what participants may consider 'empowering', which can differ greatly between cultures (this is further discussed by Harrer (2019)).

SpielRaum is designed as an after school care. In German school systems, teaching units are usually 45 minutes in length. A school day typically consists of six units in the morning, a sixty minute lunch break and depending on schedule, a maximum of four afternoon units (with 15 minute breaks every two units). A duration of four teaching units (three hours in total) scheduled in the afternoon is therefore an ideal time frame that allows participants to utilize the schools' infrastructure (i.e. scheduled transportation in the afternoon). This is important because some people may not be able to participate if transportation from and/or to the workshop depended on parents. To accommodate different schedules, SpielRaum could be offered on multiple days a week, repeating the contents until the next week. This also gives more people a chance to attend, as participant size per session is limited (see following section).

At this point, it is hard to make an informed decision regarding the total amount of sessions, as this format needs to be field-tested. Half a school year could be an appropriate time frame for testing, and can be extended to a full school year if successful. In German schools, one semester is equivalent to approximately 20 weeks, though this number can vary depending on year and federate state due to varying regulations regarding holidays and term dates. This would give facilitators 20 sessions per group to design a session plan according to each groups' interests, needs and skills, using the *SpielRaum* framework as a guideline.

SpielRaum follows principles of Cognitivism and strives for flat hierarchies. Cognitivism is a learning theory which places special emphasis on student-centered, self-regulated learning and learning how to process information and relate it to existing knowledge (Yilmaz 2011). In many aspects, this complements Potter's (2018) definition of media literacy (Section 2.3). For example, he emphasizes building knowledge structures as a central component of acquiring literacy. and student-centered learning, and strives for flat hierarchies. This should be respected when planning or conducting workshop sessions.

Group composition

The workshop addresses 12-18 year olds (12 being the minimum age due to PEGI (or in Germany FSK) age tiers for games). This particular instance is designed for eight participants and two facilitators per session. This small size is justified by the size of the physical space (outlined in Section 3.1.2) and the facilitators' responsibilities (explained in this section), which may be hard to meet at a higher ratio of participants to facilitators. Additionally, as mentioned above, multiple sessions with different groups can be held in a week to allow more students to participate.

Like many of the previous workshops, this intervention is exclusively for people of marginalized genders, so male participants or facilitators will not be allowed in the space. Certainly, there are also boys who do not have access to video games, but this is likely not due to their gender. SpielRaum however serves the purpose of combating the gender-related inequity that dominates children's access to games. Moreover, gender dynamics are currently entangled with gaming identities: male players are at an advantage because their gender justifies their participation, whereas non-male players have to vindicate theirs (see background chapter). In mixed-gender spaces, this potentially recreates the unfair access conditions that currently exist, once again disadvantaging girls. Therefore, the exclusion of boys and men factors out gendered distributions of power in participants' interactions. This ensures the integrity of SpielRaum as a safe space.

The facilitators must also be non-male. Same-gender facilitators have been found to improve female performance in computer-related tasks, with male presence even negatively impacting it (Corston and Colman 1996). All female game-jams were reported as empowering by participants (Kennedy 2018). By employing facilitators of marginalized genders, *SpielRaum* therefore hopes to create an empowering atmosphere, provide role models and increase participants' sense of belonging in the game domain. *SpielRaum* ideally suggests employing two facilitators for the above group size of eight participants. This allows for split responsibilities and competences. Both of the facilitators are advised to take field notes to document the workshop from different perspectives.

One of the facilitators should have expertise in group facilitation and working with adolescents. Their profile could therefore be a teacher or social worker. They do not need to be game literate, as their responsibilities are focused on for example mediation, leading discussions and overseeing the group. Incidentally, acquiring game literacy alongside the participants in the course of the workshop could also provide an enriching experience for both sides. They must, however, have a positive attitude regarding games as to not discourage participants in their interests. Lastly, they need to be aware of (and preferably knowledgeable about) issues of gender and marginalization. Like this, they are able to avoid counterproductive (e.g. gender-biased) comments or behavior on their part, and appropriately address the same if a participant behaves in such ways.

The last requirement also applies to the other facilitator, who is the person in charge of the workshop's game content. For this, they need to be game literate, and ideally have knowledge about game production or experience working in the industry in order to answer specialized questions from participants. They do not need to know every game offered in the workshop, but they should possess the competences to research games and judge if they are suitable for *SpielRaum* and for their group's participants. They are responsible for posing the right questions in the group discussion in order to encourage critical reflection about the played games. They are also responsible for helping participants with game setup or controls if asked for. Moreover, they possess the expertise needed set up and manage game consoles, accounts and savegames. Since there are possibly several *SpielRaum*-instances running in parallel, this might require careful planning and decisions about which games will be resumed at a later time.

Together, the facilitators possess the pedagogical and subject-specific knowledge to design and conduct workshop sessions according to the *SpielRaum*-framework.

Matrix of Oppression

Social Identity	Privileged	Border	Targeted	Ism			
Categories	Social Groups	Social Groups	Social Groups				
	Goolal Groupe		l coolai ai capo				
		←	i I I				
Race	White People	Biracial People (White/Latino, Black, Asian)	Asian, Black, Latino, Native People	Racism			
Sex	Bio Men	Transsexual, Intersex People	Bio Women	Sexism			
Gender	Gender Conforming Bio Men And Women	Gender Ambiguous Bio Men and Women	Transgender, Genderqueer, Intersex People	Transgender Oppression			
Sexual Orientation	Heterosexual People	Bisexual People	Lesbians, Gay Men	Heterosexism			
Class	Rich, Upper Class People	Middle Class People	Working Class, Poor People	Classism			
Ability/Disability	Temporarily Abled- Bodied People	People with Temporary Disabilities	People with Disabilities	Ableism			
Religion	Protestants	Roman Catholic (historically)	Jews, Muslims, Hindus	Religious Oppression			
Age	Adults	Young Adults	Elders, Young People	Ageism/Adultism			

 $[\]ensuremath{@}$ Teaching for Diversity and Social Justice, Second Edition, Routledge, 2007

Figure 2: Matrix of Oppression, reprinted with permission of Taylor & Francis Group LLC - Books from Adams, Bell and Griffin (2007, Appendix 3C); permission conveyed through Copyright Clearance Center, Inc.

Physical Layout

In order to do its purpose of providing access justice, the workshop's accessibility should also be regarded. Therefore, the space for the workshop should be accessible for people with physical disabilities or difficulty walking. Moreover, any presentations in the workshop should be designed with accessibility in mind, e.g. regarding scale or color choice for visual impairments, dyslexia or color-blindness). Special needs of participants should be enquired about and accommodated.

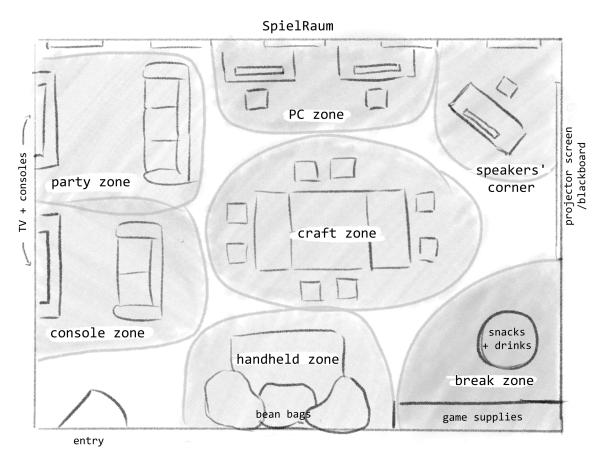


Figure 3: Example floor plan of the workshop space (not to scale)

An example floor plan is given in Figure 3. Of course, the facilities in case of conduction may differ. However, this layout was designed with a system in mind (outlined in the following), and can be easily adjusted. The minimum requirements for the *SpielRaum* space are 1) at least one game device (types can vary) per participant, 2) a seat for every participant at a table (for crafting or other activities), 3) a means of presentation (ideally a projector screen or something similar for connecting a computer).

Requirement 1) is essential. Playing together with others is of course allowed and encouraged (and necessary for multi-player games). But doing so should be the participants' decision. This is a matter of respect for different play styles and temperaments, and ensures that every participant has the space to safely play and experiment on their terms.

Moreover, as seen in Figure 3, the room is split into different zones to meet the demands of the *SpielRaum*-concept. In the example layout, one of the game stations (includes console(s), TV and seating) is dedicated to party games, and games where players need space to move in front of the screen ('party zone'). Therefore, this zone should afford

enough space for multiple players to gather and leave enough distance between screen and seating. A second game station is dedicated to console games that are for one or two players and can therefore be smaller ('console zone'). I suggest a minimum of two game stations with consoles so that guilt-free single play is possible – without one player feeling like they are blocking the console for others.

Additionally, *SpielRaum* also includes a space for non-gaming activities (see also Section 3.1.2), dubbed *craft zone* in Figure 3. This is also where facilitators can sit and monitor when the participants are engaged in gaming, which is why it is positioned in the center of the space. Game access is also provided through computers ('*PC zone*'), and handheld devices ('*handheld zone*'). Figure 5 (on page 31) depicts concept art of what these spaces could look like.

Further, games, game equipment (such as special or spare controllers, chargers, and headphones) and crafting supplies should be easily available to every participant. They are located in the 'break zone' in the sample floor plan. As the name implies, the break zone can be used to take breaks to eat or drink in between gaming.

Lastly, the room includes a 'speakers' corner', which should be near the projection screen. This is where facilitators or participants hold presentations or make announcements. In pursuit of flat hierarchies within the workshop, this space should not be exclusive to the facilitators. Participants should also be encouraged to present in this space. To truly mark it as a shared space, the speakers' corner could contain an additional gaming computer to be used by participants.

Structure & Sessions

Several factors need to be considered when structuring the content of the workshop. Firstly, it is designed as an after-school care, therefore one needs to consider that not every participant may be able to attend every session. Designing sessions to be mostly independent of each other could be one way to avoid this issue.

Secondly, as mentioned earlier, the workshop is geared towards experienced players as well as newcomers. Therefore the sessions themselves need to account for individual skill levels of the participants, especially in early sessions. To do this, the sessions should be structured to introduce more complex games (like for example open-world games) after participants have had a chance to practice some core skills like basic movement in simpler games to prevent unnecessary frustration.

Thirdly, the admissible age range is quite large. If applicants for the workshop are largely located at the ends of this spectrum, a divide into sessions by age could be worth considering. This is to further encourage peer-bonding, which might be difficult if the age gap is too large. Though this likely depends on each specific group and needs to be tried in practice.

Lastly, the sessions should include critical discussion of and reflection on the played content. However, they should not be so restrictive that they obstruct participants' free play. For this, I propose a divide of each session into three different stages: a short briefing at the beginning which gives an overview of the topic (10 minutes at maximum, so as not to take away too much gaming time), a large section of free play, and an appropriate amount of time for debrief and critical discussion of the participants' experiences. This process is visualized in Figure 4.

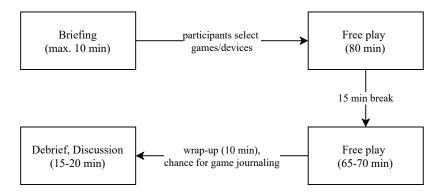


Figure 4: Flow chart of a *SpielRaum* session.

Ground Rules

To ensure the integrity of a "safe space", the first session should establish some rules of conduct. For example, participants should be advised to never seize the controller from someone who is playing, and to try to keep unsolicited advice to a minimum. These behaviors would otherwise emulate the existing access conditions described in Section 2.2, in which girls do not get to develop expertise due to encroaching behavior from male family members. This was also a problem in the video game club by Jenson and colleagues: even in female to female interaction, less experienced female players had been domineered over by female expert players, and had only started to develop their own skills once they were no longer subjected to this demeanor. Furthermore, it should be clear that insults, mockery and demeaning behavior have no place in the workshop. Additionally, participants should always ask for a player's consent if they want to watch/spectate or join in on the play. It is the facilitators' responsibility to enforce these rules and step in to solve conflicts if necessary. On a more positive note, it should be clearly communicated that the participants can always ask for help or advice, from other participants as well as from the facilitators. To allow for anonymous questions and wishes, a question box could be installed. These notes can then be brought up during the next session's briefing or discussion.

Session types

With the fact in mind that group constellations and their preferences can differ greatly, *SpielRaum* offers the facilitators different types of sessions. These have different emphases and can be tested and mixed according to the preferences of the participant group. To give the participants more autonomy and cater to their needs, facilitators should coordinate the employed methods with their group after showing them the different types.

Session type 1: themed game session

The main type of session is conceptualized as a **themed game session**. This means that the games available for play all have a common theme. This can be a game genre (e.g. 'Jump'n'Run', 'Open World', 'Racing' etc.), a specific subject (like 'combat', 'narrative', 'time', 'making' or 'emotion'), or a social issue ('representation of masculinity/femininity', 'environment',). The theme should always be appropriate for and relevant to the group, which might be at the facilitators' discretion. After a few sessions in which participants have familiarized themselves with the format, participants could be asked to choose the theme of the next session from a list or suggest one themselves. This aims to increase self-relevance. Relevance of a situation or topic to oneself is an important prerequisite for encouraging identity exploration in the design model proposed by Kaplan, Sinai and

Flum (2014).

After the briefing, participants can choose their preferred gaming devices (and potentially play partners in case of multiplayer games). The ensuing period of free play is the main part of the workshop. During this time, facilitators should ensure that the rules protecting the safety of the space are upheld, and provide assistance to players if desired. Participants are free to switch between offered games or consoles during this time, and take breaks when needed. The goal of this time period is to give the participants space to explore gaming on their own terms. The thematic restriction of offered games is in place to prevent participants from being overwhelmed (especially those new to gaming), and to create an interesting focus for the later discussion.

Following the schools' scheduling, there should be a 15 minutes break after the first 90 minutes. This will be announced by the facilitators. However, seeing as games can not always be paused immediately, participants may also take this break before or after, whenever it is convenient for them. This halfway point can also be used to gauge if anyone wants to try a different device or game that is currently occupied. If this is the case, facilitators may need to mediate to ensure everyone is getting the access they want.

The last 15 to 20 minutes (depending on the amount and complexity of the played games) should be dedicated to the debrief and discussion. Facilitators should give 10 minute's notice for the debrief to give everyone enough time to wrap up their gaming. This respect of players' time and immersion is important for maintaining the atmosphere of a safe space and signalling that their play is valid and valued. Once everyone is ready, participants are encouraged to share their experience and opinion on the played games. This is to foster self-reflection and gauge individual preferences, as well as to ensure that participants feel that their voices are heard and relevant (this contrasts with their position in gaming outside of *SpielRaum*). If facilitators also played during the session, they may do the same to demonstrate, and to reduce the hierarchical gap between facilitators and participants. If a game is mentioned for the first time, the participant is asked to briefly sum up the game they played for those who did not. These methods (summarizing, as well as 'thinking aloud') are recognized learning strategies (see Ellis, Denton and Bond (2014)) which facilitate meta-cognitive thinking. In this context, they are used to

This debrief is followed by (or may blend into) a guided open discussion, which employs similar strategies. The discussion revisits the theme of the session: the facilitators can prompt questions that relate to the theme, such as 'how did the game you played incorporate the theme?', 'what would you change about it?', or e.g. for the theme 'emotion' – 'how did the game you played make you feel? Can you say how it accomplished this?' etc. When formulating questions, facilitators can refer to guidelines for focus group discussions, e.g. Krueger and Casey (2014). If some of the games included marginalizing content (see Section 2.1), this should be addressed by the facilitators and discussed within the group. This way, *SpielRaum* hopes to sensitize participants to this type of content and raise their awareness for marginalizing elements to prevent a subconscious acceptance and internalization of the messages they convey. These questions aim to stimulate self-reflection and help digest the play experiences with the goal of facilitating critical game literacy.

Session type 2: focus game session

An alternative is the **focus game session**. This session has the same order of events as a themed game session. However, instead of multiple games with a common theme, these

sessions only focus on one or two different games. Facilitators need to account for the fact that this game needs to be provided for every participant, so games that are available on multiple devices are preferred (e.g. available for console and PC). This type of session is good for more elaborate games and games that are not round-based, where the player needs to play longer to get a feeling for the game world (such as open world games). This allows participants to better immerse themselves and form an opinion.

One possible variant of a focus game session could be a 'Let's Play'. Let's Plays are prerecorded or live-streamed gaming sessions where the player is commenting on their experience and the game. In *SpielRaum*, this could take the form of participants taking turns to play the main character and commenting out loud (with the game projected on a big screen), while the others spectate. This has the potential for interesting discussion, and hearing the thought process of players as they go. It also introduces participants to a popular part of gaming culture. However, this also poses the risk of judgemental commentary from the audience and makes the player vulnerable. This requires a lot of trust in the rest of the group and the integrity of *SpielRaum* as a safe space. This is of course striven for, but not guaranteed with every group, and especially not in early sessions. It also depends on the preferences of the participants, as not everyone may enjoy spectating and get bored. Therefore, this variant of the focus game sessions should only be proposed once the group has established mutual trust, and only in agreement with the participants (e.g. via anonymous vote).

Session type 3: crafting session

A third type of session are **crafting sessions**. These should be used sparingly as the main focus of this workshop is gaming, but they encourage engagement with the medium games on a different level and aim to foster creativity and self-expression. They should only be held once participants have had the chance to test out several games and have found some favorites, so that they have a frame of reference.

In these sessions, participants are asked to craft something game-related, whatever this may look like. For example, they can pick a favorite from the games they played and create fan art, or design themselves as a character from a favorite game. (Small scale) $cosplaying^{16}$ could also be a suitable activity. But it could also be designing a controller or console (skin), or writing fan fiction – maybe even crafting an idea or storyline for their own game. They may also choose to spend this time decorating or working on their Game Journal (explained below). If screenshots from games are required as reference, they can be put up on the projector screen. These prompts can be given as inspiration, but the activity is up to each individual. There are indications that free art-making increases self-efficacy and positive affectivity (Kaimal and Ray n.d.). Facilitators can also participate, but should make sure to assist where needed. These sessions should be announced in advance so that participants can bring additional supplies if they wish. Basic supplies like paper and paint should ideally be provided by the workshop.

In lieu of a discussion, at the end of the session participants may present their work to the group on a voluntary basis. This way, their engagement with the medium can be acknowledged and celebrated, hopefully strengthening their sense of belonging in the space surrounding gaming.

¹⁶Abbreviation for costume play. Cosplaying refers to the popular practice of replicating fictional characters' looks and dressing up as them. It is a subculture in which fans of many different media partake, including video games, anime or comics.



Figure 5: Concept art of the *SpielRaum* space (based on example floor plan in Figure 3)

The Game Journal

To supplement these sessions, participants are asked to keep a game journal for the duration of the workshop. This is central to the SpielRaum-format. The game journal is where they note down which games they played and when, what their thoughts were and what they had difficulties with. It is also a place for other thoughts and insights gained in the workshop, or discussion notes. Each participant will receive a blank notebook for this purpose at the start of the workshop, which can be customised later on (e.g. in a crafting session), and includes a loose sheet with an example as a prompt. This document is intended to be personal, but participants are free to share their journal at the end of the workshop if they wish. Time for journaling should be allotted in the sessions, and participants should make it a habit to jot down their thoughts during or after playing a game. Possibly, 5 minutes should be given before the debrief or after the discussion to make additional notes.

It is of course allowed to write into the journal outside of the workshop, but this should not be a requirement as it is not in the interest of *SpielRaum* to give homework. This serves multiple purposes. First, it allows participants to later reflect on their experience in the workshop. Further, they will likely experience an increase in game literacy. Being able to look back at the beginning and seeing progress could give participants a sense of accomplishment. This is a way to integrate "tangible success experiences" (Harrer 2019, p. 6), which Harrer identified through interviews with game workshop facilitators as an important part of an empowering workshop experience, at least in the western world. Third, the journal encourages participants to be creative and express themselves. Reflective and creative journaling has been used by Dunlap (2006) as a tool to record and give insight into personal development. This could provide participants of *SpielRaum* with a

tangible record of their potential improvement. Reflective journaling also encourages self-regulation, which contributes to mental well-being (C. Campbell 2009). The workshop's emphasis on the game journal should also signals participants that their gaming matters, and that their opinions are worth being recorded.

3.1.3 Game Selection

As discussed in Section 2.3, the development of game literacy is likely aided by trying out many games from a wide range of game genres. The compilation of a detailed set of criteria for suitable games is likely a research project in its own right that goes beyond the scope of this work. However, this section provides some reference regarding which games are (un-) suited for *SpielRaum*, and which need to be discussed further.

No-Go-Characteristics/Not suited for SpielRaum

In general, local content rating systems must be respected. For age-inappropriate games, like most shooters, facilitators can opt for age-appropriate counterparts with similar controls and mechanics instead. This way, participants still get to try out the genre. Games rated 18+ are not advised even for participants over 18, because they could potentially have disturbing content and it might not always be guaranteed that younger participants do not get a glimpse of the game.

Further, online-multiplayer games need to be excluded due to the unpredictability of other online players. However, if a game allows for servers that can be restricted to participants only, it could be the subject of a focus game session.

Conditionally suited for SpielRaum

As was established in the Background, a lot of popular games also contain marginalizing content (e.g. stereotypical gender representations, lack of playable female characters etc.). This in itself is not an exclusion criterion; on the contrary, it may encourage reflection and critical literacy. However, in order to raise awareness for this kind of content, it will need critical discussion at the end of the session, and possibly already in the briefing.

Further, very long games are not ideal for *SpielRaum*. They may take a lot of time to get into, and can likely not be played through within the workshop, which may lead to frustration. One way to address this could be within focus game sessions as mentioned in Section 3.1.2, but this will need to be decided for each game on an individual basis.

Well suited game characteristics/genres for SpielRaum

Games that are very suited for *SpielRaum* are games that allow for shorter game sessions to fit into the duration of a workshop session. Examples for this are games with a short game length, like many Indie games (who are often shorter than AAA-titles due to limited production resources) and arcade-style games like fighting or racing games which are played in rounds.

Other games that are often easy to interrupt since they consist of self-contained gaming segments are music, rythm and movement games (e.g. SingStar, Rock Band Taiko no Tatsujin, Just Dance) or party video games (e.g. Mario Party, Overcooked, Among Us).

These are just some examples. Ultimately, the facilitators will need to decide if a game is suited for the workshop. Longer games can also be continued over several sessions if that is something the participants are interested in, as long as proper savegame/account management is possible. Ideally, participants should be able to try out games from as many game genres as possible to get a good overview of what games exist and where there

preferences lie.

3.1.4 Documentation

SpielRaum can potentially be used for research purposes, presupposing participants' research consent. For example, it poses the question if previous findings regarding all female game interventions (see Section 2.4.1) hold true for this altered format. It also offers the opportunity to more closely investigate the process of game literacy acquisition. Potentially, it allows for the observation of non-male gaming patterns, although this needs to be treated carefully: as Jenson, Fisher and De Castell (2011) found, alleged 'gender-specific gaming' behaviors are better attributed to differences in skill level. Nonetheless, Spiel-Raum could offer insight into what sort of gaming behaviors are developed (especially by participants with no prior experience) when the gender-specific power relations are absent from the gaming environment.

In order to make use of these opportunities, well-planned documentation is important. Prior to the workshop, participants' ethnographic background should be recorded. This includes gender identity, age, ethnicity, previous experience with games, their access conditions at home and preferred game genres (if applicable). This can be done with an evaluation form, an interview or as part of a round of self-introductions at the beginning of the workshop.

Borrowing from previous workshops' methodology (see Section 2.4), self-evaluation forms could be used pre- and post-intervention. These could provide insight into how the workshop has impacted participants, regarding interest in game development, sense of belonging, self-efficacy or personal awareness of privilege and discrimination in the context of gaming.

Additionally, this intervention could be seen as an ethnological study similar to the EGC project (Section 2.4.4). As an example, researchers could observe how girls new to the medium go about acquiring game literacy in a safe setting. Therefore, ideally sessions could be audio and video-recorded, and the facilitators should take field notes. Interviews with the participants after the workshop can help to improve the format and gauge the impact of the intervention.

This section merely serves to point out some of the intervention's research potential; specific forms and questionnaires to collect this data should be determined by the respective researchers and adjusted to their needs.

3.1.5 Advertisement

This workshop must include supplementary educational work. Preceding the workshop should be a presentation for parents and teachers. Here, the facilitators can address the benefits of gaming for girls, and provide information about games and gaming as well as addressing common misconceptions and topics like addiction, screen time and cost. This is in hopes that children of marginalized genders who wish to join do not meet with resistance from their parents or legal guardians. Boys with no access to games due to parental restriction may also profit from this.

However, care needs to be taken to not miscommunicate the workshop's purpose as a recruitment tool for STEM careers. As has been discussed, increased interest in STEM is currently a positive side effect of female gaming. Yet as Hosein puts it:

"[Using games as a signpost for girls' PSTEM careers] may also further stereotype or socialise girls into the idea that girls who go onto [sic] to do PSTEM degrees have to be gamers. Hence a balanced but cautious approach needs to be taken that inspires those girls who are already gamers without alienating those who are not." (Hosein 2019, p. 232)

The *SpielRaum* concept might be such an approach, as it is directed at non-male teens of all experience levels, and does not have a primary goal of recruiting girls to pursue STEM-fields.

3.2 Challenges and Limitations

There are of course several limitations to consider. For instance, the conduction of the workshop largely depends on a willing school as a cooperation partner for infrastructure, participants and space. While the school might provide the room, and ideally a projector for the workshop, equipment like games, game consoles, TVs or sofas need to be sourced elsewhere. Facilitators' work and possibly lodging need to be paid for. Thus, funding is also a big limitation and is one of the first issues to be resolved next to finding a cooperative school. Since this format is an activist format with research potential for media studies and sociology, it may qualify for research or government grants.

As touched on in Section 3.1.5, parental authority is also a limiting factor. Ideally, *SpielRaum* is open to any non-male child who wants to participate. However, since the workshop's target group are minors, it is their legal guardians who decide if they are allowed to attend, no matter how eager the child may be. The only way of addressing this issue is preliminary educational work in an effort to convince parents of *SpielRaum*'s necessity and intention.

Furthermore, it needs to be said that *SpielRaum* has ambitious goals (Section 3.1.1) but the intervention is very small-scale. Therefore, it will have limited impact, but it still proposes a new format to inspire future interventions. Moreover, the version of a *SpielRaum*-instance designed in this thesis can easily be integrated into regular school schedules, thus it has the potential to be repeated in different locations at other schools. This could extend its reach. The impact that even one workshop instance can make is also illustrated in Figure 6. This image shows that many of the participants of one of the *Pixelles* Game Incubators (see also Section 2.4) have gone on to make more games and also create their own game-related events.

Another limitation is that this instance of the workshop is specifically tailored to a very specific setting (see Section 3.1.2). While care has been taken to ensure that it is adjustable, an adaptation for a different cultural context still poses a challenge and requires someone with sufficient sociological knowledge and game literacy to modify it. In any case, it is advisable to have in-group facilitators involved in the design and conduction of a *SpielRaum*-instance. It also not guaranteed that this format is suitable for every cultural setting; and some children may possibly never be reached with this due to their social circumstances; e.g. because their socio-economic status or family life makes attending impossible.

Additionally, the workshop's success in teaching media literacy depends heavily on participants' cooperation. It involves processes of (self-) reflection, which of course cannot be forced. However, even if all a participant takes away from the workshop is that they

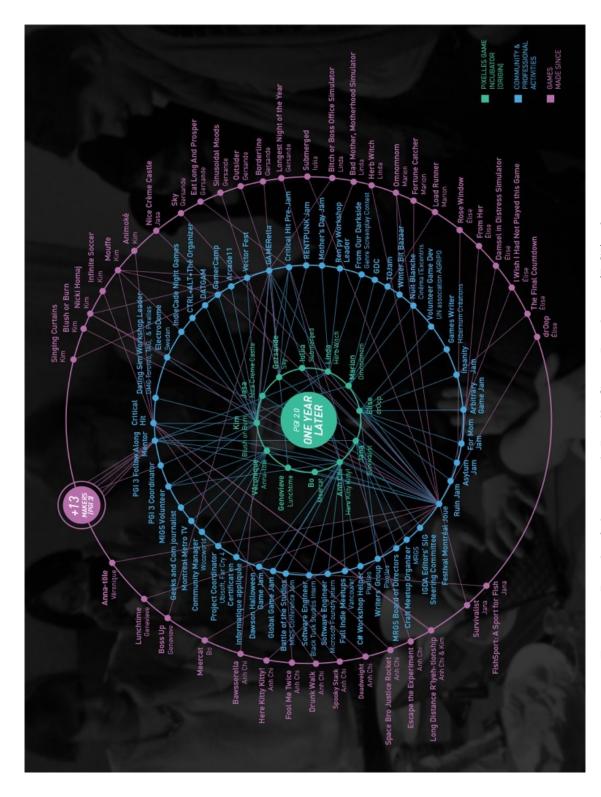


Figure 6: Reach of the second Pixelle Game Incubator (PGI) after one year. Reprinted with permission from Pixelles / Rebecca Cohen-Palacios (2015)

like games and want to play them further, *SpielRaum* will have reached one of its goals of having provided a point of exposure.

Critique has been voiced that in a school where a *SpielRaum*-workshop takes place, children that are not able to participate may be marginalized even further because participants have access to something non-participants do not have. While participants may be in a privileged position for the duration of the workshop, it is also designed with the hope that they will carry their new knowledge or hobby outside of the workshop and share it with other peers.

Lastly, the recruitment of facilitators could prove difficult. Especially the second type of facilitator, who could be a game scholar with an interest in gender studies (or a game literate sociologist specialising in gender issues) may be hard to find. Since SpielRaum takes place over a longer period of time, they will also need to be able to stay somewhere where they can commute to the workshop location. Therefore, the locations of SpielRaum workshops may be determined by the availability of facilitators. I myself aspire to conduct a SpielRaum instance near my home, taking the role of the game literate facilitator. This way, I could further refine and develop the original SpielRaum-concept (including example session plans) to put less design responsibility on other potential facilitators, possibly making recruitment easier.

3.3 Reflections

In designing this workshop, I was met with internalized views that I did not know I had. Conceptualizing the workshop forced me to face them as I needed to scrutinize every design decision to identify which messages they convey.

For example, initially the goal of the workshop was to teach girls how to play games of many different genres 'correctly', to give them the skills they 'need' to participate in discourse and gaming. This may be part of game literacy but this is not all there is to it. This kind of goal-oriented mentality and approach implies that marginalized children can only enter such spheres if they play 'by the rules' (the literal rules of play as well as the social protocols in gaming communities). This is of course counterproductive, seeing as these rules are likely made by the very people trying to keep them from joining the space in the first place. The goal should be to make the participants realize they do not have to measure up to the made-up requirements often put in place to safeguard a 'Gamer' identity. This workshop should give girls the safe environment to claim space within the game domain on their terms, in any way they want.

In fact, there is still a measure of goal-orientation in the workshop: the goal has been shifted to teaching participants how to approach games critically and with awareness. This is important, yet it is also shifting the responsibility of combating marginalization onto the marginalized parties. Under current circumstances, unawareness and lack of critical (game) literacy amounts to defenselessness against marginalization from the medium. Hopefully, with the continuous effort of interventions like *SpielRaum* and the ones addressed in Section 2.4, as well as a much needed paradigm shift in the games industry, this will no longer be an issue in the future.

Moreover, I had to reflect on my own exposure and access to video games, and tried to analyze which elements were helpful and which were detrimental to me personally, and then try to find if these were points that might apply more generally to the demographic I want to reach with this intervention. Of course, whether or not the design meets the

needs of the target group still remains to be tested. However, this method of designing could be relevant when adapting the format to a different cultural context or creating a different format. It should then include interviews with in-group people who have defied the odds and entered the game domain (ideally, these should facilitate the workshop). It should be inquired what their circumstances growing up were, what they felt they had that helped them get to where they are, what challenges they faced and what they wish they had had. These insights can then be used to adjust the contents or methods of *SpielRaum* to do the target group's needs justice.

4 Summary and Conclusion

This thesis has focused on the problem of gender-related injustices in children's access to video games. It has touched on the larger context in which the problem of game access inequalities are embedded. The lack of non-male participation in games starts with the fact that children are socialized to think of games as a medium for boys and men unless otherwise stated. This puts boys in a position of privileged access and leads to girls often yielding or deferring to their male family members when it comes to playing or game access.

The resulting lack of core game knowledge (established as part of game literacy in Section 2.3) may make it difficult to participate in mainstream gaming. However, the difference to boys with little access to games is that non-male children are already marginalized from the medium because of their gender. Therefore, their restricted access – when paired with the socialization of games as a male medium – may make them attribute the resulting lack of skills or knowledge to gender differences. This may further deter them from pursuing their initial interest in games.

In order to provide non-male children with an equal opportunity for game access, the thesis has proposed the *SpielRaum*-concept. For this, previous game-related workshops for teens of marginalized genders have been examined regarding their format and effects in Section 2.4. With the exception of Jenson and colleagues' work (see Section 2.4.4), most of them have focused on teaching participants how to create their own video games. This has led to some selection bias in the past, as many of the participants already had some amount of game literacy. *SpielRaum* on the other hand proposes a play-centric approach in hopes to also reach children who had not had interest in or experience with games previously (though it welcomes all experience levels). By providing a safe space to play, *SpielRaum* hopes to give children of marginalized genders the possibility to develop core game knowledge if they wish.

In addition to this, it also aims to facilitate critical game literacy. In Potter's (2018) model, media literacy enables literates to have more control over which information conveyed through media is processed and how (for example marginalizing messages in games). Thus, sensitizing participants to marginalizing content through guided discussions and reflection exercises like keeping a game journal, *SpielRaum* intends to nurture their ability to recognize and consciously reject marginalizing messages in the games they play. This aspect of game literacy can therefore become a tool of self-defense against implicit marginalization.

All in all, *SpielRaum* provides one possible answer to the research question regarding the design of safe spaces that allow for exposure to games and fostering game literacy. Although this format has its limitations, as discussed in Section 3.2, and similar formats exist (see Section 2.4), *SpielRaum* still offers a unique approach to the research topic of increasing access to games for teens of marginalized genders. It is of course a speculative design that still needs to be field tested regarding its methods and concrete session plans. It also depends on the facilitators' ability to adjust the content to their individual groups' needs. At its core however, *SpielRaum* hopes to accomplish that participants have a chance to access games with similar conditions to their male peers'.

To revisit the introduction and my reason for writing this thesis: current processes of socialization and marginalization result in circumstances where it is unusual for girls to play video games (that are not deemed "girl games"), or get good at them. Many boys

can find peers to play and discuss video games with, as it is not unusual for them to do so. My relationship with games growing up included free access to games without others' involvement, as well as friends to play and talk about games with. This resembled the access conditions of my male peers. Of course, not everyone who is given access to games necessarily loves them (or goes on to study them, like me). However, I strongly argue that it is important to give children of marginalized genders the choice to decide this for themselves. Currently, many non-male children may become tired of handing over the controller to their male relative and withdraw from gaming, or never even consider it as a hobby, simply because they have internalized self-limiting gender norms.

The design of *SpielRaum* is therefore my reply to the lack of choice non-male teens often have in their non-involvement in games. It should provide them with access to games, and hopefully manage to demonstrate how diverse and fun this medium can be. It should show them that games are something they can participate in if they choose to do so. They can then decide for themselves. And even if they find they do not like games, they had a chance to try them out in a judgement-free space, and it will have been their conscious choice. Hopefully, at one point the act of playing video games will no longer be gendered. But for now, the *SpielRaum* concept is my contribution to increasing the cultural accessibility of games for people of all genders.

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