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(Digital) Games Don't Care about Social Categorizations: Enabling Inclusion Through Game-based Learning in Educational Settings

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(DIGITAL) GAMES DON'T CARE ABOUT SOCIAL CATEGORIZATIONS: ENABLING INCLUSION THROUGH GAME-BASED LEARNING IN EDUCATIONAL SETTINGS

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Abstract: *The Global Initiative for Sustainable Development (Sustainable Development Goal 4) proclaims education for all, which means that people's individual potentials should be promoted, their heterogeneous abilities and interests should be appreciated, and existing resources should be used for educational processes. In recent decades, the game-based learning approach has gained prominence in the educational landscape. The approach proclaims a paradigmatic shift in education away from efficiency-oriented, standardized testing to co-constructive, game-based learning processes. This framework opens up the research question: How can digital and analogue games contribute to enable inclusion in educational settings? The empirical data consists of audio and video recordings of an Erasmus+ workshop with 19 participants playing eleven (digital) games for approximately two hours. The data provided was secondarily analysed using the Documentary Method and a participatory research design. The results show that the players were confronted with social hierarchies and power structures while playing the games. Interestingly, players directly reflected on their actions, behaviours, and assumptions. In doing so, participants reconsidered their deeply held assumptions and habits of social categorization as games provided the space for repetitive actions. Thus, players tried different behaviours and varied multiple solution paths. Moreover, the results show that players' self-efficacy increases during the game. The study highlights different types of (re)acting to avoid social categorization and promote inclusion.*

Keywords: *inclusive education; (digital) game-based learning; participatory research; social categorization; dis/ability; culture; gender*

Introduction

Starting from a popular point of view, knowledge acquisition and education are more associated with factual knowledge, passive reception, and pressure to perform than fun, leisure and sociability. From a scientific point of view, the discrepancy lies in the constitution of nowadays education. The 21st century education is characterized by constant innovation, advancing globalization and a network of active learners spread all over the world, while institutions, however, embody traditional and outdated educational settings. This problematic situation is more visible than ever, especially now during the COVID-19 pandemic. One aspect of this problematic situation appears in the form of the digital divide. The OECD (2001, p. 32) defines the digital divide as a

gap between individuals, households, [institutions], business, and geographic areas at different socio-economic levels with regard both to their opportunities to access ICT [Information and Communication Technology] and to their use of the Internet for a wide variety of activities.

In the following, a distinction must be made between the micro and macro levels. Research on the macro-level is worth mentioning with Cruz-Jesus, Vincente, Bacao, and Oliveria (2016), who examined the impact of the digital divide on educational disadvantage in 28 European countries. Surprisingly, the study shows that countries with high educational standards suffer from the digital divide to almost the same extent as EU countries with lower educational standards (ibid., p. 81). The authors attribute possible circumstances to certain marginalized and vulnerable people (ibid.). They refer to digitally conditioned inequalities among people with low socioeconomic status, low educational resources, with older age, disabilities, migration background, but also women. It seems that the dimensions of social inequalities influence each other. At the micro level, Rahamin (2004) examines person-centred social exclusion through access to and use of ITC. She emphasizes the importance of using ITC potential to reduce exclusion (ibid.). In line with Bosse (2012), ITC must be actively used to address and overcome social inequalities.

To overcome these above-mentioned issues, (digital) games are increasingly used in institutional and educational settings (Prensky, 2001). Playing games are well-known forms of interactions providing wide ranges of implicit educational processes over the lifespan (McGonigal, 2011), and promote a common and collaborative space for learning (Prensky, 2001). However, Linderoth (2012, p. 45) shows that games do not fulfil the purpose of institutional learning, as players "are able to discover and utilize affordances without always having to develop skills and knowledge." The state of the art also shows that research is primarily conducted on the negative influences of games on personal development (Adachi & Willoughby, 2012). The authors list a total of over 200 empirical studies that examine negative effects of games on the mental state of individuals (ibid., p. 158).

Following the identified research gap of a lack in research about game-based learning to promote inclusion, the following study focuses on the potential of game-based learning about social categorization and inequalities as well as its effect on promoting inclusion in institutionalized settings.

Research Questions

The paper proposes the use of (digital) games to promote inclusion and encounter social categorization based on exclusive practices and discrimination related to disability, culture, and gender. In doing so, the paper presents a constructivist discourse on inclusive education. The identified research gap on the use of game-based learning for enabling inclusion guides the research process considering the two research questions:

1. How can digital and analogue games contribute to enable inclusion?
2. How do players encounter social categorization such as dis/ability, culture, and gender while playing games?

The following section, *Theoretical Framework*, shows the state of the art and presents a review of literature on inclusive education with (digital) games. It concludes with the identification and definition of four theoretically potentials which games offer for inclusion. The *Methodology* section describes the methods used, such as the participatory research design, data collection with sampling, and analysis using the Documentary Method in the tradition of Bohnsack (2003). In the *Empirical Findings* section, relevant outcomes are presented and then discussed against the background of the theoretically identified potentials. Hereby, the research focuses on the micro level in educational settings and explores the role of play in enabling inclusion. Finally, an overview summarizes the findings and presents considerations for further research as well as suggestions for school development.

Theoretical Frame

Social Categorization in Educational Settings

Exclusionary practices originate in assumptions about social inequalities that lead to social differences. Prengel (1995) describes three main aspects of exclusion in educational settings that she identifies for the German-speaking area:

1. Spatial and social exclusion occur in and through segregating institutions.
2. There are different special education systems that focus on their subject instead of working together.
3. Hierarchies and power structures form the basis of the production of social inequality.

According to Prengel (1995), exclusionary practices express themselves particularly in and through the three dimensions of disability, culture, and gender. The following paragraphs give an overview of the definitions concerning these three categories.

The perspective of dis/ability is not a medical or individual deficit, but it is socially constructed through and in educational practices (Oliver, 1996). To understand this construction, the discourse of ableism plays a central role. Goodley (2014) posits ableism as an attitude toward human abilities and capacities that are socially desirable. Behaviors and attitudes that deviate from these desired characteristics create disability (ibid.).

The perspective of culture is fluid and not individualistic (Aldrigde, Kilgo, & Christensen, 2014, p. 111): "The goal of transcultural education [...] is defined as interacting with others by overcoming or transcending cultural barriers that limit human interactions." Following this approach, culture is a construct that requires shared interaction to overcome cultural labels and categorizations (ibid.).

The perspective of gender as the third dimension of the three social categories is not biologically binary as socially assumed (Butler, 1991). Rather, it is also constructed like disability and culture. People are raised to act within a normative binary framework of male and female (Gschwandtner & Jakob, 2009, p. 59).

In summary, all three social dimensions can be described as social constructions. Prengel (1995) proclaims a common pedagogical approach to overcome exclusionary practices that are

independent of social categorization into dis/ability, culture, and gender. The focus lies on the provision of access to a common system to facilitate inclusion for all.

Inclusion

The literature presents the German-language discourse on inclusion, which is influenced by international discourses. The reasons for focusing on the German-language discourse are: (1) The data has been collected in the German-speaking country of Austria. (2) The national discourse on inclusion has some formulation inconsistencies compared to the international discourse, due to the German and Austrian CPRD commissions' translation of inclusion as integration. While Austria has already revised its choice of words and uses inclusion, Germany continues to insist on using the word integration. Biewer (2017, p. 129) problematizes this translation since these two terms are related to two completely different concepts. That's why theoretically, inclusion must be considered in relation to its antonyms exclusion and integration. Following Fuchs (2016), these three terms form a fluid, dynamic and interdependent continuum.

Exclusion means spatial and social exclusion and prevention of participation for individuals, but also for entire groups (ibid., p. 399). This assumption about exclusion follows principles of differentiation based on a normative value system. The system defines desired and required attitudes, skills, and behaviors that are expressed in socially desirable rules (Goodley, 2014).

Such processes of exclusion are imperative and the basis for defining integration (Muth, 1986). More in-depth, Hinz (2008) identifies integration as an adaptive process. This is an attempt to meet existing societal norms, values, and desired attitudes by overcoming person-centered deficits.

In contrast, the UNESCO (2005) defines inclusion

> as a process that addresses and responds to the diversity of needs of all learners by increasing participation in learning, cultures, and communities and reducing exclusion within and from education. It involves changes and adaptations in content, approaches, structures, and strategies, with a shared vision that includes all children of the appropriate age group and a belief that it is the responsibility of the regular system to educate all children.

This quote sums up all the relevant aspects of inclusion. In the educational context, it considers all learners compared to approaches that focus primarily on children with disabilities (Biewer & Schütz, 2016; Norwich, 2005). This broad understanding includes all learners, regardless of social categorization such as disability, culture, and gender.

The Potential of Game-based Learning for Inclusion

As already demonstrated in the introduction, the pedagogical approach of game-based learning is used for learning processes to overcome traditional settings like recalling factual knowledge, teacher-centred education and engage learners in their own learning processes. Nevertheless, the identified research gap shows that the nexus of game-based learning and inclusive practices is still underrepresented in academic conversations. One goal of my master's thesis was to theoretically identify the key potentials of game-based learning, which promotes inclusion and overcomes social

categorization (Möhlen, 2019, p. 42). The following section summarizes the four identified potentials of games for inclusion:

1. *Active encounter with social categorization and diversity:*
   Gaming is a social activity. This includes single-player games because it creates an artificial activity with the virtual reality in the game (McGonigal, 2011). This means that players interact with the game, but also with their fellow players. Social learning is based on such interpersonal interactions. In this regard, the game can be a catalyst to encourage interaction to meet diverse people. Players need to engage with the diversity and heterogeneity of their fellows to succeed the game.

2. *Exploration of individual potentials and scope of action to foster participation:*
   Players recognize their own individual needs and skills through playing (Schluchter, 2015). Vice versa, players are confronted with needs and skills of their team members (ibid.). By reflection one selves as wells as others´ skills and needs, games force the player to reflect on own habits and efficacy. Therefore, players learn through past experiences and anticipate, test, choose, create, imagine, and plan while playing (Gee, 2013). In other words, they actively explore their own self-efficacy which can lead to a higher self-esteem (McGonigal, 2011). Following these assumptions, van der Spek (2012) elaborates that, above all, the feeling of being competent leads to active engagement.

3. *Growth in motivation through partial success as an empowerment strategy:*
   As already mentioned above, traditional learning does not foster learners´ engagement and motivation. Thus, (digital) games seem predestinated to cover these lacks. Well-designed gameplay meets obligations like persisting past failure, ordering problems, receiving feedback (Gee, 2013; McGonigal, 2011). Partial tasks guide learners' step by step and different levels offer space for motivation by succeeding requests (Le, Weber & Ebner, 2013). Furthermore, self-developed gaming strategies and cooperating with others motivate learners to continue and foster solution thinking (Gee, 2013; Le et al., 2013).

4. *Learning beyond traditional education fosters active participation*:
   Learners lack motivation because learning styles and didactic approaches are not contemporary. Learning processes need to be adapted to contemporary demands such as active participation, experiences and digital learning environments (Gee, 2013; McGonigal, 2011; Prensky, 2001). In this regard, games provide a space where learners are actively involved in their own learning processes and can act as creators (Goodley & Runswick-Cole, 2010). In summary, the concept of game-based learning opens up a shared and collaborative space for educational processes away from traditional contexts and strenuous performance (Prensky, 2001).

Methodology

Participatory Research Approach

The Participatory Research Approach has developed in the last decades in the tradition of Action Research (von Unger, 2014). Both aim to integrate scientific research and emancipatory purposes

in order to sustainably promote democracy, equality and justice. In comparison, the Participatory Research Approach has been extended to include the aspect of participation (ibid., p. 8). It enables participation for all, which is closely related to inclusion, and pursues active involvement of those affected. In the research context, it claims to establish research with people, not at or about them (Bergold & Thomas, 2015). This approach advocates three main principles:

1. Knowledge acquisition is a learning process and happens collectively (Reisel, Egloff, & Hedderich, 2016).
2. Everyone involved has equal rights and acts within their own perception of reality. Their appreciation and acceptance lead to empowerment being a central aspect for participation (von Unger, 2014).
3. Knowledge production nowadays is connected with economic and practical demands. It also brings about a change in knowledge generation (ibid.) In this process, the active participation of marginalized people affects scientific theory and social practice. It creates a space for sharing experiences (Reisel et al., 2016).

Considering these assumptions, the sample presented in the next section forms a heterogeneous group representing different abilities, gender, age, socioeconomic and migration background.

Data Collection & Sample

This study results from provided data conducted as part of an ERAMUS+ project called Europe in Crisis (2016-2019) (eCrisis, 2017) and used secondarily. The datasets (video and audio recordings) show 24 gaming sessions which took place in a 1.5-hour gaming workshop in 2016. The workshop represents the kick-off event of the Erasmus+ project eCrisis. The aim of the workshop was to identify habitualized structures in a heterogeneous group while the participants play without regulating guidelines (Schmölz, Kremsner, Proyer, Pfeiffer, Möhlen, & Karpouzis, 2017). 19 participants, from different contexts (university students, clients from disability and refugee support organizations, care persons), played ten provided digital and analog games. They could play what they wanted, with whom they wanted; the researchers did not set any specific rules beforehand. The goal was to study the participants' interaction, communication, habits, and behavior patterns while playing. They were free to interact normally alongside the already artificially constructed situation within the research context. Beforehand, all participants were informed about their rights. All have signed an informed consent; with which they confirm that their actions can be used for scientific purposes. Against a background of research ethics, such information is particularly important for vulnerable and marginalized persons. For this reason, information was provided in accordance with the rules of plain language.

Data Analysis

Following the participatory research design, three workshop participants were asked to contribute to the data analysis for my master's thesis. We used transcripts of the collected audio and video recordings for the analysis. In addition, I prepared all necessary information about the workflow, methodological issues, and content issues in simple language.

The chosen Documentary Method in the tradition of Bohnsack offers a subject-orientated hermeneutic approach to qualitative social studies (Bohnsack, 2003). The approach uncovers social

phenomena through a constructivist perspective (ibid.). Accordingly, the research focus shifts from mere definitions of what the phenomenon is to how the phenomenon is reconstructed by the participants (ibid.). Bohnsack (2003) points out that social phenomena are connected to reality, which is expressed in interpersonal and intrapersonal interactions. By analyzing these interactions, shared knowledge, habits, and incorporated *modus operandi* can be reproduced (ibid.). Sturm (2013) corroboratively adds that the analysis of knowledge and habits reveals shared experiences. Visualizing these basic interactions is considered a premise for exclusionary and inclusive practices (ibid.).

Empirical Findings

In the following sections, empirical findings from 24 different gaming sessions are excerpted. Different vignettes show exclusionary and inclusive practices during gaming. The transcript excerpts show the communication and habits of the players that lead to exclusion or inclusion. The underlying assumptions, beliefs, habits, and convictions of the players are analyzed. The analysis follows theoretical approaches to social categorization based on the intersection of dis/ability, culture, and gender, as well as inclusion and exclusion. Following McGonigal (2011), a game session begins with the first moves and ends with the determination of the winner(s).

Excluding Practices while playing

The first type highlights practices that exclude individuals during play. Play session 7 (lines 19-35) illustrates such practices. In session 7, participants Anja, Christopher, Linda, and Marcus play Ludo, a game for four people. Each person plays four characters. To win the game, all four characters must reach the goal. However, Christopher leaves the session to support another workshop participant. Maja takes Christopher's place at the table.

> Maja: Look at me. Guess who I am. Look at me. Guess who I am.
> Linda: No, Christopher is going to continue later.
> Marcus: Yes, he plays by himself.
> Christopher: I am right back.

The transcript shows that Maja asks the group members who she could be. This leads to the interpretation that Maja wants to take Christopher's position in the game. However, Linda verbally denies Maja's idea. Marcus supports Linda's denial by confirming her statement. It is likely that Linda and Marcus interpret Maja's question as a request to replace Christopher. However, their response is not consistent with Maja's desire to be part of the group. Christopher says that he will fill in again later, even if he is aware that it interrupts the flow of the game. These reactions do not stop Maja from directly asking Christopher to replace him.

> Maja: Christopher, can I play instead of you?
> Christopher: I play anyway.
> Marcus: Indeed, he plays right away.

The above excerpt shows Maja's changing strategies from implicitly asking to explicitly demanding. Despite Maja's progressive communication, Christopher confirms his previous statement that he

will continue the game. To emphasize Christopher's decision, Marcus confirms. In the next section, the action shifts from active exclusion to pointing out alternative ways to play.

> Christopher: Do you want to play anything else, don't you?
> Linda: There are others who do not play anything.
> Christopher: You can also ask them if they want to play anything. We offer a lot of games over there.
> Maja: Yes but…
> Christopher: Memory for example.

Both Linda and Christopher realize that Maja wants to be part of the group. Therefore, they also change their strategies so that Maja does not become part of the group. Instead of communicating directly, they try to show Maja alternative ways to participate in other gaming sessions. This change in interaction can be interpreted as a passive form of exclusion compared to the earlier form of active exclusion. It exposes Christopher's and Linda's intentions to exclude Maja. Christopher does not want to actively exclude anyone. Nevertheless, he excludes Maja in order not to run the risk of being excluded himself. In comparison, Linda's intention is vague. It could be that she does not want to exclude Christopher because he is a constituent member of the playgroup. Instead, she excludes Maja because she is the new addition. This leads to the interpretation that Linda shows loyalty to Christopher and accepts the exclusion of Maja in return.

This empirical example shows that there is a central reason in which exclusionary practices are expressed during gaming. Exclusion occurs when players feel that their own status is at risk, even if they interrupt the whole gaming session. Two different types of communication emerge. First, there is direct communication, which leads to active exclusion. If the player threatened with exclusion actively resists, a second strategy occurs. Now a passive exclusion is intended by pointing out alternative possibilities of action. This middle course shows integration efforts, but not into one's own gaming group, but into another. The players evaluate the situation according to the following pattern: Since the group has already constituted itself, there is no place for a newcomer. Even if one of the constituent players is no longer physically present, he is recognized as part of the group. Although there is a substitute player, the group does not replace the player and show loyalty to the other player. The normative framing of the game leads to the dilemma situation that someone must be excluded so that another person remains included.

(Inter)cultural Encounters Through Gameplay

The second type represents cultural aspects related to exclusionary and inclusionary practices during play. The example stands for intercultural encounters and their linking in order to transform them into inclusion. In play session 5 (lines 144-159), participants play Laura, Maja, Martina, Ornella, and Stella Jackstraw. The transcript shows that Laura, Stella, and Martina recognize jackstraw sticks as cutlery that originated in Western Asia. This indicates a shared knowledge of different cultural eating habits.

> Laura: We do have chopsticks now.
> Stella laughs.
> Laura: Going out for a meal.

> Martina: We could go out for a meal.
> Maja: People, I need one more chopstick.
> Stella: You could also skew it.
> Laura: Yes, skew it.
> Ornella: I can join going out for a meal. Wait. I already have two pairs of chopsticks.
> Stella: oh wow.

Maja notices that she is missing a chopstick. This expresses her user knowledge about eating with a pair of chopsticks. Interestingly, Stella suggests an alternative way of using chopsticks. This again confirms the interpretation of a shared idea of how to use chopsticks as cutlery. Ornella joins the conversation and talks about her idea of going out to eat because she has won enough jackstraw chopsticks to use as chopsticks. Here, the interpretation arises that owning more than one chopstick is a prerequisite for participation. Ornella's statement indicates that she is able to join the group to eat, while Maja is not. Maja only possesses a jackstraw stick, which symbolically represents a potential risk of exclusion. It should be pointed out that normative standards have more of an effect here than Stella's alternative proposal, so Maja could also participate. The next section presents a plot twist and a central change in Ornella's behavior.

> Ornella: I can go for a meal twice (3 sec) If I would pass you one…
> Stella: Do you share with me?
> Ornella laughs.
> Maja: Thanks.
> Stella: Amazing!
> Maja: Wow wow wow

Ornella reiterates that she can participate in the meal while calculating her opportunities to eat with chopsticks in relation to her collected jackstraw chopsticks. Here, the game shows a transfer opportunity to design mathematical learning processes. The transcript further shows that Ornella pauses for three seconds to think aloud reconsidering her own options, in which she is interrupted by Stella. Stella asks if Ornella wants to share her won sticks. The interaction bases on a common understanding of exclusion and an attempt to include Maja and her. Ornella enables the sharing of her stick so that no other group member is excluded. Since Maja responds with gratitude, it can be assumed that both Stella and Maja received a jackstraw stick from Ornella.

Based on this excerpt, it can be said that play has two functions. On the one hand, it shows a subject didactic learning, in the case computational and mathematical skills. Here, the potential of playing occurs as an activity that promotes learning beyond traditional education. On the other hand, games grant space for everyday associations. Here, the associations are based on shared knowledge of cross-cultural eating habits. It shows that habits of other than European origin are already deeply embedded in the players' knowledge. Nevertheless, the association influences the participants' play behavior. Using this cultural encounter, players negotiate participation on a meta-level. It is interesting to note that the original ways of using the sticks form a rigid normative framework, which is not overcome although there are alternative ways of using them. Only when the basic idea of winning moves into the background and the won sticks are shared, the risk of

exclusion is minimized while inclusion gains in importance. Compared to the first example of exclusionary practices, the game mode is adapted so that no one is excluded.

Gender Binary Reproduction Based on the Game Design

The fourth type is called gender binary reproduction and includes stereotypical and traditional gender ascriptions. In game session 2 (lines 109-124), Stella and Ornella play *This War of Mine*. It is a war survival video game from a civilian perspective (Gabriel, 2007). The goal is character survival by satisfying basic human needs such as food, medical treatment, interpersonal interactions. The following transcript section begins with the identification of the game characters. Stella identifies a character named Bruno. She also expresses that she knows nothing about this character. Ornella instructs her that they should play Bruno.

> Stella: Bruno is back. Who is Bruno?
> Ornella: We are him.

This short excerpt opens two important perspectives. First, Ornella is shown as an expert who already overlooks the situation, while Stella needs time for further orientation. Second, the game has predefined one male character. This last aspect plays an important role, as the next section shows:

> Stella: What is that? Gun bullet (.) inventory (.) Wood is predestined for fire aaaaand gunpowder
> Ornella: We need food again.
> Stella: Yes, we only own sugar and conserves.

Again, Stella is thinking out loud, which shows that she is still exploring the game setup and inventory. In doing so, she only uses armor-related expressions. Meanwhile, Ornella points out a lack of food. Stella interjects that they have little food. The above excerpt is interesting in light of the fact that armed conflict or defensive situations are traditionally attributed to males, while women provide for the wellbeing. Ornella shifts Stella's focus from arming herself to obtaining food. Even though they play the male character Bruno, her interactions show gender binary characteristics.

> Ornella: (…) I bet it will not be necessary. (…) Yes, we already own it.
> Stella: We already own sugar. (…) But we take it, it is eatable (…) We should have a look what does sugar say? (…) It says, there is no liquor without sugar. An essential ingredient for fermentation process.

Ornella seems to be pessimistic because she could be looking for something else. This assumption is confirmed by Stella's statement. She repeats that there is already enough sugar. Thereupon she relativizes her statement true to the motto: the more the better. Here a fundamental change in Stella's behavior becomes visible. She takes into account the game context of the war and conflict situation. It is no longer a matter of choice which food she collects. Furthermore, the transcript reveals that the game teaches factual knowledge. Specifically, the game provides the information that sugar is a core element to produce more food, i.e., alcohol. In this situation, two aspects must be considered. First, alcohol is not an essential food for physical survival. This leads to the question

of why alcohol plays an important role in this game? The game content of war and armed conflict opens a space for psychological stress situations in which alcohol can act as a relaxing substance. Secondly, alcohol and alcoholism are traditionally associated with male behavior.

This example shows that here, too, factual knowledge is actively conveyed through the game. Thus, the game has an educational function. Furthermore, the game offers the opportunity to confront gender-specific behaviors. Although both players seem to be female, they play with one male character. It should be noted that the game design is inadequate in terms of gender sensitivity. It did not offer any choices on gender, but also on the number of characters. However, anchored gender binary behaviors are also evident during game play. The game illustrates typically male and female attributed activities through its design. Players opt for the typically female activity even though their character is male. Thus, a first breaking of traditional thought structures takes place, although the female players perform gender-typical activities.

Inclusive Processes Through Supporting Each Other

The last vignette represents inclusive processes during play. The example describes a supportive environment with respectful behaviour. In session 5 (lines 180-194) Laura, Maja, Martina, Ornella and Stella play Jackstraw.

> Stella: This one! But its position is non-ideal.
> Maja: Yes (.) choose these, choose these both. I mean choose both.
> Stella: Yes.
> Maja: And you can try it like this: Put this one under the other one and push it (.) right.
> Stella: Gosh, you know what? I try to pull it.
> Laura: Yes, I had the same idea.
> Martina: Indeed, it is a good idea.

The passage shows Stella's uncertainty about her next move. She thinks out loud about how she can best perform. Maja supports Stella by motivating her and actively giving her advice. This engagement motivates Stella because it gives her another opportunity to move on. She also receives support from Laura and Marina to perform as intended. In this process, the players follow a collaborative strategy even when they play against each other. In the next part, it is emphasized that Stella calls for support again.

> Stella: Please tell me when it shakes. Because I cannot watch it, if I try to focus on the upper part.
> Maja: Take care! Take care! Take care! Take care!
> Stella: Did it already shake, Martina?
> Maja: No take care! Take care!
> Martina: No, I do not see anything.
> Ornella: I do not see anything either.

Stella indicates that she needs support due to her inability to focus and consider every aspect. Previous interactions show that Maja was in a leading position, while Martina was only acting in the background. But Stella approaches Martina to observe the situation, which leads to the

following interpretation. Since Maja reacts very emotionally and radiates Martina's composure, Stella seems to find Martina's support more helpful. Martina agrees and helps Stella out. Interestingly, Ornella confirms Martina's observation without being directly addressed.

Compared to the previous examples, this excerpt shows a high level of interaction between all players involved. Support is actively requested, which is also granted. A cooperative and not competitor-driven game implies that people meet on equal footing.

Discussion of Findings

Experiencing Exclusion During Gameplay

The empirical results show that games set normative limits due to their design and rules. This leads to the fact that participation possibilities remain closed. In part, games are designed to "provoke thought, provide a message or an experiences on a particularly difficult, uncomfortable or unsettling subject or issue" (Marsh & Costello, 2012, p. 264). The authors point out that "designers, developers, evaluators and practitioners [must be] aware of the ethical concerns and content [...] to protect players from harm" and exclusion (ibid.).

In detail, the empirical findings illustrate exclusionary practices during play when a group is in danger of losing well-functioning structures, its constitutive character and/or group identity. In this context, the empirical findings reveal two different types of exclusionary practices.

(1) The first exclusionary practice is characterized by direct communication. Here, there is an intention to actively exclude a person. Erkenbrack (2012) researches the players relationship and comes to the following conclusion: interpersonal alignment and interactive behavior during the game is negotiated depending on the game context and its limitations.

According to Erkenbrack (2012), game experience, specific knowledge about the game, but also audience size and goal intention are among the central prerequisites to be able to actively shape the role and not just act passively. The empirical results of my study show that exclusion practices are rooted in the avoidance of one's own risk of exclusion. Players will not accept another player if they themselves risk losing their position.

(2) The second exclusion practice also contains an integrative moment. Players do not deviate from the exclusion intention, but they try to integrate the person elsewhere. Compared to the first type of exclusion, this is due to the fact that the players are aware of their role as players and do not want to exclude the person but the player. "It is essential to remember that role alignment occurs not between the persons themselves but between the figures performed through the speech" (ibid.). The importance lies in raising awareness of such circumstances. Then, a well-designed game can provide a space to actively engage with exclusion and repeat exclusionary actions without realistically failing to do so (McGonigal, 2011).

Nevertheless, it should be emphasized that both exclusionary practices take place against the background of reducing one's own risk of exclusion. This is rooted in the normative and limiting boundaries of the game.

Engaging with Social Categorization while Playing

The analysis showed that games provide an open space for engaging with social differences. Nevertheless, it also showed: games can be a site of reproduction and manifestation of traditional social interactions.

In this context, the theoretical concept of *othering* is worth mentioning in order to understand social categorization in depth (Thomas-Olalde & Velho, 2012).

> Othering is defined as a process in which, through discursive practices, different subjects are formed, hegemonic subjects – that is, subjects in powerful social positions as well as those subjugated to these powerful conditions (ibid, p. 27).

Following this definition, othering was observable in all game sessions, especially in the players' categorization of dis/ability. Two modes of categorization could be differentiated: First, internal hierarchies appeared in the form of unbalanced interactions between players. Inflexible game structures and rigid hierarchies emerged as key indicators of othering. Second, disruptive external factors caused either group imbalance or group manifestation. The results showed that the nature of the interaction depended on the group constitution: While rigid hierarchies – expressed by defensive reactions of leading players – indicate a closed gaming community toward the external environment, lower hierarchies indicate internal restructuring and renegotiation after disruption.

Based on the results presented above, games show the potential to reflect othering. The game frames normative structures due to rules and forces players to grapple with different patterns of interaction and their own choices. Herein lies the potential to foster active encounter with social categorization and to face diversity. In play, repetition of moves and trying out diverse options can occur without life-threatening consequences (McGonigal, 2011). In the real world, gamers face social crises on a daily basis that are not irreversible (Wright, 2012).

In addition, games open up a creative space for associations in virtual scenarios. For example, a virtual game scenario can be triggered by game accessories, but also by the behavior of fellow players. One result shows the association of game accessories (jackstraw sticks) with cultural knowledge (chopsticks). This cultural practice originates from West Asian traditions. Nonetheless, all group members understand the association, implying cultural incorporation. Thus, engagement in play provides a virtual space to raise awareness of (cultural) diversity to promote and negotiate belonging. In the context of cultural diversity, another and already well-known aspect is central. Game design plays a major role in conveying cultural diversity. Dietrich (2012) writes that people identify with their game characters within the virtual environment. Due to the digitalization gaming is possible globally which means that players come from diverse cultural environments and meet to play. As a result, games should be well designed to meet diverse needs and not be exclusionary.

Another empirical result shows that gameplay can reproduce gender binary assumptions. Here again, game design plays an important role. In this study, all characters were given a first name and there was no option to change the gender of the characters. Donlinger (2007, p. 28) summarizes that especially girls are more affected by bad game designs than boys. Game designer often use male characters which can cause problems for girls with the character identification. However,

gameplay also offers potential to reflect gender binary attributions. In doing so, game design can force players to change their perspective on binary gender issues. Flangan (2009, p. 223) points out the problem of reinforcing racial and gender stereotypes through games and the need to overcome stereotypes through adequate and reflective game design.

Finally, the analysis shows the construction of fictional scenarios for negotiating exclusion and inclusion against the background of different social categorizations. While some players find alternative ways to counter social categorization, other players adapt and create new ideas to avoid exclusion and promote inclusion. It becomes clear that exclusion and inclusion is not dependent on social categories, but much more emerges in interactions. Donlinger (2007, p. 27) states that gaming promotes "complex concepts and abstract thinking" in relation to social categorization and the inclusion that comes with it. The overall potential of games is that players are forced to engage with social categories while playing, which facilitates implicit reflection and change anyway (Schluchter, 2015, p. 17). In more detail, Gabriel (2007, p. 195) elaborates three learnings during the game: strategic thinking, moral standards in dilemma situations, reflection on actions. That mechanisms are the socially transformative component of games (McGonigal, 2011, p. 186).

Enabling Inclusive Processes Through Game-Based Learning

The empirical findings show that inclusive gameplay is highly indicative of supportive behavior and eye-to-eye encounters. In detail, the material reveals three core features: Fluid and changing roles, no social categorization, and the active participation of all players.

(1) The first dimension describes fluid and changing roles and player positions during play. It is defined by low hierarchical structures, mutual appreciation, respect, as well as interactions on the same level. Low hierarchies indicate changing responsibilities. All players were able to assume a leadership position at least once as social positions varied during play. When players feel valued and accepted, they gain confidence in interactions. In this regard, communication was key to supportive action. Addressing and asking for help could be identified as an empowerment strategy to remain able to act. The literature argues that these are central processes for the development of self-awareness and self-efficacy in relation to one's own (inter)agency and caring (McGonigal, 2011; Schluchter, 2015).

(2) The second dimension represents the low differentiation of players in the presence of social inequality. Following Biewer (2017), the negation of labels and categories is a prerequisite for inclusion. Inclusive gameplay represents a low level of competition. Even though winning is the goal, players demonstrated supportive, collaborative, and communicative interactions. Compared to gaming sessions where players faced the risk of exclusion, the focus shifts to shared experiences during gameplay. Alternative modes of play were highly accepted and even valued. Goodley (2014) emphasizes that exception and appreciation lead to participation independent of individual labels as dis/ability, culture or gender. These findings are consistent with Maskos (2015) that people interact with each other without labeling them as dis/abled. In line with Prengel (2018), a lack of social categorization indicates low power structures and hierarchical interactions. Conversely, inclusive play sessions show interactions on an equal level.

(3) The third and final dimension involves the active involvement of players. This shows the potential of games for exploring one's own possibilities for action. Active involvement means participation, innovative ideas, collaborative strategies, communication between players. As mentioned above, the analysis emphasizes that all these aspects are based on mutual respect and appreciation. The literature argues that appreciation is a prerequisite for making differences positive and celebrating them in a supportive and nurturing way (Budde, 2017; Mecheril & Vorrink, 2017). Honneth (1997) adds that esteem is the linchpin when it comes to people's self-esteem and level of social engagement. These two aspects are important for McGonigal (2011) because games provide an interactive space to develop and strengthen individual characteristics such as self-efficacy.

Conclusion

While many research focus on the negative effects of games on players´ behaviour (Adachi & Willoughby, 2012), this study demonstrates the potential of game-based learning to encounter social categorization and enable inclusion. It shows that (digital) games are a predestined tool to promote inclusion. The empirical data shows that gaming provides space for collaboration and creativity so that social categorizations such as disability, culture, and gender can be reflected upon. Games create virtual scenarios in which learning processes take place regardless of pressure to perform and succeed, as in school learning, for example. While players are exposed to normative and standardized rules, they can explore them through repetition as well as trial and error without expecting real sanctions. In other words, play offers the opportunity to try out different ways of reacting and interacting without being punished as in reality. This offers a high potential for players to actively engage and explore different solution paths individually. Active engagement and participation are central conditions for successful inclusion.

Through play, players are automatically confronted with processes of inclusion and exclusion as well as social categorization, which can have two different consequences. Either the players reproduce social categorizations during the game or the players reflect them and act as a community. On the one hand, the reproduction of social categories strongly depends on the group structure. If the organization of the group is very hierarchical and characterized by power structures, not all players were able to participate to the same extent. On the other hand, it comes to the reproduction of social categories due to poor game design. It is necessary to consider these aspects as well and reflect on stereotypical and underlying implications. In contrast, game sessions that exhibited an inclusive nature were low hierarchical in structure; every team member actively participates; and positions were fluid and changing. Inclusive groups shared responsibilities and task management and demonstrated the ability to discuss content.

On a theoretical level, further research should incorporate an intersectional approach. There is a great deal of research on other social categories as age or education. However, these categorizations happen to be based on hierarchy and power structures as well as ableism assumptions about achievement and value. Empirical research, on the other hand, should address how the game-based learning approach can help promote inclusion across the border. Here, the buzzword *inclusive school development* can be mentioned, which deals with structural changes in teaching and learning.

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