



Mgr. Veronika Šašalová
University of Ss. Cyril and Methodius in Trnava
The Faculty of Mass Media Communication
Nám. J. Herdu 2
Trnava, 917 01, Slovak Republic
sasalova2@ucm.sk
ORCID ID: 0000-0002-7090-6532

Veronika Šašalová is a PhD. candidate who has been working at the Faculty of Mass Media Communication of University of Ss. Cyril and Methodus in Trnava since 2022. She obtained her Bachelor's degree at the Prague School of Creative Communication, specialising in creative writing, and pursued her Master's education at Masaryk University in Brno on the Literature and Intercultural Communication programme, where she focused on media and their sociocultural context. In her research, she focuses on independent and indie game development and the ways in which digital games contribute to feminist and ecocritical discourse. Additionally, she is interested in the intersection of game and literary studies, particularly through the exploration of specific narrative strategies in digital games and creative approaches that allow gaming titles to be perceived not only as products but as works of art.



Mgr. Miroslav Macák, PhD.
University of Ss. Cyril and Methodius in Trnava
The Faculty of Mass Media Communication
Nám. J. Herdu 2
Trnava, 917 01, Slovak Republic
miroslav.macak@ucm.sk
ORCID ID: 0000-0002-8173-7412

Miroslav Macák is currently an assistant professor at the Faculty of Mass Media Communication UCM in Trnava, Slovakia. He received his doctoral degree at the same institution from the digital game theory programme. The main topic of his scientific research is the industry of digital games. He is predominantly interested in Japanese game production. He also focuses on mainstream, AA and independent production of digital games, stories in digital games, game genres, and trends in the digital game industry (technological, narrative and design). His most recent overview of the digital games industry and its parallels with other media industries has been published in the book *Synergia odvetví globalizovaného mediálneho priemyslu (Synergy of Globalised Media Industry Segments)*.

DIGITAL GAMES AS A TOOL FOR GENDER EDUCATION: THE POSITION OF EDUCATIONAL GAMES AND INDEPENDENT WORKS IN THE GAMING MARKET

Veronika ŠAŠALOVÁ – Miroslav MACÁK

ABSTRACT:

Prior feminist studies in the field of digital education focus primarily on the need to retrain teachers and the need to attract women to programming. Digital games have been a part of both formal and informal education processes for several decades. Despite their longstanding prominence, the potential for gender education has not yet been fully explored. The paper focuses on specific games and uses content analysis to focus on the interactive, narrative and audiovisual components of digital games and on individual motifs or mechanics that are associated with appropriate feminist themes. The main aim of the article is to showcase the abilities and limits of educational digital games created by independent developers to teach players within the gaming community about topics of sexuality. The text also shows how individual games can help in the field of gender education. At the same time, by examining the game market, we estimate what possibilities independent educational games have for reaching audiences in gaming culture.

KEYWORDS:

digital games, education games, game culture, gender, hard core gamer, indie games, queer

<https://doi.org/10.34135/communicationtoday.2025.Vol.16.No.1.2>

1 Introduction

The issue of gender is very topical in many fields related to education, upbringing and socialisation. We can see that the teaching process is experimenting with the use of media that are stereotypically perceived only for entertainment. Universities are equally incorporating gender sensitivity into the teaching process, as evidenced by a textbook on the subject published by Comenius University (Buricová & Fábiková, 2020). At the same time, the comic book version suggests that the approach to the forms and means of teaching has also changed in the Slovak environment over recent decades. New technologies, advances in social media, as well as digital games have globally entered the thinking about education and self-development (Schmuck, 2021). However, educational digital games have already surpassed being a mere teaching tool in schools. The creation of digital games has become a form of self-expression for young creators. More than before, digital games convey authentic life situations and provide a safe space for experimentation and new experiences. Several studies (Adachi & Willoughby, 2013; Halbrook et al., 2019) have confirmed that playing digital games naturally strengthens skills such as quick reflexes, effective decision-making under pressure and aids in emotional development. Furthermore, positive links have been found between gaming and the building of communication and socialisation skills, as well as possibilities in integrating digital games into the process of teaching history or foreign languages. We claim that the spaces and characters of digital games also offer further possibilities for education in gender issues.

Westerlaken (2018) wrote that in digital games, even people from marginalised groups become heroes. One positive approach to the medium in question is precisely that through avatars we create new cognitive representations of ourselves – even at the level of gender. Wesley Schulz (2001) says that we value plants, animals but also other people, according to the extent to which they are included in the cognitive representation of ourselves. Thus, the significant rise of LGBT+ characters in mainstream work like Ellie and Lev in *The last of us 2* (Naughty Dog, 2020), Alex Chen and Steph Gingrich in *Life is strange: True colors* (Deck Nine, 2021) Judy Alvarez in *Cyberpunk 2077* (CD Projekt Red, 2020), etc. likewise expands the roles with which gamers can identify. The development of characters shows that digital-game works have undergone a considerable transformation not only on the part of the recipients but also on the part of the creators.

However, digital-gaming culture is still developing in a highly toxic environment. We can point to the unhealthy internet environment full of misogyny, sexual harassment and hateful opinions, all the way through to the poor working conditions in game studios, which, due to high workload, do not allow for deeper interpersonal relationships to be maintained. Creating safe spaces – both real and virtual – is particularly important for marginalised groups. According to the ADL (2019), up to seventy-four percent of adult female and male online gamers in the U.S. have experienced some type of harassment involving threats, including physical threats and online stalking. Fifty-three percent of victims believe the attacks were motivated because of their race, religion, gender, sex, or sexual orientation. Up to thirty-five per cent of people identifying as LGBT+ said they had experienced some kind of harassment because of their sexual orientation. Positive role models for young people, as well as continuous education that helps against the fear of the unknown and the different, is a necessity for creating a more tolerant society. Independent digital games, especially those considered educational and ‘serious’, could thus be another tool for building empathy. Awareness about gender and sexual identity comes from independent developers coming together on *itch.io*. Many of these titles do not aspire to become products that function as teaching material in schools (although they could become so). The digital games in question thus serve more “inside” digital-gaming culture. The developers seek to reinforce critical perceptions of generalisation and bias. However, the reach and therefore potential effect of such works is highly problematic.

Outside of strictly industry-related game production, educational games have been slowly moving into formal and informal learning. Gaming in general has a rich history intertwined with education (Utoyo, 2019; Martinez et al., 2022; Cole et al., 2023). As the medium of digital games evolves, independent developers have started to utilise the medium as a tool for gender education, providing safe spaces for identity exploration and representation (Shaw, 2014). Gender-related topics have been researched in relation to educational digital games, but the focus remains mainly on traditional educational games and their gender coding (Dahya et al., 2017; Steiner et al., 2009). High-

profile titles specifically aimed at the problematics of sexuality and gender are scarce and rarely used in formal education. While some universities have begun incorporating gender studies into game design programmes, there is still a need for structured initiatives that bridge the gap between academic research and industry practices (Flanagan, 2009). Educational games tackling LGBTQ+ related topics are primarily made by independent developers. They are often created with high personal interest in the developers with the idea of providing authentic experiences to the player, often stemming from the developers' own personal experience with the displayed topic (Ruberg, 2020). Despite that, independent educational games often struggle to reach a broader audience due to limited funding, sparse marketing, and utilisation of less mainstream platforms. This raises questions about the potential scalability of independent (gender) educational games and their possible impact on wider gaming culture.

2 Methodology

This paper aims to highlight the position of independent educational games that directly depict the theme of gender or sexual orientation within digital-gaming culture. The reach and potential effect of such products can only be estimated by understanding the preconceptions held about educational games by female and male gamers. In order to understand this issue, it is necessary to identify stereotypical ideas not only about educational games, but also about indie work, specifically indie queer work and its developers. In addition to theoretical knowledge, we use discursive analysis as well as game market analysis to do this, and through this we should be able to capture the current state of digital-game culture. Analysing the gaming market from a gender-studies perspective will help us to understand the initial position of gendered educational digital games, as theoretical knowledge would not be sufficient with such a dynamically evolving medium. To further explore this issue, we have chosen to critically analyse selected educational digital games published on *itch.io* and the redistribution platform Steam. The selected games have already undergone critical evaluation, usually by the organisers of the *Queer Games Festival* or by the players themselves, thus moving the creators from the level of amateur creators, who make digital games as a hobby, to the role of semi-professional to professional developers. Our aim is to use audio-visual and content analysis of the selected works to point out the elements that are expected by the public, especially the hard-core demographic. These are players who have identified digital gaming as part of their identity. These may not be the expected or preferred audiences by the creators, the aim is to determine whether the quality of the works would also match the preferences of hardcore female gamers. The expectations given are important for whether female and male gamers will finish the game and thus confront the content. The content preferences of female and male gamers from a gender studies perspective have been explored in several scholarly studies, on which we follow up below. Although the claims made by female and male gamers were not directed at the genre of educational games, these findings can be applied to them as well, as they are about the idea of what a "true digital game" should contain. However, the selected works should still meet the demands of the educational genre and its specificities to ensure an educational function.

3 Making "Better" Games

The job of a game developer is not always ideal. Unbalanced working hours, difficult balancing between work and family, or unstable working conditions are just some of the few examples of what life in the games industry is like. Campaigns such as *#Ireasmwhy* have also exposed gender-based issues such as unequal pay and sexual harassment in the workplace. Ruberg particularly highlights the intersectionality of these issues and author's state *The precarious labor of queer indie game-making: Who benefits from making video games "better"?* (2019) forms the argumentative basis for our study. Ruberg (2019) welcomes the celebration of queer indie games and the attention they are receiving. However, it is also important to highlight the socio-economic aspects of such work and the material disparities between queer creators, creators of different races and nationalities. The interviews also suggest that remaining in work in the independent sphere is based on the market and the creative preferences of the individuals

themselves. Queer creators are often perceived as artists. There is a perception that their aim is to deliver a particular message and enter into a debate with the culture of the moment. However, the investment of time and money is often neglected and unappreciated by the public – financially and otherwise. At the extreme, the commercial success of queer indie titles is not expected at all. The precedent in question is rooted in the current perception of art and artists. Particularly in post-socialist countries, we may notice that works in which performance can be quantified are perceived as more valuable. However, the frequent reluctance to pay for independent work also stems from the functioning of the game market itself.

Freelancing is used by aspiring creatives to build a portfolio and gradually work their way up to larger projects. Platforms like itch.io are also available to amateur enthusiasts who pursue digital game programming as a leisure activity. Amateur enthusiasts do not really expect to be financially rewarded for their activity. Their creation is more for their own satisfaction of needs, whether as a form of relaxation or a challenge. The quality of works shared on similar portals varies from piece to piece. However, the slow digitalisation of the gaming market creates a cluttered environment where cultural artefacts cannot be preserved. Even high quality and original works end up being overlooked due to the large amount of content (Macák & Šašalová, 2022). Of course, programming a digital game requires “hard knowledge” and access to a computer, many game engines such as Unity, CryEngine or Unreal Engine are now available for free and are preferred by amateur and independent creators alike.

This is also linked to another problem. There is a perception that no additional material resources are needed thanks to the free tools. At the same time, free engines provide pre-made templates, so it erroneously suggests that creating an independent digital does not require any programming knowledge. Although even high-budget projects often use free engines, creating with such tools can be more associated with a “cheap” product, thus decreasing consumer confidence. Indeed, the gaming digital market is specific in that the work of one person or small studio can rival that of large corporations in its success. However, the label of quality of independent creation is still provided by the publishing platform, be it PlayStation or Nintendo. For personal computers, it is mainly the Steam platform, where the developer pays a fee of 100 euros to publish his/her own game. The material background of the developer largely influences where the starting position of a given work will be in the game market. Developers of independent digital games often use crowdfunding services such as Kickstarter to raise external funding. However, even with external help, the funds for creation, release, distribution and marketing purposes are often insufficient even to cover basic costs. The combination of indie creation with artistic, serious and educational games creates the perception that they should (or do) stand outside the laws of the market. This problem can be seen in a number of arts industries and media. Deresiewicz (2020) explains how modernity popularised the image of the artist as a bohemian, a lonely genius, where his poverty was proof of inner purity and rebellious nature against consumer society. However, it could be said that this stereotypical perception of an artist came much earlier and was amplified through its variations, and continues nowadays even to video game artist-developers. Martin and Deuze say that “in this idealised notion of independence, the connection between producer and consumer can exist ‘naturally,’ that is, outside the influence of commercial sponsorship and market orientation” (2009, p. 278). Thus, an independent digital game is created by game studios or individuals in a way that ensures their financial and creative independence, which implies greater input from creators who, through non-traditional, experimental or creative approaches, make up for the shortcomings that a smaller budget might create. The problem is that consumer demands for the products in question are often equal to, if not greater than, those from high-budget productions. Their audiences are reluctant to lower their demands. Making a digital game requires other hard skills besides programming, such as animation, video production, sound, etc. Although society’s view of artists is changing, we can note that the tradition that praises the creator as a “genius” is still very strong. The developer doesn’t just have to be imaginative, but equally has to excel in marketing, distribution, game animation, sound, etc. After development is complete, they attend select game festivals, interacts with fans, and build their own brand. Perhaps more than “genius,” audiences expect a given developer to take on the role of celebrity. A society that expects people to constantly improve places huge demands on game creation. The evolution of technology contributes to this pressure. Digital games using 2D pixel graphics instead of hypermodern representations of reality are either “retro” or “outdated” and “unpolished”, but nothing in between.

These demands are even more of a problem for people who also have to cope with a homophobic, sexist or racist environment. Although the gaming market has transformed in recent years, interest in queer content and confronting

gender identities is still relatively “new”. At least from interviews with Tarja Porkka Kontturi (Diverse game developer mentor at IGDA, member of We in Games Finland and Director of Communication at Global Game Jam) it is clear that there is awareness of the need to create an environment where people can create games regardless of gender, class and education. We can already see attempts to implement game jams into the educational process, as they can teach children not only hard skills but also necessary skills within the socio-cultural context (Kobetičová & Porkka-Kontturi, 2021).

Despite the broader scope of Global Game Jam, events have been specifically created to address matters of gender identity. Since 2018, the *Queer Games Festival* has been supporting young creators in making queer digital games. As they write on the application form: “Big games, small games, fun games, serious games, trash games. We want them all” (The queer games festival naarm melbourne, n.d.). In a way, this quote captures the state of digital games that openly speak out against masculine discourse. It also points out the small number of such games and the need to fill the market’s blind spots. The growing interest in the subject not only creates an opportunity for experimentation and innovation, but also a space for real talent. It is hoped that with the changing societal climate, educational games clarifying issues of gender or sexual identification will be in demand. However, the above quote also shows that queer digital game development, due to its absence in gaming history, goes through a process of inclusion differently than most game production. Throughout gaming history, we can find periods where low-quality game production and content copying almost destroyed the gaming market (Williams, 2017). Digital games have been shedding the label of a “less valuable” medium for quite a long time. The discussions that are held about digital games as art mostly point to the entertainment function as the reason why, in the case of digital games, we can only talk about the artistic qualities of selected titles. A digital game must be entertaining. The gaming industry is still vividly debating whether entertaining is the right term. There has been considerable rethinking in this respect as well. What is certain, however, is that indie gaming has gained a reputation for works that are closer to “serious gaming.” These are works that provide multiple interpretations or other aesthetic qualities to their recipients. However, there is a problem with the term “serious” itself, which is reflected in other authors who use the term only cautiously, often in quotation marks. This effort seems to stem from the urge not to introduce further dichotomies into academic discourse in terms such as independent/mainstream, i.e., serious/non-serious, worthy of attention/rejected. The notion that there is such a thing as “serious playing” as opposed to “just playing for fun” must be avoided. Especially if playing for fun is attributed only to audiences preferring mainstream work. It is fair to argue that the notion of digital games as a product designed only for entertainment is a misconception. Every type of game, even “shovelware” games with no creative input, which are designed only for quick commerce are based on a certain political setting and are equally the source, propagator, and destroyer of gender, racial, religious, or other stereotypes. In the gaming market, the close proximity between the mainstream and independent digital-gaming must be perceived. We believe that the influence between independent and mainstream work is as dynamic in no other medium. In a way, Ruberg (2019) argues that the mainstream parasitises independent work. Thus, the innovations and ideas of independent work only serve to enrich exaggerated white males in turn. Her article further urges the question, who ends up paying the price for digital games being “better” and “more diverse?” One cannot disagree with Ruberg. We need to create the right conditions for any independent creators and break down the consensus that prevents them from leading full and dignified lives in the gaming workforce. On the other hand, it cannot be said that the relationship between independent and mainstream (high-budget) game development is a one-way process. *Valheim* (Iron Gate Studio, 2021) was of the most popular massive multiplayer online games during the year of its release and caters to a considerable player base even three years after its debut. The game in question takes place in a very large world capable of competing with works like *Assassin’s Creed: Valhalla* (Ubisoft Montreal, 2020). The themes of Norse mythology match the popularity of said themes in the current AAA productions. Not only does the work take on narrative forms typical for high-budget production, but its visual style is able to compete on the gaming market. The title in question retains the distinctive charm of an independent work. If indie creation forces high-budget titles to be “better,” mainstream creation allows indie digital games to be “less serious.” We can see this very thing in the *Queer Game Festival*’s call for “B-grade” work as well. It sends the signal that there’s already room to not confront anyone, it’s OK to have fun, it’s OK to be who you are.

However, we must still state that the situation is far from ideal. Responses to queer or gender-themed titles that fail to live up to the expectations of their audiences resonate much more strongly in digital-gaming culture. The narrative and even technical imperfections of the game are wrongly attributed to this thematic. Technical imperfections and the absence of complicated game mechanics and rules tend to be used as an excuse to denigrate a given title as “inauthentic.” There is still an assumption that a digital game will have primarily “masculine coding” – it will be characterised by considerable dynamism, complexity of game rules. The goal is to conquer a challenge that will test the player’s abilities and thus decide whether they win or lose. Educational digital games require similar skillsets to other genres of digital games. Educational game scenarios can take place in a realistically rendered world as well as a fantasy one. The goal is to improve the player’s cognitive abilities (Shi & Shih, 2015). One element of the design may, for example, be personal responsibility for achieving a set goal. The combination of high-quality content, pointing out changes and incorporating mistakes into the learning and improvement process is an example of the carefully managed design of an educational digital game (for more information, see: Papanastasiou et al., 2017; Tseklevs et al., 2016). However, the creation of such digital games is largely bound by the assumption that their target audiences have never encountered complex game mechanics or have never played digital games. It is thus very problematic to create educational digital games that appeal to gamers “inside” gaming culture, even though the genre of educational games has the potential to do so. This issue appears to be very topical and researched, which is also reflected in online discussions. In 2021, a question appeared on Reddit: “*Why are there no popular educational games?*” (BigAd95, n.d.). We can see that the discussion has attracted gamers as well as PhD students. In the discussion, there is an effort to highlight titles that would be worth further exploration. Equally, however, an effort can be drawn from the discussion to articulate where educational digital games fail for audiences unfamiliar with the specifics of the medium. Although this is a small sample and thus the data may be subject to bias, we can see a consensus that puts learning and entertainment on opposite sides of a spectrum. The comments also reflect some questioning of the design, which forces only one theme and what one should supposedly learn. For this reason, we also find it beneficial to explore digital games that have already been created within queer game jams. It is legitimate to assume that developers identifying as gamers employ different creative practices in their work and take into account preferences based on pre-existing gaming experiences whilst creating their game content.

4 Analysis and Interpretation of Selected Digital Games

For a better understanding of the subject matter, we select and discuss several titles that highlight aspects associated with educational digital gaming. *What’s your gender?* (Purplesloth, 2021) is a digital game that, at first glance, meets all the requirements of an educational game. In it, the player travels through spaces reminiscent of a museum. The spaces themselves, however, are largely made up only of different coloured cubes and geometric shapes creating the contours of the space. The different colours of various rooms allude to typical signs of gender and sexual identities and also serve as a means of navigating the space. Each room contains a heading with one gender identity. Clicking on the respective caption will show a dictionary definition about that gender identity. A female voice accompanies the player on his or her journey through the gender museum, which, in addition to explaining each gender, is meant to help clue recipients in that they are in a room they have not yet discovered. The game also provides another level of text in the visual metaphors that can be associated with gender identification. The theme is thus connected to many visual elements and possibilities. By passing through different doors, the player chooses the way he/she would like to be gendered, allowing him/herself to be addressed by different pronouns while the voice invites exploration of the feelings this evokes. The game in question builds a safe space for creating new positive gender experiences. *What’s your gender?* is primarily based on a visual experience and serves an informative function. The maze is the only source of challenge. The game in question relies primarily on the player’s curiosity or willingness to explore and discover new places. Open-world digital games often use such methods. However, this willingness to

participate is based on the audience also being provided with additional challenges or story sequences that move them forward. If the recipient(s) gets lost and cannot find the next piece of information quickly enough, moving through the rooms becomes quite exhausting and frustrating. The digital game in question adopts an educational strategy where the fear of the unknown is eliminated with arguments and proven scientific facts. Gender issues can be quite confusing, especially because of terms that are used in society but rarely explained. The weakness of such a strategy is that no associations are provided to the player. The dictionary definitions of genders are written and presented in a rather complex way. Without other possible associations, it is feasible that the recipients will not remember them, thus the educational purpose fails.

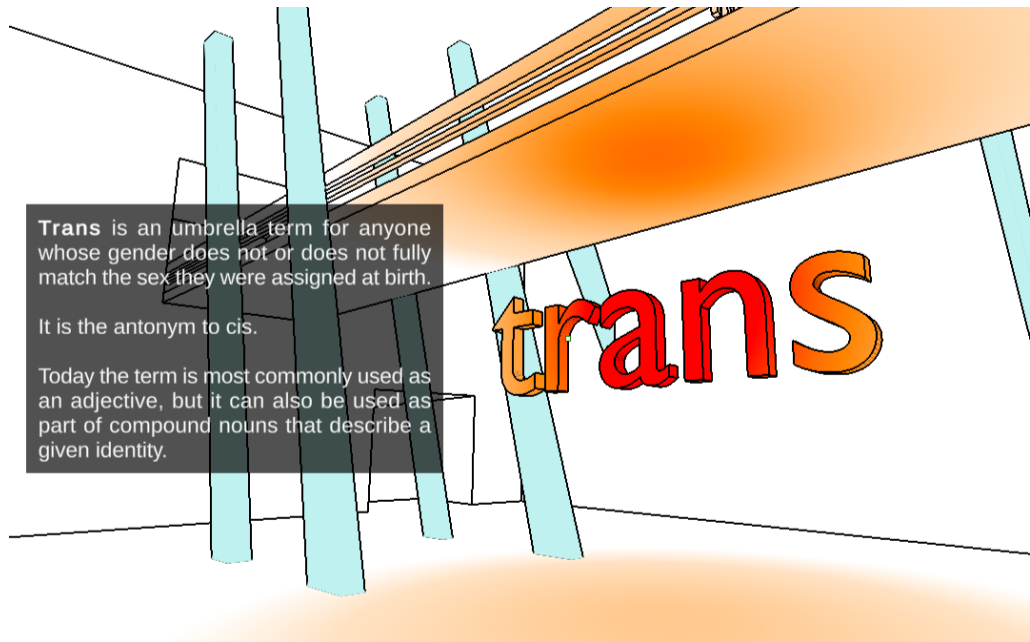


Figure 1: Visual of gender definitions in game *What's your gender?*
Source: Own processing 2024; based on Purplesloth, 2021

Gender issues require a sensitive approach. Knowledge of concepts and advocacy of scientific facts is a necessary part of feminist activism. Digital games like *What's your gender?* could serve as a teaching tool in schools, provided the work in question does not stand alone, but is accompanied by follow-up discussion, questions, and trained personnel guides the topic. However, this type of digital game does not seem to be able to hold the attention of hardcore players. On one hand, the positive responses on itch.io show great enthusiasm on the part of the target audience. Such a friendly space is also stimulating for developers. The community, according to the available comments, points out bugs occurring in the code, which can help further development. A critical but friendly environment is a good place to build skills and gain experience. On the other hand, the game in question precludes its wider application in gaming culture, mainly due to the absence of positive role models and narratives that could lead to a re-evaluation of gender identification.

Digital games have the unique ability to let someone walk in someone else's shoes, simulating situations that can be a source of understanding. Simulators have already been used for education, for example in the medical field or in the military, but they also represent a specific genre of digital games simulating various aspects of life. The digital game *Coming out simulator* (@NCASENMARE, 2014) was created for *The #Nar8 Game Jam* in 2014 and uses a single specific situation to introduce audiences to the complex issues faced by LGBTQ+ people, particularly the effects of gender stereotypes in Asian families.

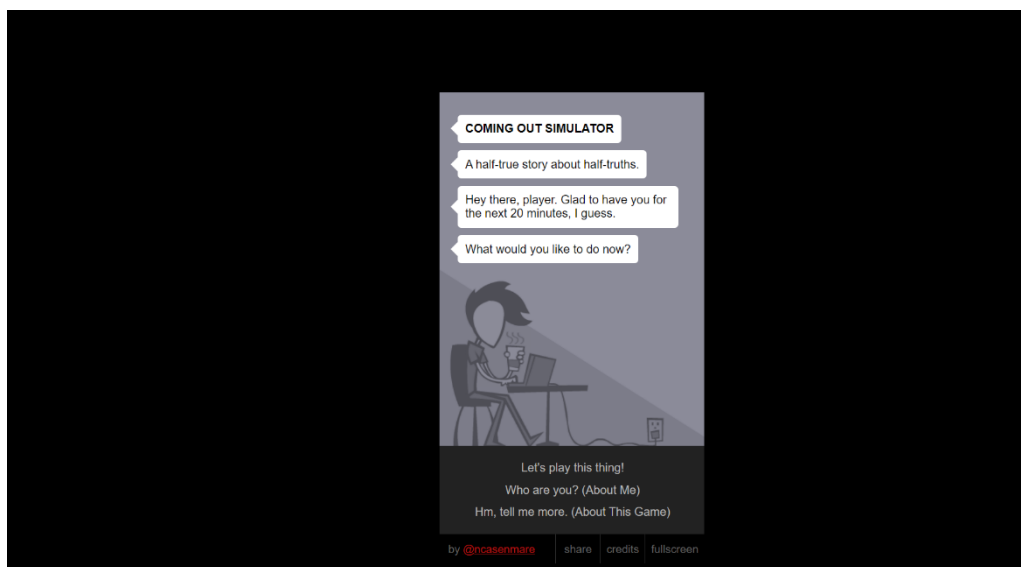


Figure 2: Visual style of *Coming Out Simulator*

Source: Own processing, 2024; based on @NCASENMARE, 2014

The visuals of the work are very simple (see *Figure 2*). It starts with a character in a café sitting at a computer. The scenario is represented by three key conversations – between the creator and the player; the main character and her partner; the main character and her parents, all of which the author stylises in the form of a social-media chat. The player has the option of selecting predefined responses, which always shift the conversation by a few pre-set reactions from the main character and the discussant. The conversations in chat bubbles, as well as the means of expression used by the author, correspond to the communication of today’s young people and appear authentic. At the same time, the narrative method has many postmodern elements. We can see the stylisation of the author as the fictional author of the work as well as the main character in different timelines that alternate. There is no shortage of self-irony, as well as pop culture allusions to films and game studios. Through said creative practices it is visible that the educational digital game was created ‘inside’ gaming culture. These means of expression may just lead to a greater degree of identification with the main character and subsequent empathy. The game even self-ironizes the way it is created and humorously anticipates the audience’s reactions. The fictional author and the fictional recipient comment on the game mechanics, where the game eventually forces the choice of each option and so the choice presents only the illusion of freedom, which is usually considered a flaw in game design. At the same time, however, it turns out that the algorithm remembers the recipient’s answers and occasionally reminds them within the narrative. The fictional author himself also points out certain aspects of independent creation mentioned within the paper. He introduces himself as *solo writer/programmer/artist of Coming out simulator*. He admits that the audio is from public domain sources and that many people have worked on the story. “I am open with my source code as I am with my sexuality” he says. Both the subtle innuendo and the pure irony of stereotypes ring out constantly in the interviews:

Author: “*Tell me, dear player, how do you think this all ends?*”

Player Option 1: “*With flowers and rainbows and gay unicorns?*”

Gender and narrative stereotypes are also mocked by the fact that certain situations do not meet the heteronormative vision. This can be seen in the last scene, where the main character is taken away from the café by another man, in the way the prince and princess are traditionally portrayed in fairy tales. The work thus uses humour not only to critique, but also to create the desired effect of amusement. The non-seriousness of the conversations between the fictional author and the player enhances the friendly atmosphere. This, in turn, contrasts strongly with the parts where the player tries to navigate through a coming out simulator. The destructive consequences of

stereotypical ideas create a merry-go-round of argumentation that always goes against the player's answers. The player witnesses the masculine father figure insulting the mother, insulting the son's creation and his lack of masculinity as he still has no female partner. The conversation, in which the main character tries to confess his different sexual orientation, is diverted by the parents to another topic – his studies. At the same time, it is made clear that bad grades would be tolerated if the son's female partner was the focus. Moreover, the parents' defensive position stereotypically obscures the seriousness of the whole issue, as homosexuality is portrayed as accepted as long as it does not involve their child. The awkwardness of the whole moment returns in an arc to the beginning, where the fictional author warns in advance that there is no right answer, and that the player does not understand how they are supposed to win the game. The incompatibility between the theme and the game mechanics to some extent brings anxiety but also challenge. This is what can cause the player to go through the work again and expect different results – to take it as a challenge. We are justified in assuming that the player will try to identify the problem and approach it differently. This aspect is very important in both educational games and the learning process. Thus, futile efforts can also be interpreted in a way that it is impossible to win in this moment and with the settings (both game and social) as portrayed in the digital game. The game violates masculinist coding by making it impossible to win. It also fails to adhere to the parameters of educational games. It does not seek feedback, nor does it test what the player has learned through the work. The player is not even given the opportunity to bring his/her own solutions, to write his/her own dialogues. The message must be decoded by the performer, but the theme and especially the length of the digital game in question do not allow for digressions. The final dialogue with the fictional author leaves the player to reflect on his or her responses. Again, the work emulates mid- and high-budget productions and lets the player decide what conclusion she or he wants to hear – true/false/semi-true – though it will ultimately say all of them. However, the chosen decision will again backfire on the recipients as well. The fictional author, before leaving the café, makes the remark: "I noticed you chose the lie first. What does that say about you?"

The educative intent is not delivered directly; it requires the recipient's willingness to reflect, but the message the game is trying to convey is not hidden. Even if the recipient is unable to decipher all levels of the text, the work at least assumes an emotional response when confronted with an unpleasant event. The situations that the main character goes through are familiar to young people even without a connection to LGBTQ+ issues. The work shows the problematic communication with parents in the teenage years, the invasion of privacy in the digital age, and the essential role of friendship and learning about one's sexual identity at this age. The game in question thus provides ample room for identification with the main character. The author's straightforwardness seems to have gained people's attention, as several fan translations of the game have been produced. The authentic way of acting can also be seen in the descriptions of the game: "Or, at least, that mobile web version. Coz screw it, I'm not paying Apple \$99 just to get rejected for 'sexual content' or whatever."

The author's comment confirms the above analysis of the gaming market. Mechanisms that are designed to protect the public against homophobic, sexist, racist environments on the internet often also function to make certain members of the public, often the most vulnerable, invisible.



Figure 3: Visual of *Transhaping: Tale of extraordinary shape*
 Source: Own processing, 2024; based on Unbound Interactive, 2019

However, digital games do not necessarily have to work with explicit design (see Figure 3). *Transhaping: Tale of extraordinary shape* (Unbound Interactive, 2019) is a digital game funded through the Kickstarter platform. It uses the mechanics of a platformer where the player tries to navigate between levels, even with a choice of difficulty. Although there is a choice of shape and gender at the beginning, if the player changes the pre-sets, a table appears with the words “Error,” explaining that we do not have the right to choose how we are born. The digital game uses metaphors to convey the lived experience of transgender people. Various consequences of gender discrimination are briefly shown, such as bullying at school, not being able to prefer certain styles of clothing, etc. Other shapes that haunt the player and prevent him/her from moving, as well as the eyes in the background, create a space where the player is constantly being watched and judged. The game works with the mechanics of stress. If its indicator exceeds a certain value, the player must start the level over. Stress can be relieved by finding and turning on the radio. The actual choice of music is apparently to be interpreted as one of the few free decisions. The shapes metaphor has been tried in other digital games such as *Thomas was alone* (Mike Bithell, 2013). The narrator works here as well, adding narrative structure to the piece. However, users can also draw many meanings from the visuals and the gameplay itself. The player must constantly hide, even taking the easier route through the sewers when traversing the city. However, the game in question also highlights the lack of information and false news. Various stereotypical newspaper articles about transgender people, who are supposedly just trying to attract attention, can be seen in the background. Confusing gender identification with the adolescence phase thus makes it impossible to accept oneself as well. Above all, the game appeals to the need for closeness and support from those around us. Digital games like *Transhaping: Tale of extraordinary shape* use all the mechanics and narrative modes that have the potential to engage even hardcore female and male gamers. Thus, the educational potential of the game also lies in its explicitness in what the player sees and what is said. The narrator talks about states of anxiety, loneliness and the slow process of self-acceptance. However, the technical problems and the visuals, which clearly refers to stock designs, come across as untrustworthy.

We can see that the problems that independent educational games have are very complex. Clean but effective designs such as *What’s your gender?* and *Coming out simulator* in turn fail to combine the difficulty of game mechanics that are expected of more experienced players. The technical setbacks, lack of funding, and high demands of the public in turn do not create room for the development of games like *Transhaping: tale of extraordinary shape*. In addition to *itch.io*, *Transhaping* is also available on the aforementioned Steam platform. If we look at the user reviews, we find that gamers don’t really have a problem with the gender theme, but with the technical shortcomings:

FYI I am trans and while I appreciate the message, This game is SOOOOOO painfully bad. Platforming, Controls are sludgy, [...] Level design is bad, countless egregious cases where you're just forced to sit around waiting for platforms to line up, or forced as a player to make blind near pixel perfect jumps or repeat a large segment of the level. (Pebbles, 2019)

Although this is a very small sample, we can see that on Steam user comments can be divided into two categories: recipients praising mainly the narrative, justifying technical imperfections, and gamers critical of the game's execution but without attacking the theme in any way. However, we can see that the expectations of female and male gamers are similar regardless of gender. It is legitimate to ask how educational digital games can reach wider audiences. New generations are being born into the digital age. Children and teenagers of increasingly younger ages are accessing technological advances. It is likely that future generations will become familiar with game mechanics sooner rather than later, and that their demands will barely be met or not met at all by educational digital games.

It is necessary to discuss what the demands of female and male gamers are and how they evolve. At the same time, it is worth noting that creation of quality digital-game products is highly influenced by the position of independent game developers in the gaming market. The question remains what might motivate audiences to play such games. The titles examined tend to appeal to already informed audiences who are merely looking to expand and educate themselves on the subject matter. The very titles in question are more likely to speak to people open to discussing the subject matter. Unfortunately, educational indie digital games dealing with gender issues largely remain in the so-called echo chamber. Of course, this doesn't mean that digital games containing gender themes don't have a chance to reach wider audiences. *Coffee talk* (Toge Productions, 2020) is equally available on itch.io as it is on PlayStation and Nintendo consoles. The development of gaming audiences as well as technological advances should become an important part of the discussion about educational digital games. The same goes for the status of game developers, as they should be part of this discussion to allow for the necessary evolution of the genre.

5 Conclusion

This paper explains the position of independent educational digital games in the gaming market. We uncovered several interacting issues. First is the disadvantageous position of independent game developers. In addition, the penetration of independent digital games into the artistic sphere interferes with the way audiences think about buying such products. However, the very works produced in this environment highlight this. Thus, the authenticity and non-obscuring of the material means that a product has in its creation are also reflected in the subject matter and creative practices in the creation of educational games. Developers show many ways of approaching and delivering a message to their audiences. The informative function can be supported by strong visuals and metaphors. However, the technical level and lack of challenge can still be a barrier to reaching hard-core gamers. The examined games were often made by a single person with various degrees of experience in game design, graphic design, and programming as well as educational background. The positive message carried by the games can be hampered by lack of visual or ludic appeal. On the other hand, independent digital games have been on a rise in popularity in recent years and digitalisation in formal school systems is slowly growing, making possible opportunities for these types of games in the future.

Gender-focused educational games combine several disadvantages which influences their position in the digital-gaming market; the position of an independent work, an educational work and minority-focused content. Each of these positions increases the demands on the product, which is thus lost amongst more advantaged works, or only reaches audiences already familiar with the topic. Said games thus, to some extent, lose their educational message. On the other hand, we can say that there is a visible potential for further growth of this type of game, since in some of the works analysed, we capture creative practices that could only have emerged from people "inside" the game culture.

Another aspect to consider for further studies is the general acceptance of the topics of gender and sexuality in digital games. Despite the plethora of major, minor and independent studios promoting gender equality and providing

meaningful representation in their works, the “core gaming community” still appears to be divided on the topic. The contemporary socio-political situation at the time of writing the article seems to divide the already polarised groups even further. The digital games have been spreading awareness about said topics on multiple levels, both through representation in “core games” and explanation in educational games. Whether that will help to tip the scales and make gamers more accepting towards gender minorities remains to be seen, and should be periodically examined.

Acknowledgements: This study was elaborated within the research project supported by Slovak Research and Development Agency (APVV) No. APVV-21-0115, titled 'Hypermodern Media Culture – Film and Television Production as Mirror of Sociocultural Phenomena of the 21st Century'.

This study was also elaborated within a national project supported by the Cultural and Educational Grant Agency of the Ministry of Education, Research, Development, and Youth of the Slovak Republic (KEGA) No. 027UCM-4/2024, titled 'Implementation of Educational Digital Games into Educational Processes in Primary Schools'.

BIBLIOGRAPHY:

- @NCASENMARE. (2014). *Coming out simulator* (Pc version) [Digital game]. @NCASENMARE.
- Adachi, P. J. C., & Willoughby, T. (2013). Do video games promote positive youth development? *Journal of Adolescent Research*, 28(2), 155-165. <https://doi.org/10.1177/0743558412464522>
- ADL. (2019, November 17). *Free to play? Hate, harassment, and positive social experiences in online games*. <https://www.adl.org/resources/report/free-play-hate-harassment-and-positive-social-experience-online-games-2020>
- BigAd95. [@BigAd95]. (n.d.). *Hello! Does anybody know any successful educational games?* [Online post]. Reddit. https://www.reddit.com/r/gamedesign/comments/lfsokn/why_are_there_no_popular_educational_games/
- Buricová, A., & Fábiková, A. (2020). *Gender (un)awareness in higher education*. Comenius University. CD Projekt Red. (2020). *Cyberpunk 2077* (PS5 version) [Digital game]. CD Projekt.
- Cole, C., Parada, R. H., & Mackenzie, E. (2023). Why and how to define educational video games? *Games and Culture*, 19(8), 981-999. <https://doi.org/10.1177/15554120231183495>
- Dahya, N., Jenson, J., & Fong, K. (2017). (En)gendering videogame development: A feminist approach to gender, education, and game studies. *Review of Education Pedagogy & Cultural Studies*, 39(4), 367-390. <https://doi.org/10.1080/10714413.2017.1344508>
- Deck Nine. (2021). *Life is strange: True colors* (PS5 version) [Digital game]. Square Enix.
- Deresiewicz, W. (2020). *The death of the artist: How creators are struggling to survive in the age of billionaires and big tech*. Henry Holt and Company.
- Flanagan, M. (2009). *Critical play: Radical game design*. MIT Press.
- Halbrook, Y. J., O'Donnell, A. T., & Msetfi, R. M. (2019). When and how video games can be good: A review of the positive effects of video games on well-being. *Perspectives on Psychological Science*, 14(6), 1096-1104. <https://doi.org/10.1177/1745691619863807>
- Iron Gate Studio. (2021). *Valheim* (Pc version) [Digital game]. Coffee Stain Publishing.
- Kobetičová, M., & Porkka-Kontturi, T. (2021). Global gam jam: How can game jams benefit the educational process interview with Tarja Porkka-Kontturi. *Acta Ludologica*, 4(2), 108-112. https://actaludologica.com/wp-content/uploads/2022/01/AL_2021-4-2_Interview_Porkka-KontturiKobeticova.pdf
- Macák, M., & Šasalová, V. (2022). Digital Games, collectors and (artificial) scarcity: The digital future might be a bit physical after all. *Communication Today*, 13(2), 4-23. https://communicationtoday.sk/wp-content/uploads/01_MACAK_SASALOVA_CT-2-2022.pdf
- Martin, C. B., & Deuze, M. (2009). The independent production of culture: A digital games case study. *Games and Culture*, 4(3), 276-295. <https://doi.org/10.1177/1555412009339732>

- Martinez, L., Gimenes, M., & Lambert, E. (2022). Entertainment video games for academic learning: A systematic review. *Journal of Educational Computing Research*, 60(5), 1083-1109. <https://doi.org/10.1177/073563312111053848>
- Mike Bithell. (2013). *Thomas was alone* (PS Vita version) [Digital game]. Bithell Games.
- Naughty Dog. (2020). *The last of us 2* (PS4 version) [Digital game]. Sony Interactive Entertainment.
- Papanastasiou, G., Drigas, A., Skianis, C., & Lytras, M. D. (2017). Serious games in K-12 education: Benefits and impacts on students with attention, memory and developmental disabilities. *Program*, 51(4), 424-440. <https://doi.org/10.1108/PROG-02-2016-0020>
- Pebbles. (@Pebbles). (2019, October 12). FYI I am trans and while I appreciate the message, This game is SOOOOOO painfully bad. Platforming, Controls are sludgy, Choose easy because this game loves to make you repeat segments including one level where if you slip you fall [User reviews on Steam]. Retrieved from <https://steamcommunity.com/app/1028950/negativerreviews/?l=czech&browsefilter=toprated>
- Purplesloth. (2021). *What's your gender?* (PC version) [Digital game]. Purplesloth.
- The Queer Games festival Naarm Melbourne. (n.d.). *Queer Games festival: Melbourne 2024*. Retrieved August 28, 2024, from <http://mqgf.com.au/#nominate>
- Ruberg, B. (2019). The precarious labor of queer indie game-making: Who benefits from making video games "better"? *Television & New Media*, 20(8), 778-788. <https://doi.org/10.1177/1527476419851090>
- Ruberg, B. (2020). *The queer games avant-garde: How LGBTQ game makers are reimagining the medium*. Duke University Press Books.
- Schmuck, D. (2021). Social media influencers and environmental communication. In B. Takahashi, J. Metag, J. Thaker, & S. E. Comfort (Eds.), *The handbook of international trends in environmental communication* (pp. 373-387). Routledge.
- Shaw, A. (2014). *Gaming at the edge: Sexuality and gender at the margins of gamer culture*. University of Minnesota Press.
- Shi, Y. R., & Shih, J. L. (2015). Game factors and game-based learning design model. *International Journal of Computer Games Technology*, article no. 549684, 1-11. <https://doi.org/10.1155/2015/549684>
- Steiner, C. M., Kickmeier-Rust, M. D., & Albert, D. (2009). Little big difference: Gender aspects and gender-based adaptation in educational games. In M. Chang, R. Kuo, Ch. G. D. Kinshuk, & M. Hirose (Eds.), *Lecture notes in computer science* (pp. 150-161). Springer-Verlag. https://doi.org/10.1007/978-3-642-03364-3_20
- Toge Productions. (2020). *Coffee talk* (Nintendo Switch version) [Digital game]. Toge Productions.
- Tsekleves, E., Cosmas, J., & Aggoun, A. (2016). Benefits, barriers and guideline recommendations for the implementation of serious games in education for stakeholders and policymakers. *British Journal of Educational Technology*, 47(1), 164-183. <https://doi.org/10.1111/bjjet.12223>
- Ubisoft Montreal. (2020). *Assassin's Creed: Valhalla* (PS4 version) [Digital game]. Ubisoft.
- Unbound Interactive. (2019). *Transhaping: Tale of extraordinary shape* (PC version) [Digital game]. Unbound Interactive.
- Utoyo, A. W. (2019). Video games as tools for education. *Journal of Game, Game Art and Gamification*, 3(2), 1-6. <https://doi.org/10.5281/zenodo.2669725>
- Wesley Schultz, P. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21(4), 327-339. <https://doi.org/10.1006/jevp.2001.0227>
- Westerlaken, M. (2018, February 11). *Reflections on Zelda Breath of the Wild*. <https://michellewesterlaken.wordpress.com/2018/02/11/reflections-on-zelda-breath-of-the-wild-vegan-run/>
- Williams, A. (2017). *History of digital games: Developments in art, design and interaction*. CRC Press; Taylor & Francis Group; A K Peters Book.