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Why Digital Game Based Learning Should be Included in Teacher Education

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ABSTRACT

As playing digital games has become part of their everyday life for many young people, digital game based learning can be a useful way of teaching today's children and teenagers. However, in order to make sure that playing is not only a way of passing time for pupils it is necessary to know some more about digital games and how they can be used in classroom learning. This article first of all discusses some factors to be taken into account before a teacher can take a digital game into the classroom. Then initial results of a research project carried out with students teachers are presented, showing that most of them need to be sensitised to the potential of digital games in order to be able to use them in class and make sure transfer of skills, facts, and attitudes children and teenager acquired in these virtual environments takes place in a way that students are also able to use them outside the game.

INTRODUCTION

Digital game based learning – by which we mean using digital games in classroom to teach certain aspects, to simulate events or processes and to show relations – is a trend trying to overcome prejudices and stereotypes about video games which are often transported in media; games are often accused of making children and teenagers aggressive or addicted. One of the first to make digital game based learning a widely discussed topic was Marc Prensky (2007), who stated that young people, because of being digital natives, need to be taught with video games. Although Prensky's notion of digital natives has been heavily discussed and criticized[1], he was wakening teachers' and scientists' interest for having a closer look at the pedagogical potential of digital games. Gee (2007), Squire & Steinkuehler (2012) and Shaffer (2006) discuss many examples of digital games and their use in teaching; thus showing that games might enrich lessons and are able to make valuable resources for teaching. This is especially true for a category called games for change which subsumes games (as well as a movement) aiming at "social impact games that serve as critical tools in humanitarian and educational efforts."[2] Gee & Hayes (2011) also look beyond the actual game and discuss the importance of nurturing affinity spaces which are similar to the concept of communities of practice and can be found for many popular games. The authors state that these affinity spaces provide deep learning and list fourteen features of such ideal nurturing affinity spaces. By comparing these features to learning at school, they show differences to and shortcomings of traditional schooling. Digital game based learning, however, has become more and more important recently. The Horizon Report 2012[3] assumes an adoption horizon of two to three years for digital games or gamification in teaching K12. Especially (role-playing) games which enable the gamers to experience situations or processes with the eyes of others as well as online games which focus on real world problems and draw the player's attention to global topics can be seen as

important in teaching contexts. Squire (2006) also argues that teachers and trainers "ought to pay closer attention to videogames because they offer *designed experiences*, in which participants learn through a grammar of *doing* and *being*." (p. 19) By quoting some examples of games, he shows what kind of learning takes place in different video games as well as the differences between – what he calls - exogenous and endogenous games[4] (ibid, p. 24). Because of their interactivity games engage players actively – you have to make choices and interact with the game system. Swain (2010) emphasizes in his paper aimed at game designers that "Humans learn through play" (p. 217). Six best practice cases, which are presented, stress the fact that gamers experience taking ethical decisions by playing certain games. This point of view is similar to that of McDaniel & Fiore (2010) who compared two ethics games. In their case study, which was combined with literature review, they found out that digital games enable emotional and instant experience (so called immersion) by playing first person perspective games. Granic et al. (2014), who summarize previously done research on the positive effects of playing video games, group benefits of playing video games into promoting cognitive skills, motivational aspects, emotional and social benefits. Moreover, a growing group of teachers and researchers is looking into the possibilities and opportunities how to use digital games in education and has come up with lots of examples and drafts for scenarios for different subjects and for teaching different skills. (cf. Schrier 2014, Hutchinson 2007, Shaffer 2006, Bogost 2011, Wagner & Gabriel 2011) As Gee (2007) stresses in his theoretical work, video games help learners to get experience they otherwise would not be able to make. Moreover, they are engaging, motivating and help to improve problem solving skills. As a result of their empirical study, Oliver & Pelletier (2013) criticize that common approaches of digital game based learning often do not look at the process and outcomes of play and their relation to social and cultural aspects. However, to recognize the full potential benefit of digital games, teachers and trainers need to have some knowledge about digital game based learning.

WHICH AREAS DO TEACHERS NEED TO TAKE INTO ACCOUNT WHEN USING DIGITAL GAMES IN THE CLASSROOM?

Being trained as a teacher also means that you are trained to integrate different media to achieve your teaching objectives. However, integration of digital media and of course especially of integrating digital games in lesson plans means that you have to bear some more aspects in mind. The model presented in this paper (which was developed by the author) consists of seven dimensions (cf. figure 1) that need to be taken into account when teachers want to use any digital game in a teaching or training setting. It is an adaptation of deFreitas & Jarvis' (2006) four-dimensional framework which was developed "for allowing tutors to select and use games more effectively in their learning practice." (ibid. p. 3) As this four-dimensional framework needs some more knowledge about digital games and game design it was simplified by the author in order to make it easy to apply even for teachers who have never thought of using digital games in class before. In order to be versatile the headings are labelled in quite a general way so that it does not matter if you want to use serious games, commercial off-the-shelf games; if your target group are primary school children, high school or university level or participants in a job training.

Seven steps to using digital games in lessons

The following part of this paper will briefly describe the seven dimensions that need to be looked at when planning to use digital games in lessons and show their relation to teacher education. Although they are called steps, it does not mean that there needs to be a certain sequence. All the dimensions described need to have carefully looked at as they are related to each other in various respects.

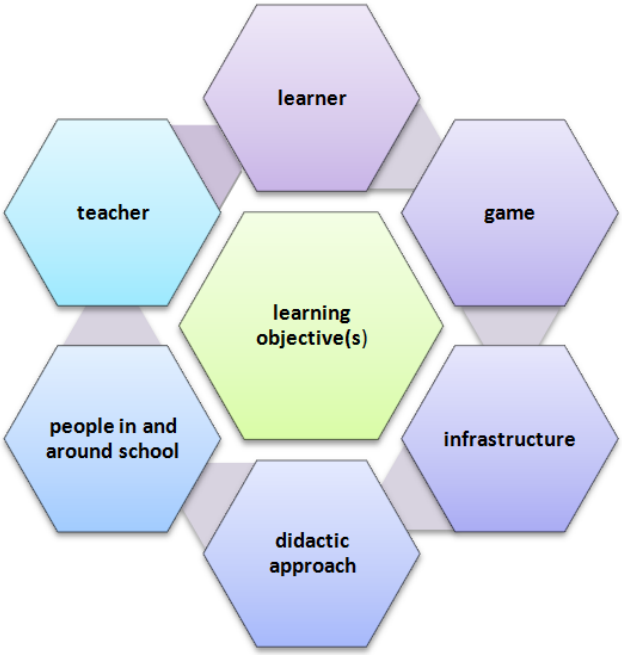

Figure 1: 7 steps to using digital games in class

Define learning objectives

The model presented here puts learning objective(s) in the centre of all planning. The reason therefore is that digital games are only seen as one of many media teachers could possibly use in teaching. The importance of learning objectives is stressed in all lectures and seminars on lesson planning, no matter if teachers are educated at university or university colleges of teacher training. A problem quite often arises when (future) teachers think that games are only a nice add-on, a kind of motivational tool or a reward for having done all the other tasks in a lesson / for behaving nicely. De Freitas (2006) gives an overview of the identified uses of games related to game based learning with adult learners (p. 15): Apart from motivating and engaging aspects, skills can be trained or learners can be empowered as authors and producers of multimedia.
Some other learning and teaching objectives can be cognitive ones (like problem solving skills, collecting information, testing of hypothesis), social skills (many games – especially Online Role Playing Games (ORPGs) need cooperation and communication in order to overcome obstacles or advance in the game) as well as the so called 21st century skills[5] (cf. Romero et al. 2014). Other objectives might include taking decisions, media and ICT skills, tolerance and so on. For defining learning and teaching objectives Bloom's Taxonomy (and

its revision) can be taken into regard as well (Anderson & Krathwohl 2000). Digital games can be used for all six categories which makes them valuable for all grades.

Describe your learners

Of course, learners are also equally important to have a closer look at before bringing a digital game into the classroom – not every game can be used for every learner. First of all, you have to make sure that the chosen game is age-appropriate (cf. section "Take a close look at the game"). As interest-driven learning is more effective (cf. Steinkuehler 2013) it is essential to find out about learners' interest. Apart from that, it is necessary to take the learners' culture and skills[6] as well as gender and other demographic data into account. Knowing your learners is essential for planning any kind of lesson – with or without using digital games. However, only if you know your target-group quite well, you will be able to look for a matching game.

Take a close look at the game

If you want to use a digital game (like any other media as well) you have to select it carefully. For using digital games in teaching contexts, one needs to differ between (a) commercial-off-the-shelf games[7] (COTS-games) which are aimed at entertaining players and (b) serious games[8] whose aim goes beyond entertainment. A sub-group of serious games are games for change which have been designed in order to influence the behaviour or attitude of players. And finally, there are (c) educational or learning games which see their prior aim in teaching players. There are lots of them to be found promising to teach spelling, maths or foreign languages. However, they are quite often called "chocolate-covered broccoli" which means that these games offer quite dull drill and practice exercises disguised as games. Therefore, digital game based learning quite often concentrates on either serious games or COTS-games as some of the strong points are motivation and immersion. Basically, learning happens in each game, but that does not mean that the game teaches what it really is supposed to teach unless the game objective equals the teaching objective (cf. Wagner 2009). As most games do not follow this design, it is the teacher who needs to make sure that transfer takes place. Therefore, the game needs to be analysed regarding its possibility to provide links for activities and exercises for reaching the teaching objectives.
Another point to bear in mind when choosing a game for teaching contexts are age-restrictions. In Europe PEGI[9] helps to decide if a game published on CD or DVD might be age-appropriate. For online games the situation is different – there is a PEGI OK label which means that the game can be played by players of all age groups as it does not contain any potentially unsuitable or harmful game content. However, in contrast to games published on CD or DVD, online games are not that strictly controlled. Moreover, the PEGI labels can only be regarded as a guidance. Thus, the teacher is responsible for having a closer look at the content and needs to decide if the game in question might be appropriate for a certain class / pupil. As a teacher you need not be an expert gamer, however, you need to play the game that long in order to be able to decide if and how it might be used in class. Some games are quite time-consuming until you can work with the contents / problem presented in class or they need extensive time until you know how to handle the game (just think of Massively Multiplayer Online Role Playing Games which are very complex and might take many hours of playing until you really know your way around the game

environment). The game also needs to be looked at regarding all the other factors (i.e. infrastructure, learning objectives, learners etc.)

Describe the infrastructure

Quite often technical infrastructure in schools is not state of the art. According to a survey by European Schoolnet (2013) "[T]here are between three and seven students per computer on average in the EU; the older the student the lower the student to computer ratio in most countries." (p. 14) Knowing that there are huge differences between countries and even between single schools it is important to check the requirements of the game that should be used and compare them to the infrastructure given. Questions like

- Will the game run on the school devices?
- Do I need an administrator to install the game?
- Do pupils / students need headphones?
- If it is an online game – are all plugins needed already installed?
- Are the ports needed available or are they blocked?
- Can pupils access the website or is it blocked?

need to be answered before you can even think about using a certain game in classrooms. Game based learning approaches, however, do not depend on having the latest equipment and 1:1 solutions. You can even use games for teaching if you only have one device in your room. However, you need to adapt your pedagogical approach.

Plan your didactic approach

Closely connected to teaching objectives is of course the chosen didactic approach. Digital games as a means of teaching can be used in various ways. They might just serve as introduction into a topic (e.g. learners play a game like "Ayiti – the Cost of Life[10]" for about 10 to 15 minutes and then they start discussing the topic of poverty). The game thus serves as kind of experience for learners as the simulation shows cause-and-effect chains and allows for exploration and reflection (Dunwell et al., 2011). Klopfer et al. (2009) identify twelve different possibilities of using games for learning (f. ex. experimenting with systems, reflecting decisions, understanding concepts and relations). The teacher also has to make sure that the lesson is planned in a way that it matches the curriculum. The infrastructure will also influence the way of teaching – it depends on the number of computers / mobile devices available if you need to stick to group work, carousel workshops etc.

Inform all relevant groups of people

As long as digital games are not generally regarded as normal means of teaching like books or films (just have a look at many media reports still connecting digital games with violence and addiction) it is useful to inform parents and the head of school why digital games are used at school. The more detailed the information is beforehand, the fewer complaints will there be. Depending on the age of the learners, it might be necessary to invite parents in order to inform them. Sometimes, it might be enough to write an information letter, stating the teaching objectives and the reasons why a certain game is used to achieve this.

Reflect on your own role

Some studies have already proven that additional material and a teaching context / tutoring is necessary to ensure that transfer from the game into reality takes place (cf. Miller & Hegelheimer 2006, Rossiou & Papdakis 2008). So the teacher's role is a very important one when it comes to digital game based learning. The teacher is responsible for creating a context in which the game can be embedded. Digital game based learning is ideal for a more learner centred approach which means that the teacher's role will be more that of a coach, thus accompanying learning processes and fostering creativity. Marklund & Taylor (2015) have investigated different teacher roles in game-based learning projects. As "[t]he task of integrating games into an educational setting is a demanding one" (ibid p. 359), teachers need to assume different roles in order to establish a setting appropriate for digital game based learning. Apart from having to care for a supporting infrastructure and carrying out administrative tasks during and around gaming sessions, they have to be gaming tutors, engage pupils in activities and discussions and make sure that teaching objectives are reached.

CAN FUTURE TEACHERS PLAN LESSONS INCLUDING DIGITAL GAMES?

As it has previously been shown, digital game based learning needs a different kind of lesson planning including some different aspects. Future teachers often do not know how to use games in learning environments and how to connect games and their content to curricular topics and / or competences. Before thinking about how to integrate digital games in lessons, teachers first of all need to know that these games might be a possible resource (next to books, analogue games, worksheets, videos and so on). As digital game based learning is not integrated in the curriculum of initial teacher education in Austria, the study carried out by the author wants to find out if students can plan a lesson around a digital game without having been taught to do so.

Method

The study, which explores whether student teachers know how to include digital games in their lesson plans or, at least, have a basic understanding of how digital games might be used to achieve certain learning objectives, was carried out between November 2013 and June 2014. Students of University Teacher College Vienna/Krems (KPH Vienna/Krems) who attended seminars on media education and human rights education were asked to complete an out-of-class task which included analysing digital games and decide if and how they could use them for teaching. These students had never done a similar task before and had never watched a lesson, in which a video game was used for teaching. This way, it was ensured that all students had the same starting point and same knowledge (i.e. no knowledge) about digital game based learning. Students had a list of about 40 games[11] from which they were free to choose from. All of the games are serious games[12] dealing with topics of human rights and human rights violation. Using an analysis frame[13] (consisting of ten to 14 questions depending on the seminar[14] the students were in) the students were asked to have a closer look at the contents, the setting and presentation of the game (visual and aural impressions, setting) as well as some game design features (objectives of the game, playable and non-playable characters). Finally the students were asked which age

group the game would be suitable for and if they thought, it could be used for teaching and if yes, how they would use it. To get some personal information students should also state how they felt while playing the game and comment on their general digital playing habits as well. The task was explained to the students during the seminars (to make sure they understand what they should do). Moreover, the analysis frame included some explanations of game-relevant terms (like narration, plot or non-playable character). The analysis had to be done at home and was finally handed in by students via the learning management system moodle, anonymized and then analysed by the author. 77 responses to the task by primary phase student teachers (all of them being in their third or fourth semester) were analysed. The students' ages ranged from 20 to 28 years, most of them (74) being female.

Data Analysis

In order to analyse the data, content analysis (Mayring 2010) was used. First of all, different categories (most of them quite similar to the questions of the students' guideline for analysing the games) were defined to find out about attitudes, skills and knowledge of the students (deductive category application). For each category a definition was given, so that all the papers handed in by students could be coded accordingly.

This paper concentrates on answering the following questions in order to find out if students knew how to deal with games as a teaching method:

1. How well do students succeed in planning a lesson including a digital game? To answer this question the responses to the task handed in by the students were analysed using the following categories:
   - the game is not regarded as useful for use in lessons (no matter which grade and/or subject)
   - the game can only be used with higher grades
   - the game is basically useful for teaching but the students do not give examples of how they would use it
   - a basic idea of how to use the game is in evidence (e.g. by stating that the game could be used in a certain subject)
   - a basic idea is provided and some information on how to realise it in class is given
   - a lesson-plan draft on how to use the game in class is provided.
2. What do students think about game based learning? This question was not explicitly asked but nevertheless quite often you can see a basic attitude towards using digital games for teaching from the way students wrote about the game and the way they would use it in lessons. Sometimes they explicitly stated that they would never use a digital game in lessons as they thought that games were a waste of time or they commented that they had never thought about using games to teach before but think it is basically a good idea.

Two more factors were extracted as they might be of relevance for finding out reasons why students are better at / not so good at integrating games in their lesson plans:

1. What was their own experience when playing the game? The hypothesis is that students are more open towards integrating games into lesson plans if their own playing experience was positive. Positive means in this context that they feel the game changed their attitudes towards certain aspects of human rights (violations), led to a gain of knowledge or made them think about the topic in a different way. A negative game

experience on the other hand would for example be frustration because of the way you have to play the game or because it is too difficult or complicated to handle.

2. Another item that is carefully looked at is the experience the students had with playing digital games. As they had to quote how much / how often and what kind of games they play / have been playing, it is possible to have a look if there is any relationship between their own gaming experience and their attitude towards game based learning. The hypothesis here is that those students who like to play digital games are more open towards using these games in lessons compared to those who do not play at all.

By having a look at these factors, the author wants to find out if it is necessary to teach the seven steps described above or if this generation of future teachers (all of them would be regarded as digital natives according to Prensky) knows how to use digital games for teaching anyway.

Selected results

As a discussion of all the results would go beyond the scope of this paper, only results directly connected to using digital games for teaching will be discussed. Altogether 77 responses to the task handed in by students were analysed to find answers to the aforementioned research questions. The most striking result can be seen from the category "own game experience" – nearly 75 % of the students quoted that their game experience was positive or the game did something with them – for example some students stated that the game made them think about the problem presented or surprised / shocked them. Only eight students said that they did not like playing the game – reasons given were mostly that the game was hard to handle or the students experienced technical problems (it was hard to install, there were software bugs while playing).

Attitude towards using games in lessons

With reference to the basic attitude towards game based learning,[15] evidence by the responses shows that positive attitudes towards digital game based learning outweigh negative attitudes. For example one student stated[16] "I haven't known that there are games from which you can learn until I did this task." Another one wrote, "I think that pupils learn by experience. This experience makes them think. That is why I regard such games as very useful." Some others said that they were really enthusiastic about the chosen game and would definitely like to use it in their future classes. "It was interesting to see how the topics poverty, health and working conditions in poor countries are taught in a very playful way." All in all, 18 responses to the task (out of 77) can be interpreted as showing a clearly positive attitude, only four cases show evidence that the students are sceptical regarding using digital games in lessons. One student for example wrote "I would advise pupils to play this game[17] at home. This game is more useful than others." Some students would only give playing games as alternative home-exercise.

Teaching objectives and role of the teacher

When it comes to drafting teaching objectives – the most important part of the seven steps (cf. figure 1) – one would assume that future teachers, who have received instruction in planning lessons for several months, do not have any problems with that, no matter which

medium they should use. However, integrating games into lesson plans seems to be a real challenge for the students – only three of them made a lesson draft which included their chosen game. Although the analysis frame asked some questions regarding use of the game in class,[18] none of the students reflected on all the questions given. Some of them thought about problems that could come up and how to solve them: "As the game consists of very similar situations children might quickly regard that as boring. Therefore I would recommend only to play through some of the situations." Another student wrote "As this topic is very comprehensive, it is necessary that there is a lot of preparation as well as wrapping-up[19]." This shows that most of them are unaware of the fact that applying a digital game based learning approach needs to reflect on your role as a teacher carefully, meaning that you need to create the setting and the context for the digital game as well as thinking of activities before, while and after playing the game in order to ensure that transfer takes place. This refers to the step "Reflect on your own role" described above. When using digital games, a completely teacher-centred approach is hardly possible. Moreover, students are also afraid of having pupils play in their lessons – there might be all the negative notions regarding digital games on their minds. Digital games are okay for leisure time but not as a tool for learning. One student noted "We would use the game when learning about different countries and continents. In order to show different ways of life this game can be used as an example for Africa. We would show the game briefly and children who are interested in the game could play it at home.[20]" Another point which the students are partly unaware of is that the teacher will not be (most of the times) the person who knows all the answers (unless you choose a very controlled setting) as games bring up a lot of issues concerning contents but also concerning game controls or storyline. This again refers to the changing role as a teacher.

Drafting a lesson plan

Thirteen of the students had at least some suggestions what to do with their chosen game whereas 39 only gave a basic idea (f. ex. that the game could be used in geography). Twelve students did not give any ideas, two of them stated that they would not use the game in class at all. Their reasons were that the game was not appropriate because of the contents and that the game was too difficult because of being only available in English[21]. This shows that they are able to analyse a game if it is useful / appropriate for their learners regarding difficulty and usability. However, none of the students mentioned factors like narration, characters, sounds or graphics.
When it comes to using digital games in lessons, some students asked themselves questions like "I think the game really makes sense and can teach a lot. However, I wouldn't know how to use it if not every child has their own tablet or PC."[22] or "As you needed to enter an e-mail address I didn't try the game because I don't want to give away any personal data." These statements show that they do not have enough knowledge regarding possible pedagogical settings and / or general media competence (for example you can use trash e-mail accounts if you do not want to enter personal information).

Own history of playing digital games

The factor of their own history of playing digital games had no influence on the fact if students were able to give reason why they would (not) use the game in lessons and how they could use the games. Although most of the students (49) described themselves as

playing digital games very seldom and ten even said they had never played any digital games, some of these non-gamers had quite good ideas how to use the games to teach. So if there is hardly any relationship between knowing much about games and having much experience playing them as well as hardly any relation between the students' gaming experience and their attitude towards digital game based learning, it must be possible to teach future teachers how to make use of the advantages of games. Both, teacher education and in-service teacher training should therefore focus on digital game based learning to enable teachers to use digital games to enhance their teaching methods and draft modern and learner-oriented lessons.

CONCLUSION

This paper and the study on which it is based – which of course cannot be generalized as the random sample is not big enough – set out to demonstrate that there definitely is a need in teacher education to include digital game based learning. For children and teenagers playing digital games is becoming more and more of a part of their lives, and therefore it is necessary to regard this medium as means for teaching as well as we regard books, films and newspapers as teaching aids. Students' comments generally show that using digital games in lessons is completely new to them. They are often not aware that digital games might provide valuable resources for simulating situations or processes or could be a fantastic starter for classroom discussions. Moreover, teachers need to get the possibility to practice drafting lessons around digital games. In addition, they need to be taught about the seven steps introduced in this paper in order to know which special demands there are when talking about digital game based learning. As discussed by Squire & Steinkuehler (2012), games can play multiple roles in learning but their effectiveness in teaching depends on a lot of factors like goal, participant, nature of the game used etc. how to use it and what to use it for in lessons. This is the reason why digital game based learning needs to be a formal part of teacher education.

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[1] Cf. Schulmeister 2008.

[2] Cf. the mission statement of Games for Change: http://www.gamesforchange.org/about/.

[3] The Horizon Project is an initiative by the New Media Consortium. It aims at helping educators worldwide by providing research and analysis regarding emerging technologies for teaching and learning. The Horizon Report is regarded as an important research into future technology that will be relevant at schools or universities.

[4] Squire subsumes games in which the context is extrinsic to game play as exogenous games, whereas endogenous games are those in which context and game play are inextricably linked (cf. Squire 2006, p. 24).

[5] 21st century skills refer to knowledge, skills, and work habits which educators, employers, and experts think to be important in order to succeed in job as well as private life. Some of these skills are for example critical thinking, problem solving, collaboration, accessing and analysing information.

[6] Some games require precise handling or include complex narrations, which would make them less fit for younger learners.

[7] Of course, all these games can be subcategorized in many ways. There are, for instance, adventure game, shooter games, racing games and so on. Cf. Apperley (2006) on the discussion about the difficulties of categorizing video games in different genres.

[8] Serious games can be categorized as well in many subgenres. Ratan & Ritterfeld carried out a study to find out about important characteristics of current serious games and developed a classification system of serious games.

[9] PEGI stands for Pan European Game Information and aims at giving recommendations in order to protect children when it comes to buying and playing video games. There are five different labels indicating the suitability of the game content (PEGi 3, PEGI 7, PEGI 12, PEGI 16 and PEGI 18). Additionally there are labels warning of bad language, discrimination, violence and so on.

[10] The serious game which wants to show the relation between poverty and (missing) education can be played online at https://ayiti.globalkids.org/game/.

[11] All games on the list had been selected by the author in order to make sure that the games might be suitable for teaching certain aspects of human rights education and can be used in various settings and subjects. Games were chosen according to the topic (human rights and human rights violation, most of them dealing with the topic of poverty), availability (free online games or games free to download) and the length (it should be possible to discuss the topic or deal with the theme of the game after a short time of playing).

[12] Serious games are digital games whose primary purpose is not to entertain but to educate or make gamers think about "serious" topics in order to change their attitude and/or behaviour.
[13] The tasks ranged from researching background information for the game, finding out which human rights the game deals with over game design elements like describing the background story, the playable and non-playable characters, the setting of the game, visual and auditory impressions, game-objectives and so on until pedagogical questions like which age is the game appropriate for and how can you use the game in lessons.
[14] For the seminar on media education some more questions were included which are, however, not relevant for this study.
[15] There was no question directly related to the attitude towards game based learning you can see from some general statements regarding the game and the method of digital game based learning respectively if they think about it in a more positive or more negative way. Those responses to the task that do not tend in either direction were regarded as neutral.
[16] As all the responses to the task handed in are in German, quotes have been translated by the author.
[17] The game chosen by the student is Free Rice (http://freerice.com/).
[18] The following questions were included in all question guidelines: Which age group is the game appropriate for? Do you think the game qualifies as being useful for teaching? (Give reasons for your decision.) How would you use the game at school? Describe your ideas by stating what you would do before, while and after playing the game in class. Which tasks would you give your pupils/students? How would you make sure that using the game would enhance your lessons? What is your role as a teacher when using the game? At which points do you need to give additional information? Which teaching objectives can you reach by using the game?
[19] The student does not give any ideas how to prepare or wrap-up the topic so that the game might be well embedded in the lessons.
[20] The game chosen is 3rd World Farmer (http://3rdworldfarmer.com/).
[21] Austrian primary school pupils start learning English in first grade. However, English is not one of the core subjects, they just get taught very basic structures and vocabulary.
[22] The game chosen by the student is GetH20 (http://www.geth2ogame.com/w/).

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