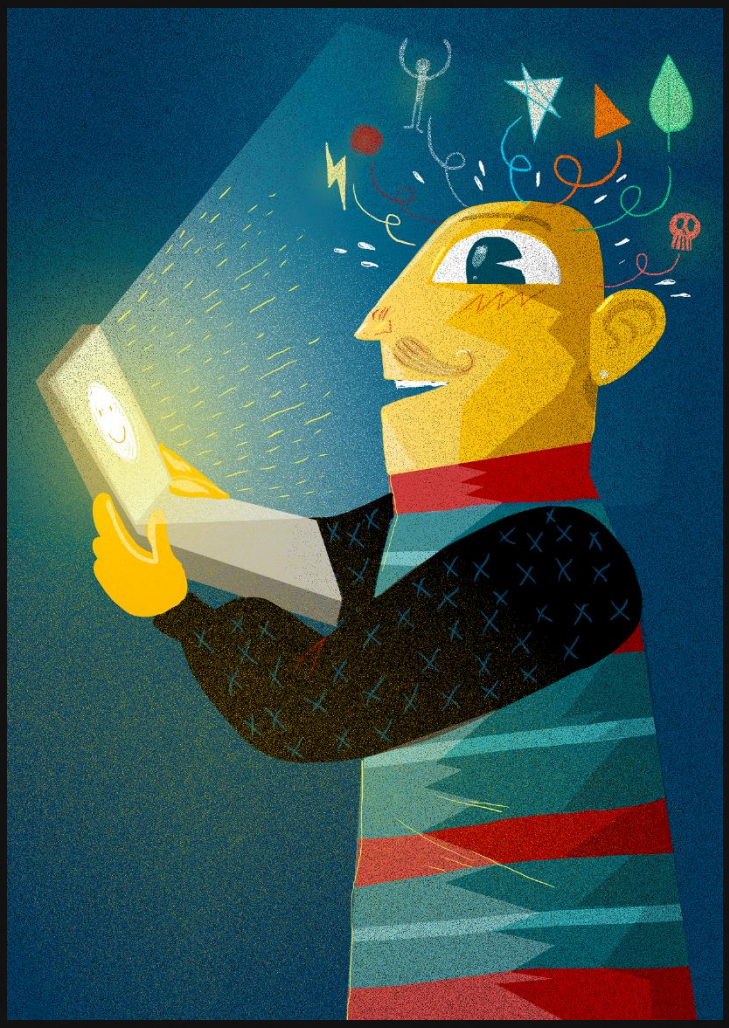
Game Environments



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Revisiting Teaching and Games. Mapping out Ecosystems of Learning

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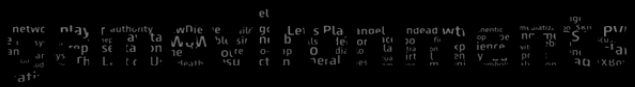

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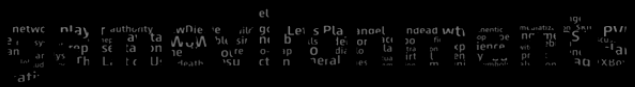

Peer-reviewed Article

Still in Another Castle. Asking New Questions about Games, Teaching and Learning

Tobias Staaby

Abstract
Research on digital game-based learning has mainly been concerned with exploring questions related to a core set of assumptions: that games, in a general sense, are effective learning tools by virtue of being motivating, engaging, adaptive and allowing for consequence-free failure and playful learning. This article revisits these assumptions and their associated questions in two levels: by subjecting them to parts of the Digital Game-Based Learning-literature problematizing these assumptions, and by contrasting them with a case-study conducted on teachers' use of, and pedagogical reasoning for, using a commercial entertainment game in a course on ethics. The resulting discussion can be summed up in three main points: 1) that the arguments of game's effectiveness relating to motivation, engagement, adaptivity and graceful failure should be reconsidered, and in some cases even dismissed, 2) pedagogical tools cannot easily be studied separately from their surrounding context, as implementation of a classroom element can result in widely different learning environments, and 3) if research on Digital Game-Based Learning aims to advance the field of game-based educational practice, then this requires a new set of questions to be asked, giving attention to the situated configurations of games and game elements, teachers, students, curricula and learning goals.

Keywords: Digital Game-Based Learning, Digital Game-Based Pedagogy, Video Games, Digital Games, Situated Learning, gamevironments

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Almost a decade ago, Young et al. (2012, 84) urged researchers on digital game-based learning to "stop seeking simple answers that address the wrong question," and to ask questions that are more sensitive to context dependent factors across different learning situations. As the authors put it, if one is looking for evidence that digital games can solve the challenges of modern education, "then we are sorry, but your princess is in another castle" (ibid., 62). Yet a large part of the academic literature on games and learning is still concerned with broad questions of games' impact on learning efficacy and student motivation (Linderoth 2012, Berg Marklund and Taylor 2016). A recent literature review concludes that the answers to these questions are "overwhelmingly positive" (De Freitas 2018, 80). However, the research literature is yet to provide a satisfying explanation for these positive effects, present guidelines for how teachers can best apply games in their profession, or illustrate how learning goals, curricula, learning activities, and digital games can be merged as elements in pedagogical designs. In other words, there are still many questions concerning games and learning that largely remain not only unanswered, but *unasked*.

This article argues that research on game-based learning is in many ways still looking around in the same old castle. In order for the academic field to advance beyond a very general and vague discourse of the educational value of digital games, there is a need for asking new questions that are sensitive to the situated nature of teaching and learning. This is especially true if the end goal for this research is to help improve the educational practice involved in games and learning. In order to make this argument, the article is structured as follows: After this introductory section follows a literature review with the goal of revisiting the established arguments for game-based learning, namely those of games' ability to make learning more efficient, motivating, and engaging. Then follows a section dedicated to studies that go beyond such general argument by showing how and why games can be of great use

to both teachers and students when specific game elements are used for reaching well-suited learning goals. After that, a case study is presented showing how a commercial entertainment game, *The Walking Dead* by Telltale Games (2012) is used by teachers to engage students in discussion and to teach them how to use ethical theories as basis for their arguments, with the goal of presenting the reader to more detailed look of how even games not designed for educational practice can be of use for teachers, given suitable circumstances. Finally, a section dedicated to discussion and conclusion considers what the argument built up over the previous sections could spell for research on the educational use of games and suggests new lines of inquiry for future scientific endeavors in the field.

Revisiting Old Arguments for Digital Game-Based Learning

In the following section I will attempt to briefly summarize the most established arguments for why games are to be used as educational tools, before discussing these in the light of examples from Digital Game-Based Learning (DGBL) research literature that challenge these arguments.

Digital games have long been lauded for their many potentially positive effects on learning (e.g., Annetta 2008, Aubrecht 2012, Fokides 2018, Prensky 2001). The main rationale for using games as educational tools is presented by Plass, Homer and Kinzer (2015) as the ability of games to make learning more effective by virtue of being motivating, providing player engagement, being able to adapt to the player, and by offering graceful ways of failure. The argument from motivation, perhaps most famously presented by Prensky (2001), stems from observations of how entertainment games can keep the player engaged for long periods of time that educators could only dream of. This power of games to motivate the player to keep

playing, the rationale goes, could be harnessed to help students stay focused on the learning process. Next, the argument concerning player engagement states that games allow for "cognitive engagement (i.e., mental processing and metacognition), affective engagement (i.e., emotion processing and regulation), and behavioral engagement (i.e., gestures, embodied actions, and movement) [and] sociocultural engagement (i.e., social interactions embedded within a cultural context)" (Plass, Homer and Kinzer 2015, 260).

Furthermore, learner engagement is facilitated by the adaptive nature of games. That is, "the capability of the game to engage each learner in a way that reflects his or her specific situation. This can be related to the learners' current level of knowledge, to cognitive abilities, to the learners' emotions, or to a range of other variables" (Plass, Homer and Kinzer 2015, 261). It concerns the game's potential ability to adapt relating to the player's level of background knowledge, cognitive abilities, emotional state, or other variables. Lastly, games allow for what Plass, Homer and Kinzer refer to as *graceful failure*: "Rather than describing it as an undesirable outcome, failure is by design an expected and sometimes even necessary step in the learning process" (2015, 261). The lowered consequence of failure, the authors argue, encourage players to take risks and explore new directions and approaches when solving in-game challenges.

The four arguments presented so far leads to the overall rationale for the educational use of digital games: that these traits, or a combination thereof, can have a substantial positive impact on the learning process, mainly by making it more efficient compared to other educational tools. These arguments have become so engrained in the discourse on digital game-based learning that they often form the

basis for studies and their related research questions. These assumptions, however, are not without their issues.

Disputing Claims Concerning the Educational Value of Digital Games

The argument that the motivational power of games makes them useful tools for learning assumes that motivation is an inherent trait of games that carries over to educational contexts without much issue. In other words, motivation is treated like an invariant constant independent of whatever situation a game is played in. This is the issue Caroline Pelletier (2009, 86) touches on when she asks if "a game such as SimCity [is] likely to remain motivating and meaningful in the context of a lesson on budget management?" Moreover, incentive structures mentioned by Plass, Homer and Kinzer (2015, 260), such as "stars, points, leader-boards, badges, and trophies," are, according to Westera (2015, 3) "not relevant for the learning contents and tasks." Westera goes on to argue that such incentive systems are linked to extrinsic motivation, which has been shown to be detrimental to intrinsic motivation. As such, there is doubt concerning the degree to which external reward systems could be argued to have positive impact on the learning process. Moreover, while some students certainly are internally motivated to play games, the diversity of gaming experience and preference among students represent a level of heterogeneity that "cannot be understated" (Berg Marklund and Alklind-Taylor 2016, 128). Not all students enjoy all types of games, or even games in general. In some cases, students might even react negatively to the idea of playing games for educational purposes (Klevjer 2021). "[T]he motivational power of a particular game is anything but straightforward and cannot be claimed on the basis of general arguments," argues Westera (2015, 3). The claim that games have motivational power per se is therefore "unjust, if not absurd" (ibid.).

While it certainly has some merit, the related argument of engagement also has some issues identified by various researchers. For example, Bell et al. (2018) have identified several different modes of cognitive engagement, including spatio-temporal immersion – the feeling of being present within the game world; narrative immersion – being engaged with the unfolding story and its characters; and ludic immersion – being engaged with the interaction with the game, its rules and possibilities for action. The researchers relate that while spatio-temporal immersion is a requirement for both narrative and ludic immersion to take place, they also state that ludic and narrative immersion can be at odds with each other. In other words: being too preoccupied with the game's rules and mechanics can cause the player to become disengaged with the game's story and theme. Linderoth (2004) found similar points of conflict between a game's rules and theme, noting that players often tend to discuss the game as a semiotically bounded system, where players primarily engage with the game's element in the manner they relate to each other rules-wise, and not as narratives or representations of real-world phenomena. When this happens in a classroom setting, using games for teaching and learning can lead to the teacher's job becoming more complicated that need be, as the teacher has to work on convincing the student to engage with the game in a pedagogically relevant manner (Vangsnes and Økland 2015). Furthermore, it is worth noting that using games is not a guarantee for student engagement, cognitive or otherwise. On the contrary: using games in an educational manner risks students becoming *disengaged*, either because they do not identify with games or gaming culture (Klevjer 2021) or they might be experienced game players and respond negatively towards the idea that games are meant to be used for learning rather than play (Berg Marklund and Alklind-Taylor 2016). To further complicate the idea of using games to encourage student engagement, Berg Marklund and Romin (2020) have argued that successful design and implementation of educational games necessitates a break away from how

games are normally designed and played, as it requires active and conscious reflection, flow-breaking design elements and interventions, and engagement in learning activities situated outside the virtual world of the game.

The ability of games to adapt to the player has also been subject to criticism by the research community. Linderoth (2009, 2012) has shown how some games contain design elements that result in the game *over-adapting* to the player in a manner that all but eliminates challenge. For instance, some games afford the player ways of skipping or circumventing challenging gameplay segments, or they allow the player to continuously improve their in-game tools – such as leveling up their avatar, getting better gear or recruiting ever more powerful armies – so that overcoming in-game challenges simply requires investing enough time and energy rather than improving at playing the game. Other games afford the students ways of changing or modifying the game to suit their needs rather than helping them get a better understanding of the subject matter at hand (Berg Marklund and Alklind-Taylor 2016).

The argument that games allow for graceful, consequence-free failure butts up against Juul's (2013, 33) notion of the "paradox of failure." This paradox goes as follows:

1. We generally avoid failure
2. We experience failure when playing games
3. We seek out games, although we will likely experience something we would normally avoid (Juul 2013, 33).

Both claims – that players enjoy games because they allow one to experiment in ways where the danger of failure is diminished, and the opposing claim that failure in games is something players would avoid altogether – can seem somewhat prescriptive. However, it is not unproblematic to claim that *it's just a game* and one therefore should not worry about failure. The consequences of experimentation and

potential failure in games can involve what to players seem like very real risks indeed. For instance, some games allow players to play on what is often referred to as *permadeath-mode* or something similar. In such games, all in-game progress is lost for good should the player's avatar die, potentially resulting in dozens of hours of hard work going down the drain. This has been shown cause players to feel genuine guilt when killing other players in some multiplayer games (Carter and Allison 2019). Furthermore, in the case of online competitive multiplayer games, playing badly and causing their team to lose can result in a player being subject to severe verbal harassment by their teammates (Adinolf and Turkay 2018). Not to mention the fact that players might have motivations for playing games other than the risk of failure. For instance, Klevjer and Hovden (2017) have shown that video game preference can vary greatly across different demographic groups. Competitive play is but one of several player motivations. One might play games simply to relax or socialize, for instance. Some games do not even have *fail states* as such, and thus involve no risk of losing, while still offering enjoyable gameplay experiences.

Furthermore, there is also the issue that most research on games and learning often neglect to define what the term *game* actually refers to. This often results in a muddled and vague discourse. Distinguishing between different kinds of games in a broad sense, like Juul's (2011) distinction between games of emergence and games of progression, between abstract games, incoherent world games and coherent world games, would do much to paint a clearer picture of the relationships between certain games and certain kinds of curricular content.

Finally, there is the general claim that games, in general, has the capacity to make learning more efficient, based primarily on the arguments mentioned above. While it is unreasonable to argue that games cannot have any positive impact on learning

whatsoever, the argument that games make learning more efficient disregards the fact that games require a considerable investment of time and resources before gameplay can even take place (Berg Marklund 2015, Berg Marklund and Alklind-Taylor 2016), as well as teacher training, professional development and access to the necessary hardware and software have been identified as major challenges for teachers (Brooks et al. 2019, Nousianen et al. 2018, Hébert, Jenson and Terzopoulos 2021). For all the considerable effort necessary to even get started using games in classrooms, one would think they are worth all the trouble. However, as this section hopefully has shown, this cannot be said to always be the case.

It is worth mentioning here that this author does not deny the fact that games can positively impact education and learning, in large and small ways, and in a wide range of different ways. Nor do I deny that there is some merit to the abovementioned arguments. The point I am attempting to get across is that continuing to sustain a scientific discourse that relies on vague and overgeneralizing truisms is helpful neither to teachers, the educational sector, or to researchers.

The Road to Asking New Questions about Games and Learning

As previously mentioned, the empirical foundation for the grand claims of the educational potential of digital games is lacking. Plass, Homer and Kinzer (2015, 260) even admit that "[s]ome of these arguments have little or no empirical support," and that "little if any empirical evidence exists for the relative impact" of for example the motivational factors of games for learning. The same can be said of many of the arguments that favor digital games as tools for teaching. In fact, this author has been unable to find any conclusive evidence in publications or studies that predate the ambitious claims like those put forth by Prensky (2001) or Gee (2003). It is therefore

this author's humble speculation that the foundational claims of games' effects on learning have, at least partially, risen out of an empirical vacuum. The scientific field of digital game-based learning research therefore seems to find itself in quite a predicament, and at risk of swallowing its own tail. The problem is twofold:

Firstly, the claim put forth by researchers (e.g., Annetta 2008, Aubrecht 2012, Fokides 2018, Gee 2003, Plass, Homer and Kinzer 2015, Prensky 2001) that games are, in a general sense, motivating, effective and engaging tools for learning, has been shown to be flawed (Berg Marklund 2015, Berg Marklund and Alklind-Taylor 2016, Linderoth 2009, 2012, Vangsnes and Økland 2015, Westera 2015). While such effects can sometimes be found, they are too unreliable and unpredictable to serve as a prime argument for games' inclusion in schools and classrooms.

Secondly, research on digital game-based learning has yet to present clear guidelines for *how* to make learning motivational, effective, or engaging with games, or come up with other rationales for the educational use of games (with some exceptions). As such, much research on digital game-based learning simply is of little use to the educational sector.

What, then, would be the best way out of this predicament? Might perhaps turning our attention to more specific configurations of digital games and learning goals paint a clearer and more promising picture? In this section, I will present a selection of publications that provide detailed accounts of exactly how specific games can help teachers teach, and students learn. In the next section, these examples will be supplemented with descriptions drawn from a larger case study enquiring into how teachers use *The Walking Dead* in a course on moral philosophy.

A study by Jensen and Hanghøj (2020) attempts to shed more light on how *Minecraft* (2009) affords students new ways of engaging with mathematical concepts. Interestingly, instead of repeating the common arguments mentioned in the previous section of this article, the authors instead begin their paper by introducing common issues in mathematics education. These include students not regarding mathematics as being a worthwhile endeavor, or how low interest in mathematics as a subject is negatively associated with mathematics performance. They also problematize how digital games have commonly been used in mathematics education in a very superficial sense, and how most studies on *Minecraft* in mathematics education fail to provide detailed accounts of how the game supports student learning, but rather rely on anecdotal evidence (Jensen and Hanghøj 2020). The authors then continue with describing their case study, which concerns how *Minecraft* was used to help 5th grade students gain a better understanding of Cartesian coordinates. Of note here is that in this case, the mathematical concept of Cartesian coordinates became a tool with which students could solve an in-game problem. As the worlds of *Minecraft* are randomly generated, and therefore not always provide the player with useful landmarks they can use for navigation, it can be difficult for players to locate specific locations, objects, structures, or other players. However, the player has a useful tool in such cases, namely that they can have their position in the game world expressed as a set of Cartesian coordinates, with the x-axis marking east-west and the z-axis showing north-south directions, while the y-axis refers to the player's elevation. The numbers on these axes change as the player moves their avatar in the game world. This feature of *Minecraft* afforded the design of a teaching unit "that created meaningful links between in-game challenges and the mathematical aspects of the game" (Jensen and Hanghøj 2020, 263). The researchers continue their paper with detailed descriptions of the various tasks and assignments presented to the students, like working in pairs to build a railway from opposite ends and meeting in the middle

or building a tunnel though a mountain from opposite sides. By conducting interviews with the involved students, the researchers were able to uncover how the teaching unit let students experience how mathematics, instead of being limited to a school domain that they just "had to learn," could become a useful tool for them in other, "real-life" settings, with several students "reflecting on how the *Minecraft* teaching unit created new perspectives on that constitutes mathematical knowledge" (Jensen and Hanghøj 2020, 267). The authors conclude their study with, among other points, noting that their study "underlines the importance of moving away from narrow measurements and asking questions such as *how* and, in particular, *what* are students learning differently when they use games in education" (ibid., 273). In short, the study by Jensen and Hanghøj is a thought-provoking account of what research on games and learning is able to uncover if it only lowers its level of description and inquiry down to the specific connections between in-game elements, learning activities, and learning goals.

Turning from mathematics to history education, we can find similar papers that also show interesting uses of games to aid in the teaching of specific subjects and skills. In a similar fashion to Jensen and Hanghøj, McMichael (2007) introduces a paper on digital games in history education with outlining some core pedagogical challenges for educators of history. One such issue, notes McMichael, is that "students can finish the semester without having understood the coherence of historical narrative" (McMichael 2007, 204). The author goes on to question whether "simple lecturing, class discussion, and other activities" are sufficient in helping the students comprehend the "holistic narrative of history" (ibid.). Digital historical simulation games like *Sid Meier's Civilization III*, (2001) argues McMichael, has the potential for being a very useful tool for teachers in such endeavors, especially when it comes to thinking in terms of counterfactual history or discussing the role of geography in

relation to the development of civilization. The *Sid Meier's Civilization* video game series (1991-2016) has also been used by Taylor (2003), who used the game in his modern world history course as a way of introducing his students to Paul M. Kennedy's (1987) *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000*, which provides explanations for factors involved in the shifts in global power in the last 500 years. Taylor relates that while he had great appreciation for the argument and model put forth by Kennedy, "freshmen might have a more difficult time grasping this model" (Taylor 2003). Taylor continues: "I had students read Kennedy and use his text to critique the historical accuracy of [*Civilization* I and II] and I used the software to animate Kennedy's model. I have found this simulation to be a great way to represent the complexities of Kennedy's model in a dynamic, visible way" (ibid.). While Taylor admits that *Civilization* "it not a perfect replication of Kennedy's argument," the game nevertheless helped his students "see and experience" Kennedy's arguments" (ibid.). Also, in a similar fashion to how Cartesian coordinates helped students solve in-game challenges in Jensen and Hanghøj's (2020) study, Taylor reports that his students could use Kennedy's model to help them succeed in the game. Furthermore, Taylor argues that historical simulation games are helpful educational tools in the way they are excellent at putting the student in the middle of unfolding historical narrative, letting them experience how historical agents could never be certain of the consequences of their actions, and that they "allow for the representation of complex historical process in a way that is more dynamic and visual than a text can ever be" (ibid.). McCall (2016) shares the same sentiment, arguing that good historical simulation games "provide what could be called systemic context for human action" (McCall 2016, 524). "Historical games," continues McCall, "can encourage players to consider that context; the systems, environmental affordances, and constraints of a historical problem space," as well as illustrate "the systemic context of people in the past, the

complicated physical and even ideological milieus in which agents in the past found themselves" (ibid.). Therefore, McCall concludes, "high quality historical games, with their focus on choice and consequence can be an important part of teaching history" (ibid.).

Again, as with mathematics education in Jensen and Hanghøj's (2020) study, these works show the value of directing attention to *what* and *how* students can learn differently in history education when digital games are applied as educational tools. These authors demonstrate how the educational value of digital games is dependent on quite specific configurations of games and game-elements, learning goals, curricula, learning activities, teacher's knowledge of how game and subject correlate, as well as other instructional tools and curricular material. The reports demonstrate what kind of new ecological conditions may appear in the students' learning environment under such configurations. One final and important observation shared by all three authors is that the design of the video game does not matter as much as how the teacher puts the game into practice as an educational tool with a clear intent in mind.

Case Study. Teaching Ethics with *The Walking Dead*

To further make the case for the new possibilities and issues that can appear when putting game-based teaching units under closer scrutiny, this section provides some descriptions and emerging themes resulting from a case study on how teachers at a high school in Bergen, Norway, use *The Walking Dead* in a course on ethics. I will start by quickly describing the unit's overall structure and design, before presenting the case study's data and the methodology involved in its collection. From there, I will go over some initial themes emerging from the data that are related to the points that

this article is attempting to convey. Please note that the following examples are taken from the data corpus of a larger ongoing research project, and that conclusive findings and results are therefore yet to be synthesized and presented. The data from this case study are mainly presented to supplement the overarching arguments of this article, and to give an example of a game-based teaching unit that has emerged out of teachers' professional practice and considerations.

The Walking Dead is a narrative adventure game with a branching story, set in a post-apocalyptic USA. The player controls the story's main protagonist, and gameplay largely consists of navigating 3D environments, interacting with objects and talking to various non-player characters. The player chooses most of the player character's actions and dialogue lines (from a mostly narrow selection). At certain intervals, the story arrives at an ethical dilemma that the player will need to solve. These range from choosing whom to save in the event of a zombie attack, to deciding who gets to eat and who must go hungry, deciding whether to lie to protect oneself, and many other difficult situations. The player's choice shapes how the story unfolds, sometimes in dramatic ways.

In this teaching unit, teachers use *The Walking Dead* with the goal of teaching students how to base their solutions to moral dilemmas on ethical theories like consequential ethics or ethics of virtue. The observed unit is part of the subject of *religion and ethics*, which is mandatory to all Norwegian high school seniors. The initial design of the unit was developed close to a decade ago by two teachers at the school, one of whom is a participant in this case study, and has since been in use by all teachers in this subject at the school. The entire unit takes place over the course of four to five weeks, with classes lasting ca. 135 minutes. It generally includes one week

for introductory lectures and learning activities, two to three weeks dedicated to gameplay and discussion, and one week for formal assessment, though the minutiae of the unit vary between teachers.

Gameplay takes place either in a classroom or the school's auditorium and is conducted in a whole-class fashion (Lee and Probert 2010), with teachers only use one copy of the game and assigns a handful of students to take turns playing the game. The rest of the students are instructed to follow the action on the screen and to make suggestions to the player on what actions to take or what dialogue options to select. Upon arriving at a dilemma, the teacher asks for the game to be paused and instructs the students discuss solutions to the dilemma in groups, using the theories they have been taught earlier. The teacher ambulates between the different groups, tuning in to what they have to say, and providing further repetition of the subject matter to the students if necessary. After a few minutes of group discussion, the teacher asks the students to share their solutions with the class, after which the students vote on what solution should be put into the game. Gameplay then continues until the next dilemma appears or the game is completed. The unit is concluded with the students discussing contemporary real-world dilemmas with the teacher present, after which they are graded based on their comprehension and application of the ethical theories.

The data includes audio and video recordings of seven teachers and their classes, retrospective, semi-structured interviews, and field notes. The goal of classroom observation and field notes was to identify interesting episodes relating to interactions between game and learning activities, like periods of low or high student activity, or cases where students either failed to grasp what the teacher was trying to convey, or where student activity were in harmony with the teacher's pedagogical

goals. These would later become the topic for short unstructured retrospective interviews immediately after class was finished. This was done to ensure that the researcher's perspective could be supplemented by how the teacher had experienced and reflected upon the observed episodes, and to avoid misinterpreting the observed events. Longer, semi-structured retrospective interviews were also conducted shortly after the observed classes, usually on the same or following day. Recorded classes are analyzed with the goal of investigating the interactions between the teacher, the students, the game and game-elements, learning goals, and important terms from the curriculum. The interviews are transcribed and thematically analyzed (Kvale and Brinkmann 2015), with the goal of investigating teachers' experiences of and reflections on using *The Walking Dead* as a tool for teaching.

An important theme in this case study is that it is not *The Walking Dead* in its entirety, but rather the ethical dilemmas contained in its narrative which the teachers report being the game's most useful aspect. The dilemmas are what gives the class something to talk about: they present the students with interesting problems to solve. Teachers instruct and encourage students to do so by applying the ethical theories from the curriculum, namely consequential ethics, ethics of virtue, ethics of duty, and relational ethics. The game's dilemmas appear particularly useful in this case, as they are generally designed in a way where every solution could be argued for, depending on what ethical theory one applies to them. According to the teachers, this is a considerable boon, as it helps the students discover that the difference between right and wrong is often in no way clear cut, but rather dependent on one's ethical position.

Furthermore, the teachers generally describe the game as being relatively approachable, both in learning to play and seeing how it could serve a purpose in the

classroom. The game puts much more emphasis on its story than its rules and mechanics, with its most salient design feature being its ethical dilemmas. This emphasis on moral philosophical problems, which are mostly well designed and without an obvious solution, resonates well with how ethics is normally taught: by discussing ethical dilemmas. It is therefore not unreasonable to conclude that the game is designed in such a way that even teachers with little gaming experience are able to recognize and apply the affordances it provides for them in their professional lives.

Another design feature of the game highlighted by the teachers is its narrative, overarching story and fictional setting. Many of the interviewed teachers state that despite the game being set in a somewhat far-fetched, fantastical setting, the game nonetheless presents a certain narrative realism that makes it possible to talk about the dilemmas and the involved characters *as if* they were real. An advantage of this often brought up by the interviewed teachers is that this offers students with believable dilemmas that the students generally have not encountered before. Consequently, the game provides students with ample opportunities for providing innovative, independent solutions: they are forced to come up with their own solutions instead of simply repeating what they have heard elsewhere. The latter is, according to the teachers, a common occurrence when discussing contemporary dilemmas, as students will often have heard solutions to them in the news or other channels. Another reported benefit is that while some teachers report being very uncomfortable with discussing contemporary dilemmas like abortion, as this might be too personal for some students, the dilemmas in *The Walking Dead* are far enough removed from reality that teachers feel comfortable talking about them while still being believable enough that the discussion becomes meaningful. In this way, the game's fictional setting proved a level of euphemization that afforded the teachers a

wider range of topics for discussion. Yet another perceived benefit noted by the teachers is that when discussing the dilemmas, the students do not have to, as put by one of the teachers, *use themselves*, meaning that since the actions are always taken on behalf of the game's main protagonist, the students are always one step removed from the acts taken in-game. This allows them to discuss solutions to dilemmas that would otherwise be seen as too extreme or insensitive if applied to a real-world dilemma. In other words: the teachers report the game's narrative, and the dilemmas involved therein, as just far enough removed from the everyday lives of students so as not to cause discussions to become uncomfortable, yet believable enough that discussion remains meaningful and relevant.

Yet another benefit of the game, according to the teachers, is that the game is of high enough quality that it often creates higher levels of engagement in class than students normally display. While this engagement is not always beneficial to the learning process (one teacher notes how students sometimes make decisions just because *they want something cool to happen*), it is nonetheless something that makes for a wider participation in classroom dialogue. According to the teachers, this seems to lower the threshold for participation, and ensures that a wide range of students get to participate in the dialogic processes of the classroom.

Like the literature discussed earlier in this article concerning mathematics and history education, this case study has also shown how games become useful tools for teaching and learning under a set of quite specific conditions. Overall, the teachers generally describe *The Walking Dead* as a very useful instructional tool that provides several advantages, mainly associated with their pedagogical practice. It helps them convey what they wish to communicate to the students and makes for an efficient catalyst for classroom discussion. This goes even for the teachers who have little to

no gaming experience (this last group, however, report being shown how to use the game by the other, more experienced teachers as essential). However, while teachers see the game as a useful tool, they are by no means as enthusiastic about it as the picture painted by the established discourse on game-based learning would have one assume. They see it as a useful tool, yes, but still just a tool.

Discussion and Conclusion

The discussion conducted in this article so far has attempted to highlight how the utility of games for learning not only depends on how they are designed, but primarily on how teachers incorporate them into pedagogical designs. In other words: there are several indications that game-based learning is, in fact, beholden to game-based pedagogy (Nousiainen et al. 2018). Game-based pedagogy has been shown by several researchers (e.g., Hanghøj and Brund 2011, Hébert and Jenson 2017) to involve several different pedagogical moves and approaches for games to become effective tools for teaching. Without a teacher present to guide and inform students, whatever learning trajectory students set off on when playing games, whether they play alone or with other students, can veer off in several unintended directions (Sandberg and Silseth 2021). It is also important to note that game-based learning environments involve more than just the game and its virtual environment, as it also includes factors such as "where the game is played, how the learning experience is designed, the level of social interaction and so on" (Alklind-Taylor and Backlund 2012, 1). Research on games and learning therefore needs to account for all these situational factors.

Another potential way of thinking about the relationship between games, learning, teachers, and subject matter is the concept of *didacticization*, as described by

Hertzberg (1999) and Lund (2014). To didacticize a subject refers to the process through which an academic field, such as modern western history, literary theory, moral philosophy, or mathematics, is transformed by a knowledgeable teacher into a school subject, and its related educational practice. It is what happens in the process by which a teacher selects parts of the wider academic field, decides what the students should learn, and how they should learn it. It also involves the teacher's pedagogical approaches to teaching the selected curricular content by the use of different tools and aids, such as models, pictures, stories, illustrations, demonstrations, technological tools, and so forth. Such a perspective could give rise to interesting questions and research projects investigating how teachers can use games as tools for transforming academic disciplines into school subjects. This relates to the questions referred to earlier in this article, posed by Jensen and Hanghøj (2020), concerning *how* and *what* students can learn differently with games. In other words: researchers could make interesting discoveries if they start investigating how games afford teachers new ways of didacticizing their subjects.

Now that we are nearing the end of the article, this author hopes that the reader would grant him a moment speak freely, in informal honesty. The degree to which some researchers have all but ignored the work done by teachers in relation to game-based learning is quite baffling to me. The fact that *debriefing* is important (Crookall 2010) should not really come as a surprise to anyone. Moreover, when scholars talk about *debriefing* of the gameplay experience, or how teachers are needed to unlock the pedagogical value of digital games, they are failing to see the forest for the trees. What researchers refer to as *debriefing* will often turn out to simply be *teaching*, plain and simple. Games are not only useful in empowering student learning; what is perhaps of more importance is *how they empower the teacher*. It is this author's sincere hope that this article will encourage other

researchers on games and learning to acknowledge this. After all, perhaps Wagner and Wernbacher (2020) put it best: “digital games do not teach, teachers do.”

In summary, in order for research on games and learning to make substantial progress, it is necessary, as Young et al. (2012, 62) put it, for “current methodologies must extend beyond their current parameters to account for the individualized nature of game play, acknowledging the impossibility of the same game being played exactly the same way twice and establishing that game play may need to be investigated as situated learning,” and, once again, to “stop seeking simple answers that address the wrong question” (ibid., 84). Indeed, this author will strongly encourage, based on the arguments presented in this article, for researchers to start seeking complex answers attempting to address the *right* questions. That is not to say that this author has the definitive answer for what these *right questions* might be, but I hope that this article nevertheless has provided some inclinations for where to start searching. Hopefully, this is a quest for scientific research community to take on in collaboration.

References

Adinolf, S. and Turkay, S., 2018. Toxic behaviors in Esports games: Player perceptions and coping strategies. *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts*. October 2018, 365-372. DOI: https://doi.org/10.1145/3270316.3271545.

Alklind-Taylor, A. S. and Backlund, P., 2012. Making the implicit explicit: Game-based training practices from an instructor perspective. *Proceedings of the 6th European Conference on Games Based Learning (ECGBL'12)*. Reading: Academic Publishing International, 1-10.

Annetta, L. A., 2008. Video games in education: Why they should be used and how they are being used. *Theory into Practice*, 47(3), 229-239.

Aubrecht, M., 2012. Games in E-learning: How Games Teach and How Teachers Can Use Them. In: Wang, H., ed. *Interactivity in E-Learning: Case Studies and Frameworks*. Hershey: IGI Global, 179-209.

Bell, A., Ensslin, A., van der Bom, I. and Smith, J., 2018. Immersion in Digital Fiction: A Cognitive, Empirical Approach. *International Journal of Literary Linguistics*, 7(1), 1-22. DOI: https://doi.org/10.15462/ijll.v7i1.

Berg Marklund, B. and Alkind Taylor, A.-S., 2016. Educational Games in Practice: The challenges involved in conducting a game-based curriculum by Academic Conferences International – issuu. *The Electronic Journal of E-Learning*, 14(2), 122-135.

Berg Marklund, B. and Romin, R., 2020. Bad game, good learning; Examining the contradictions of digital game-based learning. *Proceedings of the European Conference on Games-based Learning*. 24-25 September 2020, Brighton, UK. Sonning Common: Academic Conferences and Publishing International Ltd, 67-76.

Berg Marklund, B., 2015. *Unpacking Digital Game-Based Learning: The complexities of developing and using educational games*. [PhD thesis] University of Skövde.

Brooks, E., Gissurardottir, S., Jonsson, B. T., Kjartansdottir, S., Munkvold, R. I., Hugo Nordseth, H. and Sigurdardottir, H. I., 2019. *What Prevents Teachers from Using Games and Gamification Tools in Nordic Schools?* Proceedings of the Interactivity, Game Creation, Design, Learning, and Innovation: 7th EAI International Conference, ArtsIT 2018, and 3rd EAI International Conference, DLI 2018, ICTCC 2018, Braga, Portugal, 24-26 October 2018. Cham: Springer, 472-484.

Carter, M. and Allison, F., 2019. 8 Guilt in DayZ. In: Jørgensen, K. and Karlsen, F., eds. *Transgression in Games and Play*, 133-152. Cambridge: The MIT Press.

Crookall, D., 2010. Serious games, debriefing, and simulation/gaming as a discipline. *Simulation and Gaming*, 41(6), 898-920.

De Freitas, S., 2018. Are games effective learning tools? A review of educational games. *Educational Technology and Society*, 21(2), 74-84.

Fokides, E., 2018. Digital educational games and mathematics. Results of a case study in primary school settings. *Education and Information Technologies*, 23(2), 851-867.

Gee, J. P., 2003. *What video games have to teach us about learning and literacy*. New York: Palgrave Macmillan.

Hanghøj, T. and Brund, C. E., 2011. Teachers and serious games: Teachers roles and positionings in relation to educational games. In: Simon Egenfeldt-Nielsen, S., Meyer, B. and Holm Soerensen, B., eds. *Serious games in education: A global perspective*. Aarhus: Aarhus Universitetsforlag, 125-136.

Hébert, C. and Jenson, J., 2017. Digital game-based pedagogy: Exploring teaching strategies for classroom teachers in the use of video games in K-12 Classrooms. *Proceedings of the 11th European Conference on Games Based Learning, ECGBL 2017*, 5-6 October 2017, Graz, Austria. Reading: Academic Conferences Ltd, 227-234.

Hébert, C., Jenson, J. and Terzopoulos, T., 2021. "Access to technology is the major challenge": Teacher perspectives on barriers to DGBL in K-12 classrooms. *E-Learning and Digital Media*, 18(3), 307-324.

Hertzberg, F. 1999. Å didaktisere et fag, hva er det? In: Nyström, C. and Ohlsson, M., eds. *Arton artiklar om språk, litteratur, didaktik och prov. Et vanskrift til Birgitta Garme på 60-årsdagen.* Uppsala: Uppsala Universitet.

Hovden, J. F. and Klevjer, R., 2012. *Game Space and Social Space*. [paper] October 2012. 1-22. Available at https://janfredrikhovden.files.wordpress.com/2012/10/hovdenklevjer2012videogameskristiansand.pdf, accessed 28 November 2021.

Juul, J., 2011. *Half-real: Video games between real rules and fictional worlds*. Cambridge: MIT press.

Juul, J., 2013. *The art of failure: An essay on the pain of playing video games*. Cambridge: MIT press.

Kennedy, P. M., 1987. *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000*. New York: Random House.

Klevjer, R. and Hovden, J. F., 2017. The structure of videogame preference. *Game Studies*, 17(2), 1-16.

Klevjer, R., 2021. Civilization IV i den videregående skolen : mellom ekspertise og fremmedgjøring. *Nordidactica*, 1, 80-102.

Kvale, S. and Brinkmann, S., 2015. *Det kvalitative forskningsintervju*. Oslo: Gyldendal akademisk.

Lee, J. K. and Probert, J., 2010. Civilization III and whole-class play in high school social studies. *Journal of Social Studies Research*, 34, 1-28.

Linderoth, J., 2004. *Datorspelandets mening. Bortom idén om den interaktiva illusionen*. [PhD thesis] University of Gothenburg.

Linderoth, J., 2009. It is not hard, it just requires having no life – Computer games and the illusion of learning. *Nordic Journal of Digital Literacy*, 4(1), 4-19.

Linderoth, J., 2012. Why gamers don't learn more: An ecological approach to games as learning environments. *Journal of Gaming & Virtual Worlds* 4(1), 45-62.

Lund, A., 2014. "Å didaktisere et fag" - 15 år etter: Behovet for å didaktisere teknologirike læringsomgivelser. In: Hvitstendal, R. and Roe, A., eds. *Alle tiders norskdidaktiker – Festskrift til Frøydis Hertzberg på 70-årsdagen*. Oslo: Novus forlag.

McCall, J., 2016. Teaching history with digital historical games: An introduction to the field and best practices. *Simulation & Gaming*, 47(4), 517-542.

McMichael, A., 2007. PC Games and the Teaching of History. *The History Teacher*. 40(2), 203-218.

Minecraft, 2009. [video game] (multiplatform) Mojang Studios, Microsoft.

Nousiainen, T., Kangas, M., Rikala, J. and Vesisenaho, M., 2018. Teacher competencies in game-based pedagogy. *Teaching and Teacher Education*, 74(August), 85-97.

Pelletier, C., 2009. Games and Learning: What's the Connection? *International Journal of Learning and Media*, 1(1), 83-101.

Plass, J. L., Homer, B. D. and Kinzer, C. K., 2015. Foundations of Game-Based Learning, *Educational Psychologist*, 50(4), 258-283.

Prensky, M., 2001. *Digital Game-Based Learning.* New York: McGraw-Hill Education.

Sandberg, M. H. and Silseth, K., 2021. Being Peer Gynt: How students collaboratively make meaning of a digital game about a literature classic. *E-Learning and Digital Media*, 18(6), 581-598. DOI: https://doi.org/10.1177/20427530211022928.

Sid Meier's Civilization [III], 2001. [video game] (MS DOS, Windows) Firaxis Games, Infogrames and MacSoft.

Sid Meier's Civilization series (1991-2016). [video game series] (multiplatform) MicroProse, Activision and Firaxis Games, MicroProse, Activision, Hasbro Interactive, Infogrames and 2K Games.

Taylor, T., 2003. Historical simulations and the future of the historical narrative. *Journal of the Association for History and Computing*, 6(2). Available at http://hdl.handle.net/2027/spo.3310410.0006.203, accessed 28 November 2021.

Vangsnes, V., and Økland, N. T. G., 2015. Didactic dissonance: teacher roles in computer gaming – situations in kindergartens. *Technology, Pedagogy and Education*, 24(2), 211-230.

Wagner, M. G. and Wernbacher, T., 2013. Iterative didactic design of serious games, *Foundations of Digital Games conference (FDG13)*. Chania, Greece, 14-17 May 2013, 346-351.

Westera, W., 2015. Games are motivating, aren´t they? Disputing the arguments for digital game-based learning. *International Journal of Serious Games*, 2(2). DOI: https://doi.org/10.17083/ijsg.v2i2.58.

Young, M. F., Slota, S., Cutter, A. B., Jalette, G., Mullin, G., Lai, B., Simeoni, Z., Tran, M. and Yukhymenko, M., 2012. Our princess is in another castle: A review of trends in serious gaming for education. *Review of Educational Research*, 82(1), 61-89.