What Does It Mean to Be a Game Literate Teacher? Interviews with Teachers Who Translate Games into Educational Practice.

Abstract: In this paper, two case studies are presented of teachers who translate video gaming into educational practice. These cases are situated within a broader framework of intermediality/multimodality and related to debates about (video game) literacy and the position of the teacher in education. The question of what it means to be a game literate teacher is explored. Although the results of this study are to be considered preliminary, they raise important issues, such as the role of expert video game knowledge for teachers involved in DGBL, the description of DGBL as an interplay between distinct but intermingling knowledge aspects, and the need for teachers to become anthropologists rather than gamers.

Keywords/Key Phrases: Digital Game-Based Learning, New Literacy Studies, Case study / Interview approach, Video Game Literacy, Teachers as anthropologists

1. Introduction

It has been acknowledged that the adoption (Din and Caleo 2000) and the effectiveness (Hanghøj and Brund 2010) of game-based learning largely depend on teachers' acceptance. Consequently, much research within the field of digital game-based learning has focused on teachers' acceptance of video games in the classroom (Bourgonjon et al. 2008). By performing questionnaire research on a target audience mainly consisting of teachers who are sceptical about the use of games, the voice of those teachers who are actually using games often remains unheard. In order to overcome this issue, two case studies of teachers who use games will be presented and discussed. These cases are selected from a large-scale research project that explores general research questions such as: (1) What drives teachers to use games in their classrooms, (2) Do these teachers share certain characteristics, and (3) What kind of support do these teachers need to continue their work?

Exploring what happens when teachers are confronted with a new medium such as video games requires an ethnographic perspective. Therefore, the case studies will be situated within a broader framework of intermediality/multimodality (Kress and van Leeuwen 2001), and related to debates about literacy (Street 1995; New London Group 1996), game literacy (Burn and Buckingham 2007; Zagal 2010) and the position of the teacher in education (Schön 1983; New London Group 1996).

2. Theoretical perspectives

2.1 Intermediality

Within the larger development of digitization (see Castells 1996), video games can serve as an interesting case. As Bolter and Crusin (2000) explain, new media are often introduced as improvements over traditional media, with every new medium promising a greater sense of "immediacy", a more direct way of experiencing reality. However, no matter how much effort is put into the changing, adapting, reconfiguring, challenging – or "remediating" – a medium can never render itself invisible. No interface is ever completely transparent. On the contrary, every new medium brings forth new specificities of experiencing the world – thus focusing the attention to the "hypermediacy". Metaphorically, every new medium is born twice. Once when it is used to translate earlier practices, and a second time when the specificities of the medium are acknowledged (Gaudreault and Mario 2002).

Typical for new media is that multiple, distinct modes of representation, communication and experience are brought together. These modes do not simply co-exist, but interact as well (Kress 1998: 68). According to Jenkins and his colleagues (2006), this convergence of media can be considered empowering, in the sense that passive consumption is now transforming into active production of
meaning. However, Apperley (2008) adds an important side note to the democratizing character of new media, arguing that in order to realize the democratizing potential of new media, we will have to renegotiate what we want our culture to be like, what will constitute literacy and how we are going to reshape our institutions (e.g. education) to support this process (Lessig 2008; Apperley 2008).

In this paper, we will focus upon a number of discussions about literacy and education that arise when teachers are confronted with a new cultural artifact like video games.

2.2 Literacy

The concept of literacy has been the subject of many heated debates. Traditionally, literacy is understood as reading and writing, often adding the adjective “cultural” to comprise the knowledge of the national, literary canon as well (Hirsch 1987). While this conceptualization is still advocated by some (e.g. in calls for a return to the book culture in education), it has become difficult to maintain its rather limited scope, as it is challenged from ideological and social perspectives.

From an ideological perspective, the traditional conceptualization of literacy is problematic because it inevitably stigmatizes certain groups by creating a binary distinction between literate and illiterate people (Street 1999). From a social change perspective, the concept of literacy is challenged by the digitization, globalization and new economy (Castells 1996). Because of these changes, traditional reading and writing skills can no longer be considered sufficient basic skills for a successful life (New London Group 1996). The multiliteracies movement changes the focus from the individual to the social (New London Group 1996), by situating literacy within “semiotic domains” (Gee 2003) that encompass the social practices (based upon one or more modalities to make meaning) of different groups (Street 1995; Graff 1987). It becomes clear that literacy is a social construction people use to make meaning. The concept not only refers to a skill that enables successful communication, but also to the social struggle about the control over a specific discourse (Mackereth and Anderson 2000). Who decides what constitutes game literacy (Squire 2005)?

Video games can be considered an interesting case within the digitization that underlies the idea of multiliteracies. Because of their multimodal nature (Kress and van Leeuwen 2001) - combining computer technology with representational media and the principles of games and play - video games challenge traditional assumptions about texts (Beavis 1997) and literacy (Squire 2007) and their relation with education (Mackereth and Anderson 2000). As Kress (1996) argues: “Young people, who may be spending long periods of time with electronic games, developing high levels of analytic skills and muscular coordination quite unlike those of writing, are not going to leave these at the school gate” (193). Video games thus not only change our ideas about literacy, but they could transform the very institution of education as well (Squire 2007). When school is all about learning how to participate in our modern society, it makes no sense to ignore video games when they play such an important role in young people’s lives (Jenkins et al. 2006).

Whether the goal is to study video games in their own right, or to use video games in the classroom for learning purposes, it has been stressed that it is important for teachers to learn about and acquire video game literacy (Hsu and Wang 2009). Teachers need to become aware of the multimodal meaning making potential of video games (Gee 2007) and their abilities to transform the educational system (Squire 2007), not only for making informed decisions regarding the organization of bringing games to the classroom (Becker 2007), but also because students will persistently question teachers’ experience with and knowledge about video games (Zagal 2010). Perhaps, “the biggest challenge in developing a critical vocabulary around games may not be with students, but with teachers, parents, and administrators who treat games as trivial, rather than influential cultural artifacts and practices” (Squire 2007: 658).

While most scholars agree that video game literacy should entail the ability to decode, to understand and produce meanings (Zagal 2010), others wonder whether it could/should also include a reference to the metaphorical meaning of gaming as “exploiting or taking clever advantage of something” (Zimmerman 2009: 25). Many questions arise when thinking about video game literacy. In the first place; what does it
mean for a teacher to become video game literate? How does it affect the relationship between teachers and students (New London Group 1996)? Can contemporary definitions of literacy that comprise reading, writing and cultural awareness be translated to the realm of video gaming (Beavis 1997)? How does playing a game relate to print literacy, and game design to writing (Burn 2007: 49)?

In this paper, two case studies are presented in which teachers discuss their own way of dealing with video games in the classroom in order to provide a richer and more contextualised understanding of how teachers translate games into educational practice. By analysing the two interviews, we aim to identify how the teachers translated particular games into learning environments, and how they reflected upon that process in relation to the interplay of different knowledge aspects - i.e. game modalities, curricular aspects, pedagogical aspects, and the everyday knowledge aspects involved in playing games (cf. Hanghøj, in press). Based on these preliminary findings the discussion then explores the notion of video game literacy in relation to the teaching profession.

3. Case studies

3.1 Case 1: Teaching with a UT mod

The first case is based on an interview with Cees-Willem, a 28 year-old science teacher from The Netherlands. Cees-Willem has always been interested in technology and new media; growing up with all types of video games except Xbox-ones, creating collaborative music productions online, exploring the possibilities of Google apps and Prezi - he even found the love of his life in World of Warcraft. Given his interest in technology, it comes as no surprise that Cees-Willem took a minor in educational technology during his teacher training program and chose a school which has the ambition to become the most tech-savvy school in The Netherlands to perform his internship at. Given his profound knowledge of new technologies and his enthusiasm for using them in the classroom, Cees-Willem fitted perfectly in the somewhat different organizational structure of this school and got hired as soon as he graduated (1.5 years ago).

Cees-Willem teaches sciences in the third and fourth year, and says that “making contact with the students” is his primary goal when teaching. He believes that a science teacher should focus on getting the pupils “psyched” over the sciences, by making them reflect on the different layers in the world they live in. He wants his pupils to “open the curtains in the morning and wonder what principles underlie everything they see”. And while Cees-Willem acknowledges that this does include learning formulae, he believes that it is most important that pupils first get acquainted with the phenomena and learn how to describe them in their own words.

Both his ties with the teacher training program and his love for experience-based education are what got Cees-Willem involved in a research project that studies different types of video games in a third grade sciences classroom. In this project, a modification of Unreal Tournament and Space Challenge (created by another science teacher in GameMaker) are used in lab lessons to immerse pupils in a world that is built around what Cees-Willem calls: “unnatural concepts like forces and friction”. In both games, students have to catch coins that are scattered around the game world. In the Unreal Tournament version, the game world is in 3D and the pupils can play against each other. In the Space Challenge version, the game world is in 2D. What is special about these games is that the players can only move around by applying forces on themselves. In addition, the game world is free from friction. The pupils got two hours to catch as many coins as possible, which served as an advance organizer before the concepts were introduced in a theoretical lesson. When evaluating the program, Cees-Willem was a bit disappointed with the rather limited time devoted to the debriefing (in the project). While he can definitely see the added value of video games - certainly for a teacher in the natural sciences - he believes that it will take a little more time before he can really make use of all the advantages of games in the classroom.

Cees-Willem explains that he has not used games more often, because he felt rather insecure at the start of his career and wanted to get some experience in front of the classroom before he started
experimenting. When thinking about games, he wonders whether to use them as an example or as immersive experiences. He believes it is his job to bring his students to the required achievement levels and acknowledges that it feels safer to stick to some sort of teacher manual and to use lab sessions with a predictable outcome. He claims he would have used games in the classroom had he had access to ready-made lesson plans/materials. However, as he starts to feel more confident as a teacher, he is no longer afraid of taking some risks. Therefore, he has been exploring the Sony PlayStation 3 as a potential tool for classroom use (and the potential of Sony sponsoring him). He mentions Gran Turismo 5 because “it is very realistic,” and could therefore serve as a sandbox to perform measurements in. He will also buy Little Big Planet 2, because the first game has left him with the impression that the game editor would allow him to create just the experiences he wants for his pupils. And because he believes it would be “fun”. In the future, he thinks Kinect and Move will prove useful as well.

For Cees-Willem, video games are just another medium - a medium he knows everything about because he grew up with it. He thinks it’s only natural that everyone will start to use games in their practice, because “the generation that did not play games will grow extinct”. He describes video games as extensions of our sensory organs. Although he believes that video games will not be able to reach all pupils. So he stresses that it is important to not just use games, but to use a lot of different methodologies, in order to get every pupil involved, to address all learner preferences...

Cees-Willem believes that the school context has been an important influence in considering video games as a teaching approach. It is no coincidence that Cees-Willem is not the only teacher at his school who is exploring the use of games. In his school, the goal is to build upon the philosophy of the "new learning" while still preparing pupils to reach the national final achievement levels. This vision is reflected in the entire organizational structure. Cees-Willem points out that the management structure is very flat, as everyone can walk in and out the dean’s office. In addition, the staff is very young. “To teach in this kind of environment, you have to have an open mind,” he says, although he admits that he feels a little “rusty” already since he’s often “just standing in front of the classroom”.

3.2 Case 2: Teaching with Penumbra

The second case is based on an interview with Andreas, a 34-year old teacher from Denmark, who teaches with games on a regular basis. Andreas is trained as a school teacher, but also has a professional background working with films. In addition to his job as a school teacher at a Danish elementary school, Andreas has a part-time job as a pedagogical ICT consultant working in different schools at a regional level. Andreas has taught with computer games in his school for several years, mainly using casual games as a part of his teaching in Danish and English classes, but he has also used World of Warcraft to teach film students about camera techniques. Being interested in computer games, he likes to explore new game formats and how they may be integrated into his teaching. For Andreas, one of the primary reasons for teaching with computer games is that they are able to engage pupils and allow them to draw on their informal learning processes: “It is relevant to use computer games because you do something that the kids know about in the first place in order to learn them things that are useful for them instead of letting them read a book, which they might not see the point in reading”.

The primary focus for the interview was Andreas’ course with the 3D horror adventure game Penumbra, which he conducted with a 9th grade Danish class (Mother Tongue Education). The main reason for selecting the game for the course was that Andreas was quite fascinated by the game himself and expected his pupils to be thrilled as well when playing it. In summary, Penumbra can be described as a classical adventure game with a compelling and suspense-driven narrative and a highly immersive atmosphere, taking place in a rather dark and spooky mine environment. Based on these qualities, Andreas expected that the game could provide an engaging and immersive learning environment for his pupils.

Having decided upon this particular game, Andreas then translated the knowledge aspects of the game scenario to fit with the knowledge aspects of the MTE curriculum. More precisely, Andreas decided to use the game as a part of a course on genres that focused on the defining aspects of the horror genre, which
cut across games, films and books. According to Andreas, the aim of the course was not to analyse the genre aspects of *Penumbra* as a computer game, but rather to use the game as a way of letting the pupils become “immersed” in the language and narratives of the horror genre to support other learning activities. In order to ensure the pupils’ immersion in the game, Andreas asked the pupils to play the game in small groups using laptops in the dark basement of the school. In this way, he also re-designed the everyday physical learning environment of the classroom into an unfamiliar, but also a more relevant setting in terms of creating more horror atmosphere.

Drawing upon their game experience, the student groups were then asked to write a short horror scene from the game using a first-person perspective. This linked the game genre to the genre of fictional writing, which again was related to the pupils’ everyday knowledge of the horror genre. In order to prevent that the pupils’ fictional texts from being reduced to “school only” texts (i.e. texts which only exist and only have relevance within a school context), each of the pupil groups were asked “to select their best horror sentence” to be compared and discussed in the class. By writing these sentences up on the board, Andreas then orchestrated a discussion of how these sentences could or could not be seen as “good” horror sentences, and how they differed from other related genres such as the splatter, noir or thriller genres. In this way, the pupils were not only asked to write sentences in order to convince the teacher, but also to convince their classmates about their “quality of horror”. According to Andreas, the pupils were quite engaged both when playing the game in small groups for approximately 60 minutes as well as when discussing the quality of their horror sentences in the class.

Based on his positive experiences teaching with *Penumbra* and other games, Andreas criticizes the lack of obligation on teachers to use computer games or other forms of digital learning resources. At the same time, Andreas also stresses that teachers must be able to select relevant games for particular learning activities, and acknowledges that many teachers, including his colleagues, may feel “insecure” about teaching with games. Being a teacher, who likes to “play a bit with things”, he is fond of experimenting with computer games in order to identify curricular aims with a particular game. In this way, he argues that it is not only important that teachers are able to select relevant games; they must also be able to identify relevant learning goals and adjust his or her goals in relation to the game dynamics.

4. Discussion

As explained in the literature section of this paper, definitions of video game literacy traditionally refer to the ability to understand and produce meanings with video games (Zagal 2010). However, the question of what it means to be a game literate teacher seems more complex. For example, does it suffice to acquire expert knowledge about video games in order to be a game literate teacher? Is video game expertise a prerequisite for using games in the classroom? And is the successful implementation of video games in the classroom proof for being a game literate teacher? While the interview data of course does not suffice to provide a defining answer to these questions, they improve our understanding and can potentially serve as a roadmap for future research.

Concerning the question of video game expertise, the data show that both Cees-Willem and Andreas were able to teach with video games in the classroom even though they have very distinct levels of video gaming expertise. On the one hand, Andreas, who does not see himself as at all that video game savvy, was able to create engaging game-based learning environments for his pupils. On the other hand, Cees-Willem, who considers himself to be an expert gamer, has to admit that he does not feel confident enough to introduce video games in his classroom without the support of other researchers and teachers. The difference between the two teachers illustrates the importance of balancing different knowledge aspects – not just video game expertise – in DGBL, which of course relates back to the concept of multiliteracies: expertise in just one knowledge domain no longer guarantees a favourable outcome. Rather, success depends on the accumulation, balancing and renegotiation of different skills and knowledge aspects. In the case of translating video games into meaningful educational practice, this implies that teachers have to balance their knowledge of video games with at least three other knowledge aspects, summarized by Hanghøj (in press) as curricular knowledge aspects, pedagogical practices of the school context, and the students’ everyday knowledge about games and game genres. The main point here is that meaningful
teaching with games both requires teachers to identify, understand, and translate relevant game dynamics into learning objectives, but also to be competent professional practitioners (Schön 1983).

The description of game-based teaching as an act of balancing and renegotiating traditional understandings of different knowledge aspects is clearly illustrated in the interviews. At first sight, Cees-Willem and Andreas do not have a lot in common. Andreas teaches in a traditional elementary school, has several years of professional experience as a teacher of Danish, and feels quite confident in meeting the demands of the curriculum. In contrast, Cees-Willem teaches in a school that stimulates the use of new technologies and games, only has a few years of experience as a teacher of natural sciences, and because of this, still has a hard job of meeting the final achievement levels. Nevertheless, while the teachers in this study are indeed quite different in terms of their professional teacher competence, they share an attitude of openness to different cultural trends, a willingness to defamiliarize their own position as a teacher and to renegotiate the central role of the curriculum and the organization of education in general (with other teachers, but also with their students). As such, Cees-Willem and Andreas are realizing the empowering potential of new media. Not just by designing game-based learning environments, but also by renegotiating what they want culture and educational system to be (see the earlier discussion of intermediality – Apperley 2008).

Both from the theoretical discussion as well as the interviews, it appears that it would perhaps be beneficial to consider the use of video games by teachers from a broader educational perspective. Over the years, teachers have been confronted with many new media – such as radio, television, and indeed gaming – each holding the promise of new and improved teaching strategies. The emergence of a new technology has always inspired claims that education will be fundamentally transformed and schools would ultimately lose their relevance. Research has shown that such a strong focus on media risks that teachers become reluctant to change (Cuban, 1986). Therefore, education is rather to be perceived as a “Contact Zone” (Pratt 1991), where different cultures – and media – meet, clash, challenge and enrich each other. From this perspective, teachers don’t necessarily need to become experts with every new medium, but at the very least need to know what is going on (e.g. have a basic understanding of the most relevant genres and modalities) in order to participate. In other words, teachers need to become anthropologists: they need to “understand which trends are taking place in our culture. Meaningful intervention must take the form of working with these trends” (Papert 1980: 32).

In summary, the findings from this paper suggests that future research on game-based learning should broaden the perspective on describing in what way that teachers can be considered game literate by taking into account other relevant knowledge aspects of the educational context such as curricular aspects, pedagogical practices, and students everyday knowledge of games and genres.

5. References


Hanghøj, T. and C. Brund (2010) “Teacher Roles and Positionings in Relation to Educational Games”, Paper read at the 4th European Conference on Games Based Learning, Aarhus University, Copenhagen.


