

## Read This or Die! Including At-Risk Students through Game-Related Literacy Practices

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**Abstract:** The aim of this paper is to explore how at-risk students can become included in Danish as L1 by writing game-related texts such as game guides, character analysis or fictional stories, where they describe how to play and overcome key game challenges. The empirical data is based on The School at Play project (2015-2017), which involved a series of design interventions with the action co-op role-playing computer game *Torchlight II*. The interventions were carried out in eight classes (grades 3-6) distributed across four different Danish schools with a particular focus on four selected at-risk students in each class, who experienced social and subject-related difficulties. In order to analyze the students' game-related texts and their experience of writing them, the paper presents the Game as Curriculum model for understanding meaning-making processes involved in integrating games with curricular activities. The model is inspired by frame theory (Goffman 1974) as well as research on games and literacy (Apperley and Beavis 2011). Drawing on the perspectives of New Literacy Studies (Barton and Hamilton 2000), a dialogical perspective on student voice (Bakhtin 1981, Sperling and Appleman 2011) and Gee's (2003) notion of projective identity, I conduct an empirical analysis of three different types of students' game-related texts as well as data from post-intervention interviews. The findings indicate the importance of designing game-related assignments, which allow students to meaningfully extend their experience of overcoming game challenges in *Torchlight II* as well as expressing their voices through projected identities.

Keywords: games and literacy, games and L1, games and inclusion, *Torchlight II*, Design-based Research

### 1. Introduction

The teaching of writing in schools face major challenges in terms of allowing students to produce meaningful texts, which serve clear purposes and have readers in mind that go beyond the teacher and the school context (Purcell-Gates, Duke and Martineau 2007). The scope of these challenges has recently been documented by a large-scale analysis of Danish students' texts (Slot et al. 2016). According to this study, students in Danish as L1 – i.e. Danish as Mother Tongue Education – primarily spend their time on filling out skill-oriented assignments as well as analysing literature through pre-made templates. In this way, the students often end up writing texts, which primarily address their teachers and follow pre-defined assessment criteria with little or no references to out-of-school contexts. In this way, these writing assignments can be understood as “schoolish” as they primarily exist and are carried out within the norms and values of the school domain.

At the same time, Danish students spend a considerable amount of time outside school on navigating and producing various types of digital texts. As an example, Danish boys between 11-13 years hold the European record in time spend on playing computer games as they play games for an average of more than 2 hours each day (WHO 2016). Gaming activities involve a broad variety of different game-related literacy practices, which are often quite complex and serve clear purposes depending on the games being played and local game practices (Gee 2003). In this way, there is a clear gap between the values, norms and competencies involved in students' in-school and out-of-school literacy practices. However, this gap also represents a potential for rethinking literacy instruction in schools by promoting students' literacy practices through game-related assignments (Beavis, Dezuanni and O'Mara 2017; Hanghøj, Møller and Brok forthcoming).

When using commercial computer games in schools, it is important to bear in mind that games do not necessarily represent meaningful learning resources in themselves. Obviously, it may be entertaining to play games and seen as a welcome break for from everyday school practices. However, in order to learn subject-related outcomes from the use of commercial computer games in L1 instruction, students must be presented with meaningful game-related assignments, which can be used to develop their disciplinary metalanguage (New London Group, 1996). In this paper, I wish to argue that it is *crucially important to design literacy activities around games, which relate meaningfully to key game challenges*. Thus, I will present a model, which can be used to understand, on the one hand, links between games and curriculum and, on the other hand, links between games as designs and games as actions. Moreover, I assume that students' game-related literacy practices can be used to project and articulate their own voice in relation to their game experiences. This brings us to the following two research questions: How do students' experience game-related

assignments as meaningful in Danish as L1, and how do the game-related assignments allow the students to articulate their voices? The questions are explored through an empirical analysis of students' game-related texts as well as interview data, which are based on design interventions with the action role-playing game *Torchlight II* in Danish as L1.

## 2. Related Work

There exist numerous studies which document both small- and large-scale attempts to integrate commercial computer games in the classroom – e.g. Squire (2004), Williamson (2009), Van Eck, (2009), Marklund (2015), Hanghøj and Hautopp (2016), and Beavis, Dezuanni and O'Mara (2017). These studies all emphasize the challenge of integrating commercial games with curricular aims within classroom contexts. This challenge is further confirmed in a large-scale survey of teachers' intentions toward adopting games for teaching, which shows that teachers need more knowledge of the games they wish to use as well as support for creating links between games and curricular aims (Bourgonjon *et al.* 2013). So far, there only exists quite limited research on how to design game-related learning activities for L1 teaching, which relates specific games to specific curricular aims (Apperley and Beavis 2011; Burn 2007). In this way, there is a clear gap between the “big ideas” of researchers, who often claim the potential of game-based learning, and educators and students, who need specific learning resources and guidelines that can help them to use commercial games in the classroom (Williamson 2009). At the same time, students tend to have quite different attitudes towards and preferences for the use of commercial games in the classroom. Beavis and her colleagues (2017) suggest that that low performing students tend to dislike learning games, but enjoy playing complex digital games (e.g. *Minecraft*), which pose demanding challenges. In this way, we need more knowledge of how students experience game-related assignments as well as how teachers can be able to design such assignments.

## 3. The School at Play project

The paper draws on empirical work from The School at Play project (2015-2017), which is funded by the Egmont Foundation. The project explores how to include at-risk students in 8 classes across grades 3-6 (10-13 years old) through the use of commercial games and analogue game mechanics. More specifically, the project interventions focused on improving possibilities for social and subject-related participation for 32 identified at-risk students with 4 students in each of the 8 classes. The qualitative data for this paper is taken from interventions with the co-op action role-playing game *Torchlight II*, which was used as the primary game in the project to promote collaboration among the students that had to play in teams against the computer. In all the classes, the game difficulty was deliberately pushed to the highest level (“Veteran”) in order to “force” the students to collaborate in order to progress in the game. The collaborative gameplay of *Torchlight II* shifts between exploring maps, killing minor monsters, looting, buying resources and boss fights, which require close coordination and well-rehearsed tactics between the players, who have assume functions as either tanks, damage dealers, crowd controllers, and healers (Hanghøj 2015). The students did not have the time to finish the game during the project interventions, but several of them made it to boss General Grell, who was highly demanding to overcome.



Figure 1: Battling General Grell in *Torchlight II*

Building on their experiences with *Torchlight II*, the students were then given curricular assignments in the subjects Math and Danish as L1, which intended to provide the students with deeper understanding of the game and promote

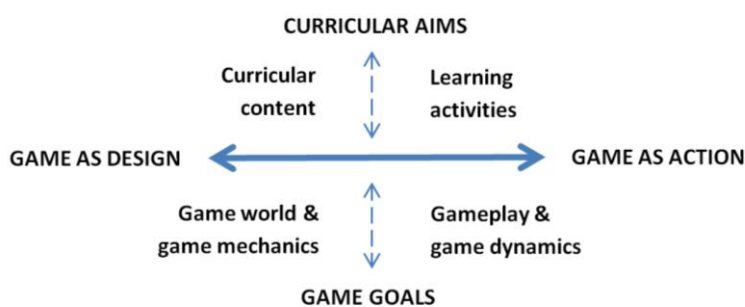
their interest in the subjects. In this paper, I will focus on how the students experienced the game-related assignments given in Danish as L1 and how they influenced the students' literacy practices.

#### 4. Theory

In order to describe how the students experienced different aspects of the game-related assignments, I will present a theoretical framework, which builds on earlier work that aimed to describe the role of the teacher in re-designing and enacting game scenarios in the classroom (Hanghøj and Hautopp 2016). For the purpose of this paper, I wish to adjust the theoretical model in order to provide *a student perspective on game-related assignments*. The adjusted model is based on the assumption that students' experience of game-related assignments can be understood as a dynamic interplay between meaning-making processes along two different dimensions. The first dimension concerns the framing (Goffman 1974) of game-related assignments that always involves a dynamic tension between *curricular aims* (e.g. learning about instructional texts) and specific *game goals* (e.g. killing enemies and gathering loot in *Torchlight II*). The underlying assumption is that students may both experience meaningful integration as well as clashes between the mixed framings of curricular aims and game goals (Hanghøj 2011).

The second dimension concerns the relationship between how game-related assignments imply a dual focus on games as particular *designs* and as situated *actions*. Games as designs both relate to the aesthetics of specific game worlds and functional game mechanics (i.e. the features of the game user interface) as well as curricular concepts or ideas (e.g. instructional texts, fictional narratives etc.), which can be related to the game design. Correspondingly, games as actions both relate to the core gameplay and social game dynamics as well as specific learning activities such as working in groups in a multi-player game or writing up game experiences. This second dimension is inspired by Apperley and Beavis' (2013) Games as Text, Games as Action model, which they use for integrating games into the curriculum of English as L1. Instead of viewing games as texts, which is core concept used within English as a subject, I prefer to conceptualize games as *designs*, which has broader relevance for other subjects - e.g. Math or Science. The key argument here is that playing games implies a continual shifting between experiencing games as materialities (i.e. as texts, designs, objects) with specific functionalities and semiotic modalities (Burn 2007) as well as experiencing the emerging game dynamics and culturally embedded practices of situated game play (Salen and Zimmerman 2004).

Taken together, the relations between the two meaning-making dimensions of game-related assignments are illustrated in the Game As Curriculum model shown below:



**Figure 2:** Game As Curriculum model

The model highlights four different aspects, which are important to students' experience of game-related assignments: 1) the content (e.g. specific ideas, concepts or student products) of game-based curricula, 2) the game mechanics and game worlds offered by particular game designs, 3) the key gameplay activities and social game dynamics involved in achieving the game goals, and 4) the organization and facilitation of learning activities in relation to specific curricular aims. Ideally, the Game As Curriculum model can both be used prescriptively to design game-related assignments as well as descriptively to analyze students' experience of game-related assignments. For the purpose of this paper, I only wish to use the model as an analytical tool.

In order to analyze how the students in the School at Play study experienced different types of game-related assignments, I will focus on their game-related *literacy practices* (Barton and Hamilton 2000). This means that I am both

interested in the students' game-related texts as well as the students' reflections and social practices that relate to the students' texts. I am particularly interested in how the students' literacy practices become expressed through different *student voices*, a concept inspired by the dialogical philosophy of Bakhtin (1981), which here refers to the students' "assimilation, reworking, and reaccentuating of other voices" (Sperling *et al.* 2011, p. 74). Moreover, I assume that the students' voices are related to their *projective identities* (Gee 2003), which refer to the ways in which the students-as-players identifies with their game characters, and how the game characters are enacted as a reflection of the students-as-players' values, aims and choices.

## 5. Methodology

The methodological approach of the School at Play project is inspired by Design-Based Research (Barab and Squire 2004). In this way, the project has involved a series of design interventions, which aims at generating theoretically and empirically informed design principles for including at-risk students through the use of computer games and game mechanics (Hanghøj 2015). The project has collected a comprehensive data material, which involves post-game interviews with all the 32 at-risk students as well as a substantial corpus of different types of game-related texts written by all the 200 students that participated in the intervention.

The current qualitative analysis of the empirical data is based on three examples, which mirror three different types of game-related assignments used in Danish as L1 as a part of the design interventions with the action role-playing game *Torchlight II*. As a part of the post intervention interviews, the at-risk students were asked about their experience of their game-related assignments. The interviews were coded using thematic analysis (Braun and Clarke 2006), which indicated that the at-risk students' primarily became engaged in writing texts that related directly to their in-game challenges in *Torchlight II*. Following this finding, the students' texts were then analyzed in order to understand how the at-risk students articulated their voices in relation to in-game challenges. The aim of the current analysis is to describe and understand how the students' texts and game-related literacy practices (Barton and Hamilton 2000) become framed through particular game-related assignments. In this way, the analysis aims to show how game-related assignments play a key role in terms of creating – or preventing – meaningful opportunities for learning and expression of student voices.

## 6. Analysis

The following analysis is structured around three examples of student texts and interview data, which are based on three different types of game-related assignments: game guides, character analysis and fictional stories.

### 6.1. Game guides

The first example is from a game-related assignment, which required the students to write a game guide based on their experiences with *Torchlight II*. The curricular aim was to learn about the genre of instructional texts by writing a game guide for a person, which did not know have any prior experience with the game. Generally, all students became highly engaged in playing *Torchlight II*, which involved intensive collaboration and knowledge sharing among members of each team. Based on their positive and rather intense game experiences, it was not surprising that the students were eager to write and pass on their experiences of what was important to learn in order to master the game.

To exemplify the at-risk students' engagement in writing game guides, I have chosen to analyze Ofelia's text. Ofelia was a dyslexic 5th grader, who often found it difficult to participate in learning activities in Danish as L1. However, she became quite engaged in playing *Torchlight II* and also in writing an instructional text about the game. Her game guide opens with this paragraph:

*"Do you know Torchlight2?". "Welll you do not know Torchlight2 thend let me tell that this texte can learne you wat kain of game it is." Yes it is a game, welll you do not want learne it". "Welll thend all I can say is goud luk to you".*

I will not focus on Ofelia's misspellings as they were an integral part of her everyday writing practices. What I want to emphasize is Ofelia's use of quotation marks as they introduce the narrative voice of a competent player, which invites the reader to become familiar with the game. The narrative voice sarcastically challenges and wishes the reader "good luck" with the game, if he or she is not interested in reading the guide. Classroom observations of the game sessions showed how Ofelia and her classmates, who were all forced to play *Torchlight II* at the top "Veteran" level of difficulty,

died several times before first learning to master the basic game mechanics (i.e. navigating, looting and attacking) and later the detailed gameplay tactics involved in defeating the game bosses (cf. Figure 2). In this way, Ofelia's text is implying that this is a tough game and that the reader is very likely to die in the game unless if he or she will read Ofelia's instructions and learn how to play it properly. Hence the paper title: Read this or die!

In the post intervention interview, Ofelia described the process of writing the game guide as a positive experience.

*I: What was it that you liked about it [the assignment]?*

*Ofelia: I liked that you had to write it for someone, which I didn't know, which I hadn't heard of. You did not know the person. I thought that was kind of fun*

*I: And do you think that was different from the other assignments, which you are given in school?*

*Ofelia: Sort of*

*I: What do think that was different?*

*Ofelia: Usually, you just have to write to your teacher or someone you know. But here you had to write for someone, which you have never heard [of] or met*

This quote shows that it was meaningful for Ofelia to write the guide, which clearly differed from the usual assignments given to her with her teacher as the receiver. She became inspired by the idea of writing for an unknown potential player to whom she could pass on her knowledge of *Torchlight II*.

In summary, Ofelia's text and her experience of the assignment shows how she, in spite of her dyslexic shortcomings, tries to communicate her game expertise to other players by adopting the narrative voice of an experienced player in the guide. This shows how the assignment became meaningful to Ofelia as it enabled her to articulate an inner voice, which adopted and reworked her knowledge of the game challenges. In this way, Ofelia's game guide allows her to assume a position as a "knower" of the game, which she uses to impress and persuade other potential players.

## **6.2. Character analysis**

The second example is based on a game-related assignment, which required the students to write an analysis of their game characters in *Torchlight II*. Character analysis is a quite well-known assignment within Danish as L1 and often involves describing both "inner" and "outer" aspects of fictional characters. In this way, the students were asked to describe inner and outer aspects of their game characters – e.g. as berserker, embermage, engineer or outlander. One of the ideas behind this assignment was that the students would be able to write an analysis of their experience of playing and exploring the game through their projective identities (Gee 2003). However, the students' texts show how most of the students interpreted the "inner" aspects of their characters quite literally through an outsider's analytical perspective. It was easy for the students to give lots of details when describing the outer looks and stats of their game avatars, but they clearly found it quite difficult to write about the inner aspects. Here is an example from Freja's character analysis:

*"Now we get to the inner [aspect]. There is not so much to write about but I know that everyone can agree that you are very aggressive. If you look closely at your character you can see that he is not very happy. I simply believe that he just want to go home and live a good life."*

In her text, Freja shifts between analysing her character from the outside, using a third person perspective "he is not very happy" and a first person "you are very aggressive" [sic], which refer to the common experience of playing the game together. Similarly, other students described the inner aspects of their characters from a first person perspective using words such as "I" and "my character". Still, their descriptions of the "inner" aspects were mostly rather short. This difficulty was also expressed in the subsequent student interviews. Here is an excerpt from an interview with Michael and Eric, which discusses their character analysis:

*I: How was it to work with character analysis in relation to the inner and outer?*

*Michael: Well, it was a bit hard with the inner because you do not know what the person has inside the game. But the outer that was okay easy, I think...*

*I: Yes, okay*

*Eric: That's actually true. You could not write about the inner stuff. The only thing I wrote there was something about that you can decide how it should go to war and that it must... err... easy now... that it helps you to attack and [be] aggressive and gunning and do everything it can to kill them, and when it dies, it will come back at some point and then attack again!*

*Michael: \*laughs\**

As the example shows, the character analysis assignment succeeded poorly in helping the students to articulate and analyze their experience of enacting projective identities in *Torchlight II*. One likely explanation for the students' lacking ability to project their identity into the characters was that the assignment was framed quite similar as when working with "traditional" analysis of literary characters. In this way, the students reproduced the way they were used to analysing fictional characters, which made it difficult for them to connect the analysis of their game characters in relation to their core game actions (cf. Figure 2). Another explanation is that the *Torchlight II* game has relatively "flat" characters with limited backstories and personal character traits, which makes it difficult to identify with their inner attitudes, values and feelings. Following the assignment, the students primarily ended up focused on the design of their characters, instead of describing their in-game tactics and how they managed to progress in the game through collaborative gameplay. In this way, the assignment only became marginally related to the students' intense experience of overcoming challenges in the game.

### 6.3. Fictional stories

The final example of a game-related assignment is taken from the fictional stories, which the students wrote based on their in-game experiences. The curricular aim of the assignment was relatively open as it simply asked the students to write a "fantastic narrative" that extended their game experiences. The story I wish to focus on was written by the at-risk student Martin, who, according to his teacher, was placed in care at his grandmother due to problems with parents that suffered from alcohol abuse and an ADHD diagnosis. During everyday teaching, Martin often found it difficult to focus on learning activities in the class. However, he became very engaged when playing *Torchlight II* and was also praised by his teacher for being quite focused when he wrote the following fantastic story, which he titled "The Battle":

#### The Battle

It was a completely normal day. I was at school and came home and played and went to bed etc, but the next morning was not normal. There was not a sound and there normally is. I went into the living room and strange enough, there was a red portal. I saw a strange monstr with horns and it had my parents. I had to go after them. It was very hard because it had a million minions, but when I was inside the portal, I saw a magician, who helped and with one strike all his minions were dead. The monster continued with my parents. *Martin*, said the magicin, *my name is martin and that guy, he is General Grell. i need your help*" it was so incredible that he needed my help *"and I can see that you are also a magician"* i looked down on myself og yes i was. It was so hard to believe, but it really was true. Then I found my ice axe and my poison hammer and we ran after Grell, but he threw the most dangerous minion he had, and that was a boss battle, so we fought him and we whacked him. It was an epic battle, but the fight against grell would be even more epic so we went down there and fought and martin was killed and then i also feigned death so that Grell would walk and then i ambushed and killed Grell saved my parents.

In this fantastic narrative, Martin's narrator experiences blending of real world events (e.g. being at home), in-game events (e.g. killing monsters) and fantastic events (e.g. when trying to rescue his parents and being asked to help the magician in the fight against General Grell). In the post-intervention, Martin was only briefly asked about his text. However, in the post-intervention interview with the teacher, she emphasized how Martin had worked quite well on the

assignment and that Martin had been very pleased with his narrative. After having finished writing it, Martin had even phoned his grandmother, where he lived, and proudly told her what he had accomplished at school.

In this way, it is tempting to analyze Martin's heroic story not only as a fantastic narrative about overcoming a tough boss in *Torchlight II*, but also a story about coming to terms with his unstable family situation and wanting to "rescue" his parents. Martin's narrative voice shows how he uses his game experiences with *Torchlight II* to imaginatively project and transform his identity into becoming both an in-game helper to the magician character, which has the same name as himself, and becoming a hero to his real world parents. In summary, this type of game-related assignment (writing a fantastic game story) worked quite well for Martin and, for the other students, as it allowed them to freely transform their game actions and game challenges into meaningful narratives, which could be related to different domains - including real world events, game world events, and events in the students' personal lifeworlds.

## 7. Discussion

The analysis of the three examples indicates a clear pattern on whether the game-related assignments were perceived by the at-risk students as being meaningful or not. The assignments analyzed in examples 1 and 3 were written in two different genres – i.e. instructional text and fictional story – which served two different purposes and curricular aims. However, both assignment types show how the students became meaningfully engaged in writing about and communicating their experience of having overcome tough game challenges in *Torchlight II*, which relates to the Games As Action aspects (cf. Figure 2). The two assignments allowed the students to articulate their inner voices through a dialogue with their in-game challenges and characters. In this way, the students both "talked back" to the game as well as continued an inner dialogue beyond the immediate game experience. This arguably helped them to become active and meaningful participants in the literacy practices of Danish as L1.

In contrast, the analysis of example 2 shows a game-related assignment, which only established marginal links between students' in-game actions and the curricular aim of the writing task. As the student quotes show, it was simply not meaningful to write a character analysis of the inner and outer aspects of their *Torchlight II* avatar. This negative example shows how the design of game-related assignments needs to carefully consider both the meaning of specific game features (e.g. the "flat" game characters in *Torchlight II*) and avoid the reproduction of traditional literature assignments, which may not necessarily fit with the experience of playing and exploring digital game worlds. In this way, the character analysis assignment mostly focused on the Game As Design aspects – i.e. the design and aesthetics of the *Torchlight II* characters – and failed to extend and rework the students' experience of playing the Game As Action (cf. Figure 2). The analysis of examples 1 and 3 clearly suggest that the students were interested in writing through their inner voice as gamers. In this way, the character analysis assignment might have been more meaningful, if it had been reframed to focus less on the personal stories of the somewhat stereotypical avatars in the game and more on the students' elaborate game tactics and their experience of taking part in the collaborative gameplay.

Following the aim of Design-Based Research (Barab and Squire 2004), these findings can be summarized as a design principle, which argues that *game-related assignments need to reframe and establish meaningful links between core game challenges and curricular aims*. This means that game-related assignments must be designed in such a way that they clearly reflect and support students' experience of and curricular understanding of core game challenges. Ideally, a challenge-based game assignments will help students to develop more expertise as gamers (Gee 2003), e.g. by communicating and reflecting on their game tactics in *Torchlight II*, and/or to develop their student voice as writers of game-related fiction. The benefits of using challenge-based game assignments is confirmed by findings from a similar study on the use of *Minecraft* in Danish as L1, which also highlight the importance of designing writing assignments around core game actions as a means for developing primary students' literacy practices (Hanghøj, Møller and Brok forthcoming).

It may be argued that the need for designing challenge-based assignments is particularly relevant, when using action-oriented multiplayer games such as *Torchlight II* and *Minecraft* in the classroom, where the game mechanics and social gameplay are quite complex and demanding. In these games, there are many things at stake for the students – both in terms of specific game actions and in the students' collaborative gameplay. The at-risk students who participated in The School at Play project were sometimes frustrated with but mostly enjoyed the highly challenging gameplay of *Torchlight II* as well as writing about how they faced "epic" enemies. However, the analysis shows that is important that the students' literacy practices relate directly to how they confronted and overcome meaningful game challenges. This

highlights the crucial role of the teacher or curriculum designer – both in terms of analysing and identifying core game challenges and in terms of designing meaningful literacy assignments, which relate to these challenges.

## 8. Conclusion

The findings presented in this paper show how it is possible to design game-related assignments, which may support the development of at-risk students' literacy practices in Danish as L1 through the projective expression of their student-as-gamer voices. The 32 at-risk students in The School at Play project, who often found it difficult to participate in everyday classroom activities, clearly benefited from being positioned as competent gamers through voices that could express and elaborate their experience of overcoming the challenges of *Torchlight II*. Moreover, the findings also point to the importance of designing game-related assignments, which – regardless of specific genres – involve learning activities that integrate core game actions with curricular aims. In spite of their ability to engage students, complex computer games should not be seen as “magic bullets” to promoting subject-related learning without being supported by meaningful assignments. However, if students are presented with assignments that allow them to directly build upon their expertise as gamers and experience of overcoming key game challenges, computer games can be a valuable way of supporting at-risk students' development of literacy practices by projecting and elaborating their inner voices.

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