

# Hooked By Avatars? Literature Studies in Upper Secondary School—A Simulation Study

Caroline Graeske<sup>1</sup>, Sofia Aspling Sjöberg<sup>2</sup> & Stina Thunberg<sup>1</sup>

<sup>1</sup> Department of Health, Education and Technology, Luleå University of Technology, Luleå, Sweden

<sup>2</sup> NTI-Gymnasium, Trädgårdsgatan 22, Luleå, Sweden

Correspondence: Caroline Graeske, Department of Health, Education and Technology, Luleå University of Technology, 971 87 Luleå, Sweden. Tel: 46-920-491-005. E-mail: caroline.graeske@ltu.se

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## Abstract

Several studies have shown that Swedish students' reading comprehension and ability to understand fiction are decreasing year by year. Numerous alarming reports point to the unsustainable situation concerning young people's reading engagement, but the ideas of how it can be remedied are few. This study aims to investigate and evaluate a didactic design that includes avatars as game elements in order to promote students' reading of fiction. What opportunities and challenges might such a design present? In the study, an action research method and game theory were used, where teachers and researchers collaboratively explored and evaluated the outcome. The results showed that this design offered many opportunities and generated reading engagement. The students co-design their learning by creating an avatar and then entering the fictional world of a short story. Creating an avatar that interacts with the fictional text requires both participation, reading comprehension and meta analytic skills. However, the design also presented challenges, that some students did not link their avatars clearly to the text and instead did their own stories. The design could thus be further developed to provide more room for avatars to interact more with the chosen literary environment.

**Keywords:** action research, avatars, game-based learning, literature studies, upper secondary school

## 1. Introduction

In the past decade, attention has been paid to young people's weak reading skills. Several surveys have clearly shown that Swedish students are losing ground, their reading comprehension and ability to understand fiction decreasing year by year. Numerous alarming reports point to the unsustainable situation concerning young people's reading engagement; but the ideas of how it might be boosted are few (PISA, 2018; Ng & Bartlett, 2017). Research also shows that fiction is marginalized in Swedish schools, despite efforts such as the governmental campaign for reading "Läslyftet" (Erixon & Löfgren, 2020; Olin-Scheller & Tanner, 2018). Moreover, we are surrounded by media characterized by constant change and movement, with games and screens tending to compete with fiction for attention. Fiction, however, has always been a central part of the Swedish subject in school, but the arguments have varied (Graeske, 2015). In recent years the public discussion has focused increasingly on the value of fiction, as young people's interest in reading fiction has steadily declined.

The curriculum and course syllabus for first-year Swedish in upper secondary school states that reading fiction is essential when it provides access to new worlds and communicates democratic values and identity development. It also states that literature studies should convey knowledge about literary genres, narrative and stylistic features of fiction from different periods. Literature studies should also promote reflection, and students should be required to produce writing based on what they have read (SKOLFS, 2011).

Consequently, the uses of fiction are many. Felski (2008) has discussed the functions and value of literature and in the study *Hooked: Art and Attachment* (2020), she focuses on identification and feelings. Felski discusses being "hooked", as a phenomenon, from different perspectives, claiming that a close relationship with the characters is central to the learner's engagement (Felski, 2020), which also is supported by researchers focusing on reading in Swedish schools (Person, 2012; Öhman, 2015).

Additionally, some researchers claim that digital learning resources can identify and improve literacy skills, and that digital media embody and motivate students to engage in fictional experiences (Jenkins & Kelley 2011).

Another way of engaging students is to gamify teaching situations and use gameplay elements in teaching (Gee & Heyes, 2011; Papadakis et al., 2020; Vidakis et al., 2019). In a Nordic context, Hanghøj et al. (2019) have shown valuable learning outcomes when students write and communicate about games, and in the Swedish school context. Thunberg (2018, 2019, 2022) has shown the potential of using game elements like avatars in literary studies in upper secondary school in order to generate reading engagement. Gamified teaching could thus offer didactic and educational opportunities, but we still need more knowledge about how game elements can be used in school in order to promote reading engagement and there is still a research gap (Graeske & Aspling Sjöberg, 2021).

### *1.1 Aim and Research Questions*

This study aims to investigate and evaluate a game-like design that includes avatars as game elements in order to promote students' reading of fiction. What opportunities and challenges might such a design present?

## **2. Previous Research and State of the Art**

Using different game elements to enhance teaching is not new. Over the past 15 years, several studies have noted the significance of different games for learning and developing literacy (Gee, 2004, 2007; Gee & Hayes, 2011). Reading can be encouraged, not only through rewards but also by using the literary work itself as an opportunity to be playful. Playfulness can be seen in several different art forms and poetry, for example, can be seen as play with words (Huizinga, 2016). Games have long been used in the teaching of foreign languages, mainly to expand vocabulary and teach grammar. The use of complex games for teaching literature, however, is far less common and there are numerous literary works with a clear connection to games (Goggin, 2020; Lundström & Svensson, 2020)

The proliferation of new media has led to new thinking regarding social learning and the potential that the so-called convergence culture offers (Jenkins, 2008; Jenkins & Kelly, 2013). Reading has long been considered an individual experience, but nowadays, researchers view reading as a participatory process and a social practice in a social context (Gee, 2004; Street, 2003). Researchers have also emphasized the didactic potential inherent in the interactivity of games (Gee & Heyes, 2011; Hanghøj et al., 2019). When games are moved from their natural context into a school context, this manifests differently. The most common concepts used are "gamification" and "game-based learning". "Gamification" and "game-based learning" are often used as synonyms. While both denote using games in a learning context, "gamification" is the broader concept and often used in relation to building loyalty to products and brands in the business world. However, both "gamification" and "game-based learning" do refer explicitly to imitating game environments in interactive teaching activities created for specific educational objectives, or commercial games, such as Assassin's Creed or Minecraft, which offers a version of the game solely for teaching.

Teachers and educational leaders have used gamification increasingly often in recent years, to engage students and optimize teaching (Bai et al., 2020). "Gamification" as a keyword appeared about twenty years ago, and the most common definition is using game design elements in non-gaming contexts. Game design elements are, in this case, levels, points, badges, scores, missions, avatars and narrative structures (Hallifax et al., 2019; Ramirez & Squire, 2019).

The difference between game-based learning and gamification is that game-based learning is about learning through actually playing, while gamification implies a learning situation whose structure involves game design elements (Dickey, 2011; Nadolny et al., 2020; Plass et al., 2015). Game-based learning can be defined as gaming with specific learning objectives. Game-based learning provides the opportunity to integrate problem-solving with teaching embedded in an immersive virtual reality, promoting engagement, providing motivation and developing knowledge (Jabbar & Felicia, 2015; Plass et al., 2015; Vidakis et al., 2019; Papadakis et al., 2020).

In the Nordic context, Danish researchers have broadened the learning potential of games (Hanghøj et al., 2019; 2021). These researchers focus not only on playing games but also on designing your own games and writing about games, and they design for an interactive and dialogic approach between specific game affordances and a pedagogical approach, in which students enter and exit a game environment playfully (Hanghøj et al., 2019, 2021).

In this study, we will use this interactive, playful approach. Playing games and reading fiction is about entering a fictional world, as well as offering students something joyful. Research also shows that students attending upper secondary school do not consider reading fiction in school joyful at all (Nordberg, 2017). In this context, then, game-based reading is about increasing students' interest in reading literature in class and not about using games in teaching. When discussing game-based reading, the focus is on the fictional narrative and the students read a fictional text and navigate through it using game elements (Thunberg, 2022).

Game-based reading can exist in different modes. In this study we implement and evaluate a didactic design, where the students created an avatar that they used when reading a short story. The assignment was designed by

teachers and researchers in collaboration, and the action was integrated with the teachers' regular teaching. The design was based on a gamification project which has been developed and implemented in upper secondary school to stimulate young readers to read classic novels (Thunberg, 2022; 2019; 2018). This design is characterized by game elements, like avatars, quests, and experience points. The tentative results from this design show that the playful use of avatars and quests grounded in the novel's narrative can stimulate students reading engagement at a deeper level, while experience points did not, going from gamification pointing towards a definition of game-based reading (Thunberg, 2022). Another study where avatars are used in literary studies has shown similar findings (Graeske et al., 2020). In this study therefore the game play with an avatar is in focus, and the design is adapted to a context where the students read a short story.

### 3. Method and Implementation

The study employed an action-based research method where teachers and researchers collaborated, in a symmetrical and complementary approach, to explore and evaluate an action in order to change and improve teaching. Action-based research can be seen as a form of practice-based research, to enhance teaching based on the teachers' own questions. Significant is also that the teachers are active throughout the whole research process, phrasing research questions and analyzing the action (cf. Bergmark & Wiklund, 2020). Action-based research can therefore be considered a way for teachers to gather information about their own practice to make necessary changes for further development and improvement (Kemmis, 2009; Rönnerman, 2018). In this case, the action process consisted of four stages: 1. identifying the area of work; 2. planning and implementation; 3. documentation and reflection; 4. development after completion of the action.

The action was implemented during 2020/21 at an upper secondary school in a medium-sized municipality. The project involved two classes, one from the technology programme and one from the electricity and energy programme, two teachers and two researchers.

#### 3.1 Action Research in Four Stages

In the first stage, the teachers together with the researchers identified a problem to work with – the students' resistance to reading fictional texts. The teachers found that the students read poorly and had very low motivation to read fiction. Using new digital learning resources in teaching to encourage learning was a stated goal of the school administration. The preceding year, one of the teachers had used virtual reality (VR) to teach Swedish with good results, and now she wanted to develop this approach by using other digital resources for teaching literature.

In the second stage an action that involved testing a digital, didactic design, where the students could create an avatar to read with, was planned in order to encourage students' learning. In this stage, the teachers had a lecture by Stina Thunberg, a doctoral student in Swedish and education at Luleå University of Technology, who examines game based learning for literature studies. Thunberg presented her game-like design and showed some findings from her study (Thunberg, 2018, 2019, 2022). This lecture was a source of inspiration and a starting point for the project, right in line with the principal's vision to lead and navigate in a digitalized future.

The school administration, the researchers and teachers then set up the framework for the project. The participating teachers had had previous experience of using VR in the classroom, with adequate outcome (Graeske & Aspling Sjöberg, 2021), and they now wished to explore the possibilities of reading a short story with game elements, like an avatar (cf. Thunberg, 2020; Graeske et al., 2020). This time a digital tool called Plotagon was used in order to create an avatar in a short film. The avatar was supposed to carry on an internal monologue relating to the main characters in a short story read in class. The assignment was aligned with the curriculum, and the intended learning outcome was that the students would understand the plot by creating a character to interact with the story and create an internal monologue.

During the first lesson, before embarking on the design, the students answered a questionnaire about their previous reading experiences in school and expectations regarding the action reading with an avatar. In total 28 students participated and answered the questionnaire. Then the students and the teacher together started to read aloud the short story "A Good-Looking Couple", written by Etgar Keret and published in the collection of short stories called *The Nimrod Flipout* (2008).

This short story was partly chosen because it was considered reasonably long – four pages. Another reason was its content, which was deemed likely to appeal to young people. The story is about relationships and sexuality, something that young people find easy to relate to, according to the teachers. Briefly summarised, the story is about a first meeting between a young woman and a young man in the man's apartment. The reader follows the couple's thoughts through their internal monologues, in the story. A door, a cat and a TV also think aloud about the two young people's budding relationship.

During the first lesson, the Swedish teacher also explained the concept of internal monologue. Next, the entire class discussed the short story, focusing on the internal monologue. Then, together teachers and students looked for examples of internal monologue, which were excerpted and inserted into an example template. This part of the lesson took 80 minutes.

Then the students got instructions about how to use the software, Plotagon, which was quite self-instructing, and few students experienced difficulties when using it. The assignment was presented after this part, where the students tested the software in 80 minutes. As part of the assignment, each student was asked to use the software to record a short film where they created an avatar who interacted with the plot in the short story through an internal monologue. The film, which would be a maximum of three minutes, would show that the student understood the plot and the concept of internal monologue.

After creating a film in Plotagon, the students once again had to answer a questionnaire eliciting their feedback on the action. Then it was time for documentation and reflection. Finally, in stages three and four the teachers and researcher had reflective discussions about the action where they analyzed the empirical material, questionnaire and observations during the implementation of the design, and the students' assignments.

The empirical material was analyzed using game-based learning theories (Gee, 2004, 2008, 2010) and theories about the use of literature (Felski 2020). The process resulted in dissemination and co-writing of present article.

### *3.2 Ethical Perspective*

During the study, the Swedish Research Council's ethical guidelines were applied (Vetenskapsrådet, 2017). However, since the project employs an action research approach, the traditional view of ethics and traditionally important research considerations, such as informed compliance, confidentiality, and the participants' integrity, were renegotiated because researchers and teachers collaborated and worked together. In action-based research, the social connections between the participants become more complex, and reflections regarding anonymity and the distribution of results become important. In this context, the researchers and teachers tried to work in a symmetrical and complementary atmosphere, resulting in the co-writing of the present article.

The entire collaboration amounted to a constant reflection on ontological, epistemological and methodological ideas (cf. Andrée et al., 2020). The ontological perspective includes reflection on how the students' learning was influenced by the action and acknowledging the values at stake. In the teachers' case, this considers expertise from the teaching profession, and in the researcher's case, expertise about research projects and the gathering of empirical data. Reflections from an epistemological perspective have also served as guidance. These were mainly about the negotiations about a shared research object in which the goal of the action became to gather new information regarding the didactic potential of game elements in the form of avatars for teaching literature. Finally, the reflections regarding the methodological perspective were mainly about how the empirical data can be interpreted based on different teaching theories. This discussion turned out to be educational for all parties (Ibid.). So, what are the results of the action? What opportunities and challenges does a design with including game elements like avatars in order to stimulate fiction reading, present?

## **4. Results**

The students' answers in the questionnaires showed that the students predominantly had a positive approach towards the action, and 25 out of 28 students created films in which the avatars reflected on the plot of the assigned short story "A Good-Looking Couple". Overall, the teachers were delighted and satisfied over the outcome, how the students solved the assignments.

### *4.1 Reading with an Avatar*

The teachers point out, in reflective conversations, that the students were very productive and innovative, and they also claim that the students had fun and communicated with each other about different solutions to how they should solve the mission. They also started immediately with their tasks, which is not usually the case. Most of the students were very artistic and created imaginative avatars that interacted with the short story. For example, one student chose to hold an internal monologue through an avatar who was friends with the young man in the short story. The avatar thinks about how he could help his friend develop a serious relationship, because he deserved a stable partnership. There were also elements of humour in this film, as the avatar in the internal monologue says that the young man has had 22 girlfriends before the current one.

Another example of how the students approached the task, highlighted by the teachers, was an avatar in the form of a fruit, a banana, lying in a fruit bowl. The banana thinks that the young man in the short story is irresponsible since he does not receive any attention from him. The fruit longs to be used, perhaps baked in the oven. In this film, there is also a moustachioed avatar who is considering whether he should use the banana for a banana cake, and if so,

whether he has all the necessary ingredients at home. Here, the connection to the short story is not as clear, but towards the end of the young man's internal monologue, he mentions that the girl may like him more if he bakes something delicious. The film ends with him heading off to buy eggs for the banana cake. However, the teachers' reflections are that most students interacted with the chosen text, but a few students also floated out and created their own stories.

#### *4.2 Enter into Fictional Text*

According to the teachers, all students, but three, showed analytic skills when they interacted with the character and the plot with the avatar. The avatar provided opportunities to enter the fictional text (cf. Thunberg, 2022) and inspired the students to descend into the short story, where the students must make an effort to understand the plot and literary environment in order to interpret, act, and use style elements, like internal monologue. Interactions that require a "system thinking" and meta analytic skills (Gee, 2004, 2007, 2008, 2010)

However, the reflective conversations with the teachers also showed that challenges did emerge. For example, one of the teachers said that the students thought it was fun to work with the program itself – to create avatars and movies – but added that some students' interest probably stayed there. On the other hand, the teachers found it helpful to vary their approach to teaching literature and try out new approaches. But the design could be developed to ensure that students link their creations better to the text. One way to do this could be to make it easier for the avatar to move in the chosen literary environment. Another idea is to make it possible for the students to create more avatars and move around in multiple literary texts and environments. The benefit to this would be to make the learning focus more complex where more learning objectives can be added.

Overall, the teachers also found that the students got more motivated to read and work with literature and here they referred to the questionnaire which shows that several students, 43 percent, felt that they became more motivated to read fiction when they used digital tools and game elements like avatars.

### **5. Discussion**

The action then shows that both teachers and students found new ways into the literature via game elements like avatars. The teachers also perceived that the students found the teaching more pleasurable when allowed to enter a fictional world by a digital avatar. The avatar helped them to enter and descend into the text (cf. Thunberg, 2022). According to the teachers, all students who were present during the lesson completed the task on time, which is remarkable and rarely happens when students are assigned to read fiction in class (cf. Rönnerman 2018). Usually, it is difficult to get the students to start new reading projects, which was not the case this time. All students wrote their own internal monologue for their avatar, without much help from the teacher, and 25 of 28 students managed to link their internal monologue to the content of the short story. The students were also very active and creative when using digital learning resources and game elements in literature studies. Consequently, links to activities outside the school context, such as gaming with avatars, in informal learning, can be connected to formal learning.

#### *5.1 A Design to Descend Fictional Worlds—Opportunities and Challenges*

Based on Gee's design principles, the students participating in the action showed proof of engagement where they were involved in co-design and designed and created their own learning. In addition, students solved problems and identified with an avatar – principles that can generate increased literacy (Gee, 2008).

Students' engagement in reading seemed to be promoted by the action, and the design provided many opportunities as it promoted students' creativity, exploration and participation. However, it also presented some challenges; some students did not relate clearly to the text and floated out where they created their own stories. The design could thus be further developed to provide more room for avatars to interact more with the chosen literary environment.

Reading a fictional text with an avatar requires both reading comprehension and analytical skills. But reading with an avatar also requires commitment and identification. Felski (2020) has shown that characters are important for the reading engagement, and the avatar seems to generate identification, engagement and participation.

For a long time, reading was considered to be an individual experience. Recently, however, that approach has been challenged, and today researchers view reading as a participatory and social practice in a social context (Gee, 2004; Street, 2003). The learning potential inherent in the dialogical principle of games has been emphasized by researchers (Gee & Heyes, 2011; Hanghøj et al., 2019; Thunberg, 2020), and in the present context it has also been highlighted by the teachers. The creation of the avatar generated an engagement with the fictional material, enabling the students to set up an "affinity space", (Gee & Hayes, 2011: 71ff) a place for learning, a place in which they could enter into the short story with an avatar who performed a task in the form of an internal monologue.

In conclusion, it should be said that both games and reading fiction are about entering fictional worlds and both activities are pleasurable, which is important in this context as well. Game-based reading is thus about sparking students' interest in reading and getting them hooked on the text with the help of avatars – hooked by avatars.

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