

**LEARN BY PLAYING: A TEACHING PACKAGE FOR L2  
LEARNING IN DIFFERENT VIDEO GAME GENRES**

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<p>Tiivistelmä</p> <p>Videopelit voidaan jakaa opetusvideopeleihin ja kaupallisiin videopeleihin. Opetukseen tähtäävissä videopeleissä tarkoituksena on opettaa pelaajalle jotain, esimerkiksi kieltä. Kaupallisissa videopeleissä puolestaan tarkoituksena ei ole opettaa pelaajalle jotain tiettyä taitoa. Sen sijaan ne ovat ajanviettotapa, josta on vuosi vuodelta tullut entistä suosittumpi ihmisten keskuudessa. Juuri tästä syystä kaupalliset videopelit tarjoavat paljon mahdollisuuksia kielen oppimisen kannalta, sillä vaikka niissä kielen oppiminen ei ole pääasiallinen tarkoitus, voivat ne silti olla tehokas tapa oppia kieltä esimerkiksi kielen omaksumisen periaatteiden kautta (katso Reinhardt 2018, Peterson 2013). Kaupallisissa videopeleissä aiempi kielen oppimisen tutkimus on keskittynyt hyvin paljon tiettyihin genreihin, kuten massiivimoninpeleihin (Wattana 2015, Rama, Black, Van ES and Warschauer 2012). Tästä syystä on tärkeää, että tutkitaan myös muita genrejä, jotka voivat erota massiivimoninpeleistä paljon sekä pelattavuudeltaan että mekaniikoiltaan mutta myös sisällöltään.</p> <p>Tämä materiaalipaketti on suunnattu opettajille, jotka ovat kiinnostuneita hyödyntämään videopelejä opetuksessaan. Tämä paketti käsittelee kuutta eri videopeligenreä (roolipeli, toimintaseikkailu, ongelmanratkaisu, strategia, simulaatio ja interaktiivinen elokuva) ja niiden sisäisiä toisen kielen oppimista edistäviä ominaisuuksia. Materiaalipaketti on tarkoitettu yli 18-vuotiaille. Halusimme luoda kattavan paketin, joka yhdistää videopelien genrejä ja kielen oppimisen sekä videopelien tutkimuksen eri suuntauksia toimivaksi kokonaisuudeksi. Materiaalipakettimme käyttää DGELL (digitaalisten pelien tehostettu kielen oppiminen) teoriaa, jossa tutkitaan videopelien pelaamisen ja kielen oppimisen suhdetta toisiinsa erilaisten kieltenomaksumis teorioiden kautta (Reinhardt 2018). Tutkimme jokaisen genren omia kielenoppimisen ominaispiirteitä ja suunnittelimme tehtävätyyppejä niiden pohjalta.</p>	
Asiasanat – video games, language learning, material package, DGELL	
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# 1 Introduction

The topic of this thesis is commercial video game genres and how they can be utilized in L2 learning. The thesis will include an extra-curricular material package for students that are 18 years old or older. We chose it because even though video games are used in L2 teaching, the games used are still mainly educational games instead of commercial games. The difference between these two types is that educational games focus on teaching whereas commercial games revolve more around entertainment. This is an important notion because being able to combine entertainment and L2 learning in the form of playing video games would provide new avenues and opportunities for effective L2 learning. In addition, another reason for this topic was that research, in which the focus is on how different video game genres can be utilized in L2 learning, is severely lacking. Likewise, only few adaptable material packages that focus on video game genres and how they could be used in L2 learning have been created before (see for instance Palola 2018). Therefore, we aim to provide a material package for language teachers to use in their L2 teaching.

For many years commercial video games have been a popular pastime for people of all ages. This popularity has also created interest between L2 learning and video games in the research field. According to Reinhardt (2019, 137) video games and L2 learning has been studied from many different perspectives such as psycho-cognitive, which focuses on immersion through comprehensible language input, and social-informed, in which interaction and cooperation is the focal point. He continues that in terms of how L2 learning occurs in video games, repetition and translation are some examples of this, at least from a structural-behaviorist perspective. These perspectives will be discussed in more detail in chapter 3.

There are plenty of ways a player learns L2 while playing videogames. Reinders (2012) states that from the perspective of task-based learning, players accomplish a lot by doing tasks in video games to further progress in the game. Video games' environments and worlds are also highly immersive, and the player has agentic

freedom to engage and interact with it (Reinders 2012, 18-20). This is something that L2 learners cannot accomplish by reading a book or watching a movie. The engagement and interactivity elements of videogames are one of the biggest benefits for L2 learning. For example, there has been a lot of L2 research of how playing video games improves vocabulary learning by the amount of time the players spend playing (for instance Miller & Hegelheimer 2006, Sundqvist and Wikström's 2013). Regardless of such benefits, commercial video games have been underutilized in L2 learning. On the other hand, educational video games have been utilized more owing to the fact that they are inherently designed with learning in mind. We will discuss further what possibilities video games provide in terms of L2 learning in chapter 3.

Considering commercial video games seem to be underutilized in L2 learning, we wanted to create a material package that L2 English teachers can use to effectively incorporate such games into their own teaching. As was described before the package is designed for students that are 18 years or older, and it is important to realize that the package was designed with a focus in mind on different commercial video game genres. Thus, it can be employed as an independent course focusing solely on L2 learning through video games or the teacher can, for instance, pick and choose genres that they find most useful for the students' needs. This is critical because it enables teachers to adapt and use the exercises in the material package even though they might not have a possibility to use the exact games we used as examples. This is because the games are only representatives of the genres they were classified to belong to. Thus, it is possible to use the same exercises with minor adjustments with different games of the genre in question. The commercial video game genres that we chose for the material package are RPGs (role-playing games), action-adventure, strategy, life simulation, problem solving and interactive movies because they all cater to different people and provide various gameplay features, which will be discussed later in chapter 4.

As we explained in the previous paragraph our focus is on commercial, or vernacular. In research, there are two different approaches to studying commercial games and

educational games, the first one being digital game-enhanced language learning (DGELL) and the other digital game-based language learning (DGBLL) (Reinders 2012, 33). DGBLL studies games that are intended for educational purposes whereas DGELL investigates vernacular games and their correlation to language learning (Reinders 2012, 33). Since our thesis examines the role and possibilities of different commercial video game genres, our theoretical framework will concentrate on DGELL. These approaches will be discussed further in chapter 3.

Earlier we described that the aim of this thesis is to provide a material package for L2 English teachers to use. However, before the package itself, it is important that we first explain how L2 learning and video games are related, and how this relationship has been studied in previous research. These points will be discussed in chapters 3 and 5. The material package itself was constructed based on this previous information and it will consist of a list of different commercial videogame genres with example games to each corresponding genre. The material package will function as an extra-curricular or as an independent course for ESL adult learners above 18 years old. In addition to the reasons given previously, the genre perspective was chosen because research on the connection between L2 English learning and commercial video games has not been conducted from a genre perspective before. As such great emphasis will be placed on what the characteristics of the genres are and what L2 English learning possibilities videogames of each genre can offer. In other words, instead of focusing on only one aspect of English L2 learning, this thesis tries to uncover what benefits commercial video games have on a more general scale in terms of L2 learning: reading, writing, grammar and listening comprehension.

## 2 Defining a video game

There has been a lot of discussion in the research field of game studies about how a video game should be defined. Reinhardt (2018, 4) defines game studies in the following words: “the study of the theory, research and practice of the play and design of all and any games, digital and analog, educational and entertainment-focused”.

There are two distinct computer game theories for defining a video game that are used in game studies. The first theory is ludology and the second theory is narratology, (for further information, see Thon 2016, Vargas-Iglesias & Navarrete-Cardero 2020). In this material package, we will define video games using both video game defining theories. Ludology defines video games through sets of rules and player experience that define a video game. Narratology defines video games as a narrative.

Peterson (2013) describes how in ludology, video games should be defined as their own media and not through other existing media theories, e.g., literature. In ludology, the focus is on the player's own experience and the set of rules inside of the video game (Peterson 2013, 18). In the ludology's rule-based system, the video game has to be considered as goal-oriented, playful, rule-governed and engaging. Juul (2005, 36) describes the theory as: "a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable."

The main focus in ludology is on setting goals, orienting and achieving progression as the core features of what is a game. The player achieves agency by participating in the goal-oriented experience of the video game through a limited set of in-game rules (Reinhardt 2018, 79). The in-game rules can be a limited set of movements the video game character can perform or a video game level design that leads the character to a certain outcome. For example, in order to progress in the game, the player has to go from point A to point B.

The way in which Wolf (2001, 14) describes video games follows the ludologist view. He defines video games through elements that can be expected to be found in a video game: conflict, rules, usage of player abilities and a valued outcome. Conflict refers to opponents or circumstances the player must battle; rules dictate what is possible and impossible to do; player abilities include, for example, strategy and skill; and finally valued outcome, in short, refers to the goal: winning or losing, attaining the highest

score or being the fastest etc. He argues that all video games include these elements although in varying degrees. In addition, Wolf (2001, 115) states that another common characteristic and an integral part for the structure of video game is interactivity. Although Wolf's definition is almost twenty years old, many of the elements he outlined are still apparent in present video games.

Narratology consists of the idea that video games are experienced like an interactive drama, in which the player gets to participate both as the performer as well as a member of the audience (Laurel 1991). In narratology, it is required that games are understood and defined as novel models of narrative (Murray 1997 as quoted by Peterson 2013, 17). Video games have a lot of narrative elements e.g., well developed characters, plotlines, immersive fictional worlds with their own history and mythology. This theory focuses on playing games from the perspective of personal narratives that the player makes during gameplay. The player is part of the narrative and creates their own identity while playing. The players learn the rules of the game through the contexts provided by the game's narrative (Reinhardt 2018, 82-84). e.g., the game tells that touching enemies will hurt you, thus the player should avoid touching them (for further information, check Laurel 1991 and Murray 1997).

In this material package we want to focus on video games being defined as both a ludological and a narratological product. Thus, we define video games as products that are built from a set of rules and designed to create an immersive experience to the player as well as use narrative elements to aid and explain about the game's world to the player. In this thesis, this is the definition we will base the concept of video games on. Peterson (2013, 19) explains the attempts of uniting narratology and ludology as a single theory of game studies. The idea is that not all video games have stories, but even those games can produce narrative sequences. It supplies a more diverse framework to understand the functions of narrative in the game as well as the player's own gaming experience. Thus, this leads to the aforementioned definition of a video game that we agree with.



### 3 Video games and language learning

In this chapter we will go through the different approaches to video games and language learning and in what ways they study the relation of L2 learning and digital games. We will first go through the general history of the rise of game studies. Second, we will discuss on the views of how L2 learning happens with video games. Third, is how are video games and L2 learning researched where we discuss different theories.

#### 3.1.1 The rise of video games and language learning

One of the reasons for the rise of L2 learning and video game studies is the overall rise of video game's popularity in the early 2000's. They attract a lot of young people for more significant amounts than any other media. Video game players spend long periods of time playing video games and maintain high engagement throughout their play sessions. This makes it a valuable research field for finding methods to make language learning more engaging and motivating for unmotivated students as well as studying how playing video games influences L2 learning (Reinders 2012, 19-20). In other words, video games have become the most popular form of free time media for people of all ages, and considering this popularity, it is an important research avenue for engaging L2 learning.

The immersive and engaging environments in video games are an extensive L2 learning setting. Because of the growing emphasis on authentic task-based learning in the language learning research field, different video games' immersive environments provide ample opportunity to expand L2 learner's skills and engage more effectively in learning. Players can learn through engaging with the language in the game world and learn social, cognitive, and metacognitive skills during play. The engagement and immersion make the learner work as an active participant in their own learning experiences as well as create their own educational environments (Reinders 2012, 18). Because video games are often goal-oriented and include task-based activities, this led to L2 learning researchers to focus on the L2 learning occurrences in these authentic

digital environments. Because of video games' immersive qualities, videogames can create high levels of player agency since the player is able to participate and be a part of the game's world. When the player can interact and take a role in the game's inner narratives, they pay more attention to the narratives as a whole (Callaja 2007, 249-252).

L2 learning and its contexts can be investigated both from the perspective of intentional learning and incidental learning. Intentional learning happens in formal academic setting where learning is the main goal, such as a school. However, incidental L2 learning usually transpires outside of these academic environments in which the learning occurs when the learner is conscious or unaware of it (Reinhardt 2018, 31). In incidental learning, the learning context can happen through interacting with the surrounding world around you (Lacasa 2013, 32). In the field of digital games and language learning there are different research approaches and theories that study how L2 learning happens in the game incidentally and intentionally. We will discuss these further in the next chapter.

### 3.1.2 Second language acquisition

There are many different approaches for SLA (second language acquisition). In our thesis it works as the building block for studying the correlation of L2 and video games. The field of SLA investigates in what ways second, or foreign language is acquired through informal and formal contexts (Reinhardt 2018, 102). Mitchell, Myles & Marsden (2013, 59) also explain that the concept of acquisition in second language is that it is the result of normal interaction with the language such as communication. This leads to developmental processes that are similar to first language acquisition. On the other hand, Manchón & Polio (2022, 98) explain that through history SLA has been examined from many different views. Some are more formal models such as the universal grammar perspective whereas others that were created more recently are more communicative. According to Mitchell, Myles & Marsden (2013, 59-63), universal grammar model states that all humans have innate, shared guidelines, which in turn restricts the variability of possible human languages making them more

similar. According to this view, this would explain why children are able to learn especially their native language so rapidly. However, there are many other perspectives on SLA that have been created, but we will focus on the approaches illustrated by Reinhardt (2018) for we believe that they are best suited for second language learning in video games. Next, we will explain in greater detail the SLA approach that we chose for our thesis.

SLA contains both incidental and intentional learning and it is important to acknowledge both when studying SLA in videogames. An incidental SLA situation could be, for instance, how an exchange student acquires the target language by being surrounded by the target language in their everyday environment. Similarly, a player is immersed in a video game's everyday environment that is rich language-wise. On the other hand, an example of an intentional SLA situation would be when a videogame player uses a dictionary to understand the language and in turn what is happening in a videogame. Reinhardt (2018, 103) breaks down three distinct views of how SLA occurs when playing video games. The views are behavioristic view, psycho-cognitive view and social-informed view. Next, we will explain them individually (for more views on SLA, see Mitchell, Myles & Marsden 2013 & Milton 2009).

In the behavioristic view, language learning is seen as a result of different stimuli and responses to them and does not differ from regular learning. It is seen as a formation of habits (Mitchell, Myles & Marsden 2013, 48). L2 learning happens in multiple instances during gameplay. One of the learning instances happens when the player translates the target language, thus gaining comprehension of it. Another instance is when the player is exposed to specific language structures, sounds, words and grammar through repetition. The last instance is through the negative and positive reinforcement through rewards and penalties (Reinhardt 2018, 104-105).

In other words, the player learns L2 by playing the game for multiple hours a day and by repeating a similar action multiple times during play and learning through trial

and error. For example, the player goes to an in-game shop and buys 10 apples. After buying the apples the phrase “purchased 10 apples” will appear. Through repetition of buying different things from the store, the player will be familiar with the word “purchase”. Another hypothetical situation would be when the player would have to do a specific action to move forward in the game. The game would give visual aids and tips in the L2 what to do. Then the player would do different actions to find what the game was asking of them. Once they find the right thing to do, the game gives immediate feedback for succeeding.

The psycho-cognitive view sees language existing in the mind of a person in the form of representations and relationships that include meaning, form and usage (Reinhardt 2018, 106). The language learning is seen as construction-based, rational, exemplar driven, emergent and dialectic (Mitchell, Myles & Marsden 2013, 119). Construction-based means the L2 user learns or uses already learned language constructions to try and understand language. Rational means the mind is set to predict the linguistic features during, for example conversation or other discourse. Exemplar-driven means that through repetition L2 learner can deduct similarities and learn language constructions (Mitchell, Myles & Marsden 2013, 119). For example, seeing the use of articles in front of singular objects can help the learner figure out how to use articles. Emergent means that the language learning emerges during the times L2 is being used rather than viewing it from the perspective of constructions. Dialectic means interacting with other people such as teachers who help to understand the L2 through communication (Mitchell, Myles & Marsden 2013, 119).

In psycho-cognitive view, from the perspective of studying videogames, the L2 learning occurs through immersion. When the player is immersed, they will acquire the language through the interaction of the in-game narrative or game-related actions that are abundant in diverse discourses, e.g., talking about the game online with other players. The L2 learning occurs through negotiation of meaning through the in-game content or other players. Possibilities for language production or other comprehension indicates that the game also grants L2 learning (Reinhardt 2018, 106-107). For instance,

the player is playing an online game with multiple people. They discuss a plan to defeat the next level in the target language. During this interaction, one of the players asks what certain words mean from the other players and the other player describes the unknown word to the player. Another instance would be when the game gives visual hints like pictures or actions to show what certain things mean (e.g., having the picture of money next to a merchant).

The third view is the social-informed view of language learning. It does not see acquisition as a universal process but rather as something that can change depending on the individual. It focuses more on mediation as a factor for language development. Social-informed theory learning happens through participation, for instance learning can be seen as an activity that is taught by a peer (a teacher) and then internalized by the learner (Atkinson 2011, 63). In social-informed view socialization, communication and identity work as the key elements in language development (Reinhardt 2018, 108). The social-informed view focuses on learning L2 through the player's own game identity and active participation in their role in the game. The L2 learning happens through the players own in-game character and interaction with other players in various discourses that range from interpersonal, pragmatic and cultural meaning of language use. The L2 learning happens when the player participates in different gaming social practices that help them learn how to play and be identified as a player (Reinhardt 2018, 108-109). For example, the player talks to other people online as the portrayal of their in-game character or by watching tutorial videos of the video game online.

We think that these three views create important information about how L2 learning can be perceived when playing video games. Instead of only focusing on one perspective, we see that all three views provide ample pedagogical instances where L2 learning occurs. Our own gaming and L2 learning experiences have included situations where we learned the L2 from all of the perspectives mentioned. Thus, none of them should be neglected when assessing the L2 learning occurrences in video

games. By focusing on all of them instead of just one, the quality of the materials will be more diverse.

## 3.2 Computer assisted language learning

This Material package will focus on the field of game studies and CALL research which are very similar to one another. Peterson (2013) defines CALL as the field of research, which encompasses all theories that use computer technology to enhance language learning. (Peterson 2013: xii-14). This package will be a part of game studies as well as CALL research. There are two distinct video game and L2 learning research methods in CALL called Digital game-based language learning (DGBLL) and Digital game enhanced language learning (DGELL).

### 3.2.1 Digital game based language learning

In DGBLL, the research focus is on how an educational game can correlate L2 learning to its player. Reinhardt (2018,4) describes an educational game as a game that was purposefully designed to be a tool for L2 learning. Reinders (2012, 33) describes DGBLL as working with educational video games that have synthetic immersive environments. The focus is to study how specific game designs afford L2 learner behaviors, as well as how game-based environments can be designed to incorporate and/or complement L2 pedagogical uses. In other words, in DGBLL the focus is on making and designing video games for the purpose of L2 learning and studying how successful it is as a L2 learning tool by testing it out with L2 students. (For further information see Cornille, Thorne & Desmet 2012, Hung, Yang, Hwang, Chu & Wang 2018).

In practice, DGBLL gives an alternative model for achievement-oriented learning. Video games do not just work as tools for learning but rather as contemporary learning environments for task-relevant communication. The goal-directed gaming

environments require student's digital literacy as well as provide immediate feedback through linguistic form and exposure to a wide range of communication genres including those that are the closest to traditional literacies. This new method of task-based teaching also gives the learner complex narratives where the students are actively participating in through roles (Reinders 2012, 20-22). In other words, DGBLL offers L2 learners an immersive L2 learning environment that can autonomously aid the learners L2 growth through task-based activities with immediate feedback as well as being surrounded by the target language in various rich discourses.

### 3.2.2 Digital game enhanced language learning

Digital game-enhanced language learning is studying how playing vernacular games can correlate L2 learning in the digital wilds. Reinders (2012, 32) describes vernacular games as commercial games that have been made without the intention of focusing on language learning. Cornillie, Thorne and Desmet (2012, 247) describe how commercial games function as environments that have the possibility to reinforce incidental language learning. Vernacular video games are seen as cultural products that include a variety of cultural discourses and narratives that can provide both language learning as well as cultural awareness (Reinders 2012, 35). In comparison to vernacular games, educational games are more artificial and focus heavily on certain L2 learning aspects. The digital wilds are defined as digital spaces, communities and networks that are independent from formal academic contexts (Sauro & Zourou 2017, 1). In other words, the focus in DGELL is studying informal L2 learning contexts in digital environments not made purposefully for L2 learning.

DGELL is a form of applying learning theories and SLA theories to digital game environments and study the in-game configurations, contexts and game structures in their relation to possible L2 learning affordances (Reinders 2012, 32-36). Language learning through vernacular video games can happen autonomously and often incidentally. The player learns the L2 to be able to continue and progress in the game rather than to just play the game in order to learn the L2 in general. Thus, the learning

is based in the motivation to advance in the game (Arnseth 2006 as quoted in Reinders 2012, 36). Reinhardt (2018, 9) describes how the narratives in vernacular games act as learning resources for L2 and players learn the L2 from the immediate interactions during gameplay and through outside discourse about the game environments online. In other words, the L2 learning happens when the player is engaged with the language inside the game and outside of it through discourse with others.

### 3.2.3 DGELL pedagogy

DGELL pedagogy involves pedagogical mediation and implementation of a framework of pedagogical materials to help the learner focus on the language use in the game (Reinhardt 2018, 9). When one makes pedagogical activities with DGELL, it is very important to consider these aspects. Adding a wraparound task that includes debriefing elements where learners get to discuss their game and L2 learning experiences. It should include instructional practices that make the learner focus on the literacies and discourses in the game. In addition, the activities should be goal-oriented and take into account the narrative or the narrative features of the game (Reinhardt 2018, 170-171). In other words, it is important to have activities that have specific L2 tasks that the player focuses on while playing as well as a task where the player can reflect on what they learned after their game session had ended. For example, have the player complete a level of dethroning a king and make the L2 objective writing down key points what happened in the story. Then give a task that makes the player reflect what he has achieved and write about the themes of the mission. There are some CALL studies that use DGELL pedagogy (see for instance Ranalli's 2008, Rankin, Gold & Gooch's 2006, Reinhardt, Warner & Lange 2014).

When one is doing DGELL research, it is important to also consider what skills are required of the player to be able to play the game. Game literacy is the cumulative skills needed to play and finish a game that contains usage of language and other semiotic systems. These skills can vary from coordinating and strategizing game actions. (Reinhardt 2018, 106). For instance, a video game that demands certain



buttons to be pressed to open a door or a certain moveset to do a more damaging hit to an enemy. The skills can also focus on outer tools and resources, e.g., using walkthroughs, manuals and player forums. Gaming literacy can be seen as computer literacy where the user needs to know how to handle a computer/console as well as how to start, play and end a game (Reinhardt 2018, 106). In our material package we wanted to focus more on the L2 learning occurrences rather than game literacies' effect on the language learning experience due to the limited scope of this thesis. There has been some previous research on gaming literacy (see for instance Reinhardt 2018, Lacasa 2013, Palola 2018).

In our material package, we decided to use DGELL instead of DGBLL. We consider vernacular games to be more engaging and richer in L2 content than educational games. We have had our own L2 learning experiences solely from vernacular games and on the digital wilds. Educational games can also be engaging, but they are often less immersive than a vernacular video game, for educational games are mostly played in an academic setting rather than student's own leisure. There is also a gap in research for a wider range of genres and popular video games in vernacular games that have not been studied from the perspective of L2 learning capabilities.

## 4 Analysing video game genres

An important point in this thesis is the notion of video game genres and how they can be used in language learning. For this reason, it is crucial to understand what a game genre is and how the chosen genres are defined. Therefore, in this chapter we will explain these points in detail.

According to Reinhardt (2018, 91-99) A singular game is called a game title. Game titles are often acknowledged to be a part of a larger game genre. A game genre is a type of categorization for games that include similar themes, playing styles and mechanics. Mechanics are defined as game rules that outline what the player can and cannot do inside the game, thus facilitating player behaviors. (Reinhardt 2018, 91-99).

From this basis, one could imagine that labeling video games is an easy task. However, there are many different notions that need to be addressed, which is why identifying games into separate genres is not as easy as it sounds. For this reason, we will address these issues in the next section.

#### 4.1 Problems with identifying video game genres

The same as films and books, video games can also be divided into different genres depending on their themes and gameplay. However, when identifying and labeling games into different genres, certain aspects need to be addressed. For example, Lacasa (2013, 28) explains how there is no general agreement on videogame genres to help us classify them. However, industries and companies group videogames into genres by one criterion or another to introduce clarity and help consumers select videogames. In addition, considering from a ludological perspective, Wolf (2001, 115-116) provides deeper insight by explaining that while games usually have a definite goal, the ways in which this goal is achieved can be separated into various stages, resulting in a game that can be placed in multiple genres. As such, he explains that interactivity is a useful starting point for genre analysis considering video games. Adams (2014, 67) adds to this by explaining that in video games, genres are dependent on the various challenges that a player faces, and they are separated from the content. As such, for example, an adventure game is still an adventure game regardless of if it is set in a fantasy world or a historical period. In this way video game genres can be labeled by the nature of their interactivity. However, from a narratological perspective, Reinhardt (2018, 91) explains that a video game includes a narrative theme such as science-fiction. He continues that video game genres have some overlap with film and genres in literature. As an example, *Destiny* is a science fiction role-playing game and *Titanfall* is a science fiction first-person shooter game. Although they are science fiction games, they are still placed in different genres as a result of the difference in the nature of their interactivity i.e., gameplay mechanics.

Another important thing to note when considering the notion of video game genres is the existence of hybrid genres and subgenres. Reinhardt (2018, 91) describes that new hybrid games create new genres and subgenres, and it is not collectively agreed upon which are the main ones and which are just subgenres. This is also noted by Adams (2014, 67) who explains that there are games that do not correspond with any genre, or alternatively are a combination of several different genres. Furthermore, Reinhardt (2018, 91) explains that developers might try to reinforce the uniqueness of their games by labeling them with genre names that extend the limits of conventional genre descriptions. Although many contemporary games are hybrids of multiple genres, still in this material package we will place the chosen games into certain specific genres based on the following genre descriptions for the sake of clarity. In this thesis we will focus on six different video game genres based on the nature of their interactivity: RPG (role-playing game), action-adventure, strategy, problem-solving, life simulation and interactive movie. These genres will be defined in the following sections.

## 4.2 RPG

According to Wolf (2001, 130–131) RPGs (role-playing games) are games in which the player controls a character that has a number of different characteristics such as, species, gender, age and different skills, for example, dexterity and strength. Adams (2014, 75) adds to this by explaining that in many RPGs, various challenges are present: tactical, explorative, logistical or even economical in the form of looting and trading equipment. According to Wolf (2001, 131) the controlled character might even have a developed persona. This is backed by Reinhardt (2018,93) who explains that RPGs may include comprehensive character creation. He continues that RPGs include a large-scale world in which players complete task, or quests as they are usually called. He also states that Western RPGs and Eastern RPGs are subgenres of RPGs. The difference between them is that in the former the player is able to personalize the storyline whereas in the latter the player controls a group of people in a linear storyline.

In addition, role-playing games might also differ in terms of how many players there are. Considering this notion, Wolf (2001, 131) mentions that RPGs may be either single player or multiplayer games. For example, we would add that MMORPGs (massively multiplayer role-playing games) are RPGs that are set in a vast open world which is inhabited by the player-controlled character and various NPCs (non-player characters). Reinhardt (2018, 90-91) describes MMORPGs as a hybrid genre. However, in this thesis due to its scope we will focus on single player RPGs instead of multiplayer RGSs such as MMORPGs, which have been studied quite extensively in previous research (see for instance Rama, Black, van Es & Warschauer 2012 and Rankin, Gold & Gooch 2006)

Lastly Reinhardt (2018, 93) describes that the themes in RPGs often revolve around fantasy. He continues that considering the possible support for language learning, RPGs provide players the ability to develop their characters, play with different identities and perspectives in-game, understand rules, follow the narrative, complete and select quests and communicate with possible other players and NPCs. Examples of RPGs are *Witcher 3: The Wild Hunt* and *The Elder Scrolls V: Skyrim*, both of which are fantasy RPGs.

### 4.3 Action-adventure

It is hard to find games that are purely adventure games since they are usually combined with another genre such as role-playing and action. For the sake of clarity, we will focus on action-adventure games that could be considered as a hybrid genre incorporating aspects from both action and adventure games. Also, it is important to notice that the action-adventure genre might sometimes be referred to as just adventure. Wolf (2001,118-119) explains that a common characteristic for adventure games is that they all include a world that is made of different instances such as rooms or locations. Furthermore, the general goal is much more complicated than merely

shooting, catching or capturing although some goals are achieved through certain stages, which may include these in variations.

However, as described above, action-adventure games include characteristics from the action game genre as well. The action genre is the most popular video game genre. In action games, the player's actions control the character in a virtual environment. The games can be in first person or third person. In first person games, the player sees the actions from the visual perspective of the playable character as if the player themselves were doing them. In third person games, the player sees the characters actions from an outside perspective (Lacasa 2013, 8). In other words, first person perspective is similar to what a person sees through their own eyes, whereas third person is similar to a movie where the character is being followed with a camera. In addition, Adams (2014, 70) points out that include challenges of various types, such as physical, conflict and economic, or even puzzles.

It is also important to note that according to Reinhardt (2018, 92), adventure games include a story, character development, exploration and puzzles. Wolf (2001, 118-119) continues that the setting of adventure games is regularly placed into a certain historical time period, but they can also be connected to a world of fantasy or science fiction. This is backed by Reinhardt's (2018, 92) notion that mystery, science-fiction and fantasy are common themes in adventure games. Other characteristics include a lack of one-way linear levels and the ability for players to explore the world around them (Wolf 2001, 118-119). In terms of language use Reinhardt (2018, 92) explains that elements that support it in adventure games are decision-making, following stories, selecting options, puzzles and communicating with NPCs or possible other players.

What is also noteworthy is that text-based adventure games also exist (Wolf 2001, 119.) However, in this thesis the focus is on the prior mentioned characteristics of the adventure genre and text-based adventure games will be excluded for they are quite different from regular adventure games with their world and gameplay revolving around text itself.

## 4.4 Strategy

According to Wolf (2001, 132) strategy games focus on strategy instead of quick reflexes and continuous action. However, we would add to this definition that nowadays strategy games may also be very hectic and require quick reflexes especially considering multiplayer games such as *Starcraft* where players battle each other both through strategy and quick reactions to the other players' actions which require, to some extent, not only quick thinking but also quick reflexes. Adams (2014, 78) reinforces this fact by stating that an important objective in strategy games is to reduce the numbers of opposing forces.

Reinhardt (2018, 93) continues that subgenres in the strategy genre include RTS (real-time strategy) and TBS (turn-based strategy). As the names suggest, in RTS games all players make their decisions in real time whereas in TBS games the players, be they real or AI (artificial intelligence, non-player controlled), take turns during gameplay. According to Reinhardt (2018, 93) the themes often revolve around war and history. However, again we would add that science fiction is another popular theme for strategy games as well. He adds that strategy games support language learning by requiring the player to understand rules, plan in long-term, use tactics, cooperate with possible other players and take risks. Good examples of strategy games are for example *Starcraft* (a sci-fi RTS) and *Humankind* (a historical TBS).

## 4.5 Problem-solving

For the sake of clarity, in this thesis the term problem-solving games will be used instead of puzzle games although in everyday language they are regularly used as synonyms. The term 'problem-solving' also fits the genre description better to contemporary games because many of them combine problem-solving elements to narrative-driven gameplay instead of being pure puzzle games. Wolf (2001, 129) describes problem-solving games as games in which the emphasis is on finding a

solution i.e., problem-solving. Adams (2014, 78) continues that the puzzles that are solved can either be included inside a story or there might be a grander objective in solving them. Some of them might also include trial and error as a critical component for solving said puzzles.

In addition, according to Wolf (2001, 129), the ways in which the solutions are found vary from, using various tools to solving puzzles and manipulation of objects. The puzzles usually include hints in the form of verbal, sonic or visual cues. Adams (2014, 78) adds that the puzzles that require solving include recognizable patterns, using logic and figuring out a process. Nowadays, there are many kinds of contemporary problem-solving games, and examples of these are *12 Minutes* and *Outer Wilds* that both also include narrative elements into the problem-solving genre, true to the directions of contemporary game development as was explained in section 3.1. Even though, these two games could also be classified as adventure games, they still incorporate puzzles and problem-solving as a crucial element in progressing the story, which coincides with the definition given above for the problem-solving genre. Likewise, as explained earlier video game genres can be explained by the nature of their interactivity, which is again true in this case, since the interaction and gameplay in these games revolve around problem-solving.

#### 4.6 Life Simulation

Simulation games have many different subgenres that, in addition to life simulation, according to Wolf (2001,126) include subgenres such as management simulation and training simulation. Reinhardt (2018, 93) continues that another possible subgenre is vehicle simulation that involves controlling vehicles. To continue, Wolf (2001, 126) states that management simulations revolve around managing resources to build a community in small scale or in a grander scale. The problems the players face include outside forces such as natural disasters and inside forces such as crime. Reinhardt (2018, 93) adds that the settings revolve around any possible system such as prisons, colonies, or restaurants. Training simulations, on the other hand, focus on developing

a skill of a player and they try to replicate a realistic situation in which the skill can be developed further (Wolf 2001, 126). Reinhardt (2018, 93) explains simulation games provide support for language use since they require the player to organize, plan, understand rules and consider consequences.

Due to the grand scale of different subgenres for simulation games and partly due to the limited scope of this thesis, we will focus on only one subgenre of simulation games: life simulation games, instead of looking at simulation games in general. We would add that life simulation games bear a close resemblance with management simulation games, but instead of focusing on a community, the objective is to control the daily life of a single playable character or at most a family. *The Sims* and *Animal crossing* are prime examples of life simulation games.

#### 4.7 Interactive movie

The interactive movie genre might sound strange for a video game genre since the name itself incorporates the word 'movie'. However, it is a video game genre that has a wide variety of narrative-driven game in it. Wolf (2001, 125-126) describes interactive movies as games that consist of video clips and images, and the player is given a choice in certain parts to have the ability to control the way the events play out in the game. He continues that the games are also structured in a rather linear way, and even though players are given limited freedom, the overall events happen in a rather similar sequence. However, we would add to this definition that the parts in which the player is prompted to make decisions are called QTEs (quick-time-events) and they player is prompted to press a combination of buttons in a limited time frame as the scene plays out to complete the QTE and progress the story. Also, the interactive movie genre includes contemporary games that give quite a bit of freedom to the player in terms of the events and the eventual finale of the game.

However, there might be some inconsistencies on whether certain games are called interactive movies or adventure games. For this reason, we will now make a clear



distinction between adventure games and interactive movies to avoid any ambiguity. Adams (2014, 77) offers a description for adventure games by explaining that in the heart of an adventure game is a character whose development is not number based in the form of stats, equipment, or skills, which is the case in RPGs. Rather, the development happens through dramatic events instead of numerical stats. As an example, he uses the game *Heavy Rain*. Now for the important part: the reason, why we are using an adventure game description when explaining interactive movies, is because the given description coincides with the interactive movie genre. It is also important to note that *Heavy Rain*, whose gameplay is QTE-heavy is often described as a member of the interactive movie genre. As such it is important to note that as explained in the beginning of this chapter in section 3.1, classifying games into specific genres is difficult since there is a lot of overlap between them. This is the reason we are using a different classification for adventure games and instead incorporate another possible definition for adventure games into the interactive movie genre because of their striking similarities. Examples of interactive movies are *Detroit Become Human* and the prior mentioned *Heavy Rain*, both of which include a wide range of QTEs in their gameplay and the development of the player character is not tied to numerical stats.

## 5 Previous research on video games and language learning

There have been various research topics for video game studies in the past 20 years. In this chapter we will examine previous video game research studies to give an example of what kind of methods are used and what sort of data has been discovered from various perspectives such as DGBLL and especially DGELL. We decided to focus on research that emphasizes L2 learning occurrences in different game genres as well as overall important findings in DGELL research and vernacular games' effect on L2 learning. We will discuss what different language skills are affected when playing video games and whether DGELL pedagogy can enhance the language learning during play sessions.

A lot of research has been done in game studies in studying the relationship of time consumption and L2 acquisition. Eskelinen (2019) and Erkkilä (2017) both studied the general situations where the language learning occurs during play. Both studies used experiences of players who play a lot of video games daily. It is very common in DGELL studies to do qualitative research where the data is gathered through questionnaires or interviews.

Eskelinen (2019) studied the possibilities of single player video games as informal language learning environments. In her study, she interviewed seven Finnish university students who majored in English about their L2 learning experiences while playing video games. The study implied that the motivation to learn the language happened in situations where the player needed the language, in order to progress and to understand the game world better. Another point was that the participants felt that game genres that focused more on narrative elements were better suited for language learning than others (Eskelinen 2019, 90).

In Eskelinen's (2019) study, the participants' L2 learning experiences resembled Reinhardt's (2018) SLA behavioristic and psycho-cognitive view. The player learned vocabulary through repetition and translation, in order to progress in the story as well as through wanting to know more about the game world caused by being immersed in the game and its world. What we can also learn from the study is the emphasis of having narrative evoking elements as game mechanics can encourage the player to engage more with the language thus having more affordances for language learning.

There is also a lot of CALL research studying what language skills are affected during play sessions of video games. Erkkilä (2017) analyzed the perspectives of Finnish upper secondary school students on game-enhanced language learning. The data was gathered through a questionnaire that had over 750 respondents. The questions focused on the time consumption and playing games correlation to L2 learning as well how playing games had helped them acquire the L2. The study showed positive findings of play time consumption and L2 learning. The study also found that playing

games demanded more language skills needed for comprehension rather than production. Written language skills were required more than spoken skills, however, multiplayer games required more productive and active language use (Erkkilä 2017).

The results of the study show how playing different video games and being surrounded by the language for long periods of time voluntarily has an effect for SLA and vocabulary learning. From behaviorist and socio-cognitive perspective, the participants learned language skills through repetition and by being immersed in the game environments and stories. The engaging element of video games gives the players motivation to return to play video games and interact with the language for long periods of time thus having more language learning occurrences (Reinhardt 2018).

Many previous studies have been conducted considering the effect of video games in vocabulary learning and acquisition. For example, Sundqvist and Wikström (2015) studied the correlation of how much playing video games correlated to L2 vocabulary proficiency in school. The study was done in Sweden, and it used a questionnaire, language diaries, vocabulary tests, assessed essays, and final grades as data gathering methods. The study focused on Swedish English L2 learner 9<sup>th</sup>-graders (age 15-16; N = 80; 36 boys, 44 girls). The study showed some positive results for video games correlation to vocabulary learning especially with boys but not with girls. The students who played a lot of games in their free time had excellent results in their vocabulary tests (Sundqvist & Wikström 2015).

In addition, another study that focused on vocabulary learning was conducted by Rankin, Gold, & Gooch (2006) who studied the effects of an MMORPG called *Ever Quest 2* as a language learning tool for ESL students. The participants consisted of four ESL students in the USA. The students were required to do a pre- and a post-questionnaire and a vocabulary test based on the vocabulary they used and encountered in-game during the research period. The results reveal that the effects included the students being able to correctly define at least 35 % of the words they

encountered at least once and at least 56 % of the words encountered six or more times though there were also higher percentages depending on the learner, as well as practice in communication skills when communicating with PCs for intermediate and advanced learners. Therefore, it seems that RPGs are useful language learning tools for learners that have at least an intermediate language proficiency. Another interesting point is that according to the post-questionnaire students wished for more aural input from the NPCs because after the tutorial island the NPCs had more aural input, which the students found useful. As such, the students believed that an increase in aural input would help with their oral proficiency.

Another study that incorporated vocabulary as a study element was conducted by Ranalli (2008) who studied the life simulation game *The Sims* and its effect on L2 learning in their study. The study focused on the correlation of SLA and playing the sims with supplementary materials to aid learning. The study consisted of 9 intermediate ESL pupils from different language backgrounds and play sessions of the sims with complementary pedagogical aid from a website that had the Sims vocabulary-oriented questions. The study had several grammar tests throughout the experiment that worked as data gathering for the study. The study showed that simulation games with supplementary theoretical framework can afford L2 learning especially with actions and vocabulary (Ranalli 2008).

All of the studies show promising findings for DGELL and video games' correlation to vocabulary learning. Sundqvist and Wikström's (2013) show how the time consumption of play sessions can affect the acquiring process of L2 vocabulary positively. This reflects well with Reinhardt's (2018) behavioral view of SLA where the learning happens by being inside the game world long periods of time. (Reinhardt 2018). Ranalli's (2008) and Rankin, Gold & Gooch's (2006) studies work as an example of how DGELL pedagogy (Reinhardt 2018) can be used in practice. By combining playing the game with a supplementary pedagogical framework (website, pretests), this aided the participants L2 learning experience while playing the vernacular game. The results show how DGELL pedagogy can enhance the capabilities of acquiring

information of the participants' learning as well as enhance their learning experience along the experiment.

There is also a lot of DGELL research that studies the effects of online interaction of players and its effects on language learning. Rama, Black, Van ES and Warschauer (2012) studied the L2 learning affordances in *World of Warcraft*. *World of Warcraft* (WoW) is a worldwide known MMORPG and it had one of the largest player bases in the world in the early 2000's. The study focused on six Spanish L2 learners who were fourth year university students in Southern California. The participants had differing levels of Spanish language skills and familiarity with WoW. The participants were given a Spanish language copy of WoW and time to familiarize with the game mechanics (movement, controls, game objectives). All of their conversations were recorded to google docs. Participants played the game over the course of seven-week research period and wrote journal entries after every play session. The study also consisted of three interview sessions with the participant, with the focus on language skill development and discussion about general problems when playing (gameplay wise or communication wise) (Rama, et.al 2012).

The results of the study provided multiple affordances where L2 learning occurred. The first one is from the very beginning of the game, where players are immersed in the target language through the game environment where they can engage in various authentic communication methods (speaking, reading, writing and listening) in a setting that allows risk taking and contemplation of the target language. WoW also offers an environment to talk with native speakers in a way that gives the L2 learner time to reflect on production and a significant margin for error. The final affordance was the goal-oriented gameplay of WoW that promotes collaborative actions between the players. This has a positive implication for teaching and learning that relates to the student's own sense of confidence (Rama et.al 2012).

In Rama's (2012) study the L2 acquisition is investigated from a psycho-cognitive perspective and from a social-informed perspective (Reinhardt 2018). In the psycho-

cognitive perspective, the interaction with the other players and the immersion to the game world provides motivation and incidental language learning by being immersed in the target language. From social-informed perspective, the L2 learning happens through the players in-game character. The roleplay of using and communicating with others behind a safe character gave the players courage to use the target language in a safe environment where they were not afraid to make mistakes.

There is also similar research from a DGBLL perspective that focuses on L2 learning through interacting with other players in a digital game environment. Reinders and Wattana (2015) studied how playing an MMORPG called *Ragnarok Online* can affect 30 EFL Thai IT university students' willingness to communicate (WTC) in English and how the subjective experience of playing games affects learners' affective barriers. The students took part in a 15-week long English language course. The course's focus was on an all-round English skills development. The course covered six main units and at the end of each unit the students would play a quest created by the course teacher in *Ragnarok Online* that worked as a revision exercise of the unit. The methods used were based on three data collection methods: the collected data from all of the 6 play sessions of *Ragnarok Online*, individual face to face interviews after each game session and a general questionnaire. The data was gathered from the in-game chat logs focusing on how the players used English and interacted with one another. The interviews were used for subjective experiences of the participants allowing for a wide range of descriptions regarding the effects of gameplay on WTC levels. The aim was to compare their WTC in the game and WTC in the classroom. The questionnaire was used to get an overall impression of how the participants felt about using English in the game in comparison to using it in a classroom environment. The results of the research showed positive findings of high WTC levels when playing. The majority of the participants felt that using English in the game was easier and safer in the game environment than in face to face situations (Reinders & Wattana 2015).

The research provided sufficient results for DGBLL research fields. By creating the game quests and tasks around the course materials gave a safe and an engaging

environment for the students to interact and revise the material for the course. In DGBLL research, it is very common to design games to fit school course curricula (Reinders 2012, 33). This study showed how the game environment can have a huge impact in language usage compared to a regular academic setting as well as the language learning experiences. The results showed that MMORPG's game setting and its different mediums for safe L2 interactions had a positive effect on the language learning and its usage.

There is not that much previous research done on specific game genres and analyzing their effects on L2 learning. Most game studies that do research on game genres have mostly focused on action, MMORPG and simulation genres. We will now go through some research that has focused on L2 learning occurrences in specific videogame genres.

The research conducted by Chen, Hsu, Chen & Todd (2021) provides interesting findings regarding adventure games and L2 vocabulary. The participants of the study, who were first year college students aged 18-19 years old in Taiwan, were divided into two groups: control group (n=32) and experimental group (n=30). The control group only played an adventure game whereas the experimental group played the same game incorporated with vocabulary exercises for learners immediately after gameplay. The game included language both in visual cues, such as images and subtitles, and audio. In the exercises the students were either needed to match definitions with word or fill in the blanks. It is important to note that this research followed the principles of game-based language learning since the game, *Academic adventure* was purposefully designed for language learning as its aim was to teach students about American academic culture, which ties in with language learning as cultural knowledge is acknowledged to be an important part of it. The language learning was tested through a pre-test, post-test and a delayed post-test. The outcomes revealed that even though both groups acquired new vocabulary, still the experimental group reached better results in both post-tests. This is an interesting notion in favor of game-based language learning as it shows that vocabulary can be

learned through educational video games even without any intentional language exercises on the side, but incorporating these exercises has the possibility of enhancing the learning results.

Miller & Hegelheimer (2006) focused on how the life simulation game *Sims* could be incorporated into the language classroom. The five-week study unit included 18 adult ESL learners at a major university in the USA, and each day they were divided into three stations through instructions on a website: the first station had obligatory supplementary material (vocabulary list and match the definition exercises based on SIMS), second one received supplementary material on a voluntary basis (grammar explanation, link to an online dictionary and cultural notes) and the third one did not receive any supplementary material. The students were divided into six groups with three members each and similar proficiency based on pre-test results. Each group played the game together for long periods of time. They were later tested again with a post-test. The tests include both grammar and vocabulary exercises (Miller & Hegelheimer 2006).

In addition, students completed weekly quizzes that in practice were shorter versions of the post-test, and they also completed a questionnaire at the end of each day. The results indicated benefits for vocabulary learning in the first station. Likewise, student feedback gave similar results since they proposed that supplementary material provides benefits for the completions of tasks. However, feedback also suggested that least useful materials for language learning were grammar explanations and online dictionaries. However, it was also noticed that using the voluntary supplementary materials in station two improved quiz scores, which points to the fact that merely using the words in whatever context helps in remembering them (Miller & Hegelheimer 2006). The results of this study give further evidence regarding DGELL pedagogy (Reinhardt 2018). The results showed that having complementary materials alongside play sessions reinforce language learning especially in terms of vocabulary.



A study conducted by Reinhardt, Warner & Lange, K. (2014) focused on student perceptions on game-enhanced language learning in an L2 German classroom in the USA. The students were offered different German browser games to choose from and all four groups ended up choosing three single player strategy games: *Ikariam*, *Wild Guns* and *Forge of Empires*. After each gaming session the students were required to write private logs in which they reflected on their gameplay experiences. In addition, they had to read or watch extra material regarding discourses in practices in digital gaming in German. Results showed that writing about their gaming experiences was a hard task according to the students and this had a negative effect on the gaming experience itself. This meant that some students felt that the gaming part was too educational and at the same time not fun enough, whereas others thought that the video games were not serious enough or they were too different compared to, for example, films and books. This insight provides useful information about the difficulties that one must consider in DGELL pedagogy (Reinhardt 2018). In this instance, the supplementary material was too cognitively loading and the selected strategy games were not engaging enough, which affected the L2 learning negatively.

Piirainen-Marsh & Tainio (2009) studied through the methods of conversational analysis the effects of collaborative gameplay. The participants were two 13-year-old Finnish boys who played an Eastern RPG called *Final Fantasy 7*. The data consisted of video-recordings from the participants' homes, and they specifically focused on lexical and prosodic repetition in their analysis. The results show that learners use repetition to react to events in the game and show their understanding regarding said events. In other words, by repeating words encountered during gameplay, learners point out and make statements, or merely show interest toward these events. This repetition of words and phrases also allow learners to learn and incorporate them into their own lexicon and language use. In addition, imitating the style in which the utterances are made can also help learners to reproduce different accents. Based on these results, Piirainen-Marsh & Tainio (2006) argue that interactive repetition in collaborative gameplay helps learners in interpreting and using L2 in a way that allows them to analyze it and develop their linguistic competence. This study offers

some more insights on how single player games can also have benefits for oral proficiency instead of just, for example, vocabulary learning.

Some MA these have also investigated DGELL pedagogy. Palola (2018) made a material package on video game literacy in the classroom. The material package works as an interlude to various types of video games and gives the teacher tools to teach game literacy to students, in order to use video games as a language learning asset in the school setting. The material package can be used as an extra-curricular package or selectively as a supplement for any existing course for students that are intermediate or advanced users of English as their L2. The package unites L2 teaching and game literacy teaching. The package focuses on assessing and analyzing the game literacy difficulty of different genres and provides L2 activities and tasks surrounding those game genres. The package goes through 2D platformers, 3D platformers, first-person games, RPGs and adventure games (Palola 2018).

Our material package is a continuation of Palola's (2018) material package. Palola's (2018) material package works as a model for DGELL pedagogy. Each game in the package has questions and activities that have instructional tasks, wraparound tasks as well as interactive tasks (Reinhardt 2018). e.g., discuss with the class what was said and what had happened, write a short review of the game. While Palola's (2018) material package focused more on the game literacy ours focuses more on L2 learning occurrences and what language skills they can enhance. Our package also has different video game genres.

Based on previous studies it seems that previous game research has focused more on a few digital game genres such as RPG, MMORPG, adventure and simulation games. However, in our material package we will also focus on digital game genres that do not have a lot of previous CALL research such as strategy and interactive movie video games. Thus, in our research package, the analysis of L2 learning occurrences in those less known genres will be based on the previous genre analysis, gameplay similarities

with genres that have been studied in the past, and the possibilities they offer in terms of SLA as well as our own language learning experiences.

## 6 Information about the material package

In this material package we will assess different video game genre's L2 learning possibilities through a selected game from each genre and build pedagogical L2 activities around them using DGELL pedagogy. In the following chapters we will give an overview of the goals, target group and other important factors that should be considered when using this material package. In addition, we will give a brief analysis of each video game that we chose as part of our material package and also discuss the reasons why they were chosen.

### 6.1 Goals, target group and other factors to consider

The aim of this material package is to provide an extra-curricular, or an independent course teaching package for adult learners of 18 years or older. In other words, the target group is upper intermediate and advanced ESL learners since in order to fully benefit from the tasks the learners should be able to understand the language which is used in the video games. This holds true especially for our focus, which is commercial video games, since the language in them is not considered in terms of learner level, which, on the contrary, is usually true for educational video games. However, the package is constructed in a manner that it should be both well-structured and easy-to-use independently.

As was mentioned previously, the focus is on different commercial video game genres and how they can be used to aid in ESL learning. With this in mind, the material package is structured in a way that every previously mentioned genre will be handled independently with each of them having one video game functioning as a typical example of each genre. Thus, each video game genre section will end with three different tasks that can be utilized to reinforce ESL learning. The tasks will vary

depending on what are the strengths and weaknesses based on the characteristics of each genre. These characteristics were discussed earlier in chapter 4.

The material package will consist of four 20-minute play sessions of each game and genre specific selection of tasks. The play sessions will be done individually or in groups of four where one plays and the other observe. This way the students can have different levels of social interaction with the game world as well as with each other. After each play session there is a selection of revision tasks that the students do individually or in groups. The material package was designed in DGELL pedagogy and SLA in mind, which we will next explain in detail.

The first tasks for each play sessions are made from the perspective of behavioristic SLA and they are all tasks that require the learner to recall and analyze the events and actions the students do and accomplish in the game, such as journals. The learning aim is to help the student familiarize the different L2 elements and vocabulary that they face during play. We also chose games that were praised for their immersive worlds and captivating gameplay, this way the student has a higher chance to feel more immersed in the game and its language. This helps the L2 learning from the perspective of the psycho-cognitive view of SLA. The idea of students playing in groups enhances interactivity in L2 output as well as communicative skills surrounding the game. Some of the material package's tasks are also discussion and group based which enhances L2 learning view of the social-informed SLA.

Each game section also has a final task that represents the DGELL pedagogy's idea of a summative task that allows the student to reflect on all the new things they acquired and also focuses on specific L2 elements. That is why most of the final tasks are reflective of the specific linguistic genre qualities of the games and requires the student to think about the L2 characteristics of what features create those genres.

## 6.2 Descriptions of chosen video games

For the RPG genre we chose *Witcher 3: Wild Hunt*, which is a third person, single player game that was released in 2015. The events of the game take place in a fantasy world, and the player controls a singular character, Geralt who has a developed persona, which means the customization options and character development from the player's perspective focuses more on skills and abilities of Geralt instead of his personality. However, throughout the story the player can make choices, which, for example, affects how Geralt reacts to different events, which influences how the story progresses ultimately leading to different endings. It also includes many main quests and side quests that the player can complete to better immerse themselves into the world. The game contains a lot of lexically rich dialogue and written text, which is one of the reasons why it was chosen since it provides a plethora of both aural and visual language input for the player.

For the action-adventure game, we decided to choose *Uncharted 4* (2016). The *Uncharted* series follows an action-based story of Nathan Drake, a treasure hunter that goes on broad adventures to find lost historical artifacts and keep them safe from harm's way. The game is filled with action packed 3<sup>rd</sup> person gun combat gameplay where Nathan fights off other villainous treasure hunters that try to sell or use the artifacts for an evil purpose. The game has platformer elements where Nathan has to do a lot of climbing, puzzles that need to be cracked in order to progress in the game and grand fight scenes where Nathan has to fight off groups of bad guys. *Uncharted 4* is the last *Uncharted* game and it has a rich and engaging story that is riddled with drama and humor. The L2 elements in the game is a rich colloquial spoken language, as well as written, where the player is immersed in authentic language use accompanied to fun and engaging gameplay. The game goes through multiple different settings in the world and includes a rich vocabulary for different historical and cultural themes.

For the strategy genre we have chosen a TBS (turn-based strategy) game called *Humankind* released in 2021. It can be played both in single player and multiplayer, but we will focus on the single player aspects of the game because of the limited scope of this thesis. The basic idea of the games is to control your faction through the ages in human history from the hunter-gatherer tribes to ancient times and eventually to the contemporary world. However, before each era the player must make a choice whether they want to retain their culture or adopt a different one. To win the game the player must accumulate the most points by completing different feats, such as cultural wonders and military accomplishments or by building structures, acquiring more land area, researching technologies and accumulating wealth. Once a faction has researched all technologies the game ends and the points are tallied. The language use of the game includes an abundance of written text, but also some aural input in the form of a narrator as well as AI and player-controlled faction leaders.

*Outer Wilds* is the game we chose for the problem-solving genre. The story takes place in a different solar system and the player controls an alien. The game begins with the character just acquiring the required training to fly a spaceship. Thus, the player embarks on an adventure where he can explore the different astronomical objects of the solar system by flying to them. However, after 22 minutes the sun mysteriously explodes killing the character. However, the character wakes up retaining all his memories while all the other NPCs do not. This leads to the main idea of the game, which is to utilize these 22-minute time loops to uncover the mystery behind the explosion of the star and the story of another long gone alien race. The reason why it is part of the problem-solving genre is because even though it is story-driven the gameplay mechanics themselves revolve heavily around various puzzles which need to be completed to unravel the mystery. This game is quite different from most of the other games we chose since in terms of its language use it contains only written text. In other words, the characters never speak out loud, but instead their utterances can be read in written form.

For the simulation genre, we chose *The Sims 4* (2014) which is a popular life simulation game. The Sims games have been widely studied in DGELL research and for good reason. The game's mechanic works in a way that the player controls the character that they have created by clicking around the game environment. With each click, a window will pop up that gives different actions the character can do with the clicked object or setting. The player can interact with other characters and create relationships with them and do hobbies and other daily activities that people do in their everyday life with a little spice of fiction every here and there. The game has a rich vocabulary for action words and the game gives immediate visual feedback to each action the player decides to do. The player will be immersed in only written L2 text for the language the characters speak is a made-up language. The freedom of choice and the endless possibilities for different L2 vocabulary is the reason we chose *The Sims 4*.

In terms of interactive movie genre, we chose *Detroit: Become Human*, which is a third person, single player game, which takes place in the USA of the future. The player controls three different androids, each of whom has their own stories, which eventually are intertwined. The player can move the character between cutscenes to explore the world, but during cutscenes the player has to make choices through QTEs that affect the ways in which the characters act in these situations. Since it is a representative of the interactive movie genre, the language use heavily focuses on aural input when the characters discuss with each other or think to themselves. However, it also includes some written text as well, especially during gameplay between cutscenes.

## 7 Discussion

It was difficult at first to find ways to summarize and combine activities that would reflect the different L2 learning theories we mentioned in the background. However, after several weeks of brainstorming different tasks and approaches for the actual materials, we were able to find a variety of tasks that reflect well with the theories we had implemented in the background. We wanted to try to implement all three SLA approaches in order to give a more varied material package that suits all kinds of

different L2 learners. Since all three views cater to different L2 learning methods, some focus more on L2 repetition and others rely on using the L2 to interact with others and the game world. When considering all the three views of SLA (Reinhardt 2018), which we discussed in chapter 3, we believe that we were able to bring more variety into the material package and provide different kinds of tasks for L2 learning through videogames.

All the early tasks that require the students to recall all the things that happened during the play sessions were chosen to give data of how the behaviouristic SLA approach can teach L2. These L2 learning objectives of the tasks were to help the students to acquire as well as be more acquainted with the new vocabulary that they face during their play sessions. From the perspective of behaviouristic view, the player does a lot of the same activities repetitively during play sessions which helps them to memorize the new L2 better since most of the games involve a lot of repetition of certain actions, for example purchasing items or interacting with in-game characters.

We also chose a lot of immersive videogames in the hopes that the students can get immersed into the game world and settings. Especially in games like *Detroit: Become Human* and *Witcher 3: The Wild Hunt* the player can make narrative choices that affects the course of the game, and by making and interacting with those choices the player is presented with rich L2 learning situations where the student gets to participate in the usage of the in-game L2 during play sessions. These aspects were considered for implementing the psycho-cognitive view of SLA in our material package. We also decided that by having the students play in groups they will also discuss and find information together with other people. This aspect also helps the social-informed view where the students can engage in L2 with each other and find meaning through communication while playing the videogames.

We wanted the final tasks to reflect social-informed SLA L2 learning as well as an overall L2 learning through playing video games. For the social-informed perspective, we came up with tasks where the players get to write or act as the different characters



they played in the game. This can help their L2 learning by giving them a safe persona to hide behind while using the L2. The overall final tasks also give L2 learning information as a whole and show the summative L2 learning after all of the play sessions.

Usually, material packages include self-assessment sections, however in this material package we decided to exclude it. The reason for this is that the number of times the students play the videogames will not give them enough video game playing experience to reflect realistically to the L2 learning experiences they may have. If there were more extended play sessions, then there could have been enough experiences to reflect more on one's own L2 learning through video games.

The downsides of this material package are that it is quite expensive to execute, and it only has a limited selection of games. The requirements of the gaming platforms and the amount of them requires the school to have enough resources to provide the required gaming systems to the students. That is the reason why we chose to not make a definitive package that must be followed from start to finish, but rather as a selection of different L2 learning entities that the teachers can then choose from to fit their own L2 teaching. This way the teacher does not have to worry about the expensive resources. Likewise, the genre-based perspective provides teachers the means to adapt the exercises if, for example, they do not have the games we examined in this package, but instead have the possibility to utilize other games of the same genres. Thus, a strength of this material package is that it is highly adaptable even though it might require initial resources from schools to provide gaming systems and video games.

Another limiting factor is that most of the games used in the material package are rated for players over the age of 16. It also cannot be very universally used for all school settings since some of the games are also rated for players over the age of 18, if one uses this for minors it is essential to first ask for permission from the students' caretakers. However, this material package is not meant to be followed as a whole course, but rather as a selection for additional materials to aid an existing course.

However, this limitation can be counteracted by choosing different video games from the same genres and by making minor adjustments to the exercises to fit the new game.

The limitations of this thesis also narrowed down our selection of video games. By focusing only on one game as a representative of a genre does not give enough accurate data of what types of games are in each genre, but rather gives a rough idea of the structures and game elements that are commonly in those games inside the genre. As was mentioned earlier in this paper, a lot of games have qualities from different genres and not necessarily bound by those specific rules and guidelines that describes genres. We still decided to focus more on defining common video game genres than just hyper focusing on one genre and having multiple games used to describe it. We decided to choose multiple genres for there has not been that much previous research or materials on multiple video game genres. This way we could give teachers more knowledge of different types of genres that exist and how to recognize which game genres fit best for their L2 teaching.

To research this subject even further is to do a similar material package that focuses on just one genre with more games from that genre. For example, there is a gap in previous research done in strategy, interactive movies and puzzle genres from the perspective of L2 learning. Instead, many of the studies focus on RPGs and MMORPGs, which have been studied extensively in L2 research (Piirainen-Marsh & Tainio 2009, Reinders & Wattana 2015, Rankin, Gold, & Gooch 2006). With this kind of approach, one can do a thorough analysis of the genre with a variety of material to work with. By having additional games to analyze, one can create more L2 learning tasks that fits the genre. This can then provide better and accurate L2 teaching that utilizes the L2 learning strengths and can better address the weaknesses of said genre and its games' contents. In the material package, one can also focus more on specific levels of the selected games and create task- and goal-oriented activities around those levels, which is mentioned in DGELL pedagogy (Reinhardt 2018).

Another option is to do a similar material package that focuses on commercial video game genres but targets exclusively child-friendly videogames. This would provide elementary school language teachers useful materials for their teaching as well. This would be great since our material package is not suited for elementary school teaching because the exercises in it require students to have at least intermediate or advanced language skills to be able to complete them and learn from them effectively. However, a material package that focused on early language learning for children would be a great addition to the research conducted up until now.

One can also use this material package as materials for classroom research, where a teacher utilizes the contents of this material package. The purpose would be to test how well the tasks help the students to learn the L2 from playing videogames. With that one can test the usefulness of DGELL pedagogy in academic settings and develop the exercises to fit classroom L2 learning even further. Another one could be utilizing DGBLL in a classroom setting and using the genre related questions when introducing different educational games in the classroom.

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**Learn by playing: a  
teaching package for  
L2 learning in  
different video game  
genres**

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and  
Vili-Oskari Körkkö**



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# Prelude:

The purpose of this material package is to bring variety to English teaching by utilizing different video games. It is meant to be utilized in school teaching as an independent course or as a part of a course. The video games were chosen according to the specific genres they represent and due to the diverse L2 content and usage in them. This material package contains various exercises about fantasy settings and action. The exercises themselves will focus, for example, creative writing, reading comprehension, discussion in L2 and vocabulary recall.

This material package gives instructions how you should approach each game and what is required of the students to get the maximum L2 learning from them. The target audience are players **over the age of 18**. Each game has a set of tasks that the student should do after a play session and a final task after all of the play sessions have been completed. Each genre has a set of questions that reflect more of the L2 elements from those specific genres. These tasks reflect Digital game enhanced language learning pedagogy. In digital game enhanced language learning (DGELL) the player learns the target language by playing commercial videogames, which are games that are not made for teaching (Reinhardt 2018, Reinders 2016).

In DGELL, the players acquire the language by interacting with the game world and being immersed in it. DGELL pedagogy, is a framework that helps using DGELL in teaching and provides materials in how one can utilize DGELL in a classroom or for independent learning. DGELL pedagogy involves having game sessions and supplementary materials that aid L2 learning while playing video games (Reinhardt 2018). In this material package we chose students' own reflection of their experiences by writing journals and discussing with other students in the L2 as an integral component in the exercises because previous research has shown its effectiveness in video game L2 learning, see for instance Ranalli (2008), Reinhardt (2018) and Gold & Gooch (2006). The final task is a way to gather information of the overall L2 learning the player had gained after the play sessions.



# Requirements:

- If possible, each player plays the game individually. If not possible, players form groups of four where one plays and the other three observe. We decided on groups of four because we do not think that many schools have the resources to provide enough gaming consoles for students, which is the reason why the group size is bigger. The groups of four also bring more perspective to group discussions than smaller groups. After each play session, the group roles change so that each will get to play and observe. Not all of the games have to be used, but the main idea is to pick the genres that you find more interesting and useful for your students' needs. The minimum play sessions should be four 20-minute sessions per game. However, if you decide to focus on one game more, we suggest increasing the number of play sessions. This is especially true for games that have a heavy narrative focus in them. This way students can reflect on the narrative of the game better and utilize their own experiences in L2 learning. In this material package examples of such games are *Witcher 3: Wild Hunt*, *Uncharted 4: A Thief's End*, *Outer Wilds* and *Detroit: Become Human*. In *The Sims 4* and *Humankind* the narrative is not the focus, so the four 20-minute play sessions is enough to be able to utilize students experiences effectively in the exercises.





# Requirements:

So how do you proceed? Look at the selection of games and the example tasks and see if they match the contents you are teaching. To get the most out of this material package you will need game consoles. Most of these games can be played on a PC. The other platforms that can be used are Playstation 4, Xbox One and Nintendo Switch. We will go into more detail what requirements are needed for each game in the game task sections. The main L2 foci of the overall material package circle around students' own experiences that they acquire during the gaming sessions. Many of the exercises require students to utilize these experiences in various ways such as creative writing, diaries, discussions in the L2 and role-plays to add variety to the overall teaching package. Each genre is great for especially vocabulary learning, for in each one the player is surrounded by the target language and the players can interact with the language in different ways in different genres. If you do not have a possibility to use the same games from this material package you can also choose a different game since the exercises can be applied to different games of the same genre with small adjustments.





# RPG:

## Witcher 3: Wild Hunt

- We also recommend playing the Bloody Baron questline, but any quest will have sufficient and diverse L2 use.
- Set the game difficulty to easy for a better playing experience for novice gamers.
- Four 20-minute play sessions, but if you decide to focus on this game more then add additional play sessions for this genre is heavily narrative focused.
- Requires one of these to play: Playstation 4/Xbox One/PC/ Nintendo Switch

### L2 focus:

- The culture and world of the Witcher and fantasy settings as a media.
- The language usage of the characters
- Rich in vocabulary and spoken language.
- Aural input
- Communicating with NPCs (non-player characters)

### Tasks to do after play sessions:

1. After each play session write a journal of all the activities you accomplished while playing the game. Reflect your experiences with others. (15 minutes)
2. Create your own fantasy world for a possible fantasy story. Use your imagination. Questions to consider: where is it located, what species live there, what era does it belong to, what is its history, what does the map look like, what is the premise of the story? Present your worlds and stories to the rest of the class or in small groups. This task can be done individually or in groups. (25 minutes)

### Tasks for a final task at the end when all game sessions have been played:

1. Write a short fantasy story based on the world of the Witcher. You can use existing characters from the game or create new ones. (30-40 minutes, essay answer)
2. As a group, write a short introduction to the fantasy world based on the group's notes. Act out the world you created to the other groups. Discuss what things are common in fantasy settings. (30 minutes, more focus on the discussion and presentation)





# Action-adventure: Uncharted 4: A Thief's End

- Play the game from the very beginning.
- Set the game difficulty to easy, for a better experience for novice players
- Four 20-minute play sessions, but if you decide to focus on this game more then add additional play sessions for this genre is heavily narrative focused.
- Requires: Playstation 4

## L2 focus:

- Mannerism of characters and the relationships between them
- Following a narrative with unknown L2 vocabulary
- Describing and reflecting on character arcs
- Aural input

## Tasks to do after play sessions:

1. Observe the relationship of Nate and Sam. How would you describe the characters and how would you describe their relationship? After each play session, reflect on your earlier notes and see has the relationship changed and how. Focus on the decisions the characters make. (10-15 minutes)
2. Write a journal of all the different settings you've played in during the play session and the key points of the story. Write about what you accomplished after the play session. (10-15minutes)

## Tasks for a final task at the end when all game sessions have been played:

1. Make a small play of the story as a group (use the notes you made) and act out the main points, then discuss the things you thought were the most memorable moments from the play sessions to other groups. (30 minutes for preparation, play should be less than 5 minutes, 20 - 30 minutes for group presentations as a whole)
2. Write a small essay about action as a media and what key features are in action media, such as in games, movies, books. Use the notes and experiences from the play sessions. (30-40 minutes, 700-1300 characters)



# Problem-solving: Outer Wilds

- Four 20-minute play sessions, but if you decide to focus on this game more then add additional play sessions for this genre is heavily narrative focused.
- Requires one of these: Playstation 4/Xbox One/PC/ Nintedo Switch

L2 focus:

- Reading comprehension
- Vocabulary learning

Tasks to do after play sessions:

1. Choose a dialogue entry from the game and prepare to present it to the rest of the class. Since the characters do not have any voices in the game, try to come up with how they sound like and what kind of an attitude they have. (10-15 minutes for preparation, 5-minute presentations)
2. Write a short essay about a clue followed or a puzzle you solved in the game. How did you come by it? Where did it lead you to? (20 minutes, 500-700 characters)

Tasks for a final task at the end when all game sessions have been played:

1. Create a video review of the game in groups. Make sure that each person gets to say something in the video. In the video explain the story, what puzzles you encountered in it and in the end give it a rating. The video can include, example, gameplay footage or just pictures of the game. (40-80 minutes preparation, 10-minute videos – this task can be done during multiple days or even after school hours)
2. At the end of the period discuss in groups about what the story was like and what was the meaning of it all; what was the takeaway message and why? Concepts to consider if you have beaten the game: the universe, time, beginning and end. (20-40 minutes)



# Strategy: Humankind

- Set the game speed on blitz. This way a full playthrough can be achieved in four 20-minute play sessions.
- Requires: PC

L2 focus:

- Reading comprehension
- Long-term planning
- Aural input

## Tasks to do after play sessions:

1. Write a diary in which you explain what cultures you chose to play as and why you chose them. What kind of a victory strategy did you choose to aim for? (10-15 minutes)

## Tasks for a final task at the end when all game sessions have been played:

1. Choose a culture that you played as in the game. Find more information about it, for example, from the internet and write an essay about it. (10-15 minutes for preparation, 30 - 40 minutes for essay, 700-1300 characters)
2. Discuss in group about the cultures present in the game. Were there any new ones you did not know about before or was there an interesting one? Compare the cultures you talked about to your own cultures. Any differences or similarities? (20 minutes for group discussion, 10 minutes for a discussion with everyone)
3. Work in groups. Each group chooses a different culture and prepares a presentation for the rest of the class. (30-40 minutes for preparation, 5-minute presentations)





# Life simulation: The Sims 4

- In addition to the 4 20-minute play sessions, we recommend having an extra session for the beginning, so players can create their character.
- The best outcome for this game is to have each student play the game individually.
- Requires: PC/PlayStation 4/Xbox One

## L2 focus:

- Action words
- Daily life: career, hobbies
- Vocabulary learning.
- Reflection of new learned vocabulary.

## Tasks during game sessions:

1. Choose a career and one hobby to focus on during each game session, reflect your day with another student. (10-15 minutes)
2. Write a daily log of activities you did during the play session. (10 minutes)

## Tasks for a final task at the end when all game sessions have been played:

1. Write a short essay about your dream home and future. Where would you live, what would be your dream job, what would your dream house be like? (30-40 minutes, 700-1300 characters)
2. Write a letter to your mom as the Sim you played as. Describe all of the different careers and hobbies you did during the past few days (play sessions), (20-30 minutes, focus on the genre of letters)





# Interactive movie: Detroit: Become Human

- Four 20-minute play sessions, but if you decide to focus on this game more then add additional play sessions for this genre is heavily narrative focused.
- Requires one of these: Playstation 4/Xbox One/PC

## L2 focus:

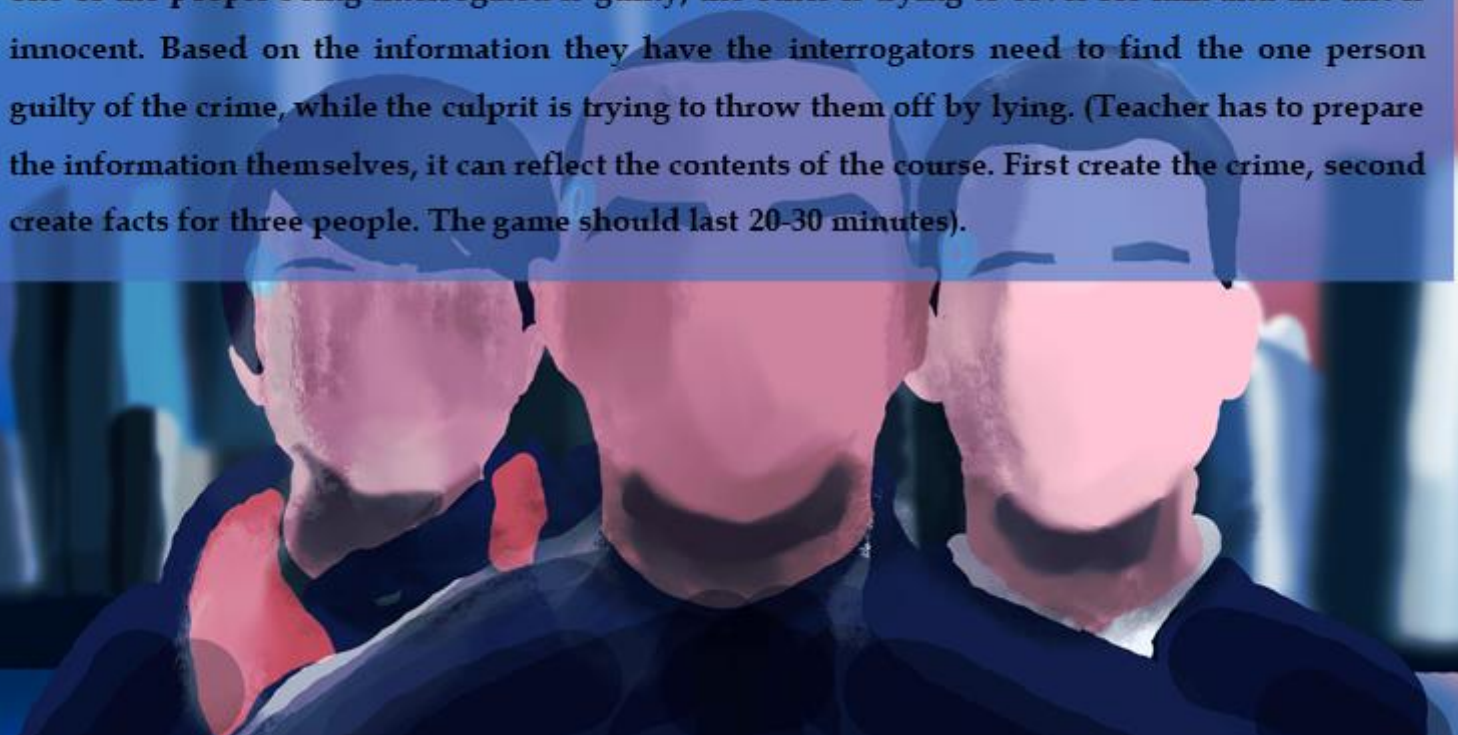
- Decision making and reflection on them
- Following the story
- Aural input

## Tasks during game sessions:

1. After every chapter on the game write a diary about your feelings in the chapter. How did the decisions you made make you feel? Would you do something differently now? (10-15 minutes)

## Tasks for a final task at the end when all game sessions have been played:

1. Use the diaries you wrote in the previous exercise to discuss in groups what decisions you made and how your story progressed. Did you make similar decisions or were there differences? (20-30 minutes)
2. Roleplay exercise. Work in groups of 5. 2 students are interrogators and 3 are the people being interrogated. Both interrogators know the same information about the crime, but not everything. Likewise, the people being interrogated each know different facts about the crime. However, one of the people being interrogated is guilty, the other is trying to cover for him and the last is innocent. Based on the information they have the interrogators need to find the one person guilty of the crime, while the culprit is trying to throw them off by lying. (Teacher has to prepare the information themselves, it can reflect the contents of the course. First create the crime, second create facts for three people. The game should last 20-30 minutes).



**All pictures in this material package  
were drawn by Jere Oksanen**

