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Video Games and Good Learning: May Video Games be Beneficial for Supporting Pupil Motivation, Literacy Development and Narrative Comprehension?

SKUT5910

Oddmund S. Brekka

Kand nr. 106

OsloMet – storbyuniversitetet

Fakultet for lærerutdanning og internasjonale studier

Institutt for grunnskole- og faglærerutdanning

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Contents

Introduction

A central characteristic of a modern society is the emergence of new technologies and a further implementation of these technologies in our daily lives. Production and development of new electrical devices, a continuous expansion of the internet and accessibility to information, and a virtually globalized world of social media are a few examples of advancements made possible by new technology. Contemporary youth and adolescents in Norway experience this technological influence first-hand, as it is ingrained and made explicitly present in their upbringing. Most every facet of their lives are in some way affected by technology. Such is the case with video gaming, a popular recreational activity, which has been established as category of fun and entertainment with a primarily adolescent demographic (Durkin & Barber, 2002). The Norwegian MedieBarometer 2017 survey reported that 75% of adolescent aged 9-15, both men and women, plays video games daily in their spare time between 2013-2017 (Vaage, 2018). This corelates well with the expansive growth the video game industry has experienced as it has increased its value from 15 billion euros to 75 billion euros in only a 20 year span (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). With video games being a product of the technologic society, and a large part of the daily lives of Norwegian adolescents, it is decisive to understand this in context of education. Traditionally, video games are considered hobbies and not something suited for education. However, if playing video games is as prevalent as an activity as statistics would suggest, and many adolescents spend significant time and effort into playing them, then this could surely be used as a foundation to bridge the gap between recreation activities and school content.

What can video games teach those who play them? How video games inspire and engage youth, how video games can enable development of skills in a contemporary society, and how playing video games can be meaningful and facilitate knowledge acquisition are issues that inspired the background for this study.

What This Thesis Does

This thesis will explore the scholarly and educational relationship between video games and the facilitation of motivation, of literacy development and promotion of pupil's narrative understanding. Exploring of the medium of video games, and specifically commercial video games, can provide insight to additional or alternate methods of facilitating learning. Motivation, literacy, and narrative are important issues in the Norwegian curriculum and related to pupils' knowledge and skill development, and their learning. As such, this thesis will be exploring this relationship on the basis how these aspects are supported in the Norwegian

curriculum and the English subject. The Norwegian curriculum is in a special stage in the writing of this thesis, as there is a revamp and development of the previous curriculum, *Kunnskapsløftet* (LK06), meaning changes to the subject are not yet ascertained for the new curriculum (Utdanningsdirektoratet, 2020). However, the thesis will take into the account the sections of the purpose of education, core values of the education and training, principles for education and all-round development, and principles for school's practice presented in the new curriculum in its discussion.

Text analysis is used as a method for exploring the issues in this thesis. This method is a qualitative approach and makes use of analysis as the primary means for arguing the use of video games in an educational context. This signifies using the Norwegian curriculum as a tool for analysis, but also incorporating contemporary and relevant scholarly research in this discussion to promote new perspectives and breadth. The intent of this study is to argue that commercial video games, usually a recreational activity, can be beneficial for supporting and developing pupil's learning. I will make the argument that video games may provide ways of engaging and motivating pupils to learn, that video games can teach skills and make pupils reflect on their own abilities, and finally, that video games can provide additional ways to experience and understand narrative compared to traditional literature. Hopefully, this study will help bridge the gap between extra-curricular activities and education, and to promote video games as a tool for supporting learning.

In the first chapter, I argue how the activity of playing video games can be motivational for the player. What does scholarly research tell us about video games and their possibilities for increasing pupil's learning motivation. In the second chapter, I argue how video games can promote development of literacy and related literacy skills. In the final chapter of this thesis, I will argue how narrative can be further understood by playing commercial video games. The thesis will conclude with a summary and highlight the main points.

Motivation

As people, we commit to, and take, actions based on an attachment. Our behaviour is connected to our emotions and our expectations of committing to an action. How people are susceptible to making these actions, and how emotions, thoughts and reasons are all connected, is related to motivational theory (Imsen, 1998). Motivation is the driving force behind the actions people do, feeding them purpose and creating meaning. To be motivated means to be moved to do something (Ryan & Deci, 2000). Imsen (1998) points out that analysing this driving force,

understanding people's reasoning for what they do, is key when becoming knowledgeable about human behaviour. As motivation is deeply connected to our behaviour, our thoughts and our purpose, then it can be understood as a central aspect of successful learning.

Understanding motivation in an educational context is essential when trying to explain what fuels pupil's choices, interest, and desire to learn. Central motivational theories, such as The Zone of Proximal development created by Lev Vygotsky (1978) or the Self-Determination theory (Ryan, Rigby, & Przybylski, 2006), are well integrated in the history of education as a means to investigate how motivation is related to learning. In an ever-expanding, interconnected, and international world, coupled with rampant development of social, political, and economic changes, there is an increasing demand to engage and motivate pupils. These pupils might experience an irrelevance to the curriculum presented by schools to their own lives which is affecting their motivation.

This brief overview of motivation is a part of the larger scholarly paradigm of motivational theory, which investigates the motivation behind human behaviour. In chapter 1 of this thesis, motivational theory will be explored to clarify and makes sense of the concept of motivation. Furthermore, this thesis will argue how motivational theory can enable a better understanding of how we learn and why our actions are fuelled by motivation. The main focus of the discussion in chapter 1 is to investigate how video games is connected to facilitation of motivation and if the motivation garnered by players may benefit their learning.

Literacy

The word literacy relates to the word literate, which translates to an individual's ability to read and write, which in turn cements that these skills are relevant for understanding the concept. However, literacy is a multifaceted concept which involves more than reading- and writing skills, such as transferring learnt skills to different situations and to continually expand knowledge. According to Gunther Kress, literacy is more than the acquisition of skills and technical competence, but is a set of practices, forms of knowledge, which forms deep-seated dispositions in the person who is literate (Kress, 1997). A further exploration of the literacy concept, and a broader definition, was proposed by The United Nations Educational, Scientific and Cultural Organization (UNESCO) during an expert meeting in 2004:

> "Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed or written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to

develop their knowledge and potential, and to participate fully in their community and society" (United Nations Educational, Scientific and Cultural Organization , 2004).

One important aspect of UNESCO's definition of literacy is how the culmination of different abilities or skills which can be developed or achieved by an individual through engaging with textual material. The ability to identify, understand, interpret, create, communicate and compute is something an individual can gain competence in, considered part of an ongoing learning process. The development of this ability is meant to be helpful and beneficial to the learner, both as individuals and part of society. There is an emphasis on the dynamic nature of literacy. Achieving goals and potential is individual, differing from person to person, which means that the skillset of a literate person needs to be diverse and adjustable to different contexts and situations. The process of understanding and adapting their competence to fulfil their goals and achieve deeper learning is essential to a literate individual. Constance Steinkuehler presents another, albeit still narrow, definition of literacy. Literacy is fundamentally about encoding and decoding meaning into quasi-persistent text plus images (Steinkuehler, 2010). The literate reader will be able to extract information, and in turn interpret that information, into meaning. Essentially, literacy is the individual's ability to engage with text and how successfully they can comprehend the meaning residing within that text. The definitions presented by Kress, UNESCO and Steinkuehler all provide general descriptions of the concept and what it represents, although for the purpose of using it in this thesis, literacy must be understood in a video game context. Applying the concept of literacy to the activity of video gaming can consequently lead to a change of the concept itself. This thesis will acknowledge the literacy related to video gaming as a type of "digital literacy". This digital literacy considers the total amount of human knowledge and skills which allow people to successfully and purposefully use digital tools (Zerkina, Lomakina, Kisel, & Lazarou, 2019). Concretely, this suggests a vital relationship between the individual and technology (Steinkuehler, 2010). Knowledge and use of digital tools can be considered necessary skills for a citizen living in contemporary society, and in a world where technology is all around us.

In terms of exploring issues related to video games, learning, and pupils' literacy development, this definition of a digital literacy will be used as a tool in this thesis. Video games and literacy will be addresses and explored further in chapter 2.

Narrative

Essentially, all narratives consist of a *story* and a *story-teller*, a teller and a tale (Phelan, Kellog, & Scholes, 2006). One could say that communication can be found in the intersection between these characteristics, in which narrative is purposeful communication. If we consider narrative as both communicative and purposeful one skeletal definition can be applied: "Narrative is somebody telling somebody else, on some occasion, that something happened to someone or something" (Phelan & Rabinowitz, 2012).

There are many perspectives and definitions of narrative out there, and perhaps one of the most reoccurring obstacles in defining the concept is whether or not is it is necessary to define it at all (Talib, 2017). However, enabling a better understanding of how narrative can function in video games necessitates some form of clarification of what the concept entails. Therefore, this section provides a theoretical clarification of this concept which can be considered quite broad and useful for application in a variety of contexts. The rhetorical approach concerning narrative as a form of communication emphasises interaction between people, between people and things, and how meaning is made in the process. Although narrative in literature, and specifically in video games, certainly is rooted in a more linguistic fashion, a general understanding of the concept is helpful when discussing the subject matter.

Theory of and about narratives, how they function and what is meant by them, is relevant for exploring the research question in this thesis. Narrative theory discussed and reviewed by Talib, (2017), Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, (2016), Puckett, (2016), Phelan, Kellog, & Scholes, (2006), and Margolin (1983) is utilized to support and explore this concept.

Chapter 3 of this thesis will investigate the different components of narrative, with the intention of clarifying and broaden the understanding of the narrative concept. These components are genre, character, setting, point of view and plot. Furthermore, there will be a discussion on how narrative functions and is structured in the medium of video games. This is achieved by examining how the general definitions of narrative and its components can be applied to specific characteristics of video games, as well as investigating the narrative functions of video games themselves.

The Norwegian Curriculum and the English Subject

The new curriculum is planned to be introduced to Norwegian schools and educational institutions at the beginning of the school year in 2020. Expanding on the previous LK06 curriculum, this newly revised curriculum aims to prepare students with the knowledge,

competence, and skills necessary to face their future lives. This curriculum changes and modifies the content, goals, aims, core values and principles. Additionally, new areas of focus dealing with pupil's learning and growth are more prevalent as a focus of this curriculum. With this being clear core elements describing what the pupils need to learn to develop skills and competence in each subject. More emphasis on play and discovery, on the practical aspects of each subject, on digital literacy and assets which are helpful for the teacher in their evaluation and assessment of pupils (Valum, 2019). Importance of developing pupil's basic skills was a highlight in the LK06 to ensure development of competence, and with the emergence of a new curriculum this notion is still considered a main focal point. Teaching in school should develop the all-round pupil, which requires a process of acquiring knowledge about and insight into nature and the environment, language and history, society and the working life, art and culture, and religion and worldviews (Utdanningsdirektoratet, 2020). How this process is maintained is different from pupil to pupil, and schools need to be aware of this in teaching and provide ample opportunities for aided and self-growth.

The English subject is considered a core subject of the education plan and has been an obligatory subject for all Norwegian school children since the 1960's (Kunnskapsdepartementet, 2008). As such, English has been a prominent subject in Norwegian education history. In the new Norwegian curriculum, the English subject is structured through its relevance and central values, core elements, cross-curricular content and focus on basic skills (Utdanningsdirektoratet, 2020). English is a central subject regarding cultural understanding, communication, and identity formation. In the English subject it is vital that pupils learn to communicate in English locally and globally, obtain competence in reading and writing, and become culturally aware of different ways of living and thinking. The central value is for pupils to become proficient in English so that they can use English for further learning and to communicate and connect with others. Core elements in the curriculum are *communication, language learning,* and *exposure to English texts and culture* and are continually touched upon in pupil's education. Cross-curricular content is related to *Health and Life Skills* and *Democracy and Citizenship*, which are ideas central not only to the English subject specifically but is taught and made explicit in all subjects. The idea of developing pupil's basic skills was a prominent idea in the previous curriculum, the LK06, and is continues to be important in the new curriculum as well. The Norwegian Education Directorate (Utdanningsdirektoratet, 2020) clarifies the changes and content of the basic skills found in the English subject. *Oral communication* in English is related to listening, speaking and conversation, conveying

information, adjusting language based on context, and developing communication strategies. *Writing* deals with pupil's ability to communicate ideas and opinions in a coherent and appropriate manner in different types texts, both on paper and digitally. Pupils develop their writing skills by planning and processing texts, adjust their language based on context and who they are writing to, explore different writing strategies, and by learning single words and phrases and using them to create coherent texts. Critical use of sources is also vital in learning about writing. *Reading* relates to pupil's understanding, analysis and reflection of content found in texts, both physical and digital, and should promote language acquisition. The activity of reading should be an enjoyable one for pupils, while promoting the use of reading strategies and critical thinking skills at the same time. The final basic skill in the English subject, *digital skills*, is related to using digital media to strengthen pupil's language learning, to encounter authentic language models and discourse opportunities and acquisition of relevant knowledge. In comparison to writing and reading skills, digital skills also necessitate pupils to think critically and reflectively as they encounter different representations of English.

This thesis relates discussion of video games, motivation, literacy and narrative to the descriptors, core values and central ideas of the English subject to contextualize it to education and learning.

Motivation, literacy, and Narrative in the Norwegian Curriculum

In terms of education providing motivation, fun and engaging content for the pupils, there are certain core values in the new curriculum which offers this. Activities and tasks should be engaging for the individual pupil, meaning that the content should be differentiated based on their individual knowledge, skill, resources, and background. The curriculum takes precedence in pupils feeling that there is a substantial learning process which promotes mastery and engaging experiences. Schools must appreciate and stimulate the curiosity and creative effort of their pupils, effectively creating and engaging effort felt throughout their entire schooling (Utdanningsdirektoratet, 2020). Part of the pupil's democracy education is about how they are entitled to be heard in their day-to-day affairs, that their voices and feelings are being recognized, while at the same time given an understanding of how they have genuine influence and impact to matters they care about. Education should motivate these pupils to understand the importance of participation and becoming well-functioning members of our society and world we live in. This means that pupils need to come to terms of their identity in life, which makes education and schools responsible for giving them the correct tools to do so.

Literacy as described in the Norwegian curriculum is the development of the individual, learning and using critical thinking skills, and ethical awareness (Utdanningsdirektoratet, 2020). Schools and education are responsible for enabling pupils to obtain knowledge, participate in social settings related to communication and problem-solving, criticise and scrutinise established ideas to garner new insight and train these pupils in methodologies, theory, phenomena and forms of knowledge relevant for our day and age. The enlightenment of a person, their sum of knowledge and competence, is relevant for discussing literacy in place of the new curriculum. Educating pupils to communicate effectively and purposefully is key in their literacy development process. The new curriculum prompts pupils to understand that they are part of a larger collective, and that there is present a cultural diversity which makes a foundation for continuous development of society and culture around them. Literacy is involved in the process of gaining competence in different school subjects, closely related to what is stated as an in-depth learning process in the curriculum. Schools shall present room for learning so that the pupils develop understanding of key elements and relationships in a subject, and eventually apply this understanding to familiar and unfamiliar contexts (Utdanningsdirektoratet, 2020). Such in-depth learning implies a sense of progression, where pupils are challenged in different ways, albeit supported to master these challenges over time, both individually and in interaction with others.

The Norwegian curriculum and the English subject emphasise digital literacy learning for pupils. This relates to acquiring knowledge of English, developing digital skills, and be critical and reflective in meeting with digital media (Utdanningsdirektoratet, 2020). This will grant authority to this thesis, as it will be arguing how literacy can be developed in the context of a digital medium such as video games.

Understanding how the world is interconnected and how there is a staggering amount of different cultures and sub-cultures, and the exploration of human/cultural diversity can be made clear through exposing pupils to stories and perspectives from around the globe. One could further develop cultural understanding by for example investigating and comparing different cultures co-existing in same geographical areas or looking at how cultural expressions form a sense of identity. Norwegian pupils shall obtain insight into Sami history, culture and diversity of culture, which can be achieved by looking into their rich history and stories. Literature, culture and society is closely linked to our understanding of narrative, and it is through understanding what makes a narrative and what meaning one could extract form interacting with it which is relevant for pupils as they engage with the new curriculum.

Commercial Video Games and Education

Using video games in an educational setting requires meaningful links between in-game challenges and curricular aims, stressing the design and facilitation of game-related assignments (Hanghøj, Lieberoth, & Misfeldt, 2018). Facilitating motivation for pupils, developing their literacy skills, and expanding their literary knowledge with the use of video games can only be achieved if that use is meaningful for the pupils and there is a connection to educational aims. Gaming activities need to be designed to be relevant to the specific learner's context and goals (Gumulak & Webber, 2011). The teacher needs to be aware and competent with the use, and inclusion, of video games in their teaching. Activities, learning goals, teaching material, assignments, evaluation, and any learning-based concept the teacher wants to accomplish using video games need to be properly incorporated and comprehensible for the pupils. Kambouri et al. (2006) argue that re-labelling learning and making an effort to recognizing pupil's gaming pursuits could be legitimate literacy practice. Awareness of pupil's engagement with video games can be useful when transferring it to an educational setting, by using video games in the classroom to foster positive development of motivation (Ebrahimzadeh & Alavi, 2017). Essentially, video games can be used as productive learning tools which can promote the aims, goals, and skill and knowledge development stated in the curriculum.

Video games can provide educators the opportunity to introduce layers for conceptual learning and new taxonomies for pedagogical design, which makes the potential complex learning that gaming can involve readily apparent (Steinkuehler, Squire, & Barab, 2012). The complex, multimodal nature of video games requires the learner to adapt and approach tasks in a different manner compared to traditional learning activities, such as pen-and-paper tasks. Learning through video games necessitate that the players are willing to think in new and different ways and to construct new strategies to effectively interact with the medium.

Professor Nicolas Trépanier (2014) discusses how video games can be utilized in the classroom to promote and develop pupil's critical thinking skills, source criticism, analysation of the inherent content of the video games and relating it to real-world events as well as delving into the history of man portrayed in a video game format. A large amount of Trépanier's discoveries correspond well with the emphasised content of the new Norwegian curriculum. Trépanier taught history using a successful video game franchise, the *Assassin's Creed series* (2007)*,* as a learning tool to point out historical inaccuracies and discrepancies, and the importance of analysing these in a critical manner can manifest into meaningful debate and conversations on the subject. The professor himself states how video games themselves, as medium, might not

be beneficial for students. However, use of the medium in accordance with the theoretical framework of teaching, can be fruitful for engaging contemporary youth and work as a complement to existing courses. For example, Trépanier displayed how playing video games with historical themes alongside conducting academic research, such as writing a paper on political topics or cultural aspects, instigates development of critical mindset and perspectives (Trépanier, 2014). Thus, video games are not considered mere play, but as effective tools for academic research as well.

This utilization of video games in educational contexts can be fundamentally be considered a gamification process. The common definition of gamification can be viewed as the application of game design elements in non-game contexts. The use of role-play to promote learning, rewarding pupils with stars or points if they accomplish something, collaboration between pupils, or creating challenges with more than one way to solve it to emphasise different approaches are examples of using game-like elements in the classroom. Gamification can enhance student engagement, enjoyment and motivation (Ramirez & Squire, 2014). Incorporating this into classrooms can be beneficial in reaching the learning goals and aims of the Norwegian curriculum, make for a playful environment, and help quantify activities. Educators themselves would be able to understand the motives, reasoning, and intent of pupils as they experience school related activities. Researchers Karimi and Nickpayam propose that gamification can be considered a persuasive technology that attempts to influence the behaviour of the player by activating individual motives via game-design elements (Karimi & Nickpayam, 2017).

Video games themselves may have a bad reputation among some parents and educators. The video game industry, as it has increased in popularity, is often criticised with encouraging bad behaviour for its consumers and being labelled as a waste of time (Gee, 2003). The apparent availability of mature content found within commercial video games, and eventually the exposure of it due to playing the game, is largely connected to this perception video games promoting bad behaviour. Despite this, video games are cemented as an important and valuable pastime for many young learners around the world. The main point is not to argue for a shift in opinion of video games in society, but rather to claim that utilizing them in a responsible manner can be an invaluable asset for further learning. Pupil's interest in commercial video games played recreationally is believed to be a benefit if integrated into teaching (Gee, 2003; Steinkuehler, Squire, & Barab, 2012).

Although the intent of this thesis is to shed light on the educational properties of using video games to coincide with the aims found in the curriculum, there is a need to address certain limitations to their implementation in educational contexts. Firstly, this thesis is primarily interested in the use of commercial video games. The nature of these games lends them to not being as educationally focused, as compared to edutainment or serious games, with the primary intent being entertainment. Commercial video games are concerned with fun and engaging their audience, which can diminish potential educational properties. The purpose of exploring commercial games in the first place is to evaluate how one could implement certain parts of the game for classroom contexts and make connections between pupil's recreational activities and schoolwork.

A second limitation, mainly related to the previously mentioned "mature content", is the age restrictions and age ratings put on video games. With regards to video games used in a Norwegian school context, schools must heed the restrictions set out by The Pan-European Game Information (PEGI). As an age classification system, PEGI aims to make parents and guardians aware of the content in video games and to ensure protection from young children and children. Although PEGI is oriented with content organization in 38 European countries, there is semblance and overlap with similar systems based in North America, South America, Australia and Asia. PEGI uses two levels of information on age classifications: age labels (which are 3, 7, 12, 16 and 18) and content descriptors (which are *bad language, discrimination, drugs, fear, gambling, sex, violence* and *in-game purchases*) (Information Pan European Game, u.d.). This means that there only certain games which comply with the correct age labels and appropriate content which are allowed for use in educational settings. Video games such as *God of War* (2018), or even the aforementioned *Assassin's Creed* (2007) franchise which was used for study by Nicolas Trépanier, are restricted to the 18+ age rating and cannot be easily incorporated into education, even if there is merit to their educational potential.

Other limitations include lack of teacher competence of and experience with the use of video games, pupil's experience and foreknowledge of playing, lack of hardware and technology to play video games, and whether or not the gameplay is interesting or engaging for the pupils.

Terminology

This section of the thesis seeks to construct a purposeful definition of the term video game and what is meant by the activity of playing such a game. Examining the structure of a video game, its game mechanics, will clarify this better. This section will also theorize how the game

mechanics of a video game can be linked to the notion of education, which is central to the aims of this thesis. Finally, this terminology section will clarify certain key concepts or terms which will be utilized later in the thesis for exploring the relationship between video games and motivation, literacy, and narrative.

Before exploring how video games can facilitate learning, it is necessary to clarify what is meant by the concept of video gaming and what we mean by the term "video game". Seeing as this thesis will go in-depth into the correlation between video gaming and learning, one may assume that there are certain types of video games that may be more appropriate for this purpose as well. There is no need to be completely familiar with all types of video games, but it is necessary to understand that there are certain components which make a *video game*. Scott Rogers (2014) claims that defining a video game does not have to be complicated. A video game is a game played on a video screen, whereas a game is an **activity** which requires at least **one player**, has **rules** and has a **win and/or lose condition**. Rogers also emphasizes that a video game should have a clear **objective**, resulting in the player(s) having a clear understanding for what the game entails (2014).

Another way to understand video games is to not necessarily define them, but instead recognize their characteristics. Chris Crawford mentions four common features of video games, meant to address the fundamental aspects of video games, and explore the ties between player and game. These features are: representation, interaction, conflict and safety (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). *Representation* refers to how games are about something else, a subjective depiction of reality placed in a digital format. One might argue that the term representation does not cover all meaning; not all games are a representation of the real world for example. The term instead highlights how games can establish a connection to the player's imagination and creativity. As a crucial feature for a game's appeal, *interaction* deals with how players can influence the gameworld and in turn get meaningful responses from the game. A video game needs to be engaging, fun and interesting for the player to invest time into playing it. *Conflict* is related to challenges a player can face and obstacles to overcome when playing. A sense of difficulty and progression to reaching a goal is central to this feature. Lastly, the concept of *safety* distinguishes the events in the video game from events in the real world. There are different consequences to doing something in-game than in real life. Shooting down a helicopter in one of the *Call of Duty* (2003-2019) games can be a thrilling and result in a huge explosion, but there is no real danger to anyone involved due to the fictious nature. However,

the same action in real life would be extremely dangerous and have economic and legal repercussions to boot. Crawford consider video games as "safe ways to experience real situations" (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). James Paul Gee' Psychosocial Moratorium learning principle adheres to this sentiment as well, stating how video games can functions as safe spaces where learners can take risks and the real-world consequences are lowered (Gee, 2003). Video games can be considered spaces where the player can test out theories or practice their skills in a completely different setting than in real life. This could possibly contribute to an experience where the players find excitement in their actions and experiment with the gameworld.

Video games are essentially multimodal in nature, meaning they are made up of several textual features meant to convey meaning to an audience. Gunther Kress' (2010) theory of modes illuminates how video game characteristics, their textual features, can be considered different modes of human expression. These modes can be categorized as either verbal or non-verbal which is indicative of their nature. Sound, picture, text, animation, audiovisuality and a type of interaction are modes which can be found in any medium, however, a multimodal medium is characterized by a combination of these modes. Clive Fencott (2012) adds that video games provide meaning to its players due to how they are semiotic-based. Interpreting the signs found within the video game medium is indicative of the process of meaning-making and comprehension happening in the player.

Taking said definitions into consideration, is it possible to make a definition for video games in the context of discussing the issues presented in this thesis. The answer is, unfortunately, not very likely. As mentioned, there are multiple perspectives on what *defines* video games and what these games *are made of*. Simon Egenfeldt-Nielsen, Jonas Heide Smith and Susana Pajares Tosca (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013) present in their book *Understanding Video Games: The Essential Introduction* an overview to how we understand and theorize video games. Their research emphasizes that there might not be one correct definition, but that we need to be aware of and explicit about the decisions we make with our definitions. How we define games need to be general enough to catch the essence of the medium, while at the same time make the definition distinctive from similar medium, such as card games or interactive movies. There is an explicit distinction of there being a game which is possible to engage with using technology. Video games can be played on either a console, mobile device, a computer, or any other technological device, essentially proving that these games can be experienced in many different fashions. At the same time, the definition of video

games needs to be specific enough to make sure we are talking about a video game and not anything else. Television, movies or radio are not video games, even if they too require technology to function. So how can the concept of video gaming be specified then? By examining the core traits of video games one can see that they provide some form of *interactivity* with the player and that they are *dynamic* (Domsch, 2013). Performing an action on a controller or keyboard elicits a response in the video game. Something is happening because of an action the player took. In turn, the video game makes the player aware that their input has created a change in the game, and that performing actions outside the game will continue to affect the events taking place in-game. With some similarities to Crawford's explanation of the video game feature of interaction, interactivity is a circular process of player affecting game and game affecting player. The choices a player makes is vital in developing the narrative, influencing the events happening in the gameworld. Going further, the interactivity and agency of player choices marks video games as dynamic media. When something is dynamic it relates to the fact that there is a temporal dimension independent of the user, such as a song taking the same amount of time for anyone who listens to it. The process of the medium is actively generated, the activity of the user notwithstanding. When playing a level of *Super Mario Odyssey* (2017), the enemies still move on screen, the music plays and there is activity if the player puts down the controller. According to Domsch (Domsch, 2013), video games are both dynamic and actively nodal, meaning they are a combination of user agency (the user can transform the perceptible form through input) with activity (the medium changes in the user's real time but without her influence). This cements how the narrative dynamic of video games is essentially dualistic, and the interaction between player and game is key to producing meaningful progression and experiences.

One way to further create distinction between different types of games is to categorize them as either *educational* or *commercial.* Educational games can be described (Steinkuehler, Squire, & Barab, 2012) as being a type of video game produced for intent of being used in a school setting. Their purpose is to teach something for the person who plays them. This could be related to a subject matter in any given subject, for example learning multiplication in mathematics or learning about the American civil war in History. Another way to label educational video games is to categorize them as "serious video games", meaning that their purpose is something more than pure entertainment (IGI Global, 2019). Concepts such as gamification, game-based learning and edutainment are educational, scientific terms coming as a result of the development and usage of a more serious approach to video gaming (Egenfeldt-Nielsen, Heide Smith, &

Pajares Tosca, 2013). Through their serious nature, and strict focus on educational content, these types of games are more likely to be used in an educational setting as well. Players who invest time and effort into playing these types of game may learn about certain topics and develop skills which are inherent in their structural design. This, however, is only the case if there is player investment. Players who manage to successfully engage and participate in playing the video game may experience positive development in their learning process (Shu & Liu, 2019). While the genre of educational games no doubt relates heavily to education and learning, and a vast amount of research has been made on them, this thesis will primarily explore the relationship between commercial video games and learning.

Commercial video games are a form of entertainment, meant to inspire and create experiences for the player as they play the games. These types of video games are what most people typically think of when they hear the term video game, even if there exist a multitude of genres, styles, game designs, appeal to different demographics, depth and length or types within the category itself. Commercial video games also lends themselves to franchising; game series like the *Call of Duty* (2003-2020) franchise or the *Grand Theft Auto* (1997-2013) franchise are video game industry superstars, with millions of copies of their games sold around the world (Webb, 2019). These franchises easily become quite popular. Through game mechanics and content which are designed to incite excitement, and a mixture of thrilling gameplay and visual style, these types of games garner a large and broad audience. Although commercial video games are primarily meant to provide entertainment for the player, this thesis seeks to make the argument that they can be used to enhance learning. This thesis will employ examples of different types of commercial games from many genres to provide a broad perspective on their potential learning capabilities. With that said, this thesis will investigate a specific genre of commercial video games as a means for closer examination of the characteristics of video games and their educational properties. To better understand how video games can enhance the motivation of students, and develop digital literacies and narrative competence, this thesis will explore the subgenre of "role-playing games", or "RPG's". These types of video games may be the primary focus in exploring the educational properties of video games, although this thesis will make use of examples from games from a variety of genres to broaden the scope if necessary.

Role-playing games put the player(s) in a fictious setting where they portray different roles. These roles are developed within the game system, usually through player's actions, decisions or changes related to in-game character capabilities and statistical changes (Ernest & Rollings, 2003). RPGs as a genre also tend to have certain activities related to it. Fighting,

developing/training, exploring, travelling, investigating, story building and emphasising with character(s) are key elements of the genre (Fencott, 2012). The roles which the player portray can often be customized depending on the game, to a simple or more complex degree. Games like *Dark Souls* (2011), *World of Warcraft* (2004) and *Elder Scrolls* (1994-2020) series allows the player to create an avatar (a virtual persona) acting as the extension of the player in the game. A customization process typically refers to how the player can create, recreate, and change various features of their avatars. In gameplay the player progresses and interacts with the game through this avatar. The creation process of the player character is intended to help personalize the story and its connection to the gameworld. RPG's are unique in the sense that they allow players to manage, craft and decide their own fate and intention to a greater extent. This is of course inhibited by the game rules, but the favour for most RPG's is this sense of ownership and personalized creation instilled in the players.

Game Mechanics and Education

The whole structure of a game is traced to the set of rules which it is made of and through player's interaction with these rules. Active participation from the player through their action makes up the game. Domsch (2013) argues that "in order to qualify as a game, the range of options given to the player as well as the in-game consequences of the choices and actions must be prescribed by a set of rules that together form the game mechanics". How far and wide Mario can jump from platform to platform is possible to a set of options which the game enables the player to choose from. The player is able to have some sort of control of how they want Mario to jump, even if the game is designed with a set range of available options.

How the video game is structured, designed and presented through its mechanics is key to the player's perception of the game and interactive gameplay experience. Steinkuehler et al. (Steinkuehler, Squire, & Barab, 2012) suggest a three stage process of gameplay experience, namely through stages of involvement, immersion and investment. Involvement is related to player's first encounter with the game and the initial introduction. Involvement transcends to immersion as the players become engaged with the gameplay and the gameworld. This immersive state eventually triggers a stage of investment, at which point the player is compelled to finish the game successfully and reach the narrative conclusion.

Professor James Paul Gee (Gee, 2003) presents several learning principles helpful to explaining the didactic properties of video gaming. These principles seek to show how the activity of playing video games can lead to some form of learning for the player, and through active

engagement with the material there will be opportunities for developing learning strategies, higher literacy competence and an appreciation for the artform. Gee explains that these principles, or at least some of them, are inherent in **good** video games. A good video game should provide entertainment for the player, making it an engaging activity. At the same time, if engaging enough, the video game should offer opportunities for learning and developing skills as well. "Serious games" certainly focus on the educational properties of video gaming, and while "commercial games" are created for fun and entertainment, this does not limit their potential for learning. Video games' capacities for enabling learning has to do with the way they are designed and how that design lends itself to creating a meaningful experience for the player. Central to the types of games which may provide good learning for the players is that in their design they to some degree corelate to Gee's (2003) principles of learning, which can be viewed in figure 1.

36 Good Learning Principals Built Into Good Video Games

1. Active, critical learning
2. Design
3. Semiotic
4. Semiotic Domains
5. Metalevel thinking about semiotic domains
6. Psychosocial Moratorium
7. Committed Learning
8. Identity
9. Self-knowledge
10. Amplification of input
11. Achievement
12. Practice
13. Ongoing learning
14. Regime of Competence
15. Probing Principal
16. Multiple Routes
17. Situated Meaning
18. Text
19. Intertextual
20. Multimodal
21. Material intelligence
22. Intuitive knowledge
23. Subset
24. Incremental
25. Concentrated sample
26. Bottom-up basic skills
27. Explicit Information On-demand
28. Discovery
29. Transfer
30. Cultural models about the world
31. Cultural models about learning
32. Cultural models about semiotic domains
33. Distributed
34. Dispersed
35. Affinity Group
36. Insider

Figure 1: A compiled list of the 36 learning principles built into good video games (Chambers, u.d.)

Though all these principles are relevant for exploring the educational properties of a good video game, not all of them will be used in discussion of this thesis. Of these, his game learning theory identifies twelve basic principles, which are relevant for exploring the relationship between video games and facilitation of motivation for the players, how they can enable a development of literacy, and how the use of video games can promote narrative and literary knowledge and competence development. According to James Paul Gee (2003), these principles are the:

- **Active control Principle**
- **Design Principle**

- **Semiotic Principle**

- **Semiotic Domain**

- **Meta-level Thinking Principle**

- **Psychosocial Moratorium Principle**

- **Committed Learning Principle**

- **Identity Principle**

- **Self-knowledge Principle**

- **Amplification of Input Principle**

- **Ongoing Learning Principle**

- **Regime of Competence Principle**

While these twelve learning principles are instrumental in recognizing what makes a good video game and the educational properties of said game, there is need to expand on an additional learning principle to better understand how video games can provide insight to a social dimension of this activity. The learning principle of "Affinity Groups", or "Affinity Spaces", is relevant for discussing how critical learning can be achieved through individual involvement on a more systematic level. Gee explains this learning principle as:

> "In critical learning, the learner comes not just to form an appreciative system through practice and interaction with the affinity group associated with the domain but to reflect overtly on the goals, values, feelings and desires that compose this system, to compare and contrast this appreciative system to others , and to make active and critical choices about the system." (Gee, 2003, s. 98).

The concept deals with how critical learning can be achieved by the individual by an interaction, or developing an appreciative relationship, with a larger unit of individuals in a specific domain. In turn, this group of individuals co-create a system in which they are all able to further expand their knowledge and learning as a group. The system continues to grow and expand with the continual involvement by the members as well. A place for self-reflection, self-development and critical engagement with others are a mainstay of the concept of affinity spaces. An affinity space based on video gaming implies that the members of the group find appreciation in playing them, achieves some meaningful satisfaction and a desire to expand, share and partake in exploration of the games.

Agency

Agency is a concept which implies a degree of control in choices made by agents. It is a vague concept, perhaps resembling similar terms like *character, autonomous, individuality* or *receptivity*, however they are different. According to David Weissman (2020), agency signifies purpose, cause, and appraisal in agents who can control circumstances and themselves to some degree. Keith Dowding (2008) presents an individualistic view on agency, wherein the agents actions are given power, or ability to bring about changes. In terms of video games this means the player, through their own effort, create substantial changes and choices to influence how the game is being played. This is regarded as an interaction process between someone playing the game and the game itself, which ensures a close connection between interactivity and agency. Agency is related to how the player can impact the narrative of the game through gameplay decisions (Domsch, 2013).

Agency revolves around a person's ability to purposefully make decisions and choices, meaning it requires a conscious effort to do so. There must be an incentive, consciously or subconsciously, which motivates an agent to make decisions. It is, however, important to note that not all actions or choices we make require motivation, but the act of making a choice in the first place is a motivated response (Domsch, 2013). Mundane choices might not necessarily create enough emotional input to be motivated, resulting in a choice based on indifference. However, an indifferent choice is still an action based on "choosing", which might be better than no choice at all. According to Domsch (2013), this is a distinction between an informed choice and a motivated choice; a motivated choice must be a conscious choice, but not vice versa.

In this thesis, agency will be a recurring concept related to obtaining further understanding of how video games facilitate motivation in the player and how player choices can impact the game narrative. This concept can then be used to better understand our own choices, our motivation, and the consequences of the choices we make. As such, agency will be utilized to explore player motivation in chapter 1, and how player choice influences narrative structure in chapter 3.

Methodology

The relationship between video games and learning, motivation and development of literacy and knowledge explored in this thesis is conducted by examining relevant, peer-reviewed research. The idea of connecting entertainment in the form of games and relating it to how we learn is an inspiring prospect, and it should come as no surprise that it merits exploration. The

purpose of this thesis is to make the argument that video games can contribute to further knowledge and exploration of these aspects of education. This means that this thesis has a strict focus on research associated with video games as a base for learning or education. Text analysis is used to discuss, explore, and investigate scholarly material on the topic of video games and learning. The main purpose of using literary analysis is to obtain understanding of the literature in a more holistic fashion, looking at **why** studying it might be meaningful and **what** is has to say (Pacific Lutheran University , 2020). These texts are categorized as background theory on the larger topic of video games and learning. Employing a text analysis in this thesis means to investigate what background theory has been made on the subject. In other words, what questions have already been made on the topic of video games and learning and what questions can be developed further (Mason & Waywood, 1996). One main concern of this methodology is oversimplification/overgeneralization. The findings or research used in the thesis might not be applicable to all situations related to video games, or it might be that complex ideas related to the educational properties of video games cannot be easily categorized or explained. To purposefully explore the research questions in this thesis, it is necessary to avoid these possible concerns and meaningfully include research.

Choice of Texts

The process of selecting scholarly material and research is one of diligence, insight and judgment. With a surplus of research having been done on the topic of video gaming, a certain selectiveness and exclusivity is required. Research and scholarly material need to involve the topics of video games and learning, video games and motivation, video games and literacy, and video games and narrative in some capacity to justifiably incorporate them in this study. This sentiment is related to the relevancy of sources, and if the scholarly material may add anything to the discussion or not. A scientific article discussing the relationship between someone who plays a shooter video game and aggressive behaviour might be topically relevant, trying to apply that material in explaining how video games promote learning is not going to work. It may very well be that the text provides interesting findings on how the emotional investment and focus related to playing the game can cause certain aggressive behaviour if the research subject is "losing" or failing to accomplish the goals. However, even if one considers that a scientific discovery, including it in the discussion of the thesis statement would neither be relevant nor add anything substantive.

In addition to selecting research which gives relevant information for exploring the thesis, there needs to be a requirement for validity and reliability as well. Validity and reliability are concepts

which evaluate the quality of the research, indicating how well it is possible to measure something. Validity is the extent to which the scores represent the variable they are intended. Reliability is best compared to consistency, across time, items and researchers (Price, Jhangiani, & Chiang, 2013). As this thesis utilizes text or literary analysis to gather data, there is emphasis on critical reflection, obtaining a wide variety of perspectives, consistent record keeping, clarity during analysis and accounting for personal bias. As such, the scholarly material used in this thesis is carefully and thoughtfully chosen to ensure a reliable and valid end-product.

The research explored in this thesis has been deliberately selected through searching several scientific databases and reading through written material and electronic sources. Oria is a research portal with a collection of scientific material in the Norwegian scholar library in higher education (UNIT, 2019). Access to scholarly material and research through the Oria research portal has been granted to OsloMet University through subscription. Using Oria simplified the task of choosing, selecting, and deciding what research could be included to structure and explore the ideas in this thesis. The scientific material has also been peer-reviewed and undergone a source criticism process. Additionally, other databases were used to ensure a more diverse set of source material. Google Scholar and EBSCOhost are academic databases which compile, and list scholarly material related to educational purposes. In addition, they grant access to relevant e-books and scholarly e-journals, provide additional information on related subjects useful for exploring video gaming, and through their user-friendly interface let the user easily compare data made by different researchers. The EBSCOhost search engine enables search functionality by allowing the user to combine search words, for example "video games" AND "literacy" or "video games" OR "literary analysis". The use of AND in the search engines filters the results, providing all available research containing both key words. The use of OR provide research containing either data relevant for video games or literary analysis.

While the effort of validating and determining the reliability of the research was not as arduous, the decision-making process of selecting material which was relevant was more challenging. With the focus of this thesis being how video games can be relevant for developing literacy competence, literary knowledge and for motivation, the scholarly material must be related to these aspects. Numerous articles, research and scientific material related to these aspects were easily obtained through ORIA, essentially meaning that there was no shortage of relevant empirical data for undertaking the thesis. The challenge related to selecting the material was how to ensure a wider perspective of sources exploring the same ideas. For example, there are several scholarly articles examining video games and their influence on player's motivation for

learning (Hanghøj, Lieberoth, & Misfeldt, 2018; Ebrahimzadeh & Alavi, 2017; Evans, Jones, & Akalin, 2017). Investing time to explore how they are relevant for the thesis, deciding what empirical data within the sources is meaningful to include and if the different research lend themselves to discussing different aspects of motivation are relevant for creating a broader perspective of that idea. Video games and their potential for learning prove to be a topic broad and multifaceted and can be investigated and dissected in a multitude of ways To explore the thesis statement of this thesis as concisely and truthfully as possible, selecting research about relevant topics are key. This means that some topics, as for example Video games and environmental sustainability may be an important and interesting topic, but highlighting this as part of this thesis does not contribute to exploring what this thesis does. Appropriate use of sources, scholarly research, and research material is a vital part of the research design.

The choice of keywords and phrases used in search engines were also crucial for this decision process. Awareness and evaluation of words and phrases are more likely to yield better results when used in Oria and EBSCOhost. Keywords relevant for this thesis was related to education, video gaming and the concepts of motivation, literacy, and narrative. "Video games AND education", "video games AND learning", "development of pupil's (concept) skills AND video games" were phrases beneficial for getting search results consisting of general research made on the topic of video games and learning. Narrowing down further, video game specific words such as "gamification", "MMO's", "RPG's", "game design" were utilized for acquiring an overview of video game theory and if research has been made on certain topics. Furthermore, there has already been conducted a vast amount of research on the topics of motivation and literacy and narrative. This research could easily be searched by phrases such as "motivation", "motivational theory", "literacy", "digital literacy", "narrative". These keywords and phrases provide valid results, which can be used to explore the thesis statement and promote further discussion. The challenge lies in investigating how, and if, these results are relevant for discussion of video games. It is possible to make the process less challenging by combining the "motivation", "literacy" and "narrative" keywords with the "video game" keyword in the search engine, however, the results given must still be thoroughly reviewed. Other keywords relevant for exploring the thesis were "identity", reading skills", "writing skills", "learning principles", "agency", "development", usually combined in a search with "video games".

Chapter 1: Motivation

As motivation in this thesis has been defined in a more general manner, this chapter will explore and discuss how motivation can be related to the activity of playing video games. This is done in the first section of this chapter. Secondly, as part of exploring motivational theory, this thesis will shed light on certain relevant theories of motivation and on previous research made about video games and motivation. Moreover, this thesis will clarify the concepts of intrinsic and extrinsic motivation, before applying these to the context of video gaming. Thirdly, the thesis will investigate two major motivational theories, The Zone of Proximal Development, and the Self-Determination Theory. These theories are a mainstay in motivational theory for understanding and detailing how human behaviour is motivated, and I will apply these to present how video games may instigate this same motivation for the players. Fourthly, this chapter will delve into how motivation can be related to self-growth and fuelling the development of self, and then how video games may assist with this as well. Finally, this chapter will explore how video games may promote social development by looking at the collaborative potential of video games and multiplayer games.

Motivation and Video Games

There are certainly many reasons for incorporating video games in an educational context to better understand their potential for fun and providing engaging experiences for those who play them. Video games as popular culture helps bridge the gap between pupil's in- and out-of-school lives, as well as presenting a complexity and possibilities for active engagement (Beavis, 2014). To successfully and purposefully explore how video games may facilitate motivation there is need to understand the traits of video games which may induce this in its players. Realizing how to properly utilize these traits to maintain a gamification process of educational context is key to educators (Ramirez & Squire, 2014).

Challenge, curiosity, control and fantasy are pivotal elements for describing how video games can provide motivation for the player (Hsu & Wang, 2010). The culmination of these elements creates a sensation or designed gameplay experience for the player, meaning that that any of the elements influence how the player perceives what is happening in the game. The challenge element of any video game relates to how objectives, activities and play sessions within the games enables the player to use strategies and knowledge to successfully achieve something. The progression of a certain chapter in the story or a puzzle segment necessary to complete a dungeon in a RPG might require the player to make use of skills they have acquired by playing

the game. Challenges which are intentionally implemented to push the players to complete them in a meaningful way can result in them becoming increasingly more adept at these skills and find the experience motivating. How video games promote challenges for the player is fruitful in eliciting emotional responses (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Related to this is Gee's incremental principle, which emphasises how video games become more difficult, or challenging, as the player realizes how to overcome obstacles and become better at the game (Gee, 2003). In addition to provide enough challenges for the player, these games also need to instil a sense of curiosity for the player. Curiosity surrounding the workings of the video game, how one can improve and how to progress in the game narrative are ideas of inquisitiveness for the player and can help in developing emotional attachment to the video game. Elements of control and fantasy are also necessary components to linking the notion of playing games as an activity and increasing or improving motivation (Hsu & Wang, 2010). These four elements are considered individual factors related to facilitation of motivation by playing video games.

Understanding the reason and desires behind a pupil's actions is key when analysing motivation in relation to an educational perspective. One primary factor of motivation is that the individuals which make certain actions do so autonomously. Autonomy deals with our perception of freedom, as human individuals we want to determine which path we are on and have meaningful opportunities in which we can choose freely (Rigby, 2015). This suggests a close connection to the already established concept of agency presented in this thesis. Although agency has to do with an individual's capacity to make choices, autonomy can be considered a state of self-governance and leading one's life according to own values, reasons and desires (Taylor, 2017). At its core, autonomy with regards to learning deals with "the capacity to take control of one's learning" (Benson P., 2011). As stated, the autonomy of a learner is highly relevant, and applying this notion to the activity of playing video games is no different. Learning can be achieved in a video game context if the players are awarded autonomous decisions and feel validated and in charge of how they play the game. Scholars deem that autonomy can be conceptualized and manifested in various learning context and environments, however, this area of research is in need of further exploration (Chik, Aoki, & Smith, 2016).

Intrinsic vs Extrinsic Motivation
The daily life of a human being consists of choices, routines, activities, tasks and actions which are stimulated by either by our inner motivation and desires or an external source of motivation. We are purposefully making choices based on a type of intrinsic motivation or because of the

allure of an extrinsic reward, and sometimes as a combination of both. Imsen (1998) states that this can be viewed as the "internal" or "external" factors making up our efforts as purposeful and meaningful. When the learning process or the activity itself is considered what is meaningful it is indicated as intrinsic motivation. Someone who enjoys reading gets enjoyment from the activity itself rather than the accomplishment of finishing the book. On the other hand, extrinsic motivation is described as the expectation of a reward by doing an activity or going through a learning process. A high schooler studying for a test want to get a reward in the form of a good grade. One common characteristic in both forms of motivation is the inherent connection to expectations of a satisfying experience (Imsen, 1998).

Although understanding how motivation is elicited in the individual is a key factor in motivational theory, an additional concern is how the facilitation of an individual's motivation can be further triggered by social interaction. Emotion is the fuel behind the individual's actions and motivations, but what is considered emotional and meaningful can be moulded by input from society and community. Imsen (1998) states that there is an interaction between the individual and the community they reside in. The individual is to a certain extent self-regulating, which implies a degree of agency in shaping their own lives. However, individuals make up a community, which can be both social or perhaps geographical, and it is this community which impact the extent of the individual's self-regulation, influencing their degree of possibilities and restrictions in terms of growth and development. Values, expectations, and principles are not inherently individual, but cultivated through influence and engagement with society and community.

Intrinsic and Extrinsic Motivation in Video Games

One major contributor to intrinsic motivation attributed to video gaming as an activity is their facilitation of engaging experiences and making playing, quite simply, "fun". Gavin Reid (2012) presents a literature review of several different surveys conducted on the relationship between video gaming and motivation confirms the prevalence of fun as the main form of intrinsic motivation garnered through this activity. According to De Freitas (2006), there is reason to believe increased motivational levels for learners, as well as increased learner completion rates through engagement and enjoyment, can be linked to the utilization of visual techniques and training simulations through the use of video games.

Linehan, Kirman and Roche (2015) suggest that emphasising how people reinforce complex behaviour through sense-making and attention on coherence can be fruitful in analysing the

development of intrinsic motivation. The narrative driven aspects of RPG's offer opportunities for players to utilize their reasoning and comprehension skills to make sense of the gameworld and gameplay, investigating how the interconnecting elements contributes to the creation of a story and reflecting on why these elements are designed the way they are. A well-designed role-playing game incentivises the player to explore the different aspects of the video game and the game world. According to Gee (2003) video games which contribute to learning instils a sense of discovery and exploration for the player. Gee's learning principle of discovery suggest how good video games cater to the players sense of discovery, that overt storytelling should be kept at a minimum and make room for them to experiment within the game. Furthermore, Gee suggests the notion that video games should cater to player's sense of discovery by enabling them to achieve progress through playing the game in a multitude of ways. How the game progresses and how the player moves ahead is possible through multiple routes. Players can play the game to their strengths, choose own strategies in face of obstacles, think critically of how to resolve conflicts, make different choices and explore and experience alternate playing styles (Gee, 2003). This way the players learn to implement skills and strategies to their actions of playing, and through exploring, investigating, and analysing how they play they can gradually develop these as well.

Video games intrinsically motivate the player by appealing to their ability to overcome challenges and continually enables them to reach new goals (Hsu & Wang, 2010). According to Gee, players need to feel like they accomplish something and achieves a sense of mastery over what they are doing (Gee, 2003). Learning is possible if players can use their skills and strategies in gameplay and experience success in their actions. A sense of progression as they strive for mastery and becoming better at playing is related to how video games facilitate motivation for the players. Good video game design facilitates intrinsic rewards from the onset they start playing, customizing the gameplay to the player's skill level, effort, and growing mastery. These notions are structures as an achievement learning principle and is helpful for signalling to the learner their process of ongoing achievements.

Application of motivational theory to video games for use in education can be advantageous in exploring how the medium can facilitate motivation in pupils. The idea of using video games as a benefactor for intrinsic motivation in pupils has become more prevalent as our understanding of their learning potential and educational properties has deepened. Integrating video games as a learning resource has become popular with educators. As previously mentioned in this thesis, the use of gamification can enable more intrinsically motivating

content in the classroom and be effective for educational interventions (Ramirez & Squire, 2014). However, discussion of how gamification of educational content instil intrinsic motivation in pupils can be met with a certain criticism. Game-playing is a complex linguistic activity based on intrinsic motivation or inner rewards, meaning that determining its effectiveness is non-observable (Linehan, Kirman, & Roche, 2015). Human behaviour is multi-faceted, and it is important for researchers to be aware what part of the gamification process enables this intrinsic motivation.

Although intrinsic motivation has been shown to be an important benefactor of player's motivation and willingness to engage in activities, there are reasons to consider some of its shortcomings. Hanghøj, Liebroth & Misfeldt (2018) reports a counterpoint to the measure of "fun" as an intrinsic motivation related to the inclusion of at-risk students in school. The recognition and reduction of external pressure is more critical with this demographic and can be helpful in identification of individual motivations, social groups and school subjects.

While intrinsic motivation has been shown to be the most prevalent among players, there is an incentive to exploring the value of extrinsic motivation. The demographic of people playing video games has widened in terms of recognizing more players as "periodic" or "casual". Casual players do not share the same commitment as regular gamers, in which extrinsic motivation is considered the primary motivation (Reid, 2012). An example of this would be to investigate video games for mobile devices, which are hugely popular for the casual gamer base. Many of the video games for these devices provide the player with clear goals, in which the player can work towards and obtain rewards in form of coins, points or unlocking new levels. Puzzle games like *CandyCrush* (2012) or *Bejeweled* (2001) even allows the player to use real money to bypass certain levels or buy more in-game currency. How games enable players to reach certain goals or thresholds prove how they put value in extrinsic motivation. Application of the MDA model could view this type of video game activity as gaming as submission, where the game is regarded as a past-time or simply a recreational activity (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Viewing video games in a purely recreational manner emphasises extrinsic rewards for the players, as in obtaining more coins or clearing a level. Intrinsic motivation can in ways be attributed to player's engagement to the game itself and not the external rewards they reap.

RPG's as a video game genre can provide motivation for the player by enabling them to reach thresholds and goals as they progress in the game, such as levelling their characters to max

level, obtain powerful end-game skills and abilities, find mighty weapons and items, earn points or currency, amongst other things. It is important to clarify that these factors are inherently internal, as they can be achieved in-game by playing and can be intrinsically motivating for the player. However, these thresholds can be considered extrinsically motivating if they provide instrumental value to the player (Ryan & Deci, 2000). For example, reaching these thresholds can lead to regulated introjection in the player, which enhances or maintains their self-worth and self-esteem. The player will recognize their accomplishments and obtain a sense of pride in what they have achieved. Ryan & Deci (2000) argues that a regulated injection process in the individual is extrinsically based and not fully autonomous. Even if the behaviour is integrated internally in the individual, it is not experienced as fully part of the self and controlled in some sense from external factors. If reaching the goals and thresholds in the RPG holds instrumental value for the player, then their sense of progression, their actions and their motivation can be rewarded extrinsically (Imsen, 1998).

Vygotsky and Zone of Proximal Development

Discussion on the motivational consequences on the individual through social interaction can be explored further by investigating Lev Vygotsky's pedagogical concept of Zone of Proximal Development (henceforth "ZPD"). This theory is relevant for exploring and understanding the immediate psychological development of children with consideration of their emotional and cognitive psychological processes. Vygotsky (1978) relates the ZPD as the actual development achieved in the individual when they do individual tasks and problem solving, and then how this development is affected by the guidance or collaboration with more capable peers. In perspective of educational research and practice, ZPD deals with the amount of learning a child can do by themselves and alone, and what learning they can achieve with support from another, usually some more experienced or knowledgeable. Fostering good learning for pupils necessitates educators to provide experiences and challenges within their zone of proximal development. Strategy development, learning new skills and obtaining a sense of achievement are possible outcomes for learners supported through such a process. This process can be understood as "scaffolding", the instructional approach that "provide support from more experienced and knowledgeable person until the less competent person can internalize the skills and knowledge from the assisted performance and begin to perform individually" (Eun, 2019). The central point of this theory is that the motivation channelled in the individual in their path to better learning can be affected by their collaborative effort with other learners or peers.

Vygotsky and Video Games

Vygotsky's concept of the Zone of Proximal Development can be linked to the usage of video games to understand how they can improve motivation by providing enough challenge for the player while still being within their range of abilities to be successful. The key element of *challenge* presented by Malone & Lepper is linked to this notion (Hsu & Wang, 2010). This designation of sufficient challenge may result in intrinsic motivation players by reducing boredom and avoiding frustration and anxiety (Ebrahimzadeh & Alavi, 2017). For video games to be considered effective mediums of learning it is important that they provide challenges for the players, encourages them to overcome obstacles and enable them to strategize and reflect on why they succeed or why they fail to become successful.

Viewing the activity of playing video games as something which promotes engaging challenges and goals for the players to work towards, either through certain obstacles they must overcome, puzzles which need to be figured out or something similar, then the players are provided incentive to develop strategies in achieving this. Due to the interactive and multimodal nature of video games there is likelihood of encountering forms of challenges and obstacles not found in any other medium. The way players think, evaluate, and make cognitive decisions are outcomes of utilizing effective strategies in reaching these goals. For instance, a research project conducted in a secondary school in Greece found that players utilized compensation strategies when they encountered difficulties related to reading and text comprehension in video games, while challenges related to writing in video games were solved by recruiting metacognitive and cognitive strategies, followed by social strategies and then compensation strategies (Palaiogiannis, 2014). The use of a variety of different strategies employed by players denote the multifaceted nature of the medium.

James Paul Gee transfers Vygotsky's ZPD theory to a video game context exploring the facilitation of learning found in the medium through a "Regime of Competence" learning principle. According to this learning principle "the learner gets ample opportunity to operate within, but at the outer edge of, his or her resources, so that at those points things are felt as challenging but not "undoable"" (Gee, 2003). Video games used as learning tools need to present their players with progressively difficult challenges which requires them to utilize the skills and abilities accumulated through playing. For this to be effective the game needs to act as a "scaffolding" agent, an educative mediator. With the game providing necessary assistance for the player, they should manage to adapt, and improve upon, existing skills and venture into new cycles of learning.

In multiplayer games, or in games played with other players present, both ZPD and "RoC" principle can be addressed even further. Other players more experienced at the game can take the position of "a more knowledgeable other", guiding the player through the game, instructing, and helping with certain obstacles and showing support of their endeavours and efforts. The less experienced player undergoes a socially constructed learning process through educational discourse and support of a more knowledgeable and competent player. Researchers Constance Stenkuehler and Yoonsin Oh suggest the notion of a digital "apprenticeship" to function comparably to Vygotsky's theoretical framework (Steinkuehler & Oh, 2012). A more knowledgeable peer (teacher) and an apprentice (learner) jointly participate in a valued and routinely practice with a mutually understood and shared goal. Disparity in skill levels between teacher and learner is made possible due to a "scaffolding" process, a central idea within the ZPD. The learner's knowledge and capabilities are challenged by the teacher, and difficulty of task-completion is adjusted to the learner's skill level to ensure their compliance and control over the undertaking. New information or direction is given to the learner in the context of use and not beforehand. Gee's relates this to an Explicit Information On-demand or Just-In-Time learning principle, where information is awarded to the learner when it is most convenient and comprehensible and can be used in practice (Gee, 2003). A lesser-skilled player of the class-based shooter game *Overwatch* (2016) can participate in a competitive match alongside a team player who is more experienced. The more knowledgeable player can provide information which is processed by the less experienced players to influence their behaviour (Groom & O'Connel, 2018). Through voice-chat both players can communicate, where the teacher can recommend strategies to ensure more kills on the enemy team, provide information of the player character's abilities, make callouts, take lead and transport through the game environment or help explain how to negate enemy fire. This can be achieved through verbal communication or by simply showing it through how player avatars interact with the gameworld. This social process between players enable reproduction of information and the hardwired informational boundaries are supplemented with new stimuli and knowledge inside and outside the game (Groom & O'Connel, 2018). As such, apprenticeship can prove to be beneficial in acquisition of new learning.

Furthermore, there is sentiment in connecting apprenticeship as described by Steinkuehler and Oh (2012) to Gee's conceptualisation of affinity groups and development of the participants A-identities (Gee, 2000). Participants in affinity groups can, through their shared beliefs, enable a collaborative effort to obtain more knowledge similarly to that of a player-to-player

apprenticeship. This resemblance becomes more obvious when analysing their traits and intent, as both apprenticeship and affinity groups facilitate identity formation to some degree. Steinkuehler and Oh's (2012) description of apprenticeship as "a crucial mechanism for learning, linking individual knowledge, behaviours, and dispositions to socioculturally shared understandings, practices and values" as relevant for understanding learner participation in affinity spaces as well.

Besides the "RoC" learning principle being relevant for transferring Vygotski's theoretical framework to a video game context, another principle devised by Gee, the principle of Ongoing Learning, can be insightful in the discussion of how players can improve their learning in face of challenges and functions as a precursor to mastery. This principle tasks the players with undoing routinized mastery and adapt to new or changed conditions at higher and higher levels of challenge (Gee, 2003). Video games can teach valuable skills through challenging and engaging the players, but for these players to improve they need to be on alert regarding their own skill position. Acknowledgement of own strengths and shortcomings are necessary for evaluating when and how to progress in their learning, and at the same time scrutinize own, autonomized skills and abilities. It is my belief that such a learning process is valuable not only for developing pupil's skills, but can foster intrinsic motivational rewards and promote further playing and learning as well.

Self-Determination Theory as a Theoretical Approach to Understanding Motivation

Motivation can be viewed as a range of different types of motivation experienced by an individual, which is central to the idea of and theoretical approach to the self-determination theory. With self-determination theory (SDT) being a motivational theory, it addresses what energizes people's behaviour and how this behaviour is adjusted in various aspects of their lives (Deci & Ryan, 2015). SDT differentiates between autonomous and controlled types of motivations, as well as between intrinsic and extrinsic goals in the individual. Both autonomous and intrinsic motivation are advantageous in the experiencing activities and is associated with a higher degree of well-being. According to Karimi and Nickpayam (2017), SDT also considers motivation as being multidimensional and it resides along a continuum of self-determination ranging from intrinsic motivation to extrinsic motivation and then finally to amotivation (demotivation), which is explained as having no intentionality. Intrinsically motivated individuals are the most self-determined while non-motivated individuals are the least self-determined. Furthermore, SDT identifies three basic, psychological needs which are essential for psychological health and well-being: autonomy, competence and relatedness (Deci & Ryan,

2015). Autonomy is related to the desire of being in control of one's own life and act in a way which is cognisant of own desires. Competence is a need which is concerned with the individual's need to control an outcome and experience mastery. The third essential need of relatedness is related to the importance of social engagement, and interaction with other human beings to experience emotional reciprocity. In a school setting this would relate to pupils feeling acknowledged and respected by their teacher to ensure willingness to accept classroom values (Ryan & Deci, 2000). Satisfaction of these three needs are necessary to ensure optimal growth and function in the individual (Reid, 2012). Furthermore, Ryan & Deci (2000) uses SDT to make a critical distinction between behaviours which are volitional and accompanied by experiences of freedom and autonomy, a representation of one's self, and behaviours which are categorized by feelings of pressure, and is such not a representation of one's self. Intrinsically motivated behaviours are performed out of self-interest, satisfy the psychological needs of competence and autonomy, and is innately recognized as self-determined behaviour. Extrinsically motivated behaviours represent self-determination to varying degrees and in different contexts. For extrinsically motivated behaviours to become self-determined, they need to undergo internalization and integration processes. Internalization deals with the individual's value in behaviour regulation, while integration is transferring this understanding to one's self and transforming it to become part of their character. Utilization and fostering of these processes in school contexts are highly necessary, as they are not intrinsically designed, and many pupils lack self-determination. Development of pupil's self-regulation can result in behaviour changes and fuel their amotivation into personal commitment, in which increasing internalization lead to greater persistence, more positive self-perceptions, and better quality of engagement (Ryan & Deci, 2000).

Self-Determination Theory and Video Games

Ryan, Rigby & Przybylski (2006) utilized Self-determination theory to investigate motivation for computer play and its effects on well-being in four separate experimental studies suggesting that the theorized needs of competence, autonomy and relatedness independently predict enjoyment and future game play. One facet of their studies related to observing player presence, or non-mediated immersion in a game environment similar to the description of the concept by Steinkuehler et al (Steinkuehler, Squire, & Barab, 2012), provided several notable results. Firstly there is a positive association between measures of intuitive controls (game design) and experience of presence/immersion (Ryan, Rigby, & Przybylski, 2006). Secondly, there is a connection between satisfaction and the sensation of immersion. Games which provided the

player with autonomous choices and agency to carry out in-game objectives, pursue in-game goals and interests and given the feeling of having the competence to carry out effective actions managed to instil a heightened sense of presence. Ryan, Rigby & Pryzbylski (2006) suggest this indicates how immersion is achieved through two goals; firstly, a focus on game play rather than game mechanics, and secondly, how game play satisfies the psychological needs of the player. Player experiences with games supporting competence, autonomy and relatedness greatly increase game enjoyment, regardless of specific content, genre of games or their complexity (Karimi & Nickpayam, 2017). Focusing on SDT and relating it to education can prove a healthy relationship between supporting these intrinsic needs and facilitation of deeper and internalized learning.

The third psychological need of *relatedness* can be supported in video games if players feel they are able to connect and interact with others. According to Ryan, Rigby, & Przybylski (2006), this is perhaps best experienced through games which have a multiplayer component, such as Massive(ly) Multiplayer Online (MMO) games. This is due to how MMO tend to be rich in content and provide ample opportunities for player interaction. Engaging with other players can establish a sense of community where these players relate with each other and are fuelled in their actions due to similar interests, objectives, or a feeling of comradery. Relatedness emerges as an important satisfaction for the players and can increase their in-game perceptions, game enjoyment and want for future play.

Motivation and Identity Formation and Self-Growth

This thesis seeks to better understand how video games can provide meaningful development of motivation for players, and one contributor to this is how identity formation, the development of self, can be achieved through this medium. Professor James Paul Gee speaks about identity as a lens for analysing educational research as an analytic tool for studying important issues of theory and practice (Gee, 2000). The concept of identity is considered by Gee as "being recognized as "a certain kind of person" in a given context" (Gee, 2000). Social and cultural context influences the development of identity and the emergence of discrepancies in identity formation. Gee states how there are four ways in which context influences how one is "a certain kind of person", namely four identity types: 1) Nature-identity, 2) Institution-identity, 3) Discourse-identity and 4) Affinity-identity, which has close connotations to the concept of affinity spaces (Gee, 2000). Nature-identity (N-identity) is labelled as such by Gee due the natural or biological nature of the identity, as something which the individual is unable to control. N-identities has nothing to do with what an individual has chosen, done or

accomplished, but is something of natural occurrences. Being born of a certain sex, male or female, is an example of an N-identity. Gee affirms how N-identities "gain their force as identities through the work of institutions, discourse and dialogue, or affinity groups, that is, the very forces that constitute our other perspectives on identity" (Gee, 2000). Institution-identities (I-identities) are something which is imposed on your characters, for example being a student in a school and recognized as such by the teacher. An I-identity is enforced by an authority in an institution. The third perspective of identity as a discourse-identity (D-identity) relates to how people can create and sustain their self through discourse and dialogue and traits innate to oneself. Reinforcing certain traits or values is central to developing D-identities, which happen through interaction with other people. Helpful, gentle, caring or distrustful are examples of traits which can be perceived from other as part of your D-identity. The fourth perspective of affinity-identities (A-identities) is one which is closely linked to an individual's affiliation and participation in a group and the specific practices within that group.

Furthermore, Gee describes a holistic identity concept made up of three different identities: the virtual identity, the real-world identity and the projective identity (Gee, 2003). This theory is especially interesting when discussing how player and in-game identity is connected. A virtual identity is related to the virtual character as they appear in the virtual world. Gee (2003) presents this as "player as character", where the virtual character is its own identity apart from the player. In the RPG *Skyrim (2011)* the player can create their own character which has its own identity. This could for example be a Dark Elf mage and leader of the Mage's Guild, who is clever and ruthless, has a distinctive physical appearance, and is only interested in certain things in the gameworld. These traits and qualities are chosen by the player but decided by the gameworld. A real-world identity is the player's, meaning the person playing the game, real-life identity. It is the interaction between virtual identities and real-world identities which is the foundation for projective identities. How the player wants their avatar to act, what kind of person they are, their thoughts and desires, and their history is emphasised as in projective identities, and since it is the players desires which are reflected in their avatar then both share this identity (2003).

Identity Formation and Self-Growth in Video Games

Video games are tools for self-improvement, enabling potential for individual growth. A foundation for developing one's self, or identity. Choice, autonomy, and agency entrusted to the player through playing may help to evoke self-expression and aid in developing "a gameful mind" (Benson, 2015). James Paul Gee (Gee, 2003) develops learning principle of identity which is highly relevant for identity theory, and shows how video games can contribute player's

development of self through being provided choices and ample opportunities to realize and develop identities, both new and old. This is supported by the description of self-development and identical development described by Imsen (Imsen, 1998).

Gee continues and discusses how identifying as a "gamer" creates an activity-based identity, involving important life skills and are networked to the values, norms, practices and shared knowledge in a larger collective of identities (Gee, 2017). This leads to a continually, transforming group of people who develop ways to acquire certain skills and solve certain problems. As an example, Gee points to the simulation game *The Sims* (2000-2020). This video game lets the create a community or family comprised of characters known as "sims". The player can design their appearances, build houses for them, buy items, decorate their gameworld in many ways and create a large community of sims if they choose to, all possible to achieve with in-game resources. In addition to allowing the player to use in-game tools to create and design what they want, it is possible to manipulate the content outside of the game as well. Using photoshop to customize a sims' face or 3D-designing a wardrobe is allows the player to become the designer in relation to the game to a higher degree, and players can even share their creation with other players essentially creating a design-oriented game community. Gee likens this to the player adapting a "sims designer" identity, which entails "an understanding of the judgment system connected to that identity, and can design and appreciate designs in terms that fit the norms and values of the group" (Gee, 2017). Most players would recall this identity fitting a more hobby oriented environment, although the act of participating in a community and imitate activities related to real-life or professional avocations can result in respect and understanding these professions, while at the same time promote fun experiences. Reinforcing your identity as part of a community is helpful in developing affinity spaces, and can promote further engagement and production knowledge and learning within (Gee, 2003). As such, interaction between members of the affinity spaces continuously progresses and uphold the social practices and affiliations, which effectively enables development of a-identities of the affinity space members (Gee, 2000).

James Paul Gee's (Gee, 2003) identity theory can be relevant for exploring how video games can promote identity formation and create a sense of self. The fact that video games allows the player to be in control of their actions and are agents of their own volition, meaning the players decide the kind of virtual identity they want to uphold, it can be meaningful for enabling the foundation for a self-development process. From a psychological standpoint, playing role-playing games enables the player to forge a sense of identity apart from their real-life and "try

on" new identities (Allison, Von Wahlde, Shockley, & Gabbard, 2006). In the virtual world the player can identify as a noble warrior or a powerful wizard, which is improbable (and sometimes clearly impossible) to achieve in real life. This is the very essence of the idea of a virtual identity as described by Gee (Gee, 2003). A player can create an avatar which acts as a conduit for their actions and decisions, and this avatar can inhabit the role of the virtual identity for the player, with its own backstory, values, feelings, goals, physical appearance and so forth. Such a virtual identity can be wholly constructed by the player in games which feature a character creation kit, or it could be achieved by player characters or protagonist such as the virtual identity of Link in any of the *Zelda* (1998-2019) games. If the player has desires for what their characters are to be like throughout the game and makes decisions and takes actions to influence outcome, this idea of a virtual identity is transferred to a projective one. In the game *Red Dead Redemption* (2010)*,* the player character John Marston is its own well-defined character, but the player may also influence the character's choices and development as they progress the game narrative. The player can allow Marston to help certain NPCs with their problems, choose to kill certain characters, steal objects and to make decisions regardless of Marston's inherent character design. The way a player recognizes their projective identity is related to the moral and ethical values they wish to attribute to the game. Players are moral beings and video games can be viewed as moral objects which they can reflect their actions, and decide which values, practices and discourses are morally desirable (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Video games present a virtual world where players can evaluate themselves and their own identity. Gee claims how video games promote self-knowledge, where the gameworld is constructed in such a way that the players not only learn about the world in which they play, but also about themselves and their current and potential capacities (Gee, 2003).

Expanding on Gee's idea of a projective identity and relating it to gender research and video games, Ståhl (Ståhl, 2016) examines how women can create their identities through video gaming. Her research is not limited to women and video games however, as she states how her research can be transferred to male players as well. Ståhl conducted a research survey mainly concerning young girls which makes up most of the empirical data. In her study she presents seven key factors affecting, or in turn is affected by, girls and young women playing video games: skills, values, identity, gender expression, the social environment, male relations as access points and their future prospects and knowledge on how technology can be gained through playing. The key factors are relevant for exploring how children and youngsters can

craft their identities in virtual learning environment, with video games being an example of one such virtual environment. This prompt the necessity of having ample time spent in the virtual world, enabling players to be comfortable and more proficient while simultaneously developing their sense of self in order to craft an arena for better learning (Gee, 2017).

A Social Dimension to Video Games or Multiplayer Games

Some video games feature a multiplayer component in their design which enables more than one player to enjoy and play the game at any time. The structure of the video game, its game mechanics, enables multiplayer capabilities either in the same game locally or in separate games which requires an online connection. RPG's like *World of Warcraft* (2004) enables many players to play and occupy the same gamespace at the same time. Other genres of games, such as shooter-type of games like *TimeSplitters* (2002-2005) or the ground-breaking James Bond inspired *Goldeneye* game are designed for offline "couch" kind of play, where players can play on the same console in the same space. This method of allowing players to play together makes space for face-to-face social interactions and turns the gameplay session into a social and collaborative experience. On the other hand there are video games like *Dark Souls* (2011), which has a single-player storymode, but allows the player to invite other players digitally to their world (in the shape of a "phantom") to help and play together. Players can even be attacked by other players who invade their gameworld. This is a design choice made by the developers and is conceived as a core element part of the gameplay experience. *Dark Souls* (2011) is programmed and designed with an intention of enabling a multiplayer experience where multiple players experience the game together which assumedly makes for a separate experience altogether than playing the game alone.

As to better relate this social dimension of video gaming as a benefactor for player motivation stated in this thesis, it is possible to look at how role-playing games may achieve this as well. A subgenre of role-playing games is the Massively Multiplayer Online role-playing games (MMORPG's) which lets many players from around the globe to play together in the same video game space can prove to be an interesting medium exploring the social dimension of video gaming as an activity. Sharing the same space for gameplay is connected to how players conjugate, where the individual player has their own agenda and focus but acting in a larger player collective (Rogers, 2014). MMORPG's enable a greater degree of social interaction and communication than single-player RPG's. One study conducted by Zhi-Jin Zhong (2011) inspected the effects MMORPG's may have on player's social capital, both virtually and in real life. This study concludes that there is a beneficial effect to in-game social interactions which

result in a more enjoyable social experience and strengthening to virtual, social networking. Zhong's study was targeted to players in a dominantly Chinese culture, who play games differently from western gamers, making it prone for cross-culture examination. Players engaging in social communities in-game, such as guilds or groups, could instil a sense of community responsibility, give rise to norms of reciprocity and nourish common interest, which are elements providing motivation for gamers to partake in virtual community activities. This is addressed further by Sergeyeva et al (Sergeyeva, Tsareva, Zinoveva, & Olga, 2018), who claims engagement in such virtual groups allows for support in social capital and development of friendly relations. Not only can this socialization process happen in-game but can act as an access point in developing real-world friendships and social connections. Przybilski et al. (2010) argue that social interactions are key to understanding motivation attributed by video games.

Due to the massive and complex textual nature found within MMORPG's there is a higher prerequisite of textual comprehension needed for players as well (Gee, 2003). Games like *Runescape* (2001) or *World of Warcraft* (2004) are quest-based narratives with a lot of textual information on description of objectives, visual and graphical elements, animations, player to player communication, numerical data like health points and skill levels. Players need digital literacy skills to successfully comprehend the vast amount of textual information present in these types of games. The aspects of these games which makes it fun and engaging for the players may yield intrinsic motivation to continue playing them and help them be aware of the fact that necessary and relevant use of literacy skills and multimodal text comprehension can result in potential learning and in-game enjoyment. Digital literacy skills will be discussed further in chapter 2 of this thesis.

According to a study by Durkin & Barber (2002), video games used in a social context can be considered positive in development of social skills. Contrary to the popular belief that the activity of playing video games is of a solitary nature and impairs social skills, their study reports a greater sense of family cohesion among people who play video games than those who do not. The very activity of playing a video game may be individual, however, players might prefer the social inclusion of family members and friends in their activity. Applying the concept of affinity groups to further understand the social dimension of video games one can assess the medium as a mediator for an individual player to engage with a larger gaming community, supportive and empowering of their thoughts and needs. Gee (Gee, 2003) points out benefits of affinity groups in education, where their inclusion may function as models for team- and project

based work environments to group activities, such as in jigsaw group work. De Freitas (2006) states that the educational use of video games can be flexibly utilized individually, in group work or in combined situations.

Analysing the factors happening between players, more specifically interpersonal factors such as cooperation, competition and recognition can be beneficial in developing an understanding of why playing games in a social setting can be encouraging (Reid, 2012). The very activity of playing a video game can be an opportunity for many different players to find the gameplay experience exhilarating and motivating when done in collaboration. These interpersonal factors can function as a bridge towards instilling a feeling of "fellowship" for the players, which is related to how games are understood as social framework (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Essentially, video games may provide different settings where the social bonds between players can evolve and the very activity of playing together with someone else can function as motivation.

Chapter 1 Summary

As explored in this thesis, the medium of video gaming can provide learning contexts which are motivating for the learners (Beavis, 2014; Gee, 2003; Hsu & Wang, 2010). Video games provide excellent opportunities to bridge the recreational and fun ou-of-school interests of pupils and educatioan. As a recreational medium, video games are inherently designed to cater to fun and engaging experiences. It is the application of the assets of video games to an educational context, thorugh a gamficiation process, which may tap into a potential source of motivation for learners (Ramirez & Squire, 2014). The potential motivation ilicited in the player may be either intrinsically or extrinsically based, and is dependent on the type of reward the players feel they will obtain from their playing. The gameplay itself will elicit an emotional attachment or a sense of mastery, which will stimulate players intrinsically. The game can bring about rewards such as in-game items or highscores which will be more extrinsically rewarding. There might be decisive disparity in intrinsic and extrinsic motivation gained by playing between a "casual" and a more serious gamerbase (Reid, 2012). This chapter of the thesis has also discussed the application of conventional motivational theories to video games, and how they can faciliatet deeper learning through the development of self and in conjunction with others (Deci & Ryan, 2015; Gee, 2003; Przybylski, Ryan, & Rigby, 2010). Video games can be considered effective learning tools if they enable the player to develop their understanding and fuel their sense of accomplishing their goals. Video games may reveal to the player new interesting platforms in which they can learn something new, which is essential in bringing

video games in educational contexts. Regarding video games as a social activity is also beneficial for facilitating their motivation as this can be viewed as a meaningful activity (De Freitas, 2006). Learning in conjunction with others is regared as motivating in other aspects of education, for example as classroom activites, supporting pupil's development of collective learning and skill devlopment. As such, video games can elicit similar results if utilized effectively. Conclusively, there are many aspects of video games design which is crafted to cater to player enjoyment and in facilitation of their motivation.

Chapter 2: Literacy

As mentioned in the introduction of this thesis, literacy is a concept which is related to development of the individual. It is the development of skill, of competence and of knowledge, enabling people to become productive and vital members of society (United Nations Educational, Scientific and Cultural Organization , 2004). In this chapter I will argue that video games can promote player development in different aspects of literacy. Initially, I will clarify what is meant by the term digital literacy before I relate this term to how video games may promote this type of literacy. Furthermore, I will explain the concept of visual literacy and why competence in this literacy form is relevant for members of contemporary society. Video games as multimodal media is rife with visualisations and players who engage with them is likely to experience visual stimuli, and this section of the thesis aims to investigate how video games can be a source of visual literacy development. Both digital literacy and visual literacy is present in video games, and as such this part of the thesis is concerned with examining them as possible and/or effective learning tools. The main concern of acknowledging video games as effective learning tools is to investigate how the medium may promote valuable literacy competence and knowledge. This transitions into the final section of this chapter, which examines how the two main factors of the literacy toolkit, *reading* and *writing*, can be developed through the activity of playing video games.

Digital Literacy

Paul Gilster (1997) coined the term "digital literacy" in his book *"Digital Literacy"* in 1997. He defined the concept as the ability to use and understand information in multiple formats and from a wide range of sources using computers. As with "literacy", this digitalized application of the concept means more than just to read, but to read with meaning and to understand. As the internet became a mainstay in society and a new way of providing information, digital literacy recognizes the need of practices and literacies for critiquing this information, to separate truth from fiction and understanding how hypertext and non-linear reading allows new meanings to be constructed (Secker, 2018).

Digital literacy ensures skills, knowledge, and competence necessary for living in a world where technology and digital media are part of everyday life. Education is therefore important for preparing young people and adolescent with an appropriate toolkit to be literate participants in this rapidly changing world (Apperley & Beavis, 2013). The availability of different technological or digital devices and tools, which require a certain competence and knowledge for effective usage. For example, the internet is a digital tool which is available to all members

of society, granting access to nearly unlimited information, entertainment, online services from many companies and electronic communication. Digital literacy related to the use of the internet means knowledge about the internet, how to properly navigate the different aspects of it and understanding the responsibility of using it. The worldwide accessibility of digital tools like the internet emphasises their prevalence of society and with continuous use there is something to be said in learning how to properly use them and be aware of their impact. The concept of digital literacy, then, consists of three main components: 1) digital consumption, 2) digital competence and 3) digital security (Zerkina, Lomakina, Kisel, & Lazarou, 2019). The development of these components in the individual as they engage with digital tools are part of their digital literacy. This is cultivated, facilitated and mediated through computer technologies, with the intent to improve computer-operation skills, basic knowledge of computer technology, and multimodal meaning construction (Hsu & Wang, 2010).

Digital literacies can be applied through a sociocultural approach to literacy, referred to as "New Literacy Studies". Emerging from earlier anthropological attitudes towards literacy, viewing it as competence in reading and writing skills, these "New Literacy Studies" aim to advance the definition of the concept to frame an integrated view of mind, body and society (Gee, 2015). Reading and writing skills are given new dimensions. Reading compromises the ability to define questions, access and manage information, synthesise information and evaluate the usefulness of information; writing is related to the ability to create information and communicate with others (Hsu & Wang, 2010). As a divergent and progression on the traditional understanding of the concept of literacy, this concept as portrayed in "New Literacy Studies" acknowledges digital literacies as multidimensional. In other words, these "New Literacies" is related to multimodal learning, in which digital literacies is more narrowly related to searching skills, ethics and e-safety, and computer literacy and functional skills (Secker, 2018). Kate Pahl and Dr. Jennifer Roswell (2006) provide a dedicated perspective on literacy as both multimodal and emphasising communicative purposes, attributing a social dimension to the concept. Digital literacies Their perspective on digital literacy suggest the notion that the literate qualities of a person expressed through discourse is charged with understanding of one's self, or identity, in meeting with social and cultural practices, represented as forms of text. These new literacies prove to be fundamentally important in a contemporary world and educators have a responsibility to integrate them into the curriculum (Groom & O'Connel, 2018).

Digital Literacy and Video Games

Attributing the "New Literacy Studies" to a video game context details an interesting discussion on the content of literacy. According to Hsu and Wang (Hsu & Wang, 2010), there is an existence of new literacies as well as gaming literacy. New literacies are defined as using ICT's to successfully function in the 21st century workforce, while gaming literacies is related to how one successfully engages and function in computer-gaming environments. Both types of literacy here is mediated and facilitated by computer technology and is concerned with development of computer-operation skills, knowledge of computer technology and multimodal meaning construction. The skills of reading and writing are further adapted to fit the medium of video games. Reading, in the context of video games, can be considered the notion of "game playing", the action of participating in the video game. The prospect of video game design is the equivalent of writing. The very foundation for developing and improving these literacies, however, is the prospect of practice (Hsu & Wang, 2010). Practicing and experiencing reading and writing in a video game context is essential in developing literacy. Applying Gee's principle of practice is also relevant, exploring how learners spend lots of time on task and in a context (video games) which is compelling, and they experience ongoing success (Gee, 2003). Utilization of games which are cognisant of this learning principle to successfully teach and progress literacy competence can be aligned to the goals of new literacy studies.

Knowledge about video games, how to play them and understanding how games might provide learning can be categorized as a more precise form of digital literacy, looking specifically at video games as a digital tool. Steinkuehler (2010) makes the point of game play being a form of digital literacy itself. Gumulak and Webber (2011) elaborates on this notion by investigating how an appropriate use of video games can develop pupil's (information) literacy and skills. An example of this would be the game *Minecraft*, where in-game the players can craft different tools, objects, structures, or materials by combining ingredients through different processes. An iron pickaxe can be crafted by placing two wooden sticks on top of each other on a crafting table and then three iron ingots in a line above them, in a "T" like shape. However, to get the wooden sticks the players need to know where to get wood from, and the iron ingots can only be obtained by melting iron ore in a furnace. These in-game processes can be compared to their real-life counterparts, and the information the players gather from this can be used to reference the workings of the world outside a video game. In a school perspective, teachers could enable pupil's learning about biology or chemical formulas by relating it to how things work in *Minecraft*, create language learning resources and activities based on words/phrases found in

the game or let the pupils explore the functionality of different inventions in the fashion of how the crafting system. Going further, Gumulak and Webber (2011) mention how information literacy can be achieved through exercises which "include comparing game reviews, analysing the pros and cons of using a particular kind of information source to solve gaming problem, and examining the legality of uploads of screenshots and video clips to YouTube". Through use as a digital tool, video games can teach real world skills and reveal knowledge to players if used appropriately. Becoming literate through video gaming enables the reader or player to recognize certain core elements of this medium, such as text, visual-graphic elements, audio elements, game goals, game rules and scenario design (Hsu & Wang, 2010). Enabling students to becoming better at recognizing different elements of video games and reflect on how these elements are incorporated in the making of a video game can prove to be fruitful in developing a design mindset and increase literacy development. Designing games can be understood as how one can "write" in the video game medium, which will be addressed later in this chapter of this thesis.

Video games are special in that they require the reader to extract meaning from the game and in turn give meaning back. This results in a two-way connection between the player and the game. One can view the player as an independent and complex human being which has their own thoughts, values, beliefs, and cognition, which is possible to be changed or shaped through interaction with others and the world. The effort of making actions meaningful is a central to the human existence, and every activity based on volition and cognisant effort is shaped by this. Comparatively, video games are static in the sense that they are constructions, made up of certain parts, and cannot change or adapt their essence unlike the ones playing the game. Any content or narrative present in a video game is the same for anyone who plays, but what meaning one player might derive from playing the game might not be the same as another. Video games are narrative spaces which a player inscribes with his or her own intent (Steinkuehler, 2010). As the player can extract meaning from game they are playing, and in turn externalize their own meaning making, in a continually, cyclical process. The meaning and knowledge the player has will affect and help define their gameplaying experience, and in turn be shaped by what they gain from this experience. The evident connection between player and game emphasises an interactivity process in construction of meaning. Skills, knowledge, and learning procured through playing can, then, be possible if there is reason and meaningful interaction between player and game. Psychological and emotional participation from the player engaging with a

digital text, as well as the development of the narrative in the video game through this engagement, is considered narrative interactivity (Kim, 2014).

One major concern with developing literacy competence for pupils is preparing them for life in a globalized world with the appropriate repertoire of necessary skills and knowledge. Video games can offer an engaging learning experience for students to develop systematic literacy skills important in the 21st century (Lowien, 2016). Pupils who are intrinsically motivated by playing video games can view the medium as something which brings fun and enjoyment and are likely to accept this activity as a possible learning tool. Educators can utilize video games to make the learning process of different skills more engaging for these pupils, functioning as modern-day alternatives to other forms of traditional instruction. According to Groom & O'Connel (2018), video games can be used to provide a unique environment to engage pupils in conceptions and constructions within digital experiences in their upbringing.

Investigating video games past just the game play session, understanding the *metagaming* aspect of video games, may have beneficial effects related to developing digital literacy and provide learning of new skills for the player. Choontanom & Nardi (2012) links this kind of investigation to a concept of theorycrafting, the art and science of meta-exploring game mechanics, enabling players to analyse, discuss, argue about, interpret, and theorize through experimentation and logic. Close examination and exploration of the game mechanics is usually the catalyst for player interest. Theorycrafting is a compelling activity which requires a critical mindset, encouraging an intellectual activity involving hypothesis generation, testing, numerical analysis, logical argumentation, rhetoric and writing (Choontanom & Nardi, 2012). For example, players could inspect and investigate the game mechanics of *Dark Souls* (2011) through comparing defence values of certain types of shields, level their characters in the most efficient way possible (a term referred to as minmaxing), investigating how weapons operate by inspecting their active frame values, systematically rank and list spells in order of their effectiveness, analyse which weapons would be more beneficial in defeating a boss based on their statistics, or judge which weapon is more valuable to use against which monster. Players who critically engage, and are motivated to do so, with the video game, may find opportunities for expanding knowledge and literacy competence.

Another consideration to theorycrafting is viewing it as a collaborative effort, developing literacy in a social setting. Players can engage in discussion and theorizing on internet forums with other players, which may lead to passionate debates and further spread of information and

player-to-player relationship. James Paul Gee's Dispersed Principle relates to how information, knowledge and competence can be shared with others outside a domain/game and that this process can culminate in greater learning (Gee, 2003). Players around the world can combine their efforts to reach new ideas, explore game content in new and various ways, and ultimately draw more knowledge on and understanding of the video game medium.

Visual Literacy

As the rapidly-changing and globalized world we live in is dominated by digital technology, there is not only need of understanding how to effectively use this technology, but to acknowledge and understand how knowledge is represented, constructed and communicated through this. Central to this development is society's focus on cultivating visual stimuli, as represented through television, computers, advertisements, billboards, photographs, or visual arts, culminating in a visual culture. The emergence of new digital technology in society is blurring the line between text and images, which results in a need for a different type of literacy competence. Visual literacy can be categorized as a collection of competencies fundamental to human learning by seeing, enabling individuals to interpret and identify visual phenomenon in their environment (Eilam, 2012). Billie Eilam (2012) suggests that through competence in visual literacy an individual is capable of having procedural and declarative knowledge of representing information and in general, interpreting and critiquing existing representations, and selecting or generating an optimal representation for a stated purpose. As such, dealings with visual stimuli is beneficial in aiding cognitive growth and competence, and development of certain skills like critical thinking skills.

Quite naturally, visual literacy will be connected to contemporary media and examined through the visual phenomenon found within the media hierarchy. The multimodal nature of many media forms leads to exposure to visual elements which a literate learner needs to purposefully interpret and interact with. The ability to access, evaluate, experience, and produce media products is relevant for development of media literacy, a branching type of visual literacy. Although very similar to visual literacy, media literacy does not take into account the individual's prior experiences and background in their comprehension process (Eilam, 2012). For the purpose of this thesis, it is more beneficial to investigate how the more general visual literacy, and not media literacy, is represented in video games and how it can lead to further learning, even if video games are considered a media product.

Visual Literacy and Video Games

The nature of video games is complex in its formal make-up, as they engage players in various modes, enabling them control of, and response to, sophisticated images, action and sound (Darley, 2000). The combination of modes presents the players of these games to experience and engage with a deeply, multifaceted medium which prompts reception of different stimuli. Understanding how to master and acknowledge these visual, and auditory, inputs are key to developing a deeper comprehension of visual literacy.

The mode of interaction, as stated previously in this thesis, is at the core of what makes a video game what it is. How players interact with the digital text, how they perceive their actions to have agency and be consequential, is relevant for how they perceive the visuals and imagery present in this text. Engaging with the video game enables players to enter the spatio-temporal world of designed imagery, or sceneries, where players experience a heightening of sensational and spectacular of said imagery (Darley, 2000). Compared to other literature, experience with the visuals presented in video games leaves the players feeling more participatory. Their interactions with the imagery are related to traversal of the gameworld, namely architectural exploration and geographical orientation. Here visual literacy is represented in the player as part of their overall literacy progression, meaning that there are certain aspects of the visual medium of video gaming which can be appreciated and experienced.

Comprehending the visual stimuli found within the medium of video games is related to how the player is able to process and create meaning (Gee, 2003). This process of understanding what is happening in the video game contextualises how one is able to "read" and "write" in a digital medium. Reading and writing in video games, and how these skills are applied to development of both digital- and visual literacy, will be explored in greater detail in the upcoming sections of this chapter.

Video Games and Reading

Reading skills are a mainstay in any educational curriculum, given that the ability to read is necessary for adapting and being a competent member of society. Looking at the Norwegian curriculum there is an emphasis on developing pupil's reading and comprehension skills, intended to develop their competence and qualifications (Utdanningsdirektoratet, 2013). Opportunities for developing reading skills in video games are ample. This is mostly relevant for video games which require the player to be able to comprehend the textual information for narrative cohesion. Certain types of video games are heavily reliant on the player's ability to understand, interact and reading of text to make it possible to progress. Continued interaction

with text in-game and continually exposing players to situations where they must apply their reading skills can be compared to the effects of an extensive reading project. Being exposed to literary and textual material through repeated instances can be an incentive for finding enjoyment in reading. In the context of video games, this can be linked to a process of extensive reading, where repeated interactions and exposure can provide further enjoyment and engagement in the player/reader (Krashen, 2004).

A branch of literary theory that focuses on the experience and interaction of reading a text, and an articulation of this experience, is known as "reader response criticism" or "reception theory". Such literary theory grants an useful perspective from which to study a player's experience with narrative in video games (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). One must regard video games as a type of text and "readable" in some way or form if reader response criticism can have merit in the context of video games. A major point of utilizing reception theory to analyse video games is to shed light on the way narrative and gameplay together can determine player experience when it comes to games with a story element. Better understanding of the individual reading of a video game narrative may create foundation for better learning, and the player derives meaning from the textual experience (Gee, 2003).

Another aspect of reading in a video game has to do with the player's competence in recognizing patterns and "clues" presented in the game. How players are able to interpret the story and how they become aware of events is related to a literary repertoire (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). The literary repertoire relates to the player's competence, which essentially affects how they experience the content found within the game and how they perceive the form of this content. Often, video games present visual clues within their gamespaces which are connected to the narrative. Players can interpret and understand these visual clues by "reading the space", so to speak, meaning they connect the signs and elements in a spatial relationship that eventually reveals a temporal and causal relationship, creating a sequential narrative (Domsch, 2013). Developing this ability to read and strengthening their literary repertoire might prove useful for expanding pupil's understanding of what the concept of reading entails.

According to Domsch (2013) the player can encounter different narrative structures during gameplay, as well as before and after, which triggers them to mentally construct a *"storyworld"*. Creation of such a storyworld is beneficial for aiding player's imagination and exploration of the narrative structure found within the video game. This experience for the

player signifies a comprehension process of greater understanding of the video game medium, of the different forms and elements inherent in its design. These forms and elements add narrative value to the player and can be experienced through different types of media. There is the inclusion of passive narrative forms found within gameplay, such as expositions or cutscenes, however there also exists media existing outside the video game which contributes to the narrative, such as gametrailers, game merchandise or art of the video game. A storyworld is also constructed of spatial narrative, which refers to visual clues and design choices found in the game. Furthermore, game developers and designers can choose to include additional narrative content to heighten the structure. This is achieved by including audio logs of characters speaking like in the *BioShock* (2007) game, where the audio is subtitled at the bottom of the screen. The JRPG *Lost Odyssey* (2007) provides the player with personal stories and anecdotes by characters detailing events which have happened earlier or apart from the main story in the form of diary notes. Many video games are designed with a "gallery" or "library" function where the player can access encyclopaedic information on the game world, such as concept art, characters, items, lore, and other explicit narrative. Such additional narrative can be recognized as embedded narrative, which provides a heightened non-unilinearity to the game's storytelling (Domsch, 2013). Such embedded narrative enables players to discover and partake in additional content this way may result in a more expansive storyworld and opportunities for player agency. Video games which inhabit the gameworld with non-player characters which the player can interact with and which have their own stories and dialogues might provide opportunities for player attachment to the narrative. The video game incentivises such interactions with NPC's by supplying the player with more meaningful knowledge about the story and world they play in. if these interactions are structured through written dialogue this can lead to more opportunities for the player to develop their reading skills as well. Attachment and meaningful engagement with the readable text are also key to keeping the player interested and continue to fuel their sense of discovery for reading and exploring further as they progress.

Utilization of the concept of storyworld to develop player's reading skills is connected to the investigation of the passive and active media content found within the game. Besides non-player characters mentioned previously, there exists other media elements which is essential for developing the overarching feel of a well-developed universe. Active and passive media can contribute to the expansion and interest in lore and narrative elements which aids in the structure of the game's story. Lore and story elements can be expanded upon and developed further

through subsequent instalments in game franchise, as well as elements found outside the game, such as graphic novels or game guides crafted to provide additional insight to the storyworld. Game franchises like *Elder Scrolls* (1994-2020) series provide realized and expansive gameworld experiences for the player to delve into, ever-growing and continually expanded upon by the developers and the player's subjective experiences. Initially, it is the game developers are who decide what the contents of the storyworld is supposed to be, as they decide what media elements should be included, how the game enables player interaction and what text is making up the structure of the game. Information and lore about the storyworld are decisively curated by these developers. However, as the player engages with the game and its story, choices they make and game elements they interact impact the very understanding of the fabric woven to the narrative.

Even if a large portion of reading related to video games is about understanding and providing context to the gamerspace or gameworld the players are playing in, there is still need and chance for development of reading in the traditional sense of the word. Video games contain language, words and phrase, and for most types of games the player must be able to understand this before being able to progress, let alone playing. The player may not be able to complete a quest if they cannot read how to complete their objective, or certain clues scribbled on a dungeon floor might go unnoticed. Reading comprehension is a necessary skill for players to successfully interact with their video games and to obtain the whole, designed experience (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013).

Video Games and Writing

As previously mentioned, writing skills can be translated to game designing in the context of developing digital literacy. Helping players understand the importance of good game design, meaning the necessary components to craft an intriguing and engaging gameplay experience, may be beneficial in developing a valuable skillset. Critiquing and analysing the different components, the very fabric, of video games helps players develop the mindset of a video game designer (Peppler, Warschauer, & Diazgranados, 2010). Improvement upon pupil's writing skills require that the video games used for this situation have game mechanics which can be evaluated and analysed, and that there are options for them to potentially craft their own game designs. James Paul Gee supports this notion through his Design Principle, suggesting how player who can appreciate the design present in the game, and how they themselves can use this knowledge, is core to the learning process (Gee, 2003). Giving pupils opportunities for making their own video games in school might however be too ambitious, as this task requires a lot of

resources, such as programming technology and computer programs, and is very time intensive. My personal suggestion is for schools to think of game design in terms of a theoretical approach, like planning, developing creative ideas and implementation of these in the video game medium, discussing how it is feasible to work with designing a game, discussing stylistic and mechanical approaches to the game's design, amongst other things. Devoting time and effort to the pre-programming phase of game design enables the learners to be aware of the game design process and obtain learning even without the need of a many resources. If there are opportunities for programming, the writing of a video game, in the future, then the learners will hopefully have obtained some foreknowledge and experience which they can transfer to the programming phase.

Digital literacy development and evolution of writing skills can be achieved further by playing video games in a critical manner. Critical playing tends to put a focus on the player being aware and understanding how they play, and why they play as they do. Video games can be programmed, and designed, to push players to play in certain ways, limiting or narrowing player choices. The game's intent could be to lead the player to go into a certain role or reach some designed goals, hopefully making an impact on the player or contributing to their learning (Ramirez & Squire, 2014). Knowledge of how this is accomplished in video games signifies a meta-learning process in the player. Instead of simply being a player, critical analysis of how a video game is constructed elevates their position into an evaluator. Steinkuehler, Squire & Barab (Steinkuehler, Squire, & Barab, 2012) contributes to this idea by emphasising how getting into the mindset of game designing can improve literacy competence. This is supported by Gee's learning principle of design thinking, which highlights how appreciating design and design principles is core to the learning experience (Gee, 2003)**.** Operating with a mindset which involves critical thinking, an analytical perspective and consideration for minute details can be valuable for players when they play video games and reflect on their own possibilities for learning. Participation in a game design process supported by an educator can foster motivation and help cultivate knowledge and literacy skills, like identifying problems, locating, evaluating and synthesising information, and communicating this information to others (Hsu & Wang, 2010).

Playing video games and designing video games are usually considered separate entities, but there is reason to believe they can be considered interconnected, overlapping and mutually informing processes of learning (Kafai, Burke, & Steinkuehler, 2016). Commercial video game developers engage players to make changes to their games. Modyfing games, or "modding",

enables players to do more than just playing and actively shaping their gameplay experiences. The video game *Skyrim* (2011) originally released in 2011 and have been updated over the years to include level creation using in-game assets and make it possible for players to alter character models, game mechanics, change levelling progression, add new effects to spells, or change enemy encounters and placements in the gameworld. This is an example of video game developers officially inviting players to make alterations to their game, however, modding, or even hacking, video games started back in the 1980's and has become a popular activity part of video game fan culture (Kafai, Burke, & Steinkuehler, 2016).

Thinking as a game designer can prove helpful for pupils to adopt what they perceive as either activities or play in the real-world and transferring this to a video game context. Real life sports like soccer or snowboarding are often big sellers with consumers, with the Sports game genre maintains a continuous development cycle of franchises like the *FIFA* (1993-2020) series. Game series like *The Sims* (2000-2020) or *Animal Crossing* (2001-2020) allows their playerbase to perform activities or physical labour like gardening, shopping, designing, socializing, fishing and much more which are clearly modelled and function similarly to their real-life counterparts. Simulation games like *Surgeon Simulator* (2013) or *Train Simulator* (2009) take this notion to an extreme, often trying to replicate exactly how it would function in the real world (certain simulation games can often be humorous due to their game physics or stylized visualization). These types of game pair well with Gee's "Psychosocial Moratorium" and Practice learning principles as they can provide a low-risk gamerspace in which the players are able to practice extensively (Gee, 2003). Many types of games revolve around these described activities exactly because players are aware of them, meaning when players encounter these in video gaming there is greater likelihood they will instinctively know how to engage with the content. Even playful activities like "tag" or "hide-and-seek" has been shown to function in video game contexts, often functioning as minigames, like as seen in the *Mario Party* (1998-2018) series, which contextualizes play in a competitive or cooperative setting (Rogers, 2014). Drawing on their foreknowledge of the physics and possibilities of real-world activities can be beneficial for pupils if they themselves are to design and write games or design game-like objects. Furthermore, with new emergent technologies like *PlayStation's EyeToy* (2003) or the *Nintendo Wii* (2006) shows how games can make use of the human body and locomotor play. Jaakko Stenros makes the point that pretend playing and locomotor play are fundamental forms of play which have been harnessed to telic and paratelic activities (Stenros, 2015). Incorporating pupil's foreknowledge of what they deem as fun or engaging activities

and translating that to a video game context lays a foundation for developing types of video games and use of more of the whole human being. For example, adding elements from physical education and using it in video game designing and development can make use of a wider spectrum of the pupil's knowledge and competence.

Discussion of writing related to a video game context has primarily been devoted to highlighting video game design. Although similarly to how "reading" a video game requires a non-traditional skillset as opposed to traditional literature there are many instances where the player needs to be literate, there are video games which requires the player to write and have a basic understanding of the written language as well. For instance, in many RPGs the characters of the game can be renamed, which manufactures a gameplay experience where the protagonist of the game shares the same name as the player in charge. In the *Monster Hunter* (2004-2019) franchise, items like a healing "potion" or ammunition like "gunpowder" can be changed and personalized by the player, as well as creating "loadouts", a complete inventory of a multitude of items, which the player can write with a description and include written information for when and how to use it.

Certain edutainment games, such as SEGA's modified arcade game *The Typing of the Dead* (1999), require the player to be proficient in their writing skills and quickly write down words, sentences or phrases as they appear on the screen, which produces some kind of effect or reaction, and eventually progresses the game (fig. 2).

Figure 2: Gameplay from the "Typing of the Dead" (Sega, 2007).

Typing of the Dead (1999) provides the player with a range of difficulty options. Easier difficulty gives players more time to type and has simpler words and phrases, while harder difficulty requires players to type more quickly and with longer words and phrases. This promotes a sense of differentiated learning possibilities, where players of different skill levels can play the game and improve. The game also rewards the player with a higher score and points if they can spell words and phrases correctly each time. Writing in this game corelates well with the basic skill presented in the Norwegian curriculum, as players must write strategically, they may encounter and, eventually, learn new words, and use these words to form coherent sentences (Utdanningsdirektoratet, 2020). Although this game primarily targets players' writing proficiency, there is a prerequisite that the players can read and recognize letters and words. Games like and similar to *Typing of the Dead* (1999) require players to have comprehensive writing and reading skills, and they promote further development of these skills with repeated playing and exposure to the video game content and critical evaluation of this learning process. Additionally, this requires players to effectively interact with technology, awareness of the game's mechanics, and successful eye-hand coordination, which effectively prompts relevance to and growth of digital literacy. The success of these types of games shows how video games in their mechanics and functionality may cater to educational material, such as development of writing skills, while still provide engaging experiences.

Chapter 2 Summary

Video games can provide players with opportunities for becoming more literate in terms of important digital skills necessary for involvement in society in the 21st century and an ever-changing, globalized world (Apperley & Beavis, 2013; Hsu & Wang, 2010). As video games has become cemented as a mainstay in the life of people, especially young people, of contemporary society, exploring their potential for teaching life skills and promote knowldge through playing them can be considered a boon. The activity of playing can in itself be considered a form of literacy, meaning this action requires knowldge and understanding, and through proficiennt use and spending time doing so may be beneficial for developing a broader scope of digital literacy competence (Gumulak & Webber, 2011; Steinkuehler, 2010). Video games can provide players with newfound comprehension and knowldge of visually stimulating medium and teach how operating, and appreciating, technology may be instrumental in acquiring relevant skills for participation in our contemporary society. Modern media, and not only video games, are usually assembeled through many modes, and thorough engagement and exposure to these media forms can promote a new forms of knoeledge in the

individual (Kress, 1997). Video games may, then, not only provide pure entertainment for the player, but work as a potetnial, effectice knoweldge mediator.

In the more traditional sense of the word, literacy has by many been considered the proficiency in which an individual is able to read and write, and in their continuous development of related skills (United Nations Educational, Scientific and Cultural Organization, 2004). One aim of this chapter was to proclaim how both reading and writing are necessary components in succesful play, while at the same time "reading" and "writing" a video game is something unique to the video game medium as well. Video games provide the player with ample opportunities for reading, with video gaems having textboxes, subtitled dialogue between characters, in-game tooltips, and so forth. However, proficiency in reading a video game is connected to more than text comprehension, but requires multimodal analysis- and comprehension skills, and knoweldge of how these modes work together (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Similarly to players having to read in video games, some of these games enable or allow them to write and make use of their writing skills as well. Naming the player characters in RPG's, chatting with other players online, typing in secret passwords, searching for items in player inventory, or organizing and making lists of items are some examples of the player having the opportunity to write in-game. Digital literacy development related to video games and writing is concerned with introducing players to the mindset of being a designer, and how players can ecognize differetn game mechanics and potentially experiment and create their own video game structures (Gee, 2003; Peppler, Warschauer, & Diazgranados, 2010). Video games can be effective learning tools for teaching and developing digital literacy, as well as contextualizing traditional literacy skills to a multimodal medium.

Chapter 3: Narrative

This chapter is a closer examination on narrative and how narratives are implemented and experienced in video games. I will argue how video games can provide unique learning opportunities, offer new experiences with narrative structure, and enable players to transfer their knowledge and competence to different parts of their lives. To achieve this, I will point to research and scholarly material to support and justify my claims, as well as linking it to the English subject curriculum. The first section of this chapter will look at narrative theory to clarify what is meant by narrative. Then I will argue how video games can be considered narratives and how they can facilitate learning and literary competence. The next section of the chapter will investigate how player agency can influence narrative structure. The third section will investigate genre and how video game genre, and knowledge of them, can promote learning about narratives. The final section of this chapter will clarify the four components of narrative; character, setting, point-of-view and plot, and how these are incorporated in the narrative structure in video games. A brief section emphasising the most important arguments will conclude this chapter.

What Is Narrative?

Even if it is challenging to reach a universal definition of narrative, there is agreement among scholars that the concept is of a dualistic nature (Talib, 2017). There is a *what* and a *why* of narrative, or *story* and *discourse,* respectively. The *what* of the narrative can be viewed in terms of narrative content, consisting of, as far as the main elements are concerned, events, actors, time and location. The *why* has to do with the way the narrative is told (Talib, 2017). Discourse in this context is not about formal discussion of a topic, but rather about the structure of a narrative and the way it is presented. Narrative has to do with the succession of events, with main components being the chronology of these events, their visual or verbal representation and the act of telling/writing (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). This is explored further by Ken Puckett (Puckett, 2016) where he makes the claim that narrative is our effort in making real or imagined events or objects meaningful in relation to one another. Narrative theory is an expansion on this, with it being the various ways in which we try to understand those efforts to arrange events and make them meaningful. Puckett continues by emphasising two aspects of narrative: 1) the events, the actions, the agents, and the objects that make up the body of a given narrative and 2) the shape that those events, actions, agents, and objects take when they are selected, arranged, and represented in one or another medium (Puckett, 2016).

The functionality of narrative can be exemplified by looking at the first book in the *Harry Potter* (1997-2007) series by author JK Rowling, *"The Philospoher's Stone"* (1997). In the book the reader follows the titular character as he learns about his wizardry powers and attends the magical school of Hogwarts to become a wizard. At Hogwarts Harry becomes friends with other students, learns and interacts with the magical setting, and goes on an exciting adventure searching for the magical artefact known as The Philospoher's Stone. The artefact has the power to grant immortality, making the discovery of the stone a great desire of the dark lord Voldemort, the antagonist of the book. As part of the book's story we learn about important characters such as Harry Potter, Ron Weasley, Hermione Granger, Albus Dumbledore and Severus Snape. The interactions between and development of these actors help move the narrative forward. As readers we witness events that are transformative for Harry, such as his discovery of magical powers or winning his first Quidditch match, as well as events which are plot-centric, like the final confrontation between Harry and Voldemort. These characters and events take place in different locations in the *Harry Potter* (1997-2007) universe, ranging from Harry's home in the non-magical ("muggle") world, the interior of Hogwarts, the secret wizarding marketplace of Diagon Alley or the terrifying, dark woods located close to the school. The discourse of the narrative of this book deals with how these story components, the content of the narrative, is arranged and emphasised (Talib, 2017). Reading the book, we understand that there is a sense of progression to the characters and plot, and the way this is structured is done with a purpose and intention. J.K Rowling crafted a narrative where the elements of the story are arranged in purposefully to create a cohesive reading experience, based on how the author wants to express the narrative.

While narrative, and the components of a narrative, usually is associated with physical, perhaps traditional, literature such as fiction (novels and short stories), non-fiction (biographies), drama, some poetry and graphic stories (comics), they are also present in digital forms of literature as well. This theory section aims to relate the definition of narrative and how it can be applied to video games. To better understand how narrative is conceptualized in video gaming, as well as an understanding of its genre, it is necessary to clarify what this means. Video games can be categorized as a form literary construction, the same way books, or television programs or theatre plays are. They are literary texts which can be "read" in some way, shape or form. Physical representation of the entity where narrative resides, such as pages of a book or acts of a play, is usually considered text (Talib, 2017). However, one must consider text more than just a "physical" entity to capture the nuances of narrative. Video games are a digital medium, so

while examples of physical texts can be found within them, the representation of text is a composition of multiple modes. As such, this multimodal text can be interpreted as the relationship between the images on screen, found within the video game, and the meaning the player inscribes them. Gunther Kress (2010) states that all meaning we make and encounter in our lives are complex, and texts are the tools used to make some of these complex meanings material. Video games as text, then, provide opportunities for game developers to create complex gameplay experiences for players to ascribe meaning to and derive meaning from.

Video Games as Narratives and Facilitation of Literary Competence and Learning

Video games can be described as some form of electronic literature, containing the different components which make up a narrative. Literature crafted and created in a digital space makes for new ways for readers to digest stories. Readers who expose themselves to different forms of narrative, and reflect on what they are reading, can be more inclined to develop their understanding of narrative. Different aspects of literature and narrative can be explored through analysing the medium of video games. Specifically, players who experience narrative in video games are inclined to do some in a "dualistic" manner: where both the story of text and the players interaction with the textual material is shaping the narrative. As with traditional literature, the "reader" of a video game can experience and interpret how the video game presents its characters, its setting, or story related details. The dualistic nature of video games, however, enables the "reader" to influence or impact how these aspects are presented through interaction. An emphasis on interaction of player and story presents the medium of video games with a unique approach to storytelling.

Narrative structure defined by Egenfeldt-Nielsen et al. (2013) as combination of story, text and narration can be applied to video games. They comment on how story in this context relates to fictional worlds projected by the video game, where the story dimension of narrative is easier to discuss as the elements of a story is constant. The representation of text and the role of the narrator in video games is unreliable, as no two gameplay sessions will be the same concerning these dimensions, unlike in other medium which have static text, such as books. Domsch (2013) agrees with this sentiment, stating how text in passive media (books, films, etc) does not change form no matter who the reader is. Understanding narrative as simply a series of events can be misleading, due to the experience of reading a book contrary to that of playing a game is wildly different (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Games as a narrative-driven medium tells its story through its intentional design and architecture. Marcello Picucci (Picucci, 2014) suggests how game architectures can be divided into four distinguishable forms: Pre-

established, Discovery, Sandbox and Computer-generated. Perception of what kind of architecture, or game-design, is apparent in the video game is related to player visual literacy competence, mentioned in chapter 2 (Eilam, 2012). Player recognition of the narrative structure, then, is related to their competence in understanding of the visual and architectural game design elements present in the video game. Opportunities for learning may be facilitated through working with the discourse of narrative with these ideas in mind (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013).

Sebastian Domsch (2013) presents in his book *Storyplaying: Agency and Narrative in Video Games* theory and concepts which can provide greater depth and understanding to the relationship between video games and learning. His theoretical approach is heavily related to the expansion of knowledge about narrative, about how narrative is interpreted and understood, and how it is conceptualized in video gaming. Domsch (2013) establishes several concepts that tie into the spectrum of video game knowledge and perceives video games as a potential and effective learning tool. Video games can provide more than just entertainment, and instead be beneficial in the facilitation of learner motivation, of development of skills and literacy, as well as a modern depiction of the mechanics and workings of narrative. The titular concept of "storyplaying" is related to how exploration of the narrative elements in a video game itself can be considered an activity. The foundation of this concept that video games can be considered the combination of playing something as a game and reading it as a narrative (Domsch, 2013). It is the players deliberate actions playing the video game which creates a meaningful experience connected to a narrative in a fictional gameworld which is the essence of the concept. It is reasonable to assume that the player's agency is what is related to the very act of playing, while it is the players understanding and perception of the unfolding of game narrative which constitutes the story.

Player Choice and Agency
Agency is a central concept when analysing learning and video games, playing a central role in the discussion of why players make their choices, their motivation for doing so. This has been briefly discussed in chapter 1 of this thesis, however, it is important to discuss how agency plays a part in shaping narrative development through player choice. Deliberate choices made by the player will impact the narrative of the video game. The capacity to make these choices, based on inherent independency, is linked to one's agency. Players become "agents" in their own purpose. In role-playing games agency and power are employed by the player customizing and commanding the character(s) they play and make. However, these choices and possibilities

presented to player agency are restricted and accessible only through the rules which is inherent in the game and by the functionality the developers have made available in it. Player agency in role-playing games can be understood as choice-making in a specific framework. The appeal of games, as Domsch states, is the promise of agency and a promise of openness dependent on the player and player-choice (Domsch, 2013). The ability to have meaningful impact on the game's narrative are positive and motivating factors for player agency and may instil a sense of connection to its narrative.

The rules of the video games, what actions can and cannot be performed in-game, are relevant for discussing player agency. Comparing two different RPG's gameplay options, and restrictions, will grant a better understanding of how these rules govern player choice. In FromSoftware's video game *Dark Souls* (2011), the player takes on the role of a Chosen Undead trying to break a curse laid upon the world and usher in a new age of fire. The player is confronted with several obstacles along the way, including helping (or betraying) characters they meet throughout the game and defeating tough bosses guarding the path onwards. The Chosen Undead can be equipped with a wide variety of weaponry and magic to overcome these obstacles, but it is the players choice to how they want to proceed. To complete the game the player does not need to interact with every character, nor defeat every boss, but the choices they make impact what events take place. Even the ending of linking the bonfires of the world and creating an age of fire is not the only option, and instead usher in an age of darkness if they choose to do so. This is possible through the rules surrounding the structure of the *Dark Souls* narrative. The player occupies the role of a Chosen Undead based on how they want to engage with the events in the game world and decision-making process in relation to gameplay choices. Comparatively, *Skyrim* (2011), an RPG produced by Bethesda Studios, puts the player in a similar heroic protagonist role as *Dark Souls* (2011)*,* as the legendary Dragonborn. While the similarities between these two role-playing games are striking (such as character storylines, sidequests, player choice of magic, weapons, and equipment, etc), the rules, and game design, are quite different. In *Skyrim* (2011) it is possible for the player to make a "jump" action, where the player avatar jumps in-game, which is not possible to do in *Dark Souls* (2011)*,* even if the player would have wanted to. This means that the player-character in *Skyrim* (2011) is able to scale steep mountains, leap between rooftops and jump on top different physical objects, such as ledges or bookcases, resulting in a higher degree of vertical mobility and freedom compared to the player-character in *Dark Souls* (2011)*.* The rules and mechanics presented here govern player choice and ability to impact the narrative and is inherently linked to the game design.

Domsch (2013) remarks how player choice is influenced by the information given about the design of the game. Even if the player would want to jump in a game like *Dark Souls* (2011) this is not possible due to the choices made in the game design. The information awarded to the player makes up the different choices and possibilities in game play. How the player acts and reacts to this information is related to their agency as a human and as player, and through their effort they influence both game experience and the development of narrative within the video game (Domsch, 2013).

Agency and choice are factors that affect how a player experiences narrative in a video game, usually represented through their gameplay performance. While the overarching story of a video game is present in every gameplay session, how the player interacts with the story, and the choices they make as an individual, will slightly alter the consequences and results in the gameworld. This can be clarified further by looking at the RPG *Dark Souls* (2011). Playing through the story mode of a *Dark Souls* (2011) will enable the player to experience the same story every time from start to finish because of the content of this mode does not change and the end result will be the same either way. The story of *Dark Souls* (2011) itself will never change in the gameplay session. There is a clear beginning and end goal to the story and when the story comes to its conclusion the player is met with the end credits. However, the choices and decisions made by players operating within the story will alter and shape the road towards the complete narrative. The player can choose to kill certain enemies along the way in one game session but choose to sneak around the same enemies a different session. The choices made by the player, the decisions they make and the agency they have is what produces a unique gameplay session, distinct from another.

A study conducted by Michael Havranek, Nicolas Langer, Marcus Cheetham and Lutz Jäncke proposes how player agency and perspective influences spatial presence and brain activation patterns (Havranek, Langer, Cheetham, & Jäncke, 2012). Results from this study show how agency in gameplay can provide a subjective sense of being in the virtual reality while being unaware of the technology delivering virtual input to the senses. This research can be connected to Chris Crawford's (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013) description of the important feature of video game *representation*. The virtual reality in which players engrosses themselves in becomes a subjective representation of their choices and actions. In a sense, these choices and actions may be just as meaningful to the players in a virtual space as in the real world. Due to how video games may provide this subjective experience for the players, a critical reflection and investigation of their agency may grant opportunities for

understanding the cognitive workings happening in play. Havranek, Langer, Cheetham, & Jäncke's (2012) reasearch may provide a foundation for further exploration of how playing video games can go beyond use and understanding of digital technology, but create immersive and subjective gameplay experiences.

Genre

Genre is something which is found in all texts, not just literary texts, presented as a criterion for distinguishing between different types of texts (Talib, 2017). During a reading process we categorize the text in mental schematics and with cognitive effort it is possible to differentiate between different texts and compare how they are similar/different. We can notice the difference between a nursery rhyme and a historical biography and readily state that they do not share the same genre due to their inherent differences. Texts that share similar linguistic, syntactical or grammatical properties are understood as genre specific to the experienced reader. Someone with the knowledge about poetry recognize that for example haikus and limericks belong in different genres. Even narrative itself can be understood as a type of genre. On the other hand, unfamiliarity with the conventions of a given genre makes it difficult for the reader or writer to properly to produce something.

At a fundamental level genre can be viewed as a composition of two different components, *kinds* and *modes* (Talib, 2017). External features of a text, such as length of work, number of words, number of acts, plot structure, medium (written, spoken, multimedium) or audience can be considered a kind. A mode, however, refers to the internal features of the text, such as theme, mood or atmosphere. Modes, as described by scholar Gunther Kress (2010), are semiotic resources which is influenced by culture and is socially shaped to create meaning. Recognition the kinds of a literary text can be helpful in specifying the genre even more. Alistair Fowler remarks how the formation of kinds contributes to the thought of subgenres appearing before genres, and "if this appears counterintuitive , one has only to reflect that particulars are identified before generalities" (Fowler, 2003). This notion presumes that literary texts can exist as a genre before being labelled as such, showing how features of genres are something which can be extracted from these texts. David Duff makes another take on the concept of *mode* in his anthology *"Modern Genre theory"* viewing it as a counterpoint to genre, stating that modes denote the manner of representation or enunciation in literary work (Duff, 2000). Mode is distinguished from genre in the sense that genre is reserved for types of literature or texts which are both thematically and formally specific. When speaking of modes, we are usually considering a mixture of genres.

Video Games and Genre

In comparison to singular modal texts such as written novels, or any traditional literature for that matter, a text of multimodal nature such as a video game can be constructed and made with different specificities or properties in mind. This leads to there being a huge variety of different types of genres of video games, or at least that the amount of different forms of game play, game structure, game design and game mechanics are so numerous that there is need to organize them in certain ways. The abundance and evolution of so many different types of video games entails a challenge in classifying any one of them to any one genre (Fencott, 2012). Even within the genre of role-playing games there are huge discrepancies resulting in the evolution of sub-genres, such as action RPG's, turnbased RPG's, tabletop RPG's and MMORPG's. Scott Rogers states how genre in itself refers to how one would categorize something, while a game genre is used to describe a type of gameplay (Rogers, 2014). The gaming world throughout the years has progressed due to the creative endeavours from game directors which has ushered in an era of game diversity. The culmination of different modes can make even similar types of games be wildly different when playing, and exposure to how these modes are utilized can potentially make for new and exciting experiences for players.

Making players aware of the existence of different types of game genres, with an emphasis on how the game's mechanics and structure establishes it as a certain type of video game may yield better knowledge and understanding of how they can cater for different type of gameplay experiences. As a pupil might learn how a novel is conceptually different from an academic essay, awareness of how a puzzle game is not the same as a strategy game, even if they share characteristics, can prove to insightfulness and a larger appreciation for different types of games. This is especially important for development of conscious thinking and making sense of the mediums which we interact with. To clarify this further, let us take another look at the two RPG's *Dark Souls* (2011) and *Skyrim* (2011). *Dark Souls* (2011) and *Skyrim* (2011) are instantly recognized as video games, and at the same time anyone who plays them would easily be able to categorize them together as a certain genre of video games. Both games share characteristics true for the RPG genre: the player can enhance or progress their character's statistical abilities, the player can customize their character or parts of their character and there is an overarching narrative taking place in the gameworld. They share similar storytelling properties, such as a fantastical setting and creatures, medieval combat, supernatural abilities, and a vast amount of in-game lore. As players, we know that these traits are true for the RPG genre perhaps not consciously. Genre is easy to recognize, but difficult to define, likely a result

of the pattern matching parts of genre is something which involves rational and conscious thought (Fencott, 2012). This notion of conscious thought and rational thinking can be transferred to the intertextual learning principle devised by Gee (2003). According to Gee (2003), recognizing video games as a type of text, and in turn as part of a "family" of text (genre) is beneficial to obtain further competence in sense-making. Understanding texts as a "family" is related to how the reader can associate and categorize several different types of text as they become more experienced with them. A strategy guide for an RPG can be intertextually related to other texts in the sphere of that certain video game. Attributing this learning principle to the understanding of genre may be helpful in developing a player's appreciation of how video games can be categorized and what makes them special. Reading "new" texts becomes easy due to familiarity with the texts as a "family" (Gee, 2003). What then if RPG traits are found in other types of games? The video game *Devil May Cry 5* (2019) produced by Capcom enables the player to upgrade the arsenal of weapons and magic of any of the main characters as they progress the story, while they explore and wander in an apocalyptic setting. These are traits compatible with RPG's, but *Devil May Cry 5* (2019) is regarded as an action-adventure hack and slash, which differs vastly from the RPG genre. It is perhaps the high-octane action, stylish combo game mechanic and rhythm-based gameplay which creates this difference of genres. At the same time, this type of gameplay can be compared to that of the newer instalments of the *Final Fantasy* (1987-2020) series, which is clearly considered an action focused type of RPG. With *DMC5*'s (2019) focus on rhythm, why should it not be considered a rhythm game? Another example of confusing genre traits would be the party-type fighting game *Super Smash Bros. Ultimate* (2018) produced by Nintendo, the objective for this game is for the players to knock each other off platforms using a wide range of characters from many different franchises. *Super Smash Bros. Ultimate* (2018) allows the player to create their own character (called a Mii) and customize their appearance, their fighting style and special attacks, choose their gear and give them names. The player can grant both Miis and regular characters specific attributes, making them either faster, sturdier, or more powerful based on items and gear which can be equipped before every match, if permitted. All the characters can be played and found in the story mode of the game, referred to as "The World of Light"*,* where the game crafts an overarching narrative of these characters having to defeat an evil villain. Within the story world the player is met with lore of the story and world, unlockable characters and items, progress as their characters get stronger, and more. Despite all this, one would hardly define *Super Smash Bros. Ultimate* (2018) as a role-playing game, but instead adopt certain key characteristics of

the genre as part of its game mechanics. Critical analysis of the nuances and choices made to the mechanics of the game, instead of looking at the surface level, may enable learners to better understand and develop their strategies for categorizing and perceive genre traits of digital texts such as video games (Rogers, 2014).

The genre of a video game is likely to influence player expectations when playing the video game (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Adventure games persuade players to search investigate the setting and their surroundings looking for clues to advance the narrative. In action games, like a shooter or hack 'n slash type of game, the player will likely focus on threats and enemies which they could encounter, or simply where their character is placed in certain geographical position. One could say that such action games conditions the player to focus more on a singular focus instead of spending effort to closely inspect their surroundings, which result in these becoming more of a backdrop to the action. The imagery present may indicate to the player things which they need to respond to (such as picking up, shoot at, avoid, and so forth) and will persuade the player to pay attention to these prompts (Darley, 2000).

Narrative Components and Their Application in Video Games

This final section of chapter 3 of this thesis will present the different elements of narrative: character, setting, point-of-view and plot. Exploration of narrative and narrative elements, and making sense of narrative theory, have been highlighted in this thesis by referring to scholarly research by Talib (2017), Puckett (2016), and Phelan et al. (2012, 2006) amongst others. I will make the claim that it is fruitful to investigate such narrative theory in a video game context. Exploring the unique incorporation of character, setting, point-of-view and plot in relation to the context of video games may be enlightening for our understanding of multimodal narratives, as well as how they function in such texts.

Character

Characters can be defined as the persons, individuals or beings inhabiting a narrative. Margolin (Margolin, 1983) consider an universal understanding of character as a *narrative agent*, a human or human-like agent, whom actions impact and influence the narrative. According to Talib (2017) there is uncertainty in the ontology of characters which may impact the methodology of character analysis. One question which is relevant for this is whether or not we should compare characters to actual human beings, or just restrict ourselves to the text and not bother about the comparison? In our analysis of character there is a tendency to apply our knowledge and understanding of human behaviour from the real world to the characters we

encounter in a narrative. Additionally, the way we perceive characters is influenced by genre, maintaining a division on for example *fantastic* and *realistic* characters. This is not to say that characters are limited to a few certain types in any genre, but there is likelihood to encounter "real" characters in realistic fiction and fantastical characters in other forms of fiction. The appearance of characters in specific narratives is however common, usually categorized as stock characters, with examples being that detective characters usually appear in crime novels or Indians and cowboys appear in westerns (Talib, 2017). There is a likelihood to encounter certain types of characters in certain genres.

Characters in Video Games

The typology of characters found within a video game is related to the mode of interaction, meaning the player is able to engage with them, to varying extent. Egenfeldt-Nielsen et al (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013) propose that there are four types of character in video games: stage characters, functional characters, cast characters and player characters. Due to how video games are constructed in a certain composition through modes, one would perceive these characters in a different space and appearance compared to say a novel or an illustrated book. One would perhaps encounter stage characters in different modal texts; characters which are part of a scenario which the player/reader cannot interact with. In video games specifically these types of characters move around with no function personality. Functional characters are the most similar to stage characters, however they do have some function for the player. In certain sandbox type games, such as *Grand Theft Auto* (1997-2013) franchise, there are characters which walk around which the player can engage with, for example either speak to them or attack them. Stage characters and functional characters would be considered flat characters as they see little to no development throughout the game (Talib, 2017). Cast characters are special in that they share a relation with the story of the video game. A character like Captain Toad in *Super Mario Odyssey* (2017) or Ganondorf from the *Zelda* (1986-2019) series have characterization, personality and an agenda which influences the narrative in some capacity. Finally, there are player characters which actions and control are decided by the player themselves to influence the narrative. These are either characters with premade designs, such as Mario or Lara Croft, or characters which can be customized to some degree like the player character from *Skyrim* (2011). In games which are inherently linear or lack a multiplayer component these player characters are often protagonist or at least have some sort of major influence on the game narrative. For example, in most RPG's the player takes control over the main protagonist, the hero of the narrative so to speak. Similar to other types

of literature, placing the player/reader in the midst of the bulk of the narrative events creates a sense of engagement and interest in the story, and to wholly experience what the narrative is trying to convey. Complete narrative disconnect between character and overarching story does not make for a fun experience for the player. Certain RPG's such as the *Final Fantasy* (1987-2020) series often feature a narratively important player character, but also enables the player to portray other members of the cast, either through combat, overworld transportation or side-missions.

Setting

Setting can be viewed as the *place*, *space* and *state* of the narrative. Talib (2017) presents a definition of a setting expanding upon these three components. Setting can be viewed as 1) the background material in relation to the characters and events, 2) the immediate surroundings of the characters or objects in the narrative, and finally 3) the special location which is able to extend over series of actions, events and situations, although independent to any of them. Conclusively, a setting is closely associated with the objects found within the narrative.

Similar to how there can be fantastical and real character, so can there be settings which are more or less connected to our perception of the real world. Settings can be quite distanced from the "real" world through magical or fantastical characteristics, for example in the world of *Skyrim* (2011) there are magical powers, mythical creatures and landmarks which would not be able to exist in the real world. This makes it obvious for the reader that the narrative is not restricted to the rules of the real world. Some settings can however be based on the real world but still exhibit fantastical properties. Modern action films like *The Fast and The Furious* (2001-2020) franchise have settings in the real world (albeit fictionalized to a degree), with a lot of combat sequences. The characters from these films usually can withstand more punishment and harm than would be possible in real life. Even if the setting is somewhat realistic, if the events and characters operate differently than the reader would expect from the real world there is bound to be a disconnect. Degrees of fantastical or real elements in the setting can be related to Talib's (2017) concept of a *storyworld*, which is fixated on what is true or untrue in a narrative. This concept overrides the notion of realistic or fantastic characteristics but suggests that there is need to determine the semantics and meaning found within a narrative.

Setting in Video Games

How one would analyse the narrative component of setting in relation to video games it is necessary to differentiate between the dynamic and fluid narrative universe constructed through

player experience through gameplay and the creation of a gameworld, and its lore, characters, events as intended by the game developers. Role-playing games are special in that they enable the player to create their avatars, their own personalized characters in which they progress through the story and the narrative. As such, the game the player is playing is special and unique as no other game will be the exact same as their own, meaning that the setting their avatars interact with will also be unique and respond accordingly to their actions. One could make the argument that certain elements, choices, events can be very similar if the video game itself does not lend itself to player agency. If the player character in *Skyrim* (2011) chooses to steal and wreak havoc in major cities it could mean that guards will be hostile to the player, shopkeepers won't sell anything to them, there might be damage to the cities themselves because of player magic, and so forth. The environment around the player adapts to how they play, and it is through player actions which can impact the overall narrative. In a way the player is responsible for how they interact with the setting of the video game and they are the one who decides how to interpret their role in the narrative. On the other hand, the setting is something which is meticulously crafted by the game developers. How the gameworld looks, how it responds to the player actions, what stylistic choices are present, and the feel, weight and depth of surroundings are things which the player has no control over. The lore, or information and history of the narrative components of the video game, is essential to world-building and another creation by the developers. However, in certain games, such as the *Dark Souls* (2011), the lore can be quite ambiguous and open to player interpretation which may mean that certain elements of the setting are based on player understanding.

One way to understand the narrative component of setting in the context of video games is to view the gameworld as a gamespace. A gamespace is the setting of the video game where gameplay can take place (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2016). According to Egenfeldt-Nielsen et al, these gamespaces are not realistic, but rather reductive: they reporduce some elemetns from the real world, but apply game mechanics and rules to facilitate gameplay as well. An intended use of a gamespace is for the game designers to curate a specific kind of setting for their video game, and a specific isntance of interaction for the player. Domsch (Domsch, 2013) suggests that a gamespace defines the range of options a player can make, and a set of options which are impossible to enact on. Impossible options can be communicated to the player implicitly, like a mountain in *Skyrim* (2011) which the player cannot reach and is "out-of-bounds" hindered possibly by an invisible wall. This can also be communicated explicitly, like a sign stating "you are not allowed to enter here". Players becoming aware of

what they can and acannot do in the setting of the video game can affect how they percieve the video game experience and how immersed they potentially become (Steinkuehler, Squire, & Barab, 2012).

Point-Of-View

How a narrative is presented, or how a story is told, is oft decided by a *who*. This is categorized as a point-of-view of a narrative, also referred to as a narrator. The relationship between the teller and the tale, and going further, the relationship between the teller and the audience, is central to the essence of narrative (Phelan, Kellog, & Scholes, 2006). Point-of-view, or narrator, can be divided into two categories: first- and third-person narrators. According to Talib (2017) the concept of person is not a grammatical one, but instead applies to how the narrator is *within* or *outside* the story. He states, "a first-person narrator is within, whereas the third-person narrator is outside the world of a story" (Talib, 2017). The difference of these points-of-view deals with whether we as reader observe the action through the eyes of characters we read about (first-person narrator) or if we are more akin to an audience to a play, where we can observe everything that is happening as an outsider (third-person narrator).

In the discussion of narrative, a closely related term is *naratee.* A naratee refers to the participant that the story is being told to, meaning it can be the reader or the role the reader inhabits. When discussing narrative, it is also helpful to distinguish between the naratee and a narrative audience. The naratee is a character position in the text, while narrative audience refers to the role the actual reader takes on while reading (Phelan & Rabinowitz, 2012). In Robert Louis Stevenson's novel the *Strange Case of Dr. Jekyll and Mr. Hyde* (1886) a lawyer by the name of Mr. Utterson receives a letter from Dr. Henry Jekyll detailing events which have occurred in his transformation into Mr. Hyde. In this letter, the naratee is the character of Mr. Utterson, as it is addressed to him. As readers, we observe Mr. Utterson, so to speak, looking over his shoulder. We partake in the revelation of the events surrounding the transformation in the same capacity as Mr. Utterson, meaning as readers we share the same knowledge and information as the narratee.

Talib (2017) points out how the narrator can be a projection of the author while at the same time maintaining a division between the two. In this sense narrator is not the same as the author of the narrative. If a reader of the narrative perceives discrepancies in the "messages" sent by various personages, or discrepancies in the way they send and receive these "messages", irony

can occur. Any situation in which one person understands more (or less) than another, there is certainty that irony is present (Phelan, Kellog, & Scholes, 2006).

The inclusion of a narrator is considered mandatory to any traditional literature or printed text, such as short stories or novels. However, there is discussion among scholars if narratives dependent on a visual medium, or not directly encoded in language, are required to include a narrator (Talib, 2017). Games focusing on the player's creative endeavours such as *Minecraft*'s (2011) creative mode enables the player to explore the gameworld and experience events without the inclusion of context or ideas from any narrator. Point-of-view in visual narratives can be understood as camera-eye movement, voice narration, cinematics, or related terms (Talib, 2017). This thesis will discuss point-of-view used in video games and how learning and engaging with this can promote better understanding of narrative.

Point-Of-View in Video Games

Video games are inherently special in terms of being literature in that they enable the reader/player a visualized realisation of the characters' viewpoint. An example would be the utilization of a first-person point-of-view and a third-person point-of-view. Playing a game through a first-person point-of-view would let the player look through the eyes of the player character, observing and interacting with the gameworld in a similar fashion to how it would function in real life. This type of point-of-view has traditionally been used in the video game industry for shooters such as the *Call of Duty* (2003-2020) franchise, in which the first-person viewpoint inspires a closer engagement with the action, providing a closer resemblance to realism and makes the experience particularly intense. What the player can observe is restricted to what they can see, and they need to rotate the "camera" to make new observations in the game. Third-person point-of-view in video games can be viewed as the player observing the player character from the outside, for example in an over-the-shoulder perspective like in the *Resident Evil* franchise, from the bottom-down like in MOBA's such as *League of Legends* (2009) or like in *Super Mario Odyssey* (2017) which has a dynamic camera following Mario in different heights and angles depending on the gameworld geography. While it seems third-person is a more prevalent point-of-view in RPG's there are examples where incorporation of different perspectives are present. The different games from the *Elder Scrolls* (1994-2020) franchise enables the player to swap between playing the game from the two points-of-view, altering how they experience the gameplay events to a certain degree. Playing in a firs-person point-of-view enables the player to do combat and travel and experience a field of vision like

that in real life. This allows for a certain height of realism to be incorporated into the gameplay, even if the setting or surroundings of the game is not necessarily grounded in it. The action and details of the game can also feel more tense and "close" when playing this way. Third-person point-of-view on the other hand enables the player to gather more information and impressions from their surroundings. The larger field of view allows the player to perceive more, based on how they move the "camera", than if they play in a first-person point-of-view. It is the result of an intended game design choice from the game developers to create a specific gameplay experience which is central in how the viewpoint of a game is decided. Some games, like *Skyrim* (2011), allows for player preference as well.

One interesting aspect of point-of-view used in video gaming is related to the player's cognition and retaliatory behaviour, and how a video game's point-of-view enables players to be invested in the narrative. One study by Marina Krcmar & Kirstie Farrar found that internal game features such as a third-person gameplay containing blood, combines with a hostile cognition, encouraged more aggressive outcomes (Krcmar & Farrar, 2009). More research on emotional and retaliatory behaviour elicited by video games could prove useful in their possible application in educational settings. Educators who use video games to promote a sense of investment for the players might entice a more meaningful attachment to the activity, which is connected to the immersion process described by Steinkuehler et al (2012).

Cinematics, or cutscenes, is understood as being part of a visual representation of point-of-view in video games, often influencing the player's perception of the narrative (Talib, 2017). A cutscene turns gameplay into a "film", where story events are shown or characters interact, and the player has no control in its outcome. Egenfeldt-Nielsen et al (2013) confirms a number of ways in which cinematics can impact the narrative. Firstly, they can introduce central narrative conflict and tension. Secondly, cutscenes can help push the narrative in a certain direction. Player choice and agency has, as mentioned previously in this thesis, influence over game narrative, and way for the game to counterinfluence is to have certain events happen in a cinematic sequence the player cannot control. Cinematics can also provide new perspectives from what the player already has made or show content previously unknown to the player. Cutscenes could also be used to convey information to the player, either through giving the player item information, or an effect similarly to a camera zooming out and showing vital information of the gamespace, as in the beginning of every level of *Spyro the Dragon* (1998).

Egenfeldt-Nielsen et al also states how cutscenes could be used to create an aesthetic atmosphere like that of contemporary cinema (fig 3).

Figure 3: Introduction of a character in the game Metal Gear Solid: Ground Zeroes (Konami, 2014).

Furthermore, it is important to note that point-of-view in video games concerns how the players gather information related to the gameworld, or how players can construct meaning by analysing or reading the space which they play. Cinematics has already been established as a source of information gathering (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013), but a similar process can also be achieved by players themselves looking through the eyes of their avatar, or as seen from a third-person, outside perspective. Players can view objects in the game environment and analyse how they apply to progressing the narrative or influence their gameplay experience. One can liken this expression to that of Gee's "Material Intelligence" Principal, suggesting how learners can engage their mind and relate their knowledge, thinking, and problem-solving skills with the knowledge stored in objects presented in the game, often achieving more powerful effects (Gee, 2003). The player perceives what happens in the game and applies their own sense-making skills to extract meaning from this. A good qualifier for a game narrative, and as part of the gaming experience, is that narrative is what happens in minds of those who experience it (Domsch, 2013).

Furthermore, player investment in the video game can be obstructed or break if the player sense that there is something which does not align with the storyworld. One likelihood is that the setting, characters or plot the players can observe does not line up with their perception, such as NPC's who act irrationally, objects in the gamespace look out of place or events or happenings which fail to be thematically relevant. Immersion breaking at this level is related to game design choices made by the developers and cannot be altered by the player. Another likelihood is if the player encounters technical glitches, or "bugs", which are irrelevant to the narrative and are results of failure in the game data. This could be looking at characters appearing inside walls, objects clipping or disappearing completely, or abnormalities with character models (such as characters in game having their textures appear stretchy or enlarged).

Plot

According to Talib (2017), *plot* has been underemphasised as a narrative component by most literary critics, yet it still is important to the composition of narrative. It is taken to be the equivalent of narrative structure. The sequence or series of events making up a story. When any part of narrative, such as character, becomes *dynamic* it can be considered part of plot (Phelan, Kellog, & Scholes, 2006). An additional way to describe plot is through the Aristotelian method of a beginning, middle and projected end (Puckett, 2016). Aristotle, who had mainly tragic drama in mind, compared plot to the "soul of mimetic literary works" (Phelan, Kellog, & Scholes, 2006). Whether our definitions of plot favour the Aristotelean method or any other definition, there is agreement to the dynamic and sequential nature of the concept. Furthermore, Talib (2017) points out a crucial connection between characters and plot. The progression of a plot is epitomized by conflict, and conflict is centred on a character, or characters, in a multitude of external or internal possibilities. Phelan et al (2006) deviates the definition of plot from a focus on character, stating how story relates to character and action in narrative form while plot is a specific term centred on action alone, with minimal possible reference to character.

Other central elements related to plot are suspense, surprise, and the eventual climax. Suspense is what leads the reader question "what comes next?" or "how will this end?" in a narrative. Answers to these questions can come at any given time in the narrative, and suspense seems to need a build-up process to ensure gratification for the reader. Surprise is created when the narrative departs from our expectations (Talib, 2017). Both suspense and surprise might be considered responses from plot rather than components of plot as some scholars argue. Climax, on the other hand, is a narrative component of plot which involves the highpoint or culmination of events. It is not to say that the climax is the endpoint of the narrative, but rather that the plot

points of the narrative provide the reader with expectations and investment in the story which eventually culminates in an exciting, high-point.

Plot in Video Games

Plot as used in video game is related to not only content of the narrative, but also the progress of this narrative as time and effort is put in by the player. One major understanding of plot is how it is related to the mechanics of a video game (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Events and progression of the story occurs as the player interacts with the video game and plays at a certain path encapsulating the narrative structure of the video game. As already discussed in this thesis, video games are special in that they enable the player to make choices and influence the narrative to make an unique gameplay experience. The plot of a video game is concerned with applying these choices made by players to one pathway which can result in progression in many different, possible outcomes. According to Domsch (2013), these pathways created by the player choice are nodes which can align to future possible narrative structures. Every choice a player makes acts as a node in which a new possible future of narrative progression appears, like branches of a tree. This sentiment is shared by Egenfeldt-Nielsen et al (2013) stating how narrative action has a "branching" effect; the existence of multiple paths in a narrative. Of course, there are difficulties related to this way of understanding plot. It is unbelievable that every choice a player makes as they play will create new narrative nodes and drive the plot in new directions all the time. This would require an unrealistic amount of time, resources, and game data to sufficiently work in the video game. Granting the players an illusion of narrative impact through their choices or moderate amounts of branching seems to be a solution for most video game designers to this obstacle. *BioShock* (2007) lets the player make choices regarding how to interact with certain NPCs they encounter as they progress through the game. Players can either save and rescue these characters, which directly influences their end-game narrative plot junction, or they can harvest these character's genetic material, "ADAM", which in turn places these players at a different narrative place at the end of the game. The player must follow the linear progression of the story no matter which of these choices they make, but the game developer has enabled a possibility of player influence to the narrative structure. Effectively, such mechanics is meant to provide players with the sentiment of swaying the nature of the plot progression, and ensuring a narrative where player action has plot consequences (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). It is player agency which influences the plot and how the narrative system of the video games is tied to the choices the player makes. Whether the plot progression of a game is more linearly based

like in *Bioshock* (2007) or open-ended like in many MMORPGs, there will be some in-game plot consequences to how the players choose to act and the choices they make.

In most RPG's plot, or narrative structure, can be linked to two separate categories: either the main story or side missions. The main story is the intended narrative route designed by the developers, taking the player from the beginning of the game to the end of the game. This narrative function can be compared to traditional literature, as they will follow the same sequential nature. From a design standpoint the game should provide incentive for the player to follow the main story to its completion by challenging player skill and manage a sense of motivation and engagement (Rogers, 2014). Side missions on the other hand are optional pieces of game content. These events could be relevant for expanding the games plot or in-game lore, and acts as a way for the player to acquire additional content, be it extra experience, items, or information or knowledge about the game. Both main story and side missions are part of the entire narrative structure, which in turn is made up of smaller separate building blocks of narrative. The term "quest" is often referenced and used in RPG's, which acts as smaller sequences of the whole narrative. These quests are a type of "mission" the player must complete, effectively enabling control of the game's action and create opportunities for storytelling (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). The result of the player's actions or choice of actions as they complete the quest can either directly impact the overarching narrative or provide the player with certain rewards which in turn can affect the story. When players complete quest related to the main storyline of the video game, they will trigger a node of progression where the game registers the end of a narrative sequence and advances the storyline one step closer to the climax of the intended story route. Here the player's action and choices will most likely affect the outcome in some capacity, but due to the programming of the video game the story progression will occur no matter what choices the player has done beforehand. For instance, in *Skyrim* (2011) during a section of the main quest the player avatar is presented with a choice of saving an elder dragon or join the order of a dragonslaying guild and then kill this very dragon. This choice is crucial for the advancement of the game's narrative and what the player chooses will impact the plot progression of the game or which characters show loyalty to the player avatar. However, no matter which options the player chooses to do the video game will register a completion of a plot point and place the player on to the next step of the narrative path. When the player completes a side-quest the video game does not register this as a progression of the pot and narrative, and the outcomes of these types of missions exist in another temporal state. Players can complete side-quests and not see any progress in time nor

narrative sequencing, likening the time they spend in the gameworld as "frozen" as it does not advance anything else. While not a primary influence to the plot of the video game, side-quest can reward payers with better weapons or upgrades to their arsenal, or allow them to experience more of the storyworld and lore not directly tied to the main story.

Chapter 3 Summary

Narrative as presented in video games provides unique learning opportunities and learning experiences for those who play them. The interactive and multimodal nature of video games may provide new ways of engaging with narrative, and players will be able to transfer their knowledge and competence to different areas of their lives. Video games which provide players with a sense of meaningful agency and choice-making prove to be more engaging and effective in their storytelling (Domsch, 2013). In my opinion, video games which prove to be engaging and produce positive cognitive responses in players might be beneficial for teaching and education, if utilized properly by educators. Video games which are inherently more violent, or at least focuses on aggressive actions, can be immersive for the players, but this immersion may perhaps break with age restrictions put on in schools and not grant the desired educational effects. This notion is supported by James Paul Gee, as he categorizes video games as neither good nor bad, but it all depends on how they are used (Gee, 2003). Making use of video games which lets player become cognisant and immersed in their playing can be used effectively when coupled with learning goals. Used appropriately in a context with a supervisor or peer, it may be possible to diminish, or at least be aware of such issues (Krcmar & Farrar, 2009). Playing and interacting with different types of video games may also prove to enhance pupil's understanding of the concept of genres. Players who understand the reasoning for designing a video game with certain game mechanics in mind can better reflect on how this impacts the narrative sequencing and what kind of story the video game is trying to tell. As such, a reflection of the use of genres in video games transcends how one might recognize literary texts and learn to better make sense of them (Gee, 2003). Furthermore, an appreciation for how narrative components are structured and integrated in digital texts may provide scenarios for developing literary and narrative competence for players (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013). Good learning of narrative be the outcome if players recognize how characters, setting, point-of-view and plot are utilized in video games, especially if they compare and refer to their previous knowledge and understanding traditional literature. It is my belief that video games is a medium which is not only engaging for players as an activity, but has the ability to

hold our interest through unique narrative mechanics and tell stories not matched by other medium.

Conclusion

Investigating the relationship between video gaming and how this activity may promote better learning has been the prime objective of this thesis. As a popular pastime for many young learners, video games have the ability to engage and function as valuable teachers for these youngsters. Therefore, applying these games to an educational context can in many ways prove to be beneficial for educators around the globe – to bridge the gap between learner's out-of-school activities and school life.

To purposefully evaluate how video games can be considered effective learning tools, one may view them in relation to the competence aims of the Norwegian curriculum, and specifically in the English subject. Grounding their use to an educational setting encourages how we can view this medium as more than just enjoyment. Video games may be used in the classroom in the same capacity as traditional literature, if educators and pupils alike have the necessary proficiency to use them, or at the very least function as an engaging alternative (Ebrahimzadeh & Alavi, 2017). Even commercial video games, which are primarily designed as entertainment, can create a positive impact on pupil's learning in accordance with school curriculum.

This thesis meant to shed light on how video games have merit in facilitating player motivation, can be considered tools for learning as well as developing competence, and finally teach the player alternative ways to comprehend stories and narrative. Although these three themes may seem distant from each other, connected mainly through the general theories of learning and pedagogy, the reach and span of video games as a medium present its players with various context where they may experience, and be exposed to them. Video games function as educators and promotes "good learning" if players can utilize and realize their scholastic potential (Gee, 2003). This thesis has tried to shed light on how good learning can be traced to pupil motivation and their development of skills and narrative understanding through active and purposeful interaction with this medium.

Understanding the impact video games have on pupil's out-of-school lives can be beneficial for helping educators realise how they can be used to great advantage in schools. Although this thesis proclaims that video games may be more than pure entertainment, the intent has not been to categorize the medium as the "be-all and end-all" of contemporary, educational material. However, viewing video games as a resource for promoting further learning and development of learning can encourage variety and differentiation to how we approach didactic teaching.

Conclusively, video games can indeed be an asset for the facilitation of learning for those who play them (Egenfeldt-Nielsen, Heide Smith, & Pajares Tosca, 2013; Gee, 2003).

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