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Digital Games in the EFL Classroom:  
A Mixed Methods study of Beliefs, Practices, and  
Challenges of Norwegian Lower Secondary Teachers

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## **Abstract**

This mixed methods study explored the Norwegian lower secondary English as Foreign Language (EFL) teachers' beliefs, practices, challenges, and suggested solutions regarding the use of digital games in the classroom. The aim of the study was thus to find out the beliefs of Norwegian lower secondary EFL teachers regarding the use of digital games, specifically investigating their current practices and attitudes. Furthermore, it investigated the challenges the teachers reported to experience when implementing digital games in their teaching practices. Additionally, it looked into what teachers found beneficial in order to implement digital games in their teaching practices. Data was collected through a questionnaire answered by 73 teacher participants and via four in-depth teacher interviews.

The study revealed that a majority of teachers used digital games in their EFL lessons. Approximately 40% of these were categorised as regular users and 60% as occasional users. Notably, four distinct attitudes towards digital games emerged through data analysis, namely enthusiastic, moderate, ambivalent, and reluctant. These four attitudes were found to significantly impact the implementation of digital games in the classroom. As for challenges reported by the teachers, these mainly revolved around issues, such as teacher competence, time constraints, and resource availability. However, the study revealed the crucial influence of the teachers' beliefs in shaping their practices regarding the use of digital games. The teachers suggested that enhancing teacher competence and providing necessary resources could reduce these challenges and increase the use of digital games in EFL classroom.

This research study contributes to the field of knowledge by shedding light on the complex relationship between the teachers' beliefs, practices, and challenges in implementing digital games into the EFL classroom. Further exploration into strategies for increasing teacher competence may offer valuable insights for the use of digital games in the EFL classroom.

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## List of Abbreviations

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<b>Abbreviation</b>	<b>Definition</b>
DGBL	Digital Game-Based Learning
DGBLL	Digital Game-Based Language Learning
EFL	English as a Foreign Language
LK20	<i>The National Curriculum for Knowledge Promotion 2020</i>
SIKT	Norwegian Agency for Shared Services in Education and Research



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# **1 Introduction**

This thesis is a mixed methods study which investigates the Norwegian lower secondary English as Foreign Language (EFL) teachers' beliefs about the use of digital games in the EFL classroom. Furthermore, the study inquires into how Norwegian lower secondary EFL teachers implement digital games into their teaching practices. Additionally, the study investigates the challenges of using digital games when teaching English in Norwegian lower secondary school. The focus of the thesis will thus be on English as a foreign language (EFL) teachers' beliefs, practices, and experiences concerning the challenges that the teachers face when using digital games in the EFL classroom. Thus, the present thesis aims to answer the following research questions:

1. What are the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the EFL classroom? In particular, what are their practices and attitudes?
2. What challenges do the EFL teachers report regarding the use of digital games in the classroom?
3. What do the teachers find beneficial in order to implement digital games in their EFL teaching practices in Norwegian lower secondary school?

The above questions will be answered through a mixed methods study. The data was collected by a mixed method questionnaire and teacher interviews. The questionnaire was answered by 73 participants, which yielded both qualitative and quantitative data. Furthermore, four Norwegian lower secondary EFL teachers were interviewed which provided qualitative data based on their personal experiences with digital games in the classroom.

## **1.1 Relevance and Potential Contribution of the study**

In recent years, there has been an increasing interest in research on the use of digital games in an educational context (e.g., Blume, 2019; Brooks et al., 2019; Dondi & Moretti, 2007; Lund et al., 2014; Munkvold & Sigurðardóttir, 2018; Sykes, 2018). However, a recent study suggests that previous research may have investigated teachers who are predominantly positive to the use of digital games (Munkvold & Sigurðardóttir, 2018). The research to date

has tended to focus mainly on the teachers' use of digital games rather than looking into the different perspectives among teachers. This indicates a need to understand the various attitudes to the use of digital games that may exist among the Norwegian lower secondary EFL teachers.

This thesis seeks to investigate the Norwegian lower secondary EFL teachers' beliefs and experiences regarding the use of digital games in the EFL classroom. More specifically, it investigates the EFL teachers' current practices and attitudes towards digital games. Additionally, this study investigates the challenges regarding the use of digital games reported by the teachers, and how they may affect the teachers' practices. Furthermore, the current study investigates what the teachers would find beneficial to implement digital games in the classroom, and how these suggestions may reduce some of the reported challenges. This thesis provides new insights into the nuanced perspectives of the teachers and to better understand their practices and needs.

The technological development has accelerated rapidly in recent years, which has led to an increase in digital resources available for teachers, including an abundance of digital games (Bergene et al., 2022, p. 40). Digital games have become a popular source of entertainment worldwide, creating a billion-dollar industry (Reinhardt & Thorne, 2016, p. 415). This is also apparent in Norway, where a recent study shows that 76% of children, aged 9-18, play video games (Medietilsynet, 2022). The Norwegian government has issued a statement encouraging teachers to use technology in their teaching practice to meet the pupils' interests, and states that game-based teaching methods can increase pupils' engagement and learning (Meld. St. 22 (2010-2011), pp. 40–41).

Recently, there has been much discussion about game-based learning and its potential as an effective teaching tool. (Dondi & Moretti, 2007, p. 502; Sykes, 2018, p. 220). In addition, recent research has found that there are multiple benefits to using digital games in language teaching, such as increased motivation, differentiation, and language acquisition (Blume, 2019, p. 20; Sykes, 2018, p. 220). However, while research shows there are benefits to using digital games in the classroom, it does not seem to be a frequently used tool by teachers in language learning (Blume, 2019; Lund et al., 2014). The current presupposed "mismatch" between means and ends regarding the use of digital games in language teaching is the motivation for writing this thesis.

## **1.2 Outline of the Thesis**

The current thesis is composed of seven chapters. Chapter 1 serves as an introduction to the research project, presenting the research topic and establishing the research questions. Moreover, it provides an overview of the structure and content of the thesis. Chapter 2 provides the necessary context and background for the study. It delves into the structure of the Norwegian educational system, detailing both the national curriculum and the subject-specific curriculum. Additionally, it explores the current landscape of digitalisation in Norwegian schools, along with the ongoing debates surrounding this digital transformation. Chapter 3 provides the theoretical foundation of the research. First, it defines the term digital games, before it explores the concept of teacher beliefs and professional development. Additionally, this chapter provides an overview of previous research on the topic of teacher beliefs and digital games. Chapter 4 presents the methodology used in this study. It begins by explaining the research design and the data collection methods, which are questionnaires and teacher interviews. Additionally, the chapter describes how the collected data was analysed. It also outlines the steps taken to uphold validity, reliability, and ethical considerations during the research process. Chapter 5 presents the results from both the four teacher interviews and the results of the questionnaire. Chapter 6 discusses the results in light of the theoretical framework outlined in Chapter 3. It also compares the findings of the present study with previous research on the topic. Chapter 7 concludes the research project by summarising the main findings, addressing the research questions, and discussing the limitations of the study. Additionally, it explores the contribution of the research and its potential implications for teaching and future research.

## 2 Background

This study set out to explore the perspectives and experiences of the Norwegian lower secondary EFL teachers on the use of digital games in the classroom. To understand the diverse perspectives, it is essential to comprehend the teaching context. Therefore, this chapter explains the context and provides background information for the study.

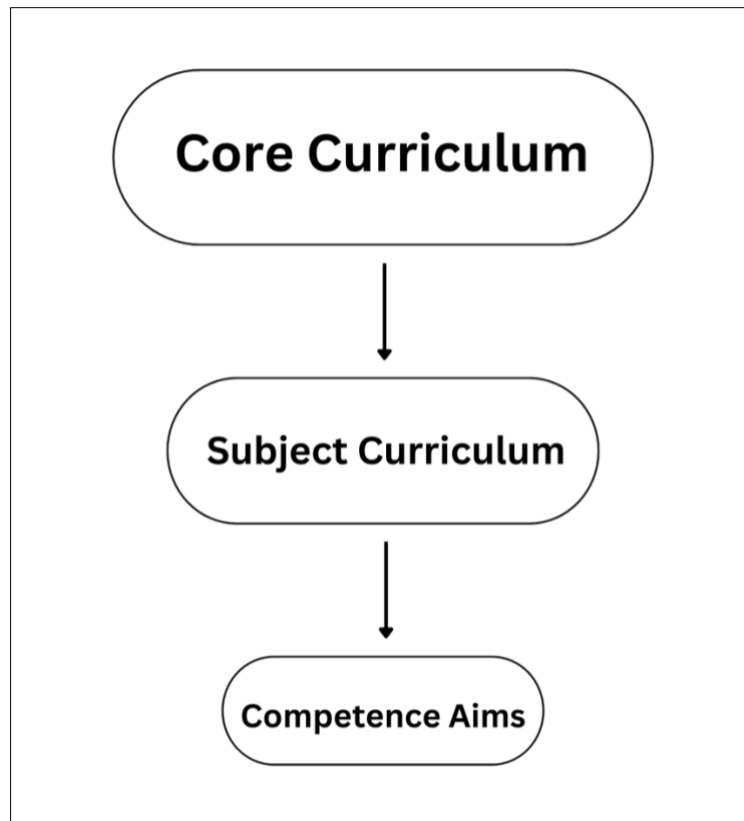
The first section outlines the Norwegian educational system and looks into the national curriculum's significance within this system. Following this, the second section explores how the LK20 framework facilitates the integration of digital games in EFL classrooms. Lastly, the third section examines the present status of digitalisation in Norwegian lower secondary schools and delves into the ongoing debate surrounding this topic.

### 2.1 The Norwegian Educational System

The education system of Norway is divided into four main parts: Kindergarten, Primary School, Lower Secondary School, and Upper Secondary School (Norwegian Directorate for Education and Training, 2022). In Norway, pupils typically begin primary school at the age of six, where they attend first to seventh grade. Following primary school, pupils move on to lower secondary school, which comprises the three grades, namely the eighth, ninth and tenth grades. Lower secondary school begins around the age of 13 and continues until approximately age 15. Upper secondary school typically lasts two or three years, depending on whether the pupils attend vocational or general studies. Primary and lower secondary school is mandatory in Norway, while upper secondary education is voluntary, although many pupils choose to attend the latter (Norwegian Directorate for Education and Training, 2022).

The primary and secondary education in Norway is regulated by *The Curriculum for Knowledge Promotion* (hereby referred to as LK20), which dictates educational practices within schools and serves as a framework all teachers must adhere to. The curriculum consists of two parts, namely the *Core Curriculum* and the individual *Subject Curriculum*. The Core curriculum is the central part of LK20 and focuses on the larger picture of education. The subject curriculum is more specified in relation to the individual subjects, and the competence aims for the subjects (Ministry of Education, 2017). Figure 1 illustrates the hierarchy of the different parts of LK20, which reflects the importance of the Core Curriculums' content:

Figure 1: The National Curriculum for Knowledge Promotion



As seen in Figure 1, the core curriculum applies to all subjects and aspects of school and constitutes the main component of LK20. It explains the purpose and core values of education, while also specifying the fundamental skills, interdisciplinary topics, and specific subject competencies. Both fundamental skills and interdisciplinary topics are connected to the all-round development of pupils to prepare them for life. The fundamental skills include reading, writing, numeracy, oral skills, and digital skills. The latter specifies that teachers should use digital tools in the classroom to promote pupils' development of digital skills in all subjects (Ministry of Education, 2017).

The Subject Curriculum contains the individual curricula for each subject taught in Norwegian schools and describes the competence the pupils should acquire in the specific subjects (Ministry of Education, 2017). The English Subject Curriculum specifies what pupils should learn in the EFL subject. The curriculum describes the subject's relevance and central values, core elements, interdisciplinary topics, and basic skills for the EFL subject. This curriculum contains competence aims which describes the knowledge and skills the pupils should acquire in the subject. In lower secondary school, the EFL subject is given 222 hours

assigned for the three years of lower secondary education. This is equivalent to two full hours of lesson per week (Ministry of Education, 2019).

## 2.2 Digital Games in The National Curriculum

The intentional vagueness of LK20 allows teachers to adapt their teaching methods to different pupils, school environments, and changes in society. Additionally, it invites teachers to include pupils in lesson planning to find relevant and meaningful content and resources which contribute to learning and motivation (Ministry of Education, 2017). Brevik, Garvoll and Ahmadian (2020) claim that learning English is entwined with interest and should therefore be incorporated in language learning to make it more relevant for pupils. They suggest that digital games provide pupils with opportunities to learn language both at home and at school (Brevik et al., 2020, p. 211). While LK20 does not mandate the use of digital games in EFL lessons, it does permit their use as teaching tools, specifically in two ways: the definition of ‘text’ and digital skills as one of the basic skills.

In the English Subject Curriculum, the definition of text is interpreted broadly. Thus, it encompasses not only traditional printed texts but also multimodal texts. These multimodal texts can be digital, graphic, and may even include sound. Given that the use of texts is a significant aspect of English teaching, it follows that digital games can be incorporated and are comparable to printed texts. While the broad definition of text encompasses digital games, their explicit use is not outlined in the English Subject Curriculum for lower secondary school. However, it is specified in a competence aim for upper secondary school, which is derived from a lower secondary competence aim. The upper-secondary competence aim is as follows: “discuss and reflect on form, content and language features and literary devices in different cultural forms of expression from different media in the English-language world, including music, film and *gaming* [emphasis added]” (Ministry of Education, 2017). Therefore, it could be anticipated that teachers would prepare their pupils for this future competence aim by incorporating it into their EFL lessons ahead of time.

Apart from this, digital games could be incorporated into lessons to foster the development of digital skills. The digital skill is defined in LK20 as the ability to gather and understand information, use digital tools creatively and connect with others in digital environments (The Norwegian Directorate for Education and Training, 2017).

Scholes et al. (2022) found that teachers can use digital games to enhance pupils’ digital skills. Digital games have the potential to improve pupils’ computer literacy and

technological proficiency. Developing technological proficiency through digital gaming can provide pupils with essential skills and competencies that are necessary to navigate the rapidly changing technology landscape of today and the future (Scholes et al., 2022, p. 13).

The flexibility of LK20 allows teachers to use tools they find beneficial for teaching and encourages them to incorporate their pupils' interests to enhance the relevance of lessons and motivation. Therefore, digital games can be seen as a suitable digital tool for the EFL classroom. However, since the use of digital games is not explicitly mandated in lower secondary school, it is not obligatory for teachers to incorporate them into their teaching. Consequently, the decision to use digital games depends on each individual teacher.

## **2.3 Digitalisation in Norwegian Schools**

To understand the Norwegian lower secondary EFL teachers' views on and experiences with the use of digital games in the classroom, it is necessary to be aware of the current state of digitalisation in Norwegian schools. This section therefore investigates the digitalisation in Norwegian schools. The first subsection examines the current state of digitalisation in Norwegian schools, specifically lower secondary schools. The second subsection sheds light over the current debate regarding the technological advancement and digitalisation in schools.

### **2.3.1 The Current State of Digitalisation**

The density of technology in Norwegian classrooms is among the highest in the world (Skagen, 2014). The digitalisation of schools offers teachers additional teaching methods and a multitude of resources. Many teachers use digital resources to a large degree in their teaching practices, and they are commonly used in the lower secondary EFL classroom (Fjørtoft et al., 2019, p. 62, 64). At the same time, digitalisation puts more demands on schools, such as those related to digital infrastructure and increased digital competence (Bergene et al., 2022, p. 40; Kultur- og likestillingsdepartementet, 2023). If schools are expected to teach pupils digital skills, they must have the necessary equipment and competence to do so (Norwegian Directorate for Education and Training, 2022).

Recent studies (e.g., Bergene et al., 2022; Fjørtoft et al., 2019) investigated the digital infrastructure in Norwegian schools, which includes digital equipment, digital teaching aids and digital resources. The research studies found that most lower secondary school leaders are satisfied with the digital tools they have access to, and that almost every pupil has access to a digital device. Teachers also reported to have a good digital infrastructure at their schools. A



majority of the teachers reported to have adequate technical support, although one-fourth reported little or no support (Fjørtoft et al., 2019, p. 54, 59; Bergene et al., 2022, p. 43; Norwegian Directorate for Education and Training, 2022).

One of the interesting findings of this research was that most of the school leaders were more focused on the digitalisation of schools and not as much on increasing the teachers' digital competence. Only half of the school leaders reported to have a systematic plan on how to increase the teachers' professional digital competence (Bergene et al., 2022, p. 45). There are several opportunities for teachers to increase their competence through national initiatives, such as further education through the Competence for Quality strategy, and the Norwegian Directorate for Education and Training's digital competence packages (Norwegian Directorate for Education and Training, 2022). Teachers did, however, state that they find informal training to be beneficial for improving their digital competence. This informal training includes learning by trial and error, self-directed study, and peer mentoring (Fjørtoft et al., 2019, p. 82-83).

Although the studies investigated many aspects regarding the digitalisation of schools, there was very little focus on the use of digital games. Even though the studies found that pupils reported to use digital games in primary school, it did not seem as they asked teachers about their use of digital games. They did, however, ask school owners to what degree they facilitated for digital game use in schools. Only 10% of school owners reported that they facilitated for the use of digital games (Fjørtoft et al., 2019). On the other hand, one survey found that 28% of the schools who took part in the study reported to use digital games (Munthe et al., 2022). Furthermore, it discovered that more schools attempted to incorporate digital games as a digital teaching practice (Munthe et al., 2022).

### 2.3.2 The Current Debate

The debate surrounding digitalisation is fuelled by the growing presence of digital technology in modern society. Young people spend a significant amount of time on screens, which has raised concerns regarding digital technology's role in everyday life. The debate has become more heated, especially with the widespread accessibility of artificial intelligence. This has raised concerns about the potential downsides of digitalisation.

This shift in public opinion towards digital technology is also evident within the debate of its role in the educational system. Skagen (2014) claims that over the past 20 years, there has been an extensive implementation of computers into classrooms without a thorough

consideration of the consequences by technology. While digitalisation is widely accepted among politicians, it is controversial among teachers, particularly with regard to the rapidly growing digitalisation of exams (Skagen, 2014).

The public debate about screen use in schools is characterised by strong engagement, uncertainty, and disagreement. As an attempt to keep the debate rational, a task group has been established to investigate the screen use of children and young people to contribute to an evidence-based discussion. The Screen Use Committee is examining the consequences of screen use and will propose measures to address it. Their recommendations are expected to be published by the end of 2024. Their preliminary findings suggest that digital technology can pose challenges when it is not sufficiently integrated into teachers' pedagogical practices as teachers do not have the sufficient competence. They found that teaching practices in schools need to be adapted to the potential of digital technology. Further, they suggest that the issue is not only how digital technology is used, but also deciding when it is appropriate to use digital technology. Their preliminary conclusion suggests that education policy should prioritise to increase the teachers' competence to create learning communities where digital technologies have their place (Skjermbrukutvalget, 2023, p. 5).

This debate also concerns the role of digital games in education. While the use of digital games as a teaching tool has attracted more attention, it has not all been favourable. Dondi & Moretti (2007) found that teachers have very different attitudes towards digital games in education, ranging from very positive to very negative (pp. 502-503). This could be interpreted as a reflection of the resistance towards the digitalisation of education.

### **3 Theoretical Background**

This chapter establishes the theoretical foundation for this study. This chapter is divided into four sections. The first section provides a definition of digital games and investigates its potential in the EFL classroom. The second section explores the concepts of teacher cognition and teacher beliefs, before investigating the connection between teacher beliefs and digital games. The third section examines professional development and professional digital competence. The fourth and final section presents relevant previous research on teachers' beliefs about digital games.

#### **3.1 Digital Games**

Research on digital games in an educational context has increased in recent years (Dondi & Moretti, 2007, p. 502; Sykes, 2018, p. 220). This rise in interest reflects an increasing recognition of the potential of digital games in the classroom. To understand how digital games can be used as a teaching tool, this section examines the various aspects of digital games in a teaching context. The first subsection of this section provides a definition of the term digital games. The second subsection investigates the use of digital games in the classroom and its potential benefits.

##### **3.1.1 Defining Digital Games**

It is important to understand the meaning of the term “digital games”. Whitton (2014) has defined the above term as “games that are played on, or use, an electronic device” (p. 6), such as games played on mobile phones, computers, consoles, and others (Whitton, 2014, p. 6; Mortensen, 2009, p. 8). Prensky (2005) describes digital games as “complex games” (p. 6), meaning they contain multiple dimensions. He uses this term to highlight the complexity of modern video games to the adults who do not have much experience with these types of games. He refers to the terms ‘digital natives’ and ‘digital nomads’ to explain the difference between the younger and older generation (Prensky, 2005, p. 1). Han (2015) explains that when people talk about games these days, they typically refer to video games played on computers or other electronic platforms (p. 258).

An alternative definition is provided by Skaug et al. (2020), which limits the definition further by listing four specific traits found in digital games. These traits are *interactivity*, *sense of agency*, *immersion*, and *storytelling* (Skaug et al., p. 15). The traits can vary in degree and overlap, but all the four are needed to be considered a digital game. Granic et al. (2014) highlight the interactivity of digital games as this is what sets them apart from other media (Granic et al., 2014, p. 67).

The term digital game-based learning (DGBL) is used in research on digital games in education, and more specifically digital game-based language learning (DGBLL) in the context of language learning (Prensky, 2001). It is the latter which is most relevant to this thesis. Digital games are often divided into two different categories within DGBLL. The first is games as synthetic immersive environments, which include games created specifically for educational purposes, and commercial off-the-shelf games, which are games created for people to enjoy, but can also be used in education under the right circumstances (Cornillie et al., 2012, pp. 244, 246). This thesis includes both categories in its definition of digital games as both can be suitable to create immersive educational experiences.

In the present study, digital games are defined based on the above definitions from previous research. Therefore, digital games are defined as complex games played on digital platforms which contain the four traits *interactivity*, *sense of agency*, *immersion*, and *storytelling*. The main purpose of it is to ensure that the definition aligns with the broad definition of text in LK20. Furthermore, this definition excludes some games that are commonly used in Norwegian classrooms, such as quiz-based games like Kahoot (Munkvold & Sigurðardóttir, 2018, p. 466). This is to gain a better understanding of the practices and challenges teachers face regarding the use of digital games which may not be applicable to the less complex digital games. Having defined what is meant by digital games, the following section will discuss in what way digital games can be beneficial in the EFL classroom.

### 3.1.2 Digital Games in the EFL Classroom

Digital games are often considered a source of entertainment, but they can also be used as a teaching tool. Digital games can be used as an effective tool in teaching due to the role of play in learning. Prensky (2001) describes the importance of play in learning, and how play is the natural way of how humans learn. Because of this, digital games can be regarded as didactic resources in any learning environment or level (Dondi & Moretti, 2007, p. 502; Prensky, 2001).

With the increased popularity of digital games, there has also been an increase in research regarding the concept of digital games in education (Beavis et al., 2014, p. 569). Research has found that incorporating digital games in the educational context are beneficial for pupils as they can increase motivation and develop competence and skills (Dondi & Moretti, 2007, p. 502). Furthermore, Sykes (2018) claims that integrating digital games into language instruction presents intriguing and diverse opportunities, especially as many digital games use English. Digital games that incorporate the target language offer pupils the opportunity to engage with authentic language experiences (McNeil, 2018).

Previous research has investigated the benefits of using digital games in the EFL classroom. Young et al. claim that the use of digital games may be more relevant for language learning than other subjects (Reinhardt & Thorne, 2016, p. 416; Young et al., 2012, p. 74). Not only does research support this claim, but children believe that playing digital games improves their English skills (Medietilsynet, 2022). For example, Acquah and Katz (2020) examined 26 studies to investigate the effect of digital games used as tools in second language acquisition. They concluded that the use of digital games could help create engagement and motivation amongst pupils, as well as contribute to differentiation and learner autonomy (Acquah & Katz, 2020). Brevik, Garvoll and Ahmadian (2020) claim that learning English is entwined with interest and should therefore be incorporated in language learning to make it more relevant for pupils. They suggest that digital games provide pupils with opportunities to learn language both at home and at school (Brevik et al., 2020, p. 211).

### **3.2 Teacher Beliefs**

As this thesis investigates the EFL teachers' practices, attitudes, and experiences with the use of digital games in the classroom, it is necessary to understand what can affect the teachers' thoughts and choices. Research on teachers' beliefs has increased drastically in the past few decades (Ashton, 2014, p. 31). Although this field of research has gained recognition, it remains challenging to define the term "teacher beliefs." There does not seem to be an agreement on the definition, and the term is used inconsistently among scholars (Fives & Gill, 2014, p. 1; Skott, 2014, p. 17). Teacher beliefs is challenging to define because the term includes a multitude of concepts which contribute to its broad interpretation (Borg, 2019, p. 1152). Additionally, researchers tend to use the term *Teacher Cognition* in research regarding

teacher beliefs as they are closely connected. These terms are often used interchangeably, which provides an additional challenge in defining the concept of teacher beliefs.

Since the definition of teacher beliefs varies among researchers, it is important to clarify how the term is understood in this research study. Therefore, the following subsections explore the concept of teacher beliefs. The first subsection explores the concept of teacher cognition and teacher beliefs and specifies the definition of teacher beliefs used in this research study. The second subsection investigates the different beliefs and attitudes teachers may have towards the use of digital games.

### 3.2.1 Understanding Teacher Beliefs

Before exploring the concept of teacher beliefs, it is necessary to understand the purpose of researching this topic. According to Borg (2015), the aim of such research is to “to better understand teachers and teaching”, to support teachers’ professional development and improve education (Borg, 2015, p. 321; Borg, 2019, p. 1150; Borg, 2024, p. 3, 5).

Teacher beliefs is one of the components of the broader concept of teacher cognition. It can be beneficial to use a broad term like "teacher cognition" in educational research as it allows researchers a more comprehensive perspective of teachers' mental processes. The term refers to a set of interconnected components that influence one another. Even when investigating one component, such as beliefs, it must be considered in the context of the broader term to gain a deeper and more nuanced perspective of teachers’ cognitive processes and teaching practices (Borg, 2019, p. 1152). While this broad definition can pose as a challenge, it also permits a comprehensive exploration of teachers’ decision making.

Borg (2003) defines teacher cognition as “what teachers think, know, and believe”, and how this affects all aspects of their work (Borg, 2003, p. 81; Borg, 2015, p. 46). The concept can be further understood as “the unobservable dimensions of teaching”, consisting of elements such as “knowledge, thoughts, attitudes, emotions, and beliefs that influence what teachers do” (Borg & Sanchez, 2020, p. 16). Furthermore, Borg (2019) explains teacher cognition can be understood as the internal and unseen influences which affects the teachers’ work. Additionally, teacher cognition studies the teachers' “personal, professional, social, cultural and historical contexts” to better understand their cognitions (Borg, 2019, p. 1167). Teacher cognition research does not only describe what teachers know and believe, but also how this affects their practices and development as teachers (Borg, 2019, p. 1150).

Research on language teachers' cognition tends to focus on the component teachers' beliefs and how this may affect teaching practices (Borg & Sanchez, 2020, p. 17). Borg (2011) defines teachers' beliefs as "propositions individuals consider to be true and which are often tacit, have a strong evaluative and affective component, provide a basis for action, and are resistant to change" (p. 370-371). By his definition, beliefs can be understood as unspoken ideas, which are based on personal values which shape how individuals interact with their environment and make decisions. Teachers' beliefs tend to be relatively stable over time and resistant to change (Borg, 2011, p. 370-371).

An additional definition of teacher' beliefs is given by Skott (2014), who describes it as the personal and subjective mental constructs shaped by experiences which impact teachers' classroom practices. Teachers' beliefs can be shaped by their educational background, teaching practice and classroom experiences (Kubanyiova & Feryok, 2015, 436). Teachers can hold multiple beliefs at the same time, such as beliefs about their pupils, their subject, and their teaching practices (Levin, 2014, p. 48). Although teachers' beliefs may have an impact on their teaching practices, there are other components which may affect their practices such as external influences or contextual factors. Some of these factors, such as the national curriculum and policies dictating teachers' actions, could lead to a contradiction between their beliefs and their actual practices. Others may be less direct yet still influential, such as the school administration and facilities (Borg, 2015, p. 324; Borg, 2019, p. 1150).

While a variety of aspects of the term 'teacher beliefs' have been examined, this paper will use the definition suggested by Borg (2011), who views it as the unspoken ideas that are shaped by the teacher, and in turn shapes teaching practices. This definition takes into account the umbrella term "teacher cognition," and how it affects all the unseen mental processes of a teacher.

### 3.2.2 Teacher Beliefs about Digital Games

Teachers' beliefs may influence if, and how, the Norwegian lower secondary EFL teachers implement digital games into their lessons. Therefore, this section investigates teachers' beliefs specifically in regard to the use of digital games in an educational context.

Dondi & Moretti (2007) argue that teachers have very different attitudes towards digital games in education. They divide these different attitudes into three groups, which highlights the varying degrees of acceptance and integration among teachers. The first group considers digital games to be a beneficial tool to use in their teaching practices and

incorporates them into their lessons. Teachers in this group believe that digital games improve pupils' motivation and increase their proficiency in different skills. The second group consist of teachers who use a specific type of digital game in their lessons but are not accepting of a larger range of digital games. This group mainly use digital games they consider to be 'simulations' of specific matters relevant to the subject, rather than playing traditional entertainment games. The third group consist of teachers who have never used digital games in their teaching practices and are unwilling to do so. Teachers in this group are either unaware of the educational value of digital games, or do not believe they have any (Dondi & Moretti, 2007, pp. 503-504).

Beavis et al. (2014) made a similar discovery when researching the beliefs of 16 Australian teachers on the use of digital games in education. They discovered two broad groups based on the teachers' beliefs, and one additional group. The three groups on the teachers' beliefs were referred to as 'the optimistic', 'the cautious' and 'the non-concerns' (Beavis et al., 2014, p. 572). The first group, the optimistic, consisted of the positive beliefs on the use of digital games their learning potential. The teachers believed digital games to be engaging and motivating for the pupils, as well as promoting learning. The second group, the cautious, focused more on the limitations and concerns connected to the use of digital games. The teachers pointed out several challenges related to digital game use, such as loss of control, limited time and resources and concerns about the learning outcome. The third and final group, the non-concerns, focused on the challenges related to the use of digital games that the teachers did not seem concerned about (Beavis et al., 2014, p. 572-576).

Hamari and Nousiainen (2015) found that teachers are more likely to use digital games if they consider them to be an asset to their teaching objectives, beliefs, and practices. They attribute this to teachers who prioritise cross-curricular competencies, like digital skills, and employ pupil-centred learning strategies. Additionally, they discovered several factors that influence teachers' use of digital games. The culture within schools can impact the use of digital games, as a supportive environment can encourage teachers to try new teaching methods. Furthermore, teachers who feel competent in using technology are more likely to incorporate it into their teaching (Hamari and Nousiainen, 2015).



### 3.3 Professional Development

The use of digital technology, including digital games, has become increasingly more common in Norwegian schools. As it can be expected that this trend will continue, teachers must be prepared for an even more technologically advanced classroom (Norhagen et al., 2024; Starkey, 2020). When asked about the factors influencing their use of digital resources, teachers mentioned didactical considerations, access to quality technological equipment, and their own competence as the main factors (Fjørtoft et al., 2019, p. 60). One of the most important strategies for increasing teacher competence is through *professional development*. Professional development can occur through formal settings such as further education, and informal settings such as self-study (Borg, 2018, p. 195).

According to Kagan (1992), teachers' beliefs may be the most reliable indicator of teachers' professional development. Changes in teachers' beliefs may signal their reflection on teaching practices, and over time, these changes can reflect their professional development as teachers (Kagan, 1992, p. 85). Therefore, this section focuses on the competence and professional development of teachers. The first subsection explores the concept of teachers' digital competence and its relevance to the use of digital games. The second subsection delves into teachers' pedagogical use of digital games and its connection to teachers' professional development.

#### 3.3.1 Professional Digital Competence

When examining teachers' use of digital games in the classroom, the teachers' digital competence is also a factor to consider. To prepare teachers for technologically advanced classrooms, the Norwegian Directorate for Education and Training has developed a framework for teachers' *Professional Digital Competence* (Kelentrić et al., 2017). They describe digitally competent teachers as aware of how digital advancements are transforming and expanding the individual subjects can support pupils in achieving competence aims and developing their fundamental skills. To be able to do so, teachers must first improve their own digital skill (Kelentrić et al., 2017).

Starkey (2020) analysed previous research and found three categories of teacher digital competence, namely *generic digital competence*, *digital teaching competence*, and *professional digital competence* (p. 41). The first category can be understood as general

digital skills and technical knowledge to use digital technology. Although being relevant to a teachers' digital competence, this is not specific to the teaching profession. The second category is more specific for teachers as it is about the use and integration of digital technology in an educational context. This second category includes the use of digital resources in current teaching practices, ability to choose and evaluate such resources in various teaching contexts, and being able to teach pupils who use digital technology. The third category involves the necessary skills in a school context, where digital technologies are part of all aspects of the teaching profession. These skills include the ability to effectively use digital tools and resources for teaching purposes, classroom management in a digital learning environment, and improve their professional development by using digital tools (Starkey, 2020, p. 42-43).

Lund et al. (2014) refer to the latter as the teachers' professional digital competence, which connects digital competence to teaching (p. 282). Further, they explain how digital competence is often viewed as a general skill but argue that professional digital competence is also specified to the individual subject. This means that not only should the teacher be capable of using digital technology, but it should be a supplement which contributes to learning of both the subject and the skill. Therefore, professional digital competence consists of three components; (1) *the teachers' digital skills* (2) *their knowledge of pupils' learning processes* and (3) *their understanding of English as a subject* (Lund et al., 2014, p. 284; Brevik & Skarpaas, 2016, p. 65).

Scholes et al. (2022) suggest that teachers need more than just their own proficiency in digital technology for effective digital teaching methods to be implemented. Teachers must understand how pupils' digital skills are influenced by various factors such as their personal interests and confidence with technology.

### 3.3.2 Game-Based Pedagogy

Digital games, like any other teaching method, must be used in a pedagogical manner in order to be suitable for teaching (Kultur- og likestillingsdepartementet, 2023; Nousiainen et al., 2018). The third subsection examines gaming pedagogy and how this can be beneficial for teachers who plan to implement digital games in their teaching.

Nousiainen et al. (2018) believe that teachers' proficiency in *game-based pedagogy* will become increasingly important for their professional competency as it gains significance in education. Therefore, they investigated the competencies teachers need to use digital games

as teaching tools. They use the term *game-based pedagogy* to describe teachers' proficiency with digital games in education. The term is based on four game-based approaches: *Educational games*, *Entertainment games*, *Making games* and *Gamification* (Nousiainen et al., 2018, p. 86). They suggest that these approaches frequently appear simultaneously and intersect.

In addition to game-based pedagogy, they also pointed to teachers' competence as essential in successfully using digital games as a teaching tool. They found four main competencies necessary for using game-based pedagogy: *pedagogical*, *technological*, *collaborative*, and *creative* competencies (p. 93). Pedagogical competence encompasses teachers' skills in planning, implementing, and reflecting on the use of digital games as teaching tools. Technological competence includes teachers' ability to select suitable games and the necessary technological skills to use them in their teaching practices. This skill supports teachers in handling and resolving technical issues that come from using digital games in the classroom. They also found that collaborative competence could be beneficial, as working together with colleagues may provide teachers with the necessary support to implement digital games. Moreover, a collaborative and supportive work environment can influence other teachers' beliefs about the value of digital games as teaching tools. Lastly, creative competence can motivate teachers to explore and develop their teaching practices. This competence can be useful when integrating new teaching and learning methods, such as game-based approaches (Nousiainen et al., 2018, pp. 93-94).

McNeil (2018) argues that teachers must have the necessary skills to use digital games for teaching, as this approach differs from traditional teaching methods. Teachers must be able to select suitable digital games, use specific aspects of the game for language learning, use it in accordance with the curriculum, and adapt it to the classroom setting (McNeil, 2018, p. 580). To acquire these skills, teachers may need experience in playing digital games. Chik (2011) found that teachers with little experience with digital games are more likely to have negative attitudes towards them as teaching tools. However, Chik also discovered that experience alone was not enough for teachers to effectively use digital games. Therefore, she suggests that incorporating digital games into teacher education programs could increase teachers' professional development and competence (Chik, 2011).

### **3.4 Literature Review**

This section investigates the previous research similar to the current thesis. In recent years, there has been an increasing amount of literature on the use of digital games in an educational context. To date, several studies have focused on teachers' beliefs about the use of digital games in the EFL classroom. Most researchers investigating teachers' beliefs about digital games have used a mixed methods approach, and typically use questionnaires and/or interviews to collect data. The previous research examined in this section is relevant due to its research topic and the similar context. Although some do not focus specifically on Norwegian lower secondary EFL teachers, they still provide a necessary foundation for the current research study. Table 1 summarises the reviewed studies on the following page.

Table 1. Previous Research

Year	Author(s)	Context	Method(s)	Sample	Main findings
2023	Tıraşın	Upper Secondary School EFL Teachers Norway	Questionnaire	219	The teachers were positive to the use of digital games A large portion used it in their lessons The main challenges reported were lack of time and lack of skill and knowledge
2023	Lone	Lower Secondary School EFL Teachers (Gaming pedagogues) and Pupils in Norway	Questionnaire Interviews	102 4	The teachers were positive to the use of digital games but reported different practices Main challenges were the time and effort
2020	Israelsson	Teachers in Norway	Questionnaire Interviews: Teachers Expert	120 3 1	The main challenges were time restraints, lack of equipment, lack of knowledge and reluctant teachers
2018	Munkvold & Sigurðardóttir	Teachers in Norway	Questionnaire	201	Main challenges were limited resources, knowledge, time, and flexibility with the curriculum
2019	Brooks et al.	Nordic teachers	Questionnaires: Norway Denmark Iceland	165 65 270	Main challenges were the lack of resources and knowledge Suggested three guidelines to promote the use of digital games in teaching

The first study illustrated in Table 1 is a Master's thesis written by Tıraşın (2023), who focused on EFL teachers' beliefs, attitudes, and practices regarding digital game-based language learning in upper secondary school. To collect his data, he used a mixed-method questionnaire using both closed-ended and open-ended questions, which combined both qualitative and quantitative features. The questionnaire comprised of 48 questions divided into three parts and was answered by 219 upper secondary EFL teachers. Tıraşın (2023) found that most teachers thought DGBLL could be used as an effective tool in language teaching, and that a large percentage used it in their own teaching. Although they were positive to digital games as a tool for language teaching, the participants also reported some obstacles. The main obstacles were the lack of time as well as lack of knowledge and skills. The latter was blamed on insufficient or outdated teacher education. Additionally, he discovered that there might be a correlation between teachers who felt comfortable using digital games as a tool and those who played them in their spare time. However, this did not seem to be a deciding factor when implementing DGBLL in their lessons.

Tıraşın identified specific limitations in the study. The first was the number of participants in the survey. Although this study had more respondents than similar research on the topic, it is still not considered a very large amount to be representative. The second limitation was the possibility that mainly teachers who were positive to DGBLL decided to participate in the survey, and that those who were negative did not. This means that with these limitations, the research findings might not be representative for all upper secondary EFL teachers in Norway (Tıraşın, 2023).

The second study is a Master's thesis is by Lone (2023), who researched gaming pedagogues' and their pupils' beliefs about digital games in the EFL classroom in lower secondary schools using a mixed methods approach. In addition to this he investigated the teachers' reported challenges and practices regarding the use of digital games. The data was collected through individual interviews with four lower secondary EFL teachers who identified themselves as gaming pedagogues, in addition to a questionnaire answered by 102 of their pupils.

He found that both the teachers and pupils had positive beliefs about digital games, and that they believed that digital games could be beneficial as a teaching tool. The four teachers all agreed that digital games could be a source of motivation and increase engagement in the EFL classroom, but they reported different practices. These practices were cautious use, frequent use, and project-based use. The pupils reported to prefer learning using digital games, compared to other instructional methods. Lone concluded that the main

challenge is the time and effort teachers must put in to create successful lessons with digital games, and not necessarily the lack of equipment as others had previously reported. Lone underlined the need for professional development in order to integrate digital games.

Lone's thesis is highly relevant due to its focus on challenges and because of the delimitation of lower secondary school and mixed- method approach. However, his focus was on four gaming pedagogues who were already interested in using games in the classroom, rather than looking into the challenges experienced by a larger number of EFL teachers. The latter might provide more useful data when looking into how to overcome the issues with using digital games (Lone, 2023).

The third study in Table 1 is a Master's thesis by Israelsson (2020), who investigated the pedagogical beliefs, attitudes, and challenges of English teachers in Norway towards gaming. She conducted a mixed-method approach using an online survey with 120 participants, three teacher-interviews and an expert interview with a gaming pedagogue. The findings indicated that time restraints and a lack of equipment were two of the main challenges. Further, she found that many of the teachers wanted to use digital games in their teaching but were uncertain of how they can do so and where to find information on the topic, while other teachers seemed reluctant to use digital games instead of traditional teaching methods (Israelsson, 2020).

The fourth study in Table 1 is by Munkvold and Sigurðardóttir (2018), who explored the use of DGBL among teachers in Norwegian schools. Their research was not limited to a specific level or subject but focused on the general use of digital games among Norwegian teachers. The aim of the research was to determine what type of games were used in teaching. The data was collected by an online survey with predefined alternatives, but with the option to supply with open answers.

Munkvold and Sigurðardóttir point out two weaknesses in the data collection. The first is the number of respondents to the survey. Only 201 teachers participated in the survey, which is too few to be considered representative for all teachers in Norway. Secondly, they deemed it likely that participants already positive to digital games were more likely to respond to the survey. They found that the teachers participating in the survey were positive to the use of digital games as a tool for learning, especially the younger teachers who enjoy playing digital games in their spare time. Their research also discovered some challenges experienced by the teachers, such as limited resources and knowledge on games, and most importantly limited time and flexibility with the curriculum (Munkvold & Sigurðardóttir,

2018, p. 466). Although their research does not specifically focus on digital games in EFL teaching, the results can provide insight into Norwegian teachers' cognition.

The fifth study was conducted by Brooks et al. (2019), who researched the use of digital game-based language learning in Nordic countries. The aim of their study was to investigate the use of digital games in Norway, Denmark, and Iceland, with a focus on the perceived challenges by Nordic teachers. The study was not limited to a specific subject or school level. The data was collected using an online, mixed methods questionnaire. It consisted of 26 questions, varying between ratings, multiple-choice, and open-ended. The questionnaire was distributed through a variety of approaches, such as direct contact with schools and unions and shared through social media. It had a total of 583 respondents, of which 411 completed the questionnaire. According to their findings, the teachers find it challenging to use game-based learning approaches because they lack the necessary resources and knowledge. The teachers reported that they struggled to effectively combine technical tools and pedagogy. Additionally, it appeared that some teachers were hesitant to include games in the classroom due to concerns about potential objections from parents and children. Based on their results, Brooks et al. (2019) suggest three guidelines to promote the use of digital games in teaching (1) *rhetoric framing of usability and learnability*, (2) *engagement* and (3) *creating a guidance area – building a DGBL infrastructure* (Brooks et al., 2019, p. 481).



## **4 Methodology**

This chapter describes the current thesis' research design and data collection methods. The thesis uses a mixed-method approach which combines qualitative and quantitative methods. This combination is beneficial as it provides a more thorough exploration of teachers' beliefs and practices. Additionally, the chapter will provide detailed insights into the mixed-method questionnaire and the teacher interviews. The research design aims to tackle three research questions, which are as follows:

1. What are the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the EFL classroom? In particular, what are their practices and attitudes?
2. What challenges do the EFL teachers report regarding the use of digital games in the classroom?
3. What do the teachers find beneficial in order to implement digital games in their EFL teaching practices in Norwegian lower secondary school?

The following subsections provide detailed descriptions of the methodology used in this thesis. Section 3.2 presents an overview of the present research design and its use of a mixed-method approach. Sections 3.3 and 3.4 discuss the use of questionnaires and interviews as data collection tools. The advantages and disadvantages of the two data collection methods are examined. Further, the questionnaire and interviews employed in this study are described in detail. Section 3.5 explains the analysis of the data. The validity and reliability of the results are discussed in Section 3.6. Last, Section 3.7 addresses the ethical considerations of the current thesis.

### **4.1 Research design**

The current thesis employs a mixed-method research design, which combines qualitative and quantitative research techniques to answer the research questions. A mixed-method approach offers the advantages of both qualitative and quantitative research as they complement one another by providing multiple perspectives, while also removing some of the limitations of relying solely on one methodology (Creswell & Creswell, 2018; Dörnyei, 2007; Johnson &

Christensen, 2017). Quantitative method is used when collecting and analysing quantitative data such as numerical data as a confirmatory scientific method (Johnson & Christensen, 2017, p. 108). Qualitative research can be used in the exploratory scientific method, for instance, if the researcher is unsure of the outcome or aims to learn more about a topic, or to understand people's experiences and perspectives (Johnson & Christensen, 2017, p. 33; 108). The use of a mixed-method approach is common in game-based research, and it provides the necessary insights into the complex topic of teacher beliefs and practices (Brevik, 2023, p. 347; Borg, 2019, p. 1157).

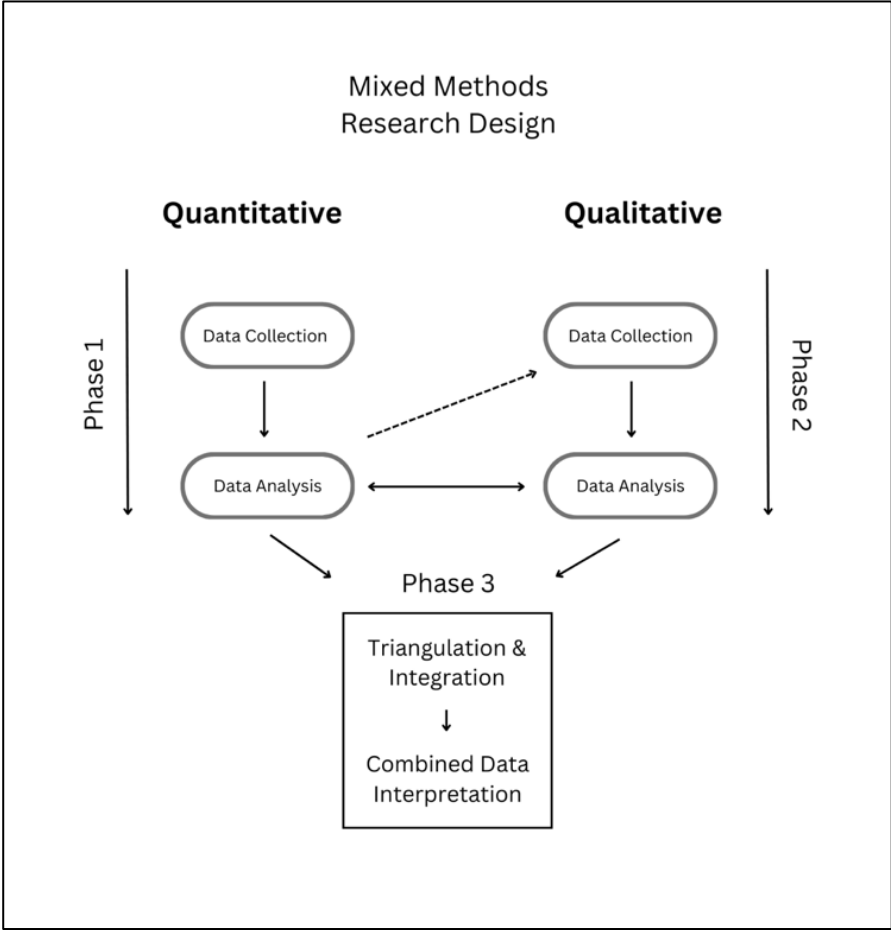
Another benefit of using multiple data collection methods is the use of triangulation. Triangulation is when different approaches explore the same topic, which can strengthen the research through corroboration and completion. Corroboration validates findings from different perspectives, and completion fills in gaps to achieve a more comprehensive understanding of the research topic (Brevik, 2023, pp. 347-348).

The mixed-method design in this project used a *sequential mixed method*, as a questionnaire was first used to collect data, followed by in-depth interviews (Creswell & Creswell, 2018, p. 52). This is the process where quantitative data is gathered and examined, followed by qualitative data to investigate the outcomes further. Thus, the data for this study was collected through an online, anonymous questionnaire and teacher interviews, which will be described in detail in the separate sections. The qualitative and quantitative features of the data collection methods contributed to answering the research questions. The quantitative method was used to investigate if, and how often, English teachers in Norway used digital games in their classrooms. This data was collected by using closed-ended questions in the questionnaire. The benefit of using a questionnaire is that it has the potential to reach a greater number of English teachers from all over Norway, which can help establish a pattern over how common the use of digital games in the classroom is, its challenges and the possible solutions.

Although a questionnaire can provide important intel, it alone cannot provide an answer to the last two research questions. To find out what challenges the teachers have encountered, they need to be able to answer based on their own experiences and not pre-assumed categories in a questionnaire. This is where the qualitative method can provide a deeper understanding and exploration than the quantitative method. Therefore, the questionnaire included eight open-ended questions to allow the participants to share their own experiences. These results, and the challenges found in previous research, were the foundation for the teacher interviews. The following sections provide detailed descriptions of the data

collection used in this thesis. The research design of the current thesis and its three phases is summarised in Figure 2.

Figure 2: Research Design



As illustrated in Figure 2, the research design of the current thesis is divided into three phases. Phase 1 involved the collection and analysis of quantitative data through an online questionnaire. Phase 2 focused on the collection and analysis of qualitative data from four teacher interviews. Phase 3 employed triangulation and integration analysis for a combined data interpretation

#### 4.2 Questionnaire

This section describes the mixed-method questionnaire used in the current thesis. The first subsection explains the use of questionnaires as data collection tools. The second subsection

described the sampling of the participants of the questionnaire. The third and final subsection details the structure of the questionnaire used in this research study.

#### 4.2.1 Questionnaires as a Data Collection Tool

Questionnaires are commonly used in language research as it can be an effective and versatile data collection tool. Dörnyei and Taguchi (2010) point to multiple benefits of using questionnaires to collect data. First, they can gather data on a much larger scale compared to other data collection methods, as they have the potential to reach many people over a short period of time. Questionnaires are easy to distribute to participants regardless of geographical location, which removes the restriction of distance. Second, they can be filled out without the researcher being present, which could make the participants more likely to answer truthfully. Third, questionnaires can reduce the amount of time needed to collect data. This is beneficial as researchers often work with time-restraints (Dörnyei & Taguchi, 2010, p. 6; Borg, 2019, pp. 1155-56). Borg (2019) adds that questionnaires enable researchers to investigate a subject on a larger scale, which can uncover patterns that would otherwise go undetected (Borg, 2019, 1156). Although not all the potential participants of a study answer the questionnaire, researchers can examine a sample of the group to find common traits (Dörnyei, 2007, p. 101).

Dörnyei and Taguchi (2010) explain that a questionnaire can provide three types of data about the participant. These types of data are *factual*, *behavioural*, and *attitudinal*. The factual data includes facts such as age, gender, length of education and geographical location. Behavioural data provides information on what the participants are doing or have done in the past. Attitudinal data is a broad category which entails what people think, such as attitudes, opinions, beliefs, interests, and values (Dörnyei & Taguchi, 2010, pp. 5-6). All three data types will contribute to answering the research questions in this study.

Although there are benefits of using questionnaires as a data collection tool, there are also some disadvantages worth considering. Dörnyei and Taguchi (2010) argue that it is easy to produce unreliable and invalid data from a poorly created questionnaire, which can happen for several reasons. The first reason can be caused by simplicity. As the participants fill in the questionnaire by themselves, the questions must be simple enough so that all participants can understand them. In turn, questionnaires provide superficial data, which make them unsuitable to delve deep into an issue. The second is what Dörnyei and Taguchi refer to as *Social Desirability Bias*, which is when the participants respond in accordance with what they believe the researcher wants, instead of what they actually believe (Dörnyei & Taguchi, 2010,

pp. 6-8). Participants can make assumptions based on the topic and how the questions are phrased and may thus change their answers accordingly.

Furthermore, previous research has indicated a potential disadvantage that may impose limitations on the results. This disadvantage is what Dörnyei (2007) refers to as *the problem of participant self-selection*. As questionnaires typically rely on voluntary participation, the willingness of the participants may vary. Therefore, it is more likely that the individuals who are more motivated decide to participate in the questionnaire compared to those who are less motivated. This could lead to results which are not representative for the population which the sample is supposed to represent (Dörnyei, 2007, pp. 100-101; Dörnyei & Taguchi, 2010, pp. 63-64). This limitation is acknowledged in previous research on teacher cognition and digital games, where it seemed likely that most of the participants consisted of teachers who were positive towards digital games (e.g., Tıraşın, 2023; Munkvold & Sigurðardóttir, 2018). Their research still provides information on the beliefs and experiences of teachers, but on a more specific group of teachers than intentional.

After examining the benefits and limitations of questionnaires when researching teachers' experiences and beliefs, the current thesis employs an online questionnaire as one of its data collection methods. This is due to its potential to reach more participants than what would have been feasible if only relying on interviews. Although questionnaires have limitations, they remain a valuable tool for gathering large-scale data efficiently and providing initial insights into complex research topics such as teacher beliefs. Additionally, the use of a mixed-method approach reduces the limitations of questionnaires as this study does not rely solely on one data collection approach. The use of teacher interviews to strengthen the results of the study will be further discussed in Section 4.3.

#### 4.2.2 Sampling

A mixed-method questionnaire was used to collect data for the current thesis. The questionnaire was distributed to recruit possible participants through different sampling methods. Dörnyei (2007) argues that gathering data from the *target population* as a whole is both unnecessary and impractical. Instead, a subsection of the population can serve as a *sample* to be examined. This sample, given that they share characteristics of the population, can be representative of the whole group (Dörnyei, 2007, p. 96). In this research study, the target population is teachers who have previously taught, or currently teach English, in Norwegian lower secondary schools. The current research study used criterion sampling to

select participants based on specific criteria (Creswell, 2013; Dörnyei, 2007). Criterion sampling was necessary as this study is limited to a specific group of teachers. To qualify for the sample the participant must have recently worked or still work at a lower secondary school as an EFL teacher. In this study, the researcher did not only identify individuals who met the criteria but was able to find relevant groups on social media to reach appropriate members.

The questionnaire was administered online through *Nettskjema*, and it was distributed on multiple platforms to reach possible participants. The link to the questionnaire was shared in various teacher groups on *Facebook*, as this was a convenient way to reach an abundance of potential participants. The requirements to participate were specified in the posts, as it was shared both in the larger teacher groups as well as the more specific English teacher groups.

In addition to sharing the questionnaire on social media, it was also sent to multiple lower secondary schools with the request that they forward it to their English teachers. The questionnaire could have been sent directly to the teachers, but not all lower secondary schools publish the staff contact information online. Although some schools share some of this information, it does not always specify what subject the teachers teach or what they have previously taught. Therefore, it was sent to the schools instead of being limited by the information available. The use of this type of *snowball sampling* could reach participants who would otherwise be missed (Dörnyei & Taguchi, 2010, p. 61).

#### 4.2.3 Questionnaire Structure

A mixed methods questionnaire was used as a data collection tool in this research study (See Appendix 1). This is due to its potential to reach more teachers than other data collection tools, time effectiveness and flexibility questionnaires provide. A mixed methods questionnaire contains various types of questionnaire items designed to collect both qualitative and quantitative data. This approach was chosen as it is more suitable for investigating teachers' beliefs (Borg, 2019, pp. 1155-1157; Brevik, 2023, p. 347).

The questionnaire was written in Norwegian, as it was highly likely that this is the first language of the participants. Although one can expect English teachers to have a high proficiency in English, it is believed that the quality of the data is increased when using the first language of the participants (Dörnyei & Taguchi, 2010, p. 49).

The questionnaire comprised of 37 questionnaire items in total, which were divided into three different sections. The first section was called "Background", which consisted of

nine questionnaire items intended to collect factual data about the teacher, their pupils, and the school they work at. This section gathered information on the participants educational background, work experience and practice. Furthermore, it also focused on the context of the participants, such as some information about their pupils, average EFL class size, and the available resources in their workplace. All the questions in this section were closed-ended questions with pre-determined options for answers.

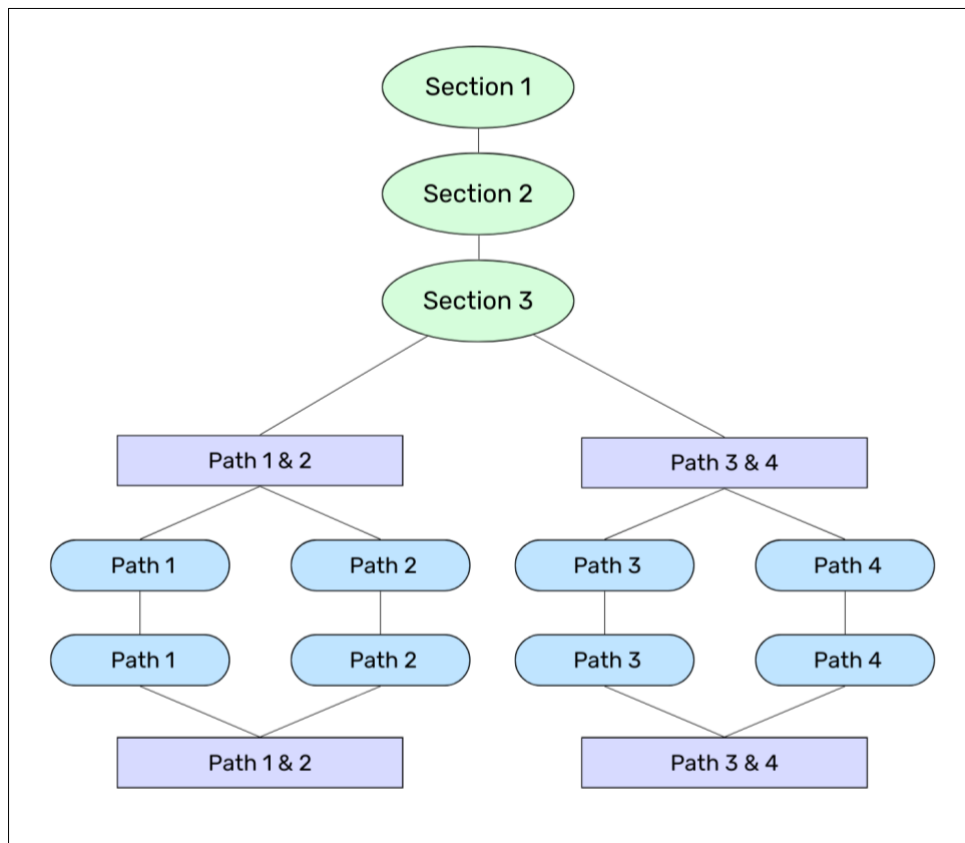
The second section was called “Teacher Beliefs”, which had nine questionnaire items to collect attitudinal data. All the items were about the teachers’ thoughts and beliefs on digital games as a tool for learning in the EFL classroom. This section contained closed-ended questions, including Likert-scale questions and rating-scales. These only had even-number alternatives to avoid the neutrality of the middle option.

The final section was named “Experiences, thoughts and challenges with digital games”. The third section differs from the previous two, where all participants would receive the same questions. This is due to the issue found in previous research, where it seemed that mainly positive teachers participated in surveys. As this is also a concern for the current thesis, this section is an attempt to avoid this possible problem.

The aim of the questionnaire structure was to include all participants, as there was a concern that they could unintentionally be excluded by the design. The last section can be divided into four possible different paths depending on the participant’s previous answers. This provides participants with more relevant questions instead of creating a “one questionnaire fits all”. Additionally, the participants will not see any questions from the other possible paths, which in turn reduces the number of questions the participant answers. This is an attempt to include all participants with different opinions, which may motivate the less motivated teachers to participate and complete the questionnaire. This section was the largest, consisting of 19 questionnaire items in total. The items were a mix of open- and closed-ended questions, intended to collect factual, behavioural, and attitudinal data. All eight open-ended questions in the questionnaire were in this section.

Figure 3 illustrates the structure of the questionnaire in detail.

Figure 3: Questionnaire Structure



As can be seen in Figure 3, the first divide between the paths is based on if the participant has previously used a digital game in their EFL lessons. Those who have tried digital games in the classroom are divided into Path 1 & 2, and those who have not are divided into Path 3 & 4. After the first division, Paths 1 & 2 were asked how frequently they used digital games in their lessons. Although provided with multiple options on frequency, all frequencies are divided into Path 1, while those who selected the option that they no longer use digital games fall into Path 2. On the other side of the structure, Paths 3 & 4 are divided by a question asking if they would like to try digital games or not. Those who would like to try fall into Path 3, and those who do not want to try follow Path 4. After being divided into one of the four paths, they are asked more specific questions about their experiences, thoughts, and challenges regarding the use of digital games in the EFL classroom.



## 4.3 Interviews

This section describes the use of interviews as a data collection method in the current research project. The first subsection explains the use of interviews as a data collection method. The second subsection described the sampling of the interviewees. The third subsection describes the interview guide used in the current investigation and the audio-recording processes of the interviews.

### 4.3.1 Interview as a Data Collection Tool

The use of interviews as a research method has become more common in educational research as qualitative interviews make it possible for researchers to investigate people's perspectives, experiences, and opinions (Brinkmann & Kvale, 2018, p. 6, 10). Interviews are typically used in phenomenological research, as this research design aims to describe the lived experiences of individuals about a phenomenon (Creswell & Creswell, 2018, p. 50). Borg (2012) claims that qualitative research is well-suited for exploring complex topics like teacher cognition. He suggests that qualitative research can be used to enhance a quantitative analysis, as qualitative research can provide a deeper insight into a topic. This is typically done sequentially, such as using interviews to follow up after a questionnaire (Borg, 2012, pp. 18-19).

Compared to other data collection methods, such as questionnaires, interviews may be more suitable to delve deeper into what people think and believe. This is because the researcher gets the opportunity to follow up on what is said and can thus ask the interviewee to clarify or elaborate (Brinkmann & Kvale, 2018, p. 5). Additionally, an interview can be more flexible than a questionnaire because questionnaire items are predetermined and cannot be changed once the questionnaire has been distributed to participants. Questions may be added, modified, or removed during the interview depending on the interviewee's answers, which makes it easier for the researcher to adjust to the unexpected.

The goal of qualitative research is different than that of quantitative research, which aims to gather a large collection of data to find patterns and generalise a sample of a population. Qualitative research, on the other hand, seeks to offer thorough explanations and insights into a phenomenon through participants who have experienced the phenomenon (Creswell, 2013, p. 147). Although interviews can provide additional insights, there are a few aspects to consider when interviews are used as a research method. The first is that the

information interviews provide is filtered through the views of the interviewees. Therefore, it is necessary to understand the interviewees' contexts and the perspectives they represent. Second, the presence of a researcher may influence the information the interviewees provide. The interviewees may alter their thoughts and beliefs due to several factors. This could be due to social prestige bias, fear of being judged, fear of how they are perceived, or even altering their opinions to what they believe the researcher wants. Third, it is essential that the interviewees provide thorough descriptions. To do so, the interviewees must have experienced what they are being interviewed about in order to share relevant information on the topic. However, the ability to express ideas and experiences varies from person to person. For some, it may be hard to articulate their thoughts on a topic, especially during an interview. Others may not have reflected much on the topic beforehand, and therefore have less to share. Adding or rephrasing questions can help the researcher get around this, but some interviewees will still have less to say than others. However, the absence of opinions itself might sometimes reveal information (Creswell & Creswell, 2018, p. 264).

This study conducted interviews to elaborate and clarify the findings of the questionnaire. By conducting teaching interviews, the different perspectives of the teachers could be explored further than by relying solely on the questionnaire results. The next subsections will describe the interview guide and structure, in addition to how the interviewees were chosen.

#### 4.3.2 Sampling

The final stage of the study comprised of semi-structured interviews of participants who provided additional insights into the perspectives on digital game use. Semi-structured interviews were conducted with four Norwegian lower secondary EFL teachers, with different beliefs regarding digital game use. The participants in this study were recruited through the researcher's personal network. The sample was representative with respect to the questionnaire findings.

Qualitative research has a very different approach to the sampling of participants compared to quantitative research. The aim of the sampling in quantitative research was to reach a large group of possible participants to find common traits representable for the whole population. Qualitative research, on the other hand, does not focus on the quantity of participants, but rather the information they provide. The aim of sampling in qualitative

research is to find individuals who can provide rich and detailed descriptions of the relevant topic (Dörnyei, 2007, pp. 125-126).

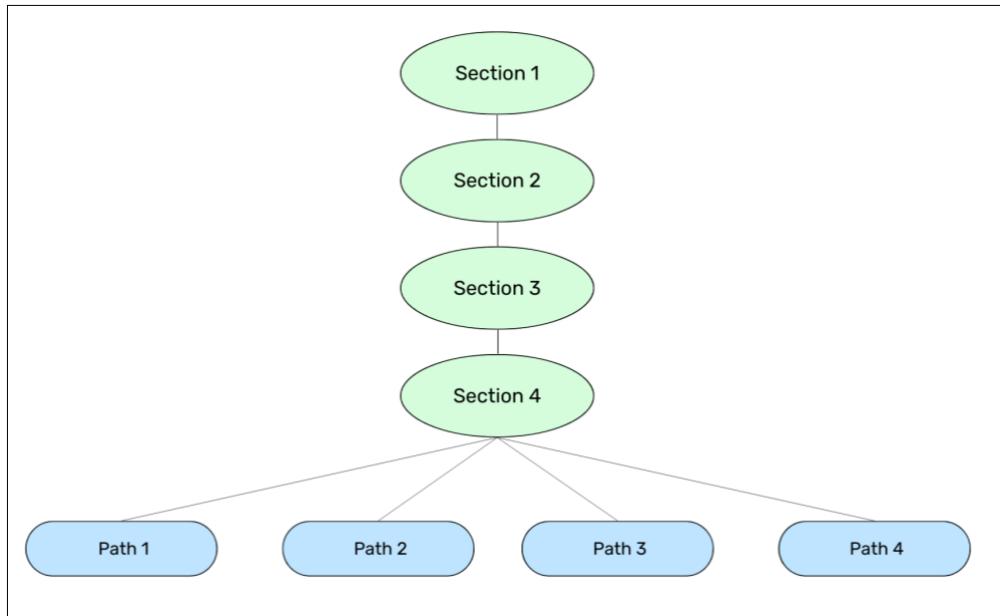
The interview subjects of this study were selected through *purposeful sampling*. Purposeful sampling is used to select specific individuals for a study based on their ability to contribute to a better understanding of the research topic (Creswell, 2013, p. 156). In this research study, it was important to choose a sample which could reflect the range of opinions found in the questionnaire results. Therefore, in the qualitative research, purposeful sampling with the *maximum variation* approach was used to select individuals who differed in their opinions on digital games in the EFL classroom (Creswell, 2013, pp. 156-157).

#### 4.3.3 The Interview Guide

The final stage of the study comprised of semi-structured interviews to provide a better understanding of the EFL teachers' perspectives and attitudes towards digital games. The purpose of this kind of interview is to delve into the interviewee's personal experiences and interpret what they describe (Brinkmann & Kvale, 2018, p. 9). As semi-structured interviews are flexible, researchers can follow up on unexpected responses from interviewees and modify their questions accordingly. This is beneficial as the interviewees' responses are unpredictable. Unlike a questionnaire, interviews allow the researcher to ask for clarification and validation from the participant.

The results from the questionnaire were used as a foundation for the interview questions, as the findings were further explored and described by the sample of interviewees. Therefore, there are similarities between the questionnaire and the interview guide used for the semi-structured interviews (See Appendix 2). The structure of the interview guide is depicted in Figure 4.

Figure 4: Interview Structure



As illustrated in Figure 4, the interview guide was divided into four sections. The first section, “Section 1”, enquired about the interviewees’ backgrounds. As this study investigates the teachers’ beliefs it is necessary to understand their individual background and how these may affect their views on digital games. The second section, “Section 2”, investigated the contexts surrounding the teachers. This section aimed to explore if and how the contexts may affect the teachers practices or attitudes. The third section, “Section 3”, investigated the teachers’ beliefs and their previous experiences of digital games. The fourth section, “Section 4”, contained four different paths similar to the design of the questionnaire. This section offered the opportunity for a deeper understanding of the teachers’ beliefs as it had four pre-prepared parts to follow up on different perspectives. The first possible part, “Path 1”, was prepared for teachers who use digital games in their EFL lessons. The second possible part, “Path 2”, was designed for the teachers who had used digital games but have decided to no longer use them in their lessons. The third part, “Path 3”, was intended for teachers who have not used digital games, and who may or may not want to do so. The fourth and final part, “Path 4”, was prepared for teachers who have not used digital games and will not use them.

The four teacher interviews were audio-recorded to ensure accuracy of the interviewees' responses and to minimise the risk of errors or misinterpretations. The interviews were digitally recorded using *Nettskjema's Diktafon* application which automatically transcribes the recordings. The interviews were carried out in-person and each

scheduled for approximately 30 minutes. They were conducted in Norwegian as it was the interviewees' first language.

#### **4.4 Analysing and Categorising the Data**

The present study uses descriptive statistics and content analysis to examine the quantitative and qualitative data to analyse the teachers' beliefs about digital game use. Statistical analysis and statistical description were used to analyse the quantitative data gathered by the questionnaire. In this process, the information is analysed, interpreted, and summarised to describe the numerical data. This can provide information about the attitudes, beliefs, and patterns of a population (Creswell & Creswell, 2018, p. 207).

Qualitative data was collected by both the questionnaire and the interviews. Prior to analysing the interview data, the interviews were prepared and organised into transcriptions. Following this, the qualitative data obtained from both data collection methods was examined by text and content analysis. This analysis can reveal themes and patterns in the data by interpreting the content (Creswell, 2013, p. 180; Creswell & Creswell, 2018, p. 53). The data can be coded into meaningful segments which can uncover trends (Creswell, 2013, p. 180; Brinkmann & Kvale, 2018, p. 120).

As this study employs a mixed methods approach, interpretations are drawn across different types of data. By comparing the results from qualitative and quantitative data, triangulation can be used to verify or refute the findings (Creswell & Creswell, 2018, p. 53)

#### **4.5 Validity and Reliability**

The concepts of validity and reliability are necessary to ensure the accuracy, consistency, and trustworthiness of research findings (Dörnyei & Taguchi, 2010, p. 93). Validity refers to the extent to which the study accurately measures or provides meaningful and useful insights about the research topic (Creswell & Creswell, 2018, p. 334, 337). Reliability refers to the consistency and stability of the results obtained from the data collection methods (Brinkmann & Kvale, 2018, p. 41; Creswell & Creswell, 2018, p. 334).

The current study used several measures to uphold the validity and reliability of the research findings. To increase the validity of the questionnaire, a small group consisting of six pre-service teachers participated in a pilot questionnaire. The pilot questionnaire provided the

opportunity to identify and address potential issues, improve the questionnaire, and increase the overall quality of the research (Creswell & Creswell, 2018, p. 216). Both data collection methods included a definition of the term 'digital games' to ensure consistency and prevent any misunderstandings of the topic.

The validity and reliability of the interviews were increased by using a pre-defined interview guide, which ensured consistency in the questioning (See Appendix 2). Leading questions were avoided to prevent bias. Additionally, the interviews were recorded and transcribed, which allowed the researcher to analyse the data more accurately.

In addition, this research study used a variety of data collection methods to increase the validity of the findings, including the integration of multiple databases to check their accuracy (Brevik, 2023, p. 347; Creswell & Creswell, 2018, p. 51). This integration of several databases strengthens the validity of the study by identifying themes supported by multiple perspectives (Creswell & Creswell, 2018, p. 274)

#### **4.6 Ethical Considerations**

Prior to beginning the study, ethical approval was obtained from Norwegian Agency for Shared Services in Education and Research (SIKT) (See Appendix 3). SIKT assessed whether the research project met the privacy requirements and legally accessed personal data. They found that the procedures of this study were in accordance with SIKT guidelines.

Prior to data collection, participants received an explanation of the project. Both questionnaire participants and interview participants were informed about the research purpose, objectives, and the handling of their data. The participation in this research study was voluntary. All data from the participants of the questionnaire were anonymous, with no identifiable information collected, and were securely stored on Nettskjema's webpage. Nettskjema maintains a high level of security, which allows for the safe storage of data, including sensitive personal information. Nettskjema, is approved by SIKT for collecting strictly confidential data. Personal information such as IP addresses or other personally identifying data will not be stored in Nettskjema. Upon completion of the research project, all data stored on Nettskjema will be deleted.

The teachers who participated in the interviews were provided with a consent letter (See Appendix 4) prior to their participation in the research study. This letter provided them with detailed information about the project, as well as their rights, such as the right to

withdraw from the project at any stage (Brinkmann & Kvale, 2018, p. 32; Creswell, 2013, p. 174; Creswell & Creswell, 2018, p. 287). Additionally, to protect the anonymity of the participants they were given aliases, and no private data was reported (Brinkmann & Kvale, 2018, p. 33; Creswell, 2013, p. 174).

## 5 Results

This chapter presents the main findings of the current study. The questionnaire gathered data from 73 participants. While not all the participants answered the eight open-ended questions, the majority of the participants answered all of the closed-ended questions. Subsequently, four teacher interviews were conducted in addition to the questionnaire to collect qualitative data. The results are presented in separate sections, each devoted to the following research questions:

1. What are the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the EFL classroom? In particular, what are their practices and attitudes?
2. What challenges do the EFL teachers report regarding the use of digital games in the classroom?
3. What do the teachers find beneficial in order to implement digital games in their EFL teaching practices in Norwegian lower secondary school?

The first section addresses the question as to whether the Norwegian lower secondary EFL teachers used digital games and provides an overview of how often the latter are used in the teachers' EFL lessons. Additionally, it explores the concept of different teacher types to identify similarities and differences in the use of digital games among the teachers. The second section covers the challenges that the EFL teachers have encountered regarding the use of digital games. The third section presents what the teachers could find beneficial in order to implement digital games in their EFL teaching practices. Lastly, the fourth and final section summarises the results.



## 5.1 Research Question 1

This section presents the results from the questionnaires and interviews relevant for the first research question posed in this study. The research question is as follows:

1. What are the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the EFL classroom? In particular, what are their practices and attitudes?

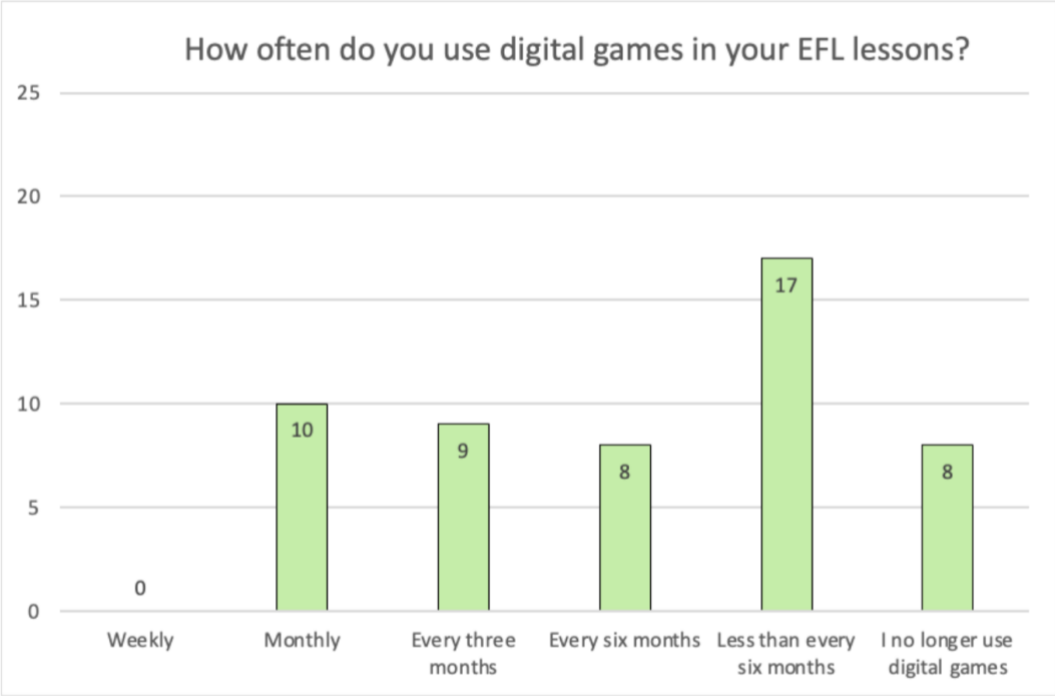
The first subsection examines the reported use of digital games among the participating teachers. It explores their prior experience with digital games in the EFL classroom, and the frequency of their use. The second subsection delves into diverse perspectives on the use of digital games among four teachers. Finally, the third subsection elaborates on these perspectives and their implications for the use of digital game in the EFL teachers' practices.

### 5.1.1 The Current Use of Digital Games

The current thesis sought to investigate to what degree the Norwegian lower secondary EFL teachers used digital games in their lessons. This research study found that the teachers used digital games to a varying degree, both in terms of use and frequency. The 73 questionnaire participants were asked if they had ever used a digital game in their EFL lessons. Two-thirds of the participants responded that they had used a digital game, as opposed to one-third who had not.

After identifying the 52 participants who had used digital games, the investigation went further into the frequency of digital game use. These 52 participants were asked how often they used digital games in their EFL lessons. Figure 5 presents the results regarding the frequency of the use of digital games in the EFL teachers' lessons.

Figure 5: Frequency



As Figure 5 illustrates, the results revealed significant differences in the individuals' reported use of digital games. This study found that 15% of the participants reported that they no longer used digital games in their EFL lessons. When asked why they no longer use digital games, they reported various challenges to be the reason. This group of former users can be considered as *non-users*. Given that the participants who no longer use digital games do not contribute to the understanding of how frequently games are used, they have been subtracted from the group of *users*. Instead, they are included in the category of non-users, which was identified in the previous result, where it was found that one-third of participants reported not using digital games in their EFL lessons. This adjustment will be revisited after examining the frequency of game use among the remaining participants. After removing these participants, Figure 6 below shows the frequency of digital game use among the participants categorised as users.

Figure 6: Frequency Among users

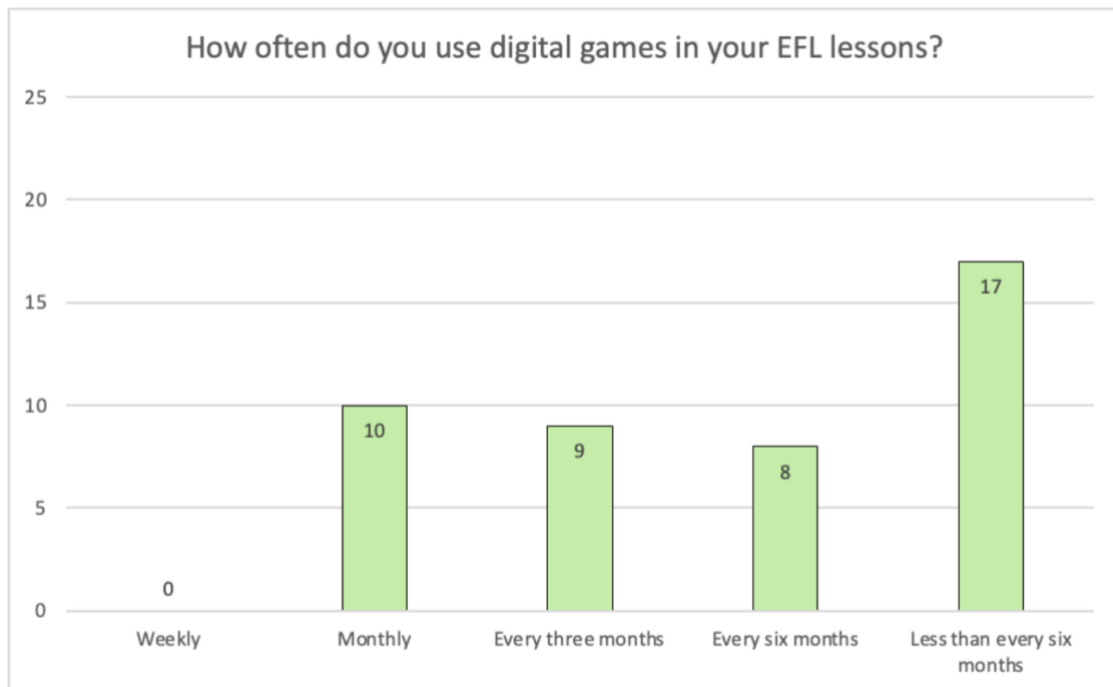


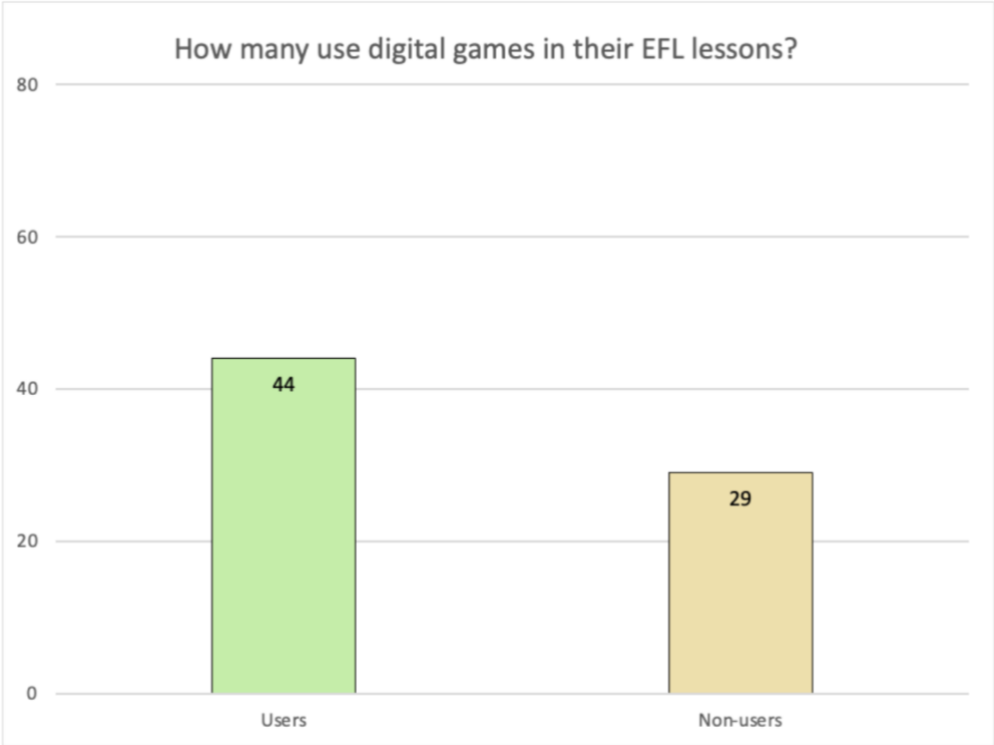
Figure 6 shows that none of the participants used digital games every week. This suggests that the most common frequency of digital game use among the participants is on a monthly basis. More than one-fifth of the participants reported using digital games at this frequency. The second most frequent users were participants who reported using digital games every three months. This group represents one-fifth of the sample. Digital game use on a monthly and every three-month basis can be associated with regular use. When both groups are combined, it becomes clear that more than 40% of the participants were *regular users*.

The next two groups demonstrated less frequent use of digital games. Almost one-fifth of the participants reported using digital games every six months. Given that a Norwegian school year lasts roughly ten months, this is equivalent to using digital games once or twice a year. The least frequent users were those who reported using digital games less than every six months. This group was also the largest, with almost two-fifths of the participants. The two low frequency groups can be classified as *occasional users*, indicating they sometimes use digital games but not on a regular basis. Combined, the occasional users accounted for almost 60% of the participants.

After the participants were categorised into users and non-users, the results seen in Figure 7 indicate that around 60% of the participants used digital games in their EFL lessons, while approximately 40% did not. Additionally, it was discovered that digital games were

used to varying degrees among the users, of which 40% could be considered regular users and 60% as occasional users.

Figure 7: Use of Digital Games



The findings indicate that there are significant variations in the teachers' use of digital games in EFL lessons, which may reflect the teachers' range of opinions, attitudes, and preferred teaching methods. These variations emphasise the importance of investigating the different perspectives towards the use of digital games in EFL lessons. This may reveal different challenges or obstacles that teachers experience, as well as what support they need to successfully integrate digital games. To gain a comprehensive understanding of the diverse perspectives on digital games, interviews were conducted with four teachers who had different opinions on the topic. The results from these interviews are detailed in the following subsection.

## 5.1.2 Different Perspectives Among Teachers on the Use of Digital Games

To investigate the diverse range of attitudes and beliefs regarding digital games among teachers, four teachers were interviewed. Their perspectives offer valuable insights into the spectrum of attitudes towards the use of digital games in the EFL classroom. The various teachers are presented in Table 2, which provides a summary of their educational background, years of experience, and their attitudes towards digital games. All the four teachers have the necessary resources available to use digital games in their EFL lessons. The following subsections of the chapter will offer more insight into the different teacher perspectives on digital games.

Table 2. Teacher Interviews

<b>Interviewee</b>	<b>Attitudes Towards Digital Games</b>	<b>Education</b>	<b>Teacher Experience</b>
Teacher 1	Enthusiastic	5 years	5 years
Teacher 2	Moderate	5 years	2 years
Teacher 3	Ambivalent	5 years	31 years
Teacher 4	Reluctant	6 years	16 years

### 5.1.2.1 *Teacher 1*

The first EFL teacher who was interviewed had a five-year teacher education degree in Norway, majoring in history with English as a secondary subject. Furthermore, he had recently completed additional university courses focusing on digital game use for teachers. He had five years of experience in a Norwegian lower secondary school, all of which he worked as an EFL teacher. He had had a keen interest in digital games since a young age, and it continued to be a significant part of his personal life. He claimed that playing digital games throughout his early years had a significant role in his acquisition of the English language. As so, he highlighted the possible influence of digital games on pupils' language skills.

Teacher 1 described himself as laid-back, aiming to create a motivating and engaging learning environment where pupils would actively participate and use English. He emphasised the value of employing a variety of methods in his lessons to provide relevance and motivation for his pupils. This teacher preferred incorporating modern methods to meet

pupils' interests, alongside traditional teaching methods. Given the significant role of digital games in youth culture, he believed it was highly relevant to integrate them into EFL lessons. Teacher 1 believed that not using digital games would be neglecting an important part of contemporary culture. He considered digital games to be a valuable educational tool, and strongly believed in the benefits of incorporating them into EFL lessons. He pointed out several positive experiences associated with using digital games, including increased pupil motivation and engagement. Additionally, he observed that pupils who typically struggled with tasks showed improvement when digital games were incorporated into lessons.

Teacher 1 regularly incorporated digital games into his EFL lessons. However, he was selective about when to use digital games and only used them as a teaching tool when appropriate. According to him, his decision to use digital games depended on the specific class and its learning objectives. While digital games could be beneficial in some cases, they might be less effective in others. He had found that digital games could be used in various ways, suitable for different occasions, topics, and skills. Teacher 1 had previously used digital games to increase oral activity in class and reduce pupils' anxiety about speaking English in front of others. He believed that when pupils played a digital game, they shifted their focus to the activity rather than worrying about their language skills. Teacher 1 had also incorporated game novellas in addition to printed books for reading activities. He observed that the interactive features of game novellas increased the pupils' engagement with the storyline. Additionally, certain game novellas had served as conversation starters, facilitating discussions in the classroom.

Teacher 1 was convinced that digital games needed to be included in EFL lessons and predicted that they would become more common in the future. However, he acknowledged that not everyone currently used this approach. Although he held an enthusiastic view of digital games, he was aware of the stigma and prejudices associated with their use. Teacher 1 argued that teachers who incorporated digital games into their lessons did so with careful consideration and intention. The teacher emphasised that integrating a digital game into a lesson did not change the purpose of teaching. The lesson remained pedagogically planned, with the aim of facilitating learning.

The teacher believed that younger teachers were more interested in using digital games than the older teachers. While they might not necessarily have negative attitudes toward digital games, older teachers might prefer to use the tools they were already familiar and comfortable with. Additionally, some might face challenges in adopting digital games due to a lack of knowledge or proficiency, unlike those who were more familiar with gaming.

### 5.1.2.2 *Teacher 2*

Teacher 2 had a 5-year teacher education degree in Norway, with a major in English and history as a secondary subject. He had been working and teaching EFL in lower secondary school for two years. He also had two years of experience as a substitute teacher. Unlike Teacher 1, he had not had specific education or training related to the integration of digital games into teaching. Teacher 2 was interested in digital games and played them in his spare time. Like Teacher 1, this teacher attributed his English language proficiency to playing digital games during childhood. Therefore, he shared the belief that pupils could acquire English language skills through playing digital games in his spare time.

Teacher 2 described themselves as a balanced teacher. This meant that he established clear expectations while maintaining a respectful and supportive learning environment. He used a variety of teaching methods and tools, such as reading literature, playing digital games, using the subject's textbook, or watching films. His goal was to keep his lessons balanced and provide pupils with instruction tailored to their needs.

The teacher held a positive attitude toward the use of digital games in EFL lessons and believed they could bring variation to lessons and increase motivation. He found digital games suitable for most parts of the curriculum if they were relevant to the topic, but especially for writing and oral activities. However, the teacher noted that games might not have been as effective for diffuse topics and were better suited for more specific ones. He considered games particularly suitable for concluding topics or chapters, although he also incorporated films and books for this purpose. According to the teacher, using digital games towards the end of topics was beneficial as pupils already had a good understanding of the material.

Teacher 2 had previously incorporated digital games into his EFL lessons but did not do so often. In his two years as an EFL teacher, he had only used digital games once. On that occasion, he had used a digital game to teach storytelling and inspire writing. Despite his positive attitude toward digital games, this teacher tended to prioritise other methods over the use of digital games in EFL lessons. There were several reasons why he did not use digital games more often. The primary reason was that he prioritised what he deemed most essential for his pupils' language acquisition. Often, digital games were not considered the most effective option compared to other teaching methods. With only two hours assigned for teaching English per week, he emphasised the importance of optimising this time. While he

would have liked to incorporate digital games more, he only did so when he felt he had sufficient time. Another reason why this teacher may not have used digital games more often was due to collaboration with other EFL teachers who taught the same grade. Since the other teachers were not equally interested in digital games, they were not considered as available tools when planning lessons. Consequently, this teacher used digital games less frequently than he might otherwise. Teacher 2 had also experienced challenges in the past when using digital games, which may have influenced his current use of them. He might have found it easier to plan and prepare for lessons without digital games, which made this a more appealing option.

### 5.1.2.3 *Teacher 3*

Teacher 3 had approximately 5 years of higher education in science and English. She had 31 years of experience teaching EFL, 28 of which had been in lower secondary school. Unlike the two previous teachers, she was not very familiar with digital games and had only limited experience with them. Additionally, she did not play digital games in her spare time.

The teacher described herself as spontaneous. She had a plan for the school year but explained that 'the road was built as you walked it'. She used a blend of traditional and modern teaching methods to provide variation in her EFL lessons. This involved using a variety of activities, such as reading literature, writing tasks, using digital resources like videos and films, and other materials gathered over the years. Typically, she integrated one literary work into her curriculum per semester or school year.

Teacher 3 had mixed opinions regarding the integration of digital games in EFL lessons. She was neither positive nor negative but appeared uncertain about their benefits. The teacher observed that pupils already used digital games extensively outside of school, which made her question the necessity of incorporating them into the lessons. Like Teacher 2, she prioritised other teaching methods she considered more important over the use of digital games. She prioritised exposing pupils to new experiences rather than reinforcing activities they already engaged in outside of the classroom. She believed that if digital games were to be used in education, it must be done pedagogically and aligned with educational objectives. While she recognised the potential benefits of using digital games, she viewed them primarily as extramural activities. While she acknowledged the possibility of incorporating digital games into the classroom, she was not personally motivated to do so. Instead, she believed that teachers who were interested and proficient in using digital games could do so.



#### 5.1.2.4 *Teacher 4*

Teacher 4 had a six-year teacher education on various subjects. She spent one and a half years of her studies on English as her second subject, while her primary subject was Norwegian. With 16 years of teaching experience, she had spent the last ten years teaching EFL in a lower secondary school setting. The teacher did not play digital games and described her relationship with them as non-existent.

Teacher 4 used both traditional and modern teaching methods. She wanted to introduce her pupils to experiences they might not have otherwise. She encouraged her pupils to participate actively in her EFL lessons by making every lesson engaging and interactive. She did so by using a variety of teaching methods, such as reading projects, literary discussions, oral exercises, music, and physical games.

Teacher 4 had a very negative view of digital games in an educational context. She refrained from using digital games in her EFL lessons and had only used them once when another teacher led the class. In her experience, she found digital games to be ineffective tools for EFL instruction. However, she acknowledged the potential benefits of digital games as extramural activities. She explained her lack of use as stemming from disinterest and limited knowledge in digital games. The teacher's main concern was that pupils already spent considerable time on screen-based activities, and she was hesitant to contribute to additional screen time. The teacher was negative about the increasing digitalisation of society and believed that schools were 'overly digitalised'. She believed that pupils' lives were increasingly occupied by screens, which had led to decreased academic proficiency and knowledge. As a result, she argued that pupils should be provided with different input to balance out the constant impact of technology. Teacher 4 believed that teachers and schools should prioritise providing pupils with the necessary tools and knowledge to succeed in life. This should be done by focusing on essential skills and meaningful content instead of the pupils' interest. She believed that teachers were vital in broadening pupils' perspectives and understanding of the world, and that they did so by exposing pupils to important texts and concepts. Despite her reservations about digitalisation, she acknowledged its potential benefits in education, such as using music, films, or series as teaching tools.

Teacher 4 believed there were more effective methods for teaching EFL than using digital games. She agreed that digital games could align with LK20 but chose not to incorporate them into her lessons. She prioritised printed text over multimodal text like digital

games because she believed reading printed text required pupils to actively engage with the content by imagining the world or characters described. In contrast, digital games presented already processed information, removing the active engagement of the reader. She argued that pupils were more focused on completing tasks in the game rather than understanding the story, which undermined the learning process. Additionally, she felt that reading printed text presented more challenges for pupils compared to playing digital games.

### 5.1.3 Understanding the Use of Digital Game across the Teacher Types

To gain an extensive understanding of the degree to which digital games are used, it is essential to investigate the diverse perspectives of the teachers. This can be done by identifying the various attitudes, behaviours, and beliefs of teachers, which in turn can help distinguish different types of teachers. Exploring the perspectives of the different teacher types may offer insight into the varying degrees of use of digital gaming. This subsection attempts to identify four different teacher types through a qualitative analysis of the participants' open-ended responses in the questionnaire and the teacher interviews. It does so by outlining each teacher type's distinctive perspective regarding the use of digital games in the classroom.

This study found varying degrees of engagement and teacher beliefs on the use of digital games in the EFL classroom. As this is an attempt to categorise the diverse opinions teachers may have regarding the use of digital games in the classroom, these types might not accurately reflect the opinions of all teachers. However, they may provide valuable insights into the varying attitudes toward the use of digital games in the EFL classroom. Based on the four interviews conducted in the present study, the variations found can be categorised as four types of teachers: (1) *The Enthusiastic Teacher*, (2) *The Moderate Teacher*, (3) *The Ambivalent Teacher*, and (4) *The Reluctant Teacher*. Each type will be described in detail below.

#### 5.1.3.1 *The Enthusiastic Teacher*

The Enthusiastic Teacher corresponds with Teacher 1 in this study. The Enthusiastic Teacher was distinguished by a great interest and passion for digital games, viewing them as valuable tools in education. He firmly believed in the educational benefits of digital games and actively

sought opportunities to integrate them into his lessons. He demonstrated flexibility in using digital games to suit different learning objectives and classroom contexts. The Enthusiastic Teachers was motivated by his belief in digital games as a transformative pedagogical tool, and often encouraged others to embrace it. He also believed that digital games would be a commonly used tool in education in the future.

This teacher type could employ digital games as either the main component of his lesson or as supplementary material. He typically favoured modern methods over traditional approaches to make lessons engaging, motivating, and relevant for his pupils. This teacher demonstrated a willingness to devote more time to researching and testing digital games than others. He was also more likely to participate in professional development activities related to digital games.

The Enthusiastic Teacher was more likely to overcome the initial challenges associated with digital games because of his dedication. Additionally, the Enthusiastic Teacher had a high level of proficiency in playing digital games himself, which made it easier to employ them as teaching tools. His greater proficiency could also have reduced the obstacles to integrating digital games.

The Enthusiastic Teacher's attitude towards digital games has most likely contributed to him using them in their teaching practices. The positive beliefs of this teacher may have been the leading cause for their use of this educational tool. It is evident that their experience with digital games has significantly contributed to the competence required for incorporating digital games into the EFL classroom.

#### 5.1.3.2 *The Moderate Teacher*

The Moderate Teacher corresponds with Teacher 2 in this study. The Moderate Teacher differed from the previous type as he neither fully embraced nor rejected digital games. He recognised the potential benefits but also acknowledged their limitations and challenges. Although he was positive about digital games, he did not actively seek to incorporate them into his lessons.

The Moderate Teacher demonstrated a more selective approach to using digital games compared to the Enthusiastic Teacher. This did not necessarily imply more reflection on his choices but rather indicated a more conservative approach towards integration. Compared to the Enthusiastic Teacher, he was seen as more pragmatic and less willing to devote an extensive amount of time to the integration of digital games. As a result, he might not have

put in the same amount of effort to overcome challenges, choosing instead to use different teaching methods. This teacher type used digital games when it was suitable, which was less frequently than the Enthusiastic Teacher. The Moderate Teacher, similar to the Enthusiastic teacher, also played digital games in his spare time.

The Moderate Teacher struggled more with conflicting priorities and tended to choose teaching methods he considered as more important over digital games. He may have prioritised other methods because he believed that using digital games in lessons was too time-consuming. Furthermore, he may not have considered lessons involving digital games as important compared to other instructional approaches. His prioritising was influenced by various factors, including his personal teaching beliefs, the requirements of the national curriculum, and the opinions of colleagues, pupils, and parents.

Examining the Moderate Teacher reveals a broader spectrum of opinions compared to the previous teacher type. While this teacher type can also draw on his own experience and beliefs regarding digital games as a suitable instructional tool, he appears to be less enthusiastic about incorporating it as a frequently used tool. This teacher type's less frequent use of digital games appears to be caused by two main reasons. Firstly, although he acknowledges the potential of digital games as a tool in the EFL classroom, he does not hold a more positive view of them over other tools. This suggests that this teacher type may not have as strong beliefs in the value of digital games and their potential for improving learning outcomes. The second reason is due to the effort it requires to use digital games effectively in the EFL classroom. The teacher describes multiple challenges related to the use of digital games, which suggests that they may demand more effort compared to other instructional methods. If the teacher experiences the use of digital games as challenging in addition to questioning the learning outcomes compared to other methods, it may not be a surprise that this teacher reported conflicting priorities.

### 5.1.3.3 *The Ambivalent Teacher*

The Ambivalent Teacher, who corresponds to Teacher 3, is characterised by her conflicting opinions on the use of digital games in the EFL lesson. This teacher type had varied opinions and neither fully embraced nor rejected the use of digital games. She showed a combination of interest and reservation toward incorporating digital games into EFL lessons, often expressing both positive and negative perspectives. The Ambivalent Teacher had used digital

games in her lessons once before but remained uncertain about their benefits and suitability as teaching tools. However, she was more likely to prioritise traditional methods.

The Ambivalent Teacher devoted little time to researching and testing digital games. This teacher type had less personal experience playing digital games than those in the previous teacher types. Consequently, her proficiency in using digital games as a pedagogical tool can be considered as low. This could have posed a significant barrier for this teacher, leading her to not attempt to integrate games into her teaching practices. While she had participated in professional development activities related to digital games, she was not as proactive in seeking out such opportunities. This type of teacher may view digital games as an additional challenge in teaching rather than a valuable resource.

While the Ambivalent Teacher did not exhibit a strongly negative attitude towards digital games, her lack of interest suggests a greater degree of hesitancy compared to the previous two teacher types. It is unclear whether this hesitancy was related to digital games as a teaching tool in general or if she was hesitant to use them herself. While she may be open to learning more about digital games, she may require additional support or training to fully embrace them.

#### *5.1.3.4 The Reluctant Teacher*

The final teacher type, The Reluctant Teacher, corresponds with Teacher 4 in this study. The Reluctant Teacher expressed a profound scepticism towards the integration of digital games in the classroom, which identified her as the most critical of this pedagogical approach. This teacher type displayed significant resistance towards digital games and tended to favour traditional teaching methods. Unlike her counterparts, the Reluctant Teacher displayed serious doubts about the educational value and efficacy of digital games, and expressed the belief that such tools fail to contribute meaningfully to learning outcomes. Therefore, she is highly unlikely to integrate digital games into her teaching practices.

This teacher type demonstrated minimal interest in researching or testing digital games for classroom use and rarely participated in professional development activities related to digital games. She was unlikely to seek out opportunities to learn more about digital games for educational purposes.

This teacher type likely had limited personal experience with playing digital games, which may have led to a lack of confidence and competence in using them as a pedagogical tool. Consequently, she perceived digital games as a distraction rather than a valuable

resource. Moreover, she harboured a general scepticism toward digital technology, and believed that pupils already spent too much time on screens.

The Reluctant Teacher's viewpoint starkly contrasted with that of the Enthusiastic Teacher, as she prioritised exposing pupils to 'what they needed' over 'what they wanted'. As a result, she prioritised exposing pupils to what she perceived as essential knowledge and skills rather than responding to pupils' preferences for digital games. The Reluctant Teacher believed that the primary objective of schools was to impart this essential knowledge, as exposure to it did not occur naturally. She argued that pupils already played with digital games at home, where they had ample opportunity to explore them independently. Instead, the Reluctant Teacher saw the classroom as a space to prioritise activities that may not have been available outside of school, such as training fundamental academic skills. Furthermore, she emphasised the importance of Extramural English for language learning outside of formal classroom settings and suggested that English language acquisition through digital games should not have occurred in an educational context.

The Reluctant Teacher's doubts towards digital games are likely influenced by her beliefs about their suitability and relevance in the classroom. As she does not consider digital games to be valuable tools in the EFL classroom, she is inclined to rely on other methods that she perceives as more suitable for teaching.

## **5.2 Research Question 2**

This section will present the results from the questionnaires and interviews relevant for the second research question, which is as follows:

2. What challenges do the EFL teachers report regarding the use of digital games in the classroom?

This study investigated the challenges reported by the EFL teachers regarding the use of digital games in the classroom. This was done by analysing both qualitative and quantitative data. The results showed that teachers experienced multiple challenges connected with the integration of digital games into their teaching practices. The closed-ended multiple-choice item identified patterns among the challenges experienced by the sample. These trends can reflect the common challenges that teachers encounter. The open-ended item allowed teachers to elaborate on their challenges, which provides a more comprehensive understanding of the

specific challenges they faced. Additionally, this provided the participants with a chance to report any other challenges that were not addressed by the closed-ended question. The first subsection will present the results obtained from the closed-ended item, with an overview of the common patterns and trends observed among participants. Following this, the results from the open-ended item will be presented to gain a deeper understanding of the nuanced experiences and perspectives of the teachers.

### 5.2.1 The Reported Challenges

The 52 of 73 participants who had used digital games were asked to select all the challenges they had encountered. The 52 participants identified challenges from a list of predetermined options based on previous research findings. In total, the participants contributed with 176 responses, which are detailed in Figure 8.

Figure 8: Challenges

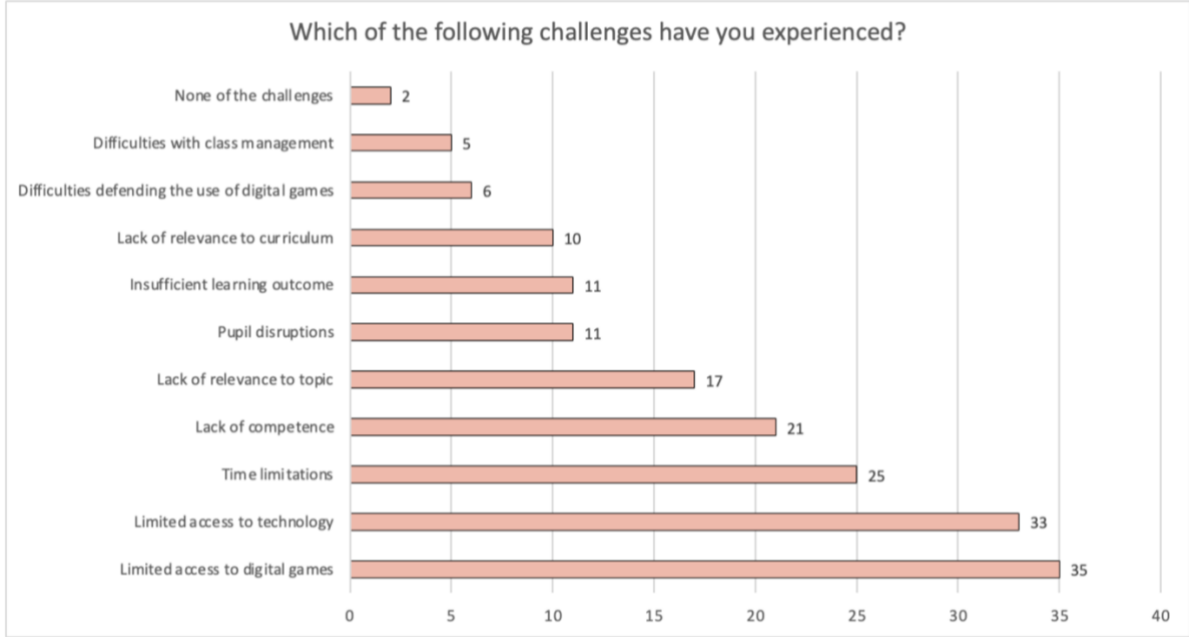


Figure 8 indicates that the predominant challenges revolved around the lack of available resources for teachers. Nearly 70% of participants pointed out the lack of suitable digital games, while more than 60% mentioned a lack of necessary technology.

Besides the above challenges, nearly half of the participants identified time constraints as an issue. However, it remains unclear whether this has to do with the time required for lesson planning by the teacher or the time restraints within EFL lessons. Additionally, 40% of

participants reported a lack of knowledge as a challenge. A third of participants found the lack of relevance to the topic as challenging, while one-fifth regarded the lack of relevance with the National Curriculum as a challenge. Moreover, participants reported challenges related to classroom management. Specifically, over 20% encountered difficulties with their pupils' behaviour when using digital games, while nearly 10% faced issues regarding class management. Additionally, some teachers found it challenging to justify or defend the use of digital games in their EFL lessons. More than 20% questioned the learning outcomes associated with digital game use, considering it a challenge. Several teachers reported no experience with any of the predetermined challenges.

In addition to the results presented above, the participants were asked to elaborate on the challenges they experienced. Out of the 52 individuals who had tried digital games, 41 described their challenges. Nearly all respondents specified multiple challenges, resulting in a total of 77 reported challenges across their responses. These were analysed and classified into seven categories, as depicted in Figure 9: (1) Lack of competence, (2) Classroom management, (3) Lesson time constraints, (4) Learning outcome, (5) Time-consuming preparation, (6) Lack of technology, and (7) Lack of digital games.

Figure 9: Reported Challenges

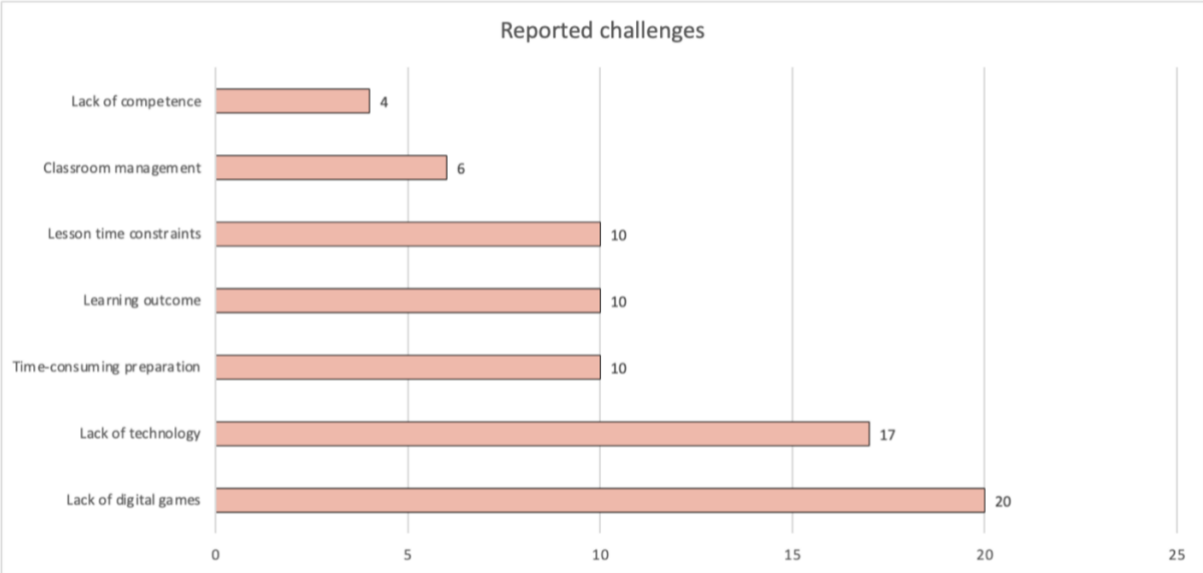


Figure 9 illustrates that the most commonly experienced challenges among the teachers were the lack of technology and digital games, with a minority reporting a lack of competence as a



challenge. The challenges reported by the participants are summarised in Table 3, along with specific explanations of their difficulties.

Table 3. Reported Challenges

<b>Category</b>	<b>Reported Challenges</b>	<b>Frequency</b>
Lack of competence	· Teachers express insufficient knowledge, skills, experience, and competence	4
Time-consuming preparation	· Lesson preparation is time-consuming and requires considerable effort	10
Learning outcome	· Teachers question the learning outcome of digital games	10
Lack of technology	· Teachers have a varying or no access to necessary equipment · Issues connected to internet or other IT problems	17
Lack of suitable games	· Teachers have a varying or no access to the digital games they would like to use	20
Lesson time constraints	· Limited number of EFL lessons · Difficulties due to limited lesson time	10
Classroom management	· Disruptive pupils · Pupils are more easily distracted and struggle to remain focused on the task · Uncertainty about whether pupils are following instructions · Teachers encounter increased difficulty in managing the entire class	6

As can be seen in Table 3, almost 10% identified their lack of competence as a challenge when integrating digital games into their EFL lessons. They noted that their lack of proficiency increased the effort required to use digital games because there was more to understand and manage.

Following that, 15% highlighted concerns regarding classroom management. This is due to various reasons. Firstly, they observed that pupils were more prone to distraction when

digital games were incorporated into the lesson. Secondly, they faced challenges in monitoring their pupils' activities and progress. Thirdly, they encountered difficulties in guiding the class effectively towards the intended learning objectives.

Twenty-four percent of participants specified issues regarding lesson time constraints, either due to the time consumed within the lesson or the limited amount of EFL lessons. The latter is seen as particularly challenging because teachers found it difficult to prioritise their limited time to digital games.

Twenty-four percent of participants expressed challenges in determining the actual learning outcomes associated with using digital games. While most did not doubt its impact on pupil motivation, they were more uncertain about its effectiveness in language acquisition. This is challenging due to the uncertain learning outcome of using digital games compared to other teaching methods.

Twenty-four percent of respondents identified the time required for planning as a significant challenge. This aspect presents a barrier that may prevent teachers from attempting or utilising digital games, as it may seem to be a more demanding choice. Planning such lessons is perceived as time-consuming, as teachers must identify suitable games relevant to the topic being taught and align them with curriculum objectives. Additionally, they must ensure compatibility with available technology, download the games onto the appropriate platforms, and prepare them for classroom use. Adding further complexity, these lessons must be planned pedagogically, like any other lesson. They perceive this as involving numerous additional steps compared to planning an 'ordinary' lesson. This perception might explain why some teachers prefer traditional methods over the use of digital games.

The two most frequently reported challenges are related to resource availability. Thus, 41% identified the lack of technology as a challenge, while 49% mentioned the absence of suitable digital games. It is evident that for teachers to incorporate digital games in the classroom, they require the essential resources. Without adequate technology or access to digital games, this option is simply not possible for them.

Upon reviewing the challenges summarised in Table 3, it became evident that certain challenges shared common characteristics or underlying themes. The reported challenges were combined into broader categories in an attempt to identify larger trends and make the information more comprehensible (see revised Table 4). This is to emphasise the main challenges the participants experienced when using digital games in their EFL lessons.

Table 4 presents the main challenges reported by the participants, which can be divided into three main categories: (1) Competence, (2) Time, and (3) Resources.

Table 4. Reported Challenges Revised

<b>Categorisation</b>	<b>Reported Challenges</b>	<b>Frequency</b>	<b>Combined Frequency</b>
Competence	Lack of knowledge and skills	4	20
	Classroom management	6	
	Learning outcome	10	
Time	Time-consuming preparation	10	20
	Lesson time constraints	10	
Resources	Lack of technology	17	37
	Lack of suitable games	20	

As Table 4 demonstrates, lack of competence is a common theme among several of the identified challenges. While some participants explicitly mentioned this, others indicated challenges connected to this, such as difficulties with classroom management and uncertainty regarding the learning outcome. These challenges can be linked to a lack of proficiency in using digital games into EFL classes.

As previously mentioned, challenges related to both lesson time constraints and time-consuming preparation can be categorised under the broader issue of time management. While it is essential to acknowledge these specific challenges individually, they ultimately combine into a common problem: the lack of time. Time constraint is a common issue for teachers, irrespective of the resources, methods, or subjects.

The participants frequently reported challenges related to the lack of necessary technology and digital games. Since both technology and digital games are essential resources for implementing digital games in the classroom, they have been combined into the broader category of 'resources'. This category includes various issues, such as the lack of budget to acquire essential resources and difficulties with IT and internet-related issues. When these challenges are combined, the most commonly reported issue relates to the overall lack of essential resources.

### 5.2.2 Challenges by Teacher Types

In examining the challenges experienced by the teachers, this study revealed both similarities and differences among different teacher types. Given that the Enthusiastic and Moderate Teachers primarily used digital games, they serve as the primary sources for understanding these challenges. One common challenge identified across all teacher types is the importance of access to necessary technology and digital games for their incorporation into EFL lessons. Without essential equipment, teachers would naturally find it challenging to integrate digital games into their teaching.

Additionally, the Moderate Teacher emphasised how inadequate technology impacts lesson planning. For instance, when there are not enough computers for each pupil they must work in pairs, which leads to various challenges. These challenges include issues with cooperation and conflicts between pupils, differences in gaming proficiency, and potential disruptions to the learning process as pupils must rotate playing the game.

Several teacher types, including the Enthusiastic Teacher, the Moderate Teacher, and the Ambivalent Teacher, identified time as a significant challenge in using digital games in the classroom. The Enthusiastic Teacher specifically points to the time-consuming lesson preparation as a major challenge. They find that integrating digital games requires significant time of lesson planning. However, they do not find the quantity of EFL lessons as a challenge as they do not experience conflicting priorities on the use of digital games. While the Moderate Teacher acknowledges the time-consuming lesson preparation, they additionally struggle with conflicting priorities due to time constraints.

The Enthusiastic Teacher also emphasised challenges that would arise when other teachers did not incorporate digital games into their lessons. This lack of practice means that pupils may not acquire the necessary knowledge on how to use digital games for learning. Consequently, the Enthusiastic Teacher found it more challenging to engage pupils in lessons involving digital games, as pupils might not take these lessons as seriously as others.

In addition to contextual factors, teachers may find that the beliefs of others pose challenges. For instance, the Moderate Teacher had encountered challenges as a result of parents' negative beliefs about digital games. On the other hand, teachers' own beliefs can also present challenges, as observed with the Ambivalent and Reluctant Teachers. The challenge related to beliefs appears to be a common issue experienced by these two teacher types.

### 5.3 Research Question 3

This final section will present the results from the questionnaires and interviews relevant for the third research question, which is as follows:

3. What do the teachers find beneficial in order to implement digital games in their EFL teaching practices in Norwegian lower secondary school?

The first subsection presents what teachers reported to be beneficial in implementing digital games and explores their suggested solutions. The second subsection investigates the proposed solutions by teacher type, focusing on differences in their suggestions.

#### 5.3.1 Suggested Solutions

In addition to investigating the challenges experienced by the teachers, this study also sought to explore the possible solutions suggested by them. Table 5 presents the teachers' recommendations to support the implementation of digital games in EFL teaching practices. While the previous section categorised the challenges into three main categories, the challenge of time is not included in Table 5. This is because the table summarises the concrete suggestions from the teachers, some of which address multiple challenges simultaneously. Therefore, the category 'Time' has been removed, as this challenge is somewhat addressed when tackling issues related to teacher competence and available resources. Additionally, none of the suggestions provided alternative methods to deal with time constraints, such as adding extra EFL lessons or giving lesson planning more time. As a result, the teachers' suggested solutions mostly focus on resolving issues with teacher competence and resources, as outlined in Table 5.

Table 5. Suggested Solutions

<b>Main challenges</b>	<b>What could be beneficial?</b>	<b>Suggested solutions</b>
Competence	Increase the teacher competence	<ul style="list-style-type: none"><li>· Courses on digital games</li><li>· Include in teacher education</li></ul>
Resources	Provide the teachers with necessary resources	<ul style="list-style-type: none"><li>· Gaming pedagogues</li><li>· IT staff</li><li>· Resource bank</li><li>· Access to necessary technology</li></ul>

As Table 5 demonstrates, the teachers provided several suggestions as to how to facilitate the use of digital games in the EFL lessons. They emphasised the importance of improving teachers' competence in using digital games and suggested various approaches to achieve this. First, they suggested providing teachers with specialised courses on digital game use. This course should provide teachers with comprehensive knowledge and practical skills essential for integrating digital games into their lessons. Additionally, they encouraged the inclusion of digital game use in teacher education. This way, future teachers would be introduced to digital games and provided with the relevant competence to use them.

As previously mentioned, access to necessary technological resources and digital games is essential to help teachers incorporate digital games into their EFL lessons. Some teachers suggested additional resources that could be beneficial.

Several teachers suggested creating a national resource bank to support teachers in integrating digital games into their teaching practices. They emphasised the importance of having access to an overview of suitable games along with lessons specifically designed for them. This resource bank would not only provide guidance on how to align digital games with LK20 but would also offer suggestions on which skills or topics they could reinforce. Additionally, teachers proposed that this resource bank should function as a digital game library, similar to streaming platforms, allowing educators to easily download games for classroom use. Furthermore, teachers emphasised the importance of having this resource bank managed by professionals in gaming pedagogy to ensure the quality of the content. Overall, teachers expressed a need for a comprehensive guideline to support them in integrating digital games into their lessons, providing them with the needed assistance in the process.

### 5.3.2 Solutions Proposed by Teacher Types

The four different teacher types express varying opinions on potential solutions for teachers in integrating digital games into their lessons. While all teacher types agreed on the importance of access to necessary technological equipment and digital games, the Enthusiastic Teacher proposed an alternative solution. Instead of equipping each lower-secondary school in Norway with the necessary technology, they suggested establishing gaming centres that nearby schools could use as needed.

The teacher types agreed that teacher competence was crucial for implementing digital games. However, the Enthusiastic Teacher argued that teacher interest was equally important. The Enthusiastic Teacher believed that even if most challenges were removed, uninterested

teachers would still not use digital games. They suggested that the National Curriculum should be changed to require the use of digital games in the classroom. This way, uninterested teachers would be forced to incorporate them into their teaching practices. The Ambivalent Teacher suggested that instead of providing the necessary competence to each EFL teacher, schools should have access to gaming pedagogues. These professionals could take over lessons when digital games are used. This approach could tackle the challenge of uninterested teachers without forcing them to use digital games themselves. Additionally, it would save teachers time by bypassing the time-consuming lesson preparation.

## **5.4 Summary**

This section summarises the main findings related to each of the three research questions. For the first research question, the study revealed that a majority of teachers reported to have used digital games in their EFL lessons, with varying frequencies of use. Approximately 40% of teachers were classified as regular users, while 60% were categorised as occasional users. Additionally, it was observed that some teachers who had previously tried digital games no longer used them in their lessons. Furthermore, the study presented diverse perspectives among the teachers regarding the use of digital games. It identified four distinct attitudes towards digital games, which ranged from enthusiastic to reluctant. These were defined as enthusiastic, moderate, ambivalent, and reluctant.

For the second research question, this study found that teachers encountered several challenges when using digital games in their teaching practices. These challenges were primarily related to teacher competence, time constraints, and resource availability. The considerable number of challenges reported by the teachers emphasises how complicated it is to implement digital games into teaching practices. Additionally, the study revealed that although the four teacher types faced some common challenges, they also encountered distinct ones. The latter seemed to be influenced by their individual experiences and beliefs.

For the third research question, this study found a number of suggestions from teachers regarding what could be beneficial to implement digital games into the EFL classroom. Most of these suggestions revolved around increasing teacher competence and providing teachers with the necessary resources.

The findings of this study will be discussed in the following chapter.

## **6 Discussion**

This chapter discusses the main findings related to the following three research questions in the current study.

1. What are the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the EFL classroom? In particular, what are their practices and attitudes?
2. What challenges do the EFL teachers report regarding the use of digital games in the classroom?
3. What do the teachers find beneficial in order to implement digital games in their EFL teaching practices in Norwegian lower secondary school?

Thus, the first question in this study sought to determine the Norwegian lower secondary EFL teachers' beliefs regarding the use of digital games in the EFL classroom, which will be discussed in Section 6.1. It specifically explored the teachers' practices and attitudes towards the use of digital games in language teaching. The second question aimed to ascertain what challenges the EFL teachers experienced when implementing digital games in the classroom, which will be addressed in Section 6.2. The third question in this research sought to explore what teachers found beneficial in order to implement digital games in their teaching practices, which will be discussed in Section 6.3.

### **6.1 The Norwegian Lower Secondary EFL Teachers' Beliefs about Digital Games**

This section discusses the results relevant for the first research question posed in this study. In particular, the first research question of this study aimed to investigate the Norwegian lower secondary EFL teachers' beliefs about the use of digital games in the classroom, focusing specifically on their practices and attitudes, which will be discussed in the following subsections.



### 6.1.1 Practices

The current research study investigated the Norwegian lower secondary EFL teachers' practices regarding the use of digital games in the classroom. It found substantial variation in the use of digital games among the teachers. Among the teachers asked, 71% reported using digital games in their EFL lessons. This finding aligns with previous studies, such as the one conducted by Tıraşın (2023), which discovered a similar percentage of respondents reporting the use of digital games. However, as the present study has identified a significant proportion of teachers with positive attitudes towards digital games, it could suggest the issue encountered in previous studies (Munkvold & Sigurðardóttir, 2018; Tıraşın, 2023). Specifically, it is possible that the questionnaire in this study attracted mainly positive teachers, which may have potentially influenced the results. Despite this, the findings offer valuable insights into the topic. As this possibility was anticipated, the questionnaire was designed to explore the nuances of the use of digital games and the teachers' beliefs comprehensively.

This study also examined the frequency of the teachers' digital game use. Interestingly, some teachers who had previously used digital games reported to have stopped doing so. This reduced the initial finding of active users of digital games from 71% down to 60%, indicating a decrease in reported use among the teachers. Among this group, 43% were categorised as frequent users, as they used digital games on a monthly to every three-month basis. This frequent use suggests a strong enthusiasm for digital games as a teaching tool. On the other hand, the remaining 57% were classified as occasional users, as they used digital games only every six months or less. This less frequent use can be associated with the teacher type “the moderate teacher.” It suggests that while these teachers recognised digital games as a valuable teaching tool, they did not incorporate them into their teaching practices as frequently as other methods.

Previous research on the use of digital games has primarily focused on the number of teachers using them and the purposes or methods of implementation (Brooks et al., 2019; Lone, 2023; Munkvold & Sigurðardóttir, 2018; Tıraşın, 2023). There appears to be less emphasis in previous studies on how frequently or to what extent teachers integrate them into their teaching practices. The findings of this study illustrate that different teachers do not employ digital games to the same extent in their teaching practices. Previous research, along with the questionnaire findings of this study, suggests that teachers' attitudes can influence their use of digital games (Beavis et al., 2014; Dondi & Moretti, 2007; Hamari and

Nousiainen, 2015; Nousiainen et al., 2018). To further explore these varying choices, this study also investigated the teachers' attitudes towards digital games in language teaching. These are discussed in the following subsection.

### 6.1.2 Attitudes

The current study investigated the Norwegian lower secondary EFL teachers' beliefs regarding the use of digital games in the classroom. It revealed varying attitudes among the teachers and identified four distinct teacher types: (1) *The Enthusiastic Teacher*, (2) *The Moderate Teacher*, (3) *The Ambivalent Teacher*, and (4) *The Reluctant Teacher*. These teacher types represent the spectrum of attitudes observed in the study and were further explored in detail through teacher interviews. The use of teacher types allowed for a deeper understanding of the diverse perspectives among the EFL teachers regarding the use of digital games. While the questionnaire may have primarily reflected the beliefs of positive teachers, the inclusion of different teacher types in the interviews provided a platform for teachers with differing opinions. This approach offers more nuanced insights into the topic.

Thus, this study identified four distinct teacher types, which were detailed in the previous chapter and can be viewed as ranging from the most positive to the least positive attitudes towards digital games. While these teacher types emerged from the findings of this research project, they bear resemblance to categories observed in previous studies. For instance, Beavis et al. (2014) categorised teachers into three groups: *optimistic*, *cautious*, and *non-concerns* (p. 572). Dondi & Moretti (2007) similarly identified three groups, where the first group found digital games to be beneficial, the second group found a specific type of game to be beneficial, and the last group consisted of teachers who had never used games and were reluctant to do so (Dondi & Moretti, 2007, pp. 503-504). Figure 10 illustrates a comparison of teacher types from the current and previous studies.

Figure 10: Comparison of Teacher Types Across Studies

TEACHER TYPES					
← POSITIVE ATTITUDES					
NEGATIVE ATTITUDES →					
RESEARCH STUDIES	Moberg (2024)	Enthusiastic	Moderate	Ambivalent	Reluctant
	Beavis et al. (2014)	The Optimistic	The Cautious		The Non-Concerns
	Dondi & Moretti (2007)	Use games	Only use specific games		Do not use games

As depicted in Figure 10, the teacher types identified in the studies range from positive to negative attitudes towards digital games (Beavis et al., 2014; Dondi & Moretti, 2007). All three studies identified one teacher group with positive attitudes towards digital games and one group with negative attitudes. The most positive and most negative teacher types have been placed at each end of the attitude scale due to their strongly conflicting views. The teacher types with less intense attitudes towards digital games are placed towards the middle of the attitude scale in Figure 10.

The main difference between the current and previous studies is the use of a fourth teacher type. The inclusion of the four teacher types in this study demonstrated the significant influence of the teachers' beliefs on their use of digital games. These teacher types reflected varying perspectives on the integration of digital games in EFL lessons. While previous research primarily focused on three teacher groups, the inclusion of an extra group uncovered additional dimensions and nuanced aspects of the topic as some of these distinct beliefs may have been combined in previous research (Beavis et al., 2014; Dondi & Moretti, 2007; Hamari & Nousiainen, 2015).

If this study had used the same three-category framework, it may have overlooked the diverse attitudes among teachers, potentially disregarding nuances in their enthusiasm levels. Lone (2023) focused on the beliefs of four upper secondary EFL teachers who were positive to the use of digital games and found variations in their use of them. However, while Lone (2023) considered all teachers in their study to hold positive attitudes, he found indications of variations. These variations resonate with the findings of the current study, where instead of grouping all positive teachers together, they were categorised into specific types, such as Moderate and Enthusiastic.

This study unveiled varying levels of enthusiasm among teachers by distinguishing between Moderate and Enthusiastic teachers. For instance, the Moderate teacher's hesitations and conflicting priorities might have been concealed. Furthermore, the Enthusiastic teacher's positive attitudes contrasted with the Moderate teacher's reluctance to seek opportunities. The average frequency of digital game use might have been affected if these categories were combined. This would have prevented this research from additional insights into the teachers' beliefs. Similarly, if the Ambivalent and Reluctant Teachers were grouped together, it would seem like a group of teachers who did not have any clear intentions of incorporating digital games into their teaching practices. This might have overlooked their distinct intentions and differences regarding the integration of digital games into teaching practices.

The four teacher types in this study did not only reflect the diverse attitudes towards digital games, but also revealed varied practices. The study thus highlights how the teachers' attitudes can influence their use of digital games in the classroom. However, Lone (2023) investigated four EFL teachers who were both competent and positive to digital games, and found that although they shared many positive beliefs, they still used digital games to a varying degree. This demonstrates that while teachers' attitudes may provide an indication of digital game use, they are not necessarily the sole determining factor, as supported by the findings of Hamari & Nousiainen (2015). This aligns with the attitudes and practices found among the Enthusiastic and Moderate teachers, both of whom hold positive views toward digital games. However, the Enthusiastic Teacher uses them more frequently. While the categorisation of these two types has offered a more nuanced perspective, it suggests that their positivity towards digital games may be equally strong.

Although this research project did not specifically set out to investigate whether age could be a determining factor to affect the teachers' use of digital games, it found that the two younger teachers of the four interviewed were more positive towards digital games than the others. While these teacher types could be associated with younger teachers, teachers of any age could fit this category. However, the Enthusiastic Teacher type may be more common among younger teachers, given their exposure to technology during their upbringing. Age itself may not directly affect their practices, but it is consistent with two specific findings in previous research. The younger teachers both grew up playing digital games and can be described as what Prensky (2005) defined as digital natives. The two older teachers, on the other hand, are what Prensky (2005) referred to as digital nomads, meaning they do not have the same experience or knowledge of digital technology (p. 1). Additionally, the younger teachers have quite a bit of experience in playing digital games, while the older teachers do

not. This is in line with previous research, where McNeil (2018) argued that experience with digital games could be beneficial for teachers to be able to use digital games in their lessons, while Chik (2011) found that teachers with little experience are more likely to have negative attitudes. Further, Chik (2011) found that the teachers in her study who had negative attitudes towards digital games also mentioned to have a moral stance against digital games (p. 161). This is similar to the findings of the current study, where the Reluctant Teacher also considered herself as morally obliged to avoid digital games.

## **6.2 The Challenges Regarding the Use of Digital Games**

This section discusses the results related to the second research question, which focuses on the challenges regarding the use of digital games in the EFL classroom. In particular, Subsection 6.2.1 discusses the challenges reported by the Norwegian lower secondary EFL teachers regarding the use of digital games in the classroom and focuses on the most commonly reported issues. In turn, Subsection 6.2.2 discusses the challenges across the teacher types.

### **6.2.1 The Challenges Experienced by the EFL Teachers**

The current study revealed that the teachers encountered numerous challenges when implementing digital games into the EFL classroom. These challenges emphasised the significant effort required by the teachers to use digital games as instructional tools. Additionally, the diversity of the challenges demonstrated why some teachers might prioritise other teaching methods over the use of digital games.

The teachers reported to have experienced multiple similar challenges. This indicates that teachers often encounter similar issues related to the use of digital game. The study also showed that the teachers perceived the challenges related to using digital games as complex and interconnected, which could potentially cause additional challenges. For instance, some teachers pointed to a lack of technological equipment, which not only impacted classroom management but also influenced pupil behaviour and learning outcomes in their lessons. The majority of the teachers reported challenges related to essential resources, such as a lack of technology and limited access to digital games. It is understandable that teachers without access to the necessary equipment would find this situation challenging. The fact that this was a commonly reported challenge shows that this is one of the main obstacles that the EFL

teachers face in the integration of digital games in the classroom. The lack of necessary resources has been consistently highlighted as a challenge in previous research (Brooks et al., 2019; Israelsson, 2020; Munkvold & Sigurðardóttir, 2018). However, this could also be considered an unexpected result, given that the technological coverage overview from the Norwegian Directorate for Education and Training demonstrates that almost every lower secondary pupil in Norway should have access to a technological device (Bergene et al., 2022; Fjørtoft et al., 2019; Norwegian Directorate for Education and Training, 2022; Skagen, 2014). Despite this, studies indicate differences in support for the use of digital games. Fjørtoft et al. (2019) found that only 10% of the school owners reported facilitating the use of digital games, while Munthe et al. (2022) reported that 28% of the participating schools used digital games. These findings suggest that although technological devices may be accessible, the infrastructure and support to implement digital games into classroom practices may not be sufficient (Kultur- og likestillingsdepartementet, 2023).

In contrast to previous studies, Lone (2023) did not find that the teachers reported lack of equipment as a challenge. This is not surprising, as he studied positive and competent gaming pedagogues who were proficient in finding solutions even with limited resources. On the other hand, while pupils may have access to a potential platform to play digital games, it does not necessarily mean that it is suitable for the specific digital game the teacher wants to use. Furthermore, several teachers reported that access to digital games posed a challenge, as schools often did not prioritise their budget for this purpose. Additionally, even if schools possessed both suitable digital games and the necessary technological equipment, there could still be other resource-related challenges, such as ensuring a stable internet connection and managing strict IT access policies. These findings along with those from previous research, highlight the importance that teachers must have adequate access to resources, including the necessary technology and appropriate digital games, to be able to use digital games in the EFL classroom.

The teachers also reported time limitations as another significant challenge, consistent with findings from previous research (Beavis et al., 2014; Israelsson, 2020; Lone, 2023; Munkvold & Sigurðardóttir, 2018; Tıraşın, 2023). The current study identified two main issues that impacted teachers' use of digital games, namely time-consuming preparation, and lesson time constraints.

The teachers found the lessons with digital games to require extensive preparation beforehand. They pointed to several reasons as to why they found it a time-consuming process. The teachers claimed that the lack of resources created additional workload. They

reported having to search for suitable games and test them, which consumed a significant amount of time and effort. For example, once a suitable game is identified, it needs to be downloaded onto the platform it will be used on. If the game is intended to be played individually by the pupils, the teacher may need to install the game on as many as thirty different platforms. Moreover, the teachers may encounter challenges during this process related to restrictions based on the technological platform they have access to. This, in turn, could further extend the preparation time. This aligns with the findings of Israelsson (2020), who also reported that teachers experienced both gameplay itself and preparation as time-consuming.

In addition to the technological aspects of lessons with digital games, the teachers also faced increased administrative tasks. Although this work increased, teachers still have the same number of lessons as before (Ekspertrgruppa om lærerrollen, 2016; Grindheim et al., 2014; Strøm et al., 2009; Utdanningsforbundet, 2021). This situation has diminished the time available for teachers to plan their lessons effectively. Consequently, it may influence which lessons teachers choose to prioritise, which may lead them to stick to familiar material rather than exploring new teaching approaches.

The teachers also reported the time constraints of lessons to be a challenge. Moreover, they expressed concerns about the limited number of lessons assigned to the EFL subject. They perceived EFL as an extensive subject with insufficient time for adequate coverage. This belief reflects a sense of pressure to cover extensive material within a tight timeframe. These challenges are intertwined with the issue of conflicted priorities, which may lead teachers to prioritise certain aspects of the curriculum over the implementation of digital games.

Teachers also perceived that implementing digital games into the EFL classroom consumed a significant portion of the lesson time. They felt pressured to rush through the game to ensure optimal use within the limited timeframe. Consequently, they were concerned about that dedicating substantial time to digital games reduced the time from other essential aspects of the lesson. The length of lessons posed a challenge as it may not allow sufficient time to fully engage with a digital game-based lesson. This could be another reason why the teachers might be more likely to use other teaching methods rather than using digital games.

It is not only the technological planning aspect that the teachers reported to be time-consuming. They also reported that they found lessons using digital games to be demanding to plan. The teachers reported a lack of competence in using digital games to be a common challenge. This could be explained by the lack of training in implementing digital games, as it

has not traditionally been included in teacher education programs until recent years (Norhagen et al., 2024; Skaug et al., 2020).

The teachers appeared uncertain about various aspects of using digital games, which may be a result of their lack of competence in this area. This finding aligns with previous research that also identified the lack of competence as an issue (Beavis et al., 2014; Brooks et al., 2019; Chik, 2011; Israelsson, 2020; Munkvold & Sigurðardóttir, 2018; Nousiainen et al., 2018; Tıraşın, 2023). Tıraşın (2023) suggested that this lack of competence could be attributed to outdated teacher training programs that have not prepared teachers in the use of digital games.

Some teachers expressed uncertainty about where to start when planning a lesson with digital games. This aligns with the findings of Israelsson (2020), who found that some teachers interested in using digital games were uncertain about where to begin. Others struggled to determine the appropriate time for digital games to be used in their lessons or which specific games would be suitable. They also reported difficulties in finding appropriate games and found it unclear as to what a lesson with digital games should involve. Overall, they seemed uncertain about the use of digital games for teaching purposes. The lack of competence in using digital games can be attributed to insufficient knowledge in both digital skills and gaming pedagogy. Previous research highlights the necessity for teachers to possess digital skills to prepare for lessons involving digital games and to address any potential challenges that may arise (Kelentrić et al., 2017; Lund et al., 2014; Skjermbrukutvalget, 2023; Thorvaldsen & Madsen, 2020). However, digital skills alone are not enough for teachers to implement digital games in their teaching practices. They must also be proficient in gaming pedagogy, which can help them to plan lessons that align with the learning objectives outlined in LK20 and the EFL subject curriculum (Nousiainen et al., 2018).

## 6.2.2 The Challenges Experienced by the Teacher Types

Although many teachers reported similar challenges, certain obstacles appeared to be influenced by the different teacher types. The Enthusiastic and Moderate Teachers had more experience compared to the other teacher types, which reduced the challenges related to a lack of competence. Lone (2023) also found fewer challenges associated with the use of digital games among his experienced and competent teachers. Consequently, these teacher types may encounter fewer difficulties in planning lessons with digital games due to their increased



proficiency in this area. On the other hand, the Ambivalent and Reluctant Teacher types may encounter more challenges than other types, given their additional barriers to overcome. These teacher types may require more support to implement digital games into their teaching practices compared to their counterparts due to their lack of experience in playing digital games. Kelentrić et al. (2017), Nousiainen et al. (2018) and McNeil (2018) described teachers' digital competence as essential in implementing digital technology, such as digital games, into the classroom. Given that less experienced teacher types may lack this essential component, it is reasonable to anticipate that they would encounter challenges that their more experienced would not.

Although some challenges are clearly evident, others remain unaddressed by the teachers. Among these, the teachers' beliefs may constitute a more subtle yet significant obstacle which ultimately influences whether a teacher chooses to use digital games in the classroom. For instance, the doubts expressed by the Reluctant Teacher about the use of digital games came from her beliefs of their suitability and relevance in the classroom. These beliefs may be due to her limited personal experience with them, as suggested by Chik (2011), who found that teachers with less experience in playing digital games are more likely to be negative. A reluctant teacher may persistently refrain from using digital games as they may firmly believe that they have no educational value. On the other hand, less reluctant teacher types might be more willing to use digital games if certain contextual challenges were reduced or removed (Borg, 2015). This demonstrates that although teachers' beliefs may not have been specifically mentioned by the teachers, they appear to play a decisive role in determining the use of digital games.

### **6.3 What Teachers Find Beneficial**

The section discusses the findings related to the third research question focusing on what the Norwegian lower secondary EFL teachers reported to find beneficial in order to implement digital games in their teaching practices.

Subsection 6.3.1 investigates the connection between the reported challenges and the suggested solutions by the teachers. Furthermore, Subsection 6.3.2 discusses how the suggested solutions tackle multiple challenges. Finally, Subsection 6.3.3 looks into the remaining challenges after examining the suggested solutions.

### 6.3.1 The Connection Between the Reported Challenges and Suggested Solutions

The suggestion reported by the teachers on what they would find beneficial to implement digital games had a clear connection with the challenges discussed earlier in this chapter. If implemented, these suggestions could reduce or remove several of the challenges identified.

The teachers emphasised the importance of access to necessary resources for implementing digital games in the classroom. They suggested various resources they deemed beneficial for this purpose. Initially, they highlighted that providing teachers with essential resources could reduce barriers for some teachers. Brooks et al. (2019) suggested that providing teachers with the necessary infrastructure could make it easier for teachers to implement digital games in their lessons. Additionally, the teachers in the current study recommended other resources to support teachers in implementing digital games into their teaching practices. They suggested that access to gaming pedagogues, that is, teachers with expertise in digital games, could be valuable. These specialists could assist teachers in finding suitable digital games, aligning them with relevant curriculum aims, developing customised lesson plans, or even leading digital game-based lessons themselves.

Furthermore, they proposed the establishment of a national resource bank managed by gaming pedagogues. This resource bank would essentially serve the function of a gaming pedagogue but on a national scale, which would offer support beyond individual schools. It would act as a comprehensive framework for teachers, and additionally provide access to a careful selection of suitable games. These suitable digital games would come with suggestions for pre-made lesson plans which aligns them with LK20. Brooks et al. (2019) suggested a guidance area where teachers could share their experiences and tips with each other. This suggestion aligns with the informal teacher training which teachers found to be most beneficial in developing their digital competence through methods such as learning by trial and error, self-directed study, and peer mentoring (Fjørtoft et al., 2019, p. 82-83)

These findings imply that teachers would benefit from a supportive system to assist them in planning and executing lessons with digital games. It appears that teachers seek guidance or reassurance on how to implement digital games into their teaching practices. The suggested solutions serve as resources for teachers but are also linked to their competence levels, offering a form of guidance to ensure the appropriate use of digital games as a teaching tool. For some teachers, this guidance may be the spark needed to begin using digital games in their EFL lessons. Thus, these resources do not only provide support but also address the potential lack of competence among teachers in implementing digital games into the

classroom. However, this tool may only benefit those who are already positive about digital games, as it may not significantly impact the beliefs of more reluctant teachers.

The teachers suggested that enhancing teacher competence in using digital games would have several benefits. The current and previous studies found that incorporating digital games into teacher education programs could be beneficial to increase teachers' professional development and competence (Chik, 2011; Tıraşın, 2023). This includes potentially improving learning outcomes, enhancing classroom management, aligning more closely with LK20, and increasing relevance to the subject topic (Chik, 2011; Kelentrić et al., 2017; Lund et al., 2014; Nousiainen et al., 2018; Starkey, 2020). Moreover, it could help teachers to advocate for the use of digital games more effectively, as they would be better equipped to articulate its benefits. Additionally, increasing teacher competence could reduce some of the workload associated with the use of digital games, as teachers would require less time and effort to effectively use them.

### 6.3.2 Suggested Solutions Addressing Multiple Challenges

As previously discussed, the suggestions provided by the teachers for implementing digital games in their lessons align closely with the challenges they reported. Moreover, several of the proposed solutions have the potential to reduce not only the specific challenges mentioned but also other related difficulties.

As previously mentioned, the three main challenges were competence, time, and resources. However, the solutions suggested by the teachers were mainly directed to the challenges of resources and competence. Reducing these two challenges may in turn reduce the challenge of time. By increasing the teachers' competence, the process of lesson planning may take less time as the connection between digital games, the EFL lesson and LK20 becomes clearer for the teacher. Increased competence may speed up multiple aspects which otherwise would have taken much longer and with more effort previously. Additionally, with the essential resources the teacher will not have to spend additional time to adapt the use of digital games to a limitation set by their access to technology or to find suitable games. Better access to resources can also reduce the lesson-preparation time, and perhaps also the lesson time constraints. Providing teachers with what they would find beneficial could reduce the workload and the barrier for the teachers to implement digital games. Additionally, it could contribute to an increased learning outcome as the teachers' competence is increased, and with the necessary technology available.

Another potential benefit of increasing the teacher competence is that it may reduce the prejudice against digital games as a teaching tool. The results indicated that the teacher beliefs on digital games vary among the teachers. The only teacher type who truly prioritised digital games was the Enthusiastic teacher. However, increasing the teacher competence may show teachers the benefits of using digital games, their relevance to LK20, and the abundance of possibilities of which they can be used. Additionally, if some of the challenges connected to digital game use were removed, it may become a more commonly used teaching tool. This could also lead to changes in the teachers' beliefs regarding digital games.

### 6.3.3 Unresolved Challenges

While the suggested solutions address many challenges, some issues remain unaddressed. The challenges related to time and teachers' beliefs need further discussion. Although some of the challenges related to time have been addressed, the issue of time has not yet been fully resolved. Additionally, there have been no suggestions provided on how to solve the challenges related to teachers' beliefs.

One of the time-related challenges is the duration of a lesson. While schools have some flexibility in setting lesson durations, the standard lengths in lower secondary schools are typically 45 minutes, one hour, or one and a half hours. Consequently, this aspect may still present a challenge for teachers who try to implement digital games into their lessons.

The number of English lessons remains the same, which presents as a challenge for teachers. They already struggle with determining what to prioritise when teaching EFL. As the results indicated, some teachers encounter conflicting priorities during lesson planning. Despite potentially reducing some conflicting priorities by increasing teacher competence, time still poses a challenge. Consequently, teachers may continue to prioritise other teaching methods over the use of digital games if they perceive them as more beneficial or relevant to their teaching.

Although not specifically addressed by the teachers, LK20, promotes interdisciplinary collaboration. Given that many digital games are in English, EFL teachers could potentially collaborate with teachers from various subjects in implementing digital games into their lessons. This interdisciplinary cooperation could potentially free up some additional time for teachers by integrating digital games into multiple subjects.

The suggestion to incorporate digital games into teacher education could indeed positively influence the beliefs of future teachers regarding their use. However, this proposal

does not address the current challenges faced by in-service teachers. While additional teacher training may potentially shift the beliefs of teachers towards digital games, it could present greater challenges for those who are initially reluctant to implement them into their teaching practices. Thus, despite its potential benefits, this proposal does not fully resolve the existing challenges faced by in-service teachers.

## 6.4 Comparison to Previous Research

This study examines similarities and differences with previous research, which are presented as a comparative summary in Table 6. It highlights teacher beliefs, practices, challenges, and solutions.

Table 6. Comparison of the Results

Author(s)	Teacher Beliefs	Practices	Challenges	Solutions
Moberg (2024)	Different beliefs · Enthusiastic · Moderate · Ambivalent · Reluctant	60% use games, where 40% use regularly and 60% use rarely Varying implementation depending on beliefs	· Time · Competence · Resources · Beliefs	Provide teachers with the necessary resources and increase their competence
Tıraşın (2023)	Mainly positive to the use of digital games	75% had used digital games in their lessons	· Lack of time · Lack of skill and knowledge	Include the use of digital games in teacher-education programs Resources for teacher support
Lone (2023)	Gaming pedagogues positive to the use of digital games	Digital games were implemented in teaching practices to varying extents and frequencies: · Cautious use · Frequent use · Project-based use	· Lack of time · Effort required to implement digital games in lessons	Increase teacher competence

Israelsson (2020)	Positive and negative attitudes towards the use of digital games	24% has used digital games, 73% had not	<ul style="list-style-type: none"> <li>· Time restraints</li> <li>· Lack of equipment</li> <li>· Lack of knowledge</li> <li>· Lack of priority over traditional teaching methods</li> </ul>	N/A
Brooks et al. (2019)	Teachers find the use of digital games to be challenging	66% had used digital games in their lessons	<ul style="list-style-type: none"> <li>· Lack of resources</li> <li>· Lack of knowledge</li> </ul>	<p>Increase teacher competence through:</p> <ul style="list-style-type: none"> <li>· Pedagogical training on digital game use</li> <li>· Emphasising the educational value of digital games</li> <li>· Establishing resources for teacher support</li> </ul>
Munkvold & Sigurðardóttir (2018)	Mainly positive to the use of digital games	N/A	<ul style="list-style-type: none"> <li>· Limited resources</li> <li>· Lack of knowledge</li> <li>· Lack of time</li> <li>· Limited flexibility with the curriculum</li> </ul>	N/A
Nousiainen et al. (2018)	N/A	N/A	<ul style="list-style-type: none"> <li>· Lack of teacher competence</li> </ul>	Increase teacher competence: pedagogical, technological, collaborative, and creative competencies
Hamari & Nousiainen (2015)	N/A	Teachers were more likely to use if they were positive to the use of digital games	N/A	<ul style="list-style-type: none"> <li>· Increase teachers' technological competence</li> </ul>

				<ul style="list-style-type: none"> <li>· Supportive environment</li> <li>· Individual guidance from experienced teachers</li> </ul>
Beavis et al. (2014)	Different beliefs: <ul style="list-style-type: none"> <li>· The optimistic</li> <li>· The cautious</li> <li>· The non-concerns</li> </ul>	N/A	<ul style="list-style-type: none"> <li>· Loss of control</li> <li>· Limited time and resources</li> <li>· Learning outcome</li> </ul>	N/A
Chik (2011)	Different attitudes: Teachers with little experience with digital games are more likely to have negative attitudes	N/A	<ul style="list-style-type: none"> <li>· Lack of experience and competence</li> <li>· Teacher beliefs</li> </ul>	Increase teachers' professional development and competence by implementing digital games into teacher education programs
Dondi & Moretti (2007)	Different attitudes <ul style="list-style-type: none"> <li>· Use games</li> <li>· Only use specific</li> <li>· Do not use games</li> </ul>	Varying implementation depending on beliefs	N/A	N/A

As summarised in Table 6, the current study shares several similarities with previous research. It appears that, similar to previous research, mainly positive teachers chose to participate in the questionnaire (Munkvold & Sigurðardóttir, 2018; Tıraşın, 2023). This led to findings that are similar to previous research. The results reflect a generally positive attitude among teachers, along with a reported high use of digital games in teaching.

The current study identified multiple challenges connected to the use of digital games, such as technological limitations, lack of competence, and time constraints, which are consistent with those found in previous research (Beavis et al., 2014; Brooks et al., 2019; Chik, 2011; Lone, 2023; Munkvold & Sigurðardóttir, 2018; Nousiainen et al., 2018; Tıraşın, 2023). Additionally, a few studies have noted that teachers' beliefs and attitudes can hinder the implementation of digital games (Beavis et al., 2014; Chik, 2011; Dondi & Moretti, 2007; Hamari and Nousiainen, 2015; Nousiainen et al., 2018).

Previous research, such as studies by Israelsson (2020), Lone (2023), Munkvold & Sigurðardóttir (2018), and Tıraşın (2023), mainly focused on teachers who held positive views towards digital games. In contrast, this thesis examined the use of digital games among teachers with diverse perspectives on the topic. While the questionnaire results predominantly indicated a high level of digital game use and positive attitudes among teachers, the inclusion of different teacher types, as observed in previous studies (e.g. Beavis et al., 2014; Dondi & Moretti, 2007), sheds light on those with differing opinions. This approach offers more nuanced insights into the subject matter by considering a broader spectrum of teacher attitudes and behaviours towards digital games in the EFL classroom and encompass a wide range of teaching practices. Reluctant teachers may be less willing to participate in questionnaires about digital games, as they may perceive them as less relevant or interesting. This could lead to their underrepresentation in research studies, which in turn may affect the results towards more positive attitudes. By conducting interviews that ensure representation from various teacher types, the reluctant and ambivalent teachers gain a platform to voice their perspectives. This helps to provide a more comprehensive understanding of the challenges and attitudes on the use of digital games in the EFL classroom.

Distinguishing between Moderate and Enthusiastic teachers has shed light on a new dimension of attitudes towards digital games as a teaching tool. Previous research might have combined these teacher types into one category, and therefore overlooked the nuances in their perspectives and behaviours. By separating them, the hesitations and conflicting priorities experienced by Moderate teachers can be uncovered as well as the positive attitude of Enthusiastic teachers. This distinction allows for a more accurate representation of digital game use and provides additional insights into the factors influencing teachers' decisions regarding the use digital games.



## 7 Conclusion

The purpose of the current study was to determine the Norwegian lower secondary EFL teachers' beliefs regarding the use of digital games in the EFL classroom, specifically the teachers' practices and attitudes towards digital games. Additionally, it aimed to ascertain what challenges EFL teachers have experienced when implementing digital games in the classroom. Lastly, it sought to explore what teachers would find beneficial in order to implement digital games in their teaching practices. The data for this mixed methods study was collected through a questionnaire completed by 73 teachers and through four in-depth interviews with teachers.

### 7.1 Main Findings

The present study has found that the majority of the teachers reported to have used digital games in their EFL lessons, with varying frequencies of use. Approximately 40% of teachers were classified as regular users, while 60% were categorised as occasional users.

Furthermore, the study presented diverse perspectives among the teachers regarding the use of digital games. It identified four distinct attitudes towards digital games, which ranged from enthusiastic to reluctant. These were defined as enthusiastic, moderate, ambivalent, and reluctant.

This study has revealed several challenges that teachers have encountered when using digital games in their teaching practices. These challenges were primarily related to teacher competence, time constraints, and resource availability. One of the most significant findings to emerge from this study is the vital impact that the teachers' beliefs play in the implementation of digital games in the EFL classroom. The Enthusiastic and Moderate teacher types were more inclined to use digital games, driven by their positive beliefs. Conversely, the Ambivalent and Reluctant teacher types were less likely to do so.

Lastly, it provided a number of suggestions from the teachers regarding what could be beneficial to implement digital games into the EFL classroom. These suggestions directly addressed the challenges reported by the teachers and offered potential solutions to reduce or remove some of these obstacles. Most of these suggestions revolved around increasing teacher competence and providing teachers with the necessary resources.

## **7.2 Limitations**

The current study aimed to investigate the beliefs, practices, challenges, and suggested solutions of Norwegian lower secondary English as Foreign Language (EFL) teachers regarding the use of digital games in the classroom.

This study has some key limitations that need to be addressed. Firstly, the relatively small sample size prevents generalisation to the broader population of teachers (Dörnyei, 2007; Dörnyei & Taguchi, 2010). Moreover, the possibility of sampling bias limits this further, as the sample may not be fully representative of all teachers due to factors such as participant self-selection which may have influenced the composition of participants (Dörnyei, 2007). Additionally, social desirability bias is a concern, as participants may have provided responses they believed were socially acceptable or desirable rather than reflecting their true beliefs or behaviours (Dörnyei & Taguchi, 2010). Furthermore, the absence of observational data in the current study limits the depth of insight into teachers' actual classroom practices, as the study relied solely on self-reported data.

Despite these limitations, the inclusion of teacher interviews alongside the questionnaire data provided additional insights into teacher beliefs, practices, and challenges related to digital game integration in the classroom.

## **7.3 Implications for Teaching**

The findings of this study have a number of important implications for future practice. This research project has provided several suggestions for what could be helpful for teachers to implement digital games. As digital games seem to be increasing in popularity as an educational tool, teachers must be prepared to use them in the classroom (Nousiainen et al., 2018). The findings of this study suggest that for teachers to be able to use digital games, they need both Professional Digital Competence as well as game-based pedagogy (Chik, 2011; Kelentrić et al., 2017; Lund et al., 2014; McNeil, 2018; Nousiainen et al., 2018; Skjermbrukutvalget, 2023; Starkey, 2020).

To encourage teachers to integrate digital games into their lessons, a key priority should be providing access to the necessary resources. These resources include the technological equipment required to play digital games and access to suitable digital games.

Additionally, establishing a digital forum or resource bank where teachers can find inspiration and support may be beneficial.

Furthermore, it could be beneficial to make some changes to LK20 and the English Subject Curriculum. While LK20 already allows for the use of digital games, it could be useful to include it more specifically, as is done in a competence aim in upper secondary school where the term “gaming” is included as one of several options.

#### **7.4 Contribution and Implications for Further Research**

This study has shed light on the varying degrees of digital game use among teachers and suggested a potential correlation with their beliefs. As an initial exploration into this area, further research could be highly valuable. Future research might further explore teachers' beliefs, practices and attitudes and aim to recruit significantly more participants.

Additionally, studies might examine how teachers' use of digital game is influenced by the access to resources. Similarly, research could delve into the differences in the use among teachers who have access to resources, exploring the causes of any variation.

Future research could explore the implications of efforts to enhance teacher competence. It could investigate into how initiatives aimed at increasing teacher competence impact the attitudes and practices of teachers towards the use of digital games. This could provide valuable insights into the effectiveness of such interventions and guide efforts to support teachers in implementing digital games into their teaching practices.

Although observational data was not collected in the current study, future research could benefit from incorporating observational methods to gain a deeper understanding of teachers' practices. Furthermore, conducting research from the perspective of the pupils may offer valuable insights into the implementation of digital games into the classroom. This approach could offer valuable insights into what pupils perceive as effective use of digital games in the classroom. Such insights could then be used to enhance teachers' competence in implementing digital games in the classroom.

In conclusion, while this study has provided valuable insights into the beliefs, practices, challenges, and solutions of Norwegian lower secondary EFL teachers regarding the use of digital games, there are still opportunities for further exploration. By incorporating observational methods and exploring the perspective of pupils, future research can deepen our

understanding and contribute to the ongoing improvement of digital game implementation in the EFL classroom.

## Bibliography

- Acquah, E. O., & Katz, H. T. (2020). Digital game-based L2 learning outcomes for primary through high-school students: A systematic literature review. *Computers and Education, 143*, 103667. <https://doi.org/10.1016/j.compedu.2019.103667>
- Ashton, P. T. (2014). Historical overview and theoretical perspectives of research on teachers' beliefs. In H. Fives & M. G. Gill (Eds.), *International Handbook of Research on Teachers' Beliefs* (pp. 31–47). Routledge.
- Beavis, C., Rowan, L., Dezuanni, M., McGillivray, C., O'Mara, J., Prestridge, S., Stieler-Hunt, C., Thompson, R., & Zagami, J. (2014). Teachers' Beliefs about the Possibilities and Limitations of Digital Games in Classrooms. *E-Learning and Digital Media, 11*(6), 569–581. <https://doi.org/10.2304/elea.2014.11.6.569>
- Bergene, A. C., Vika, K. S., Lynnebakke, B., Ramberg, I., & Wollscheid, S. (2022). Spørsmål til Skole-Norge: Analyser og resultater fra Utdanningsdirektoratets spørreundersøkelse til skoler og skoleeiere våren 2022. In *Nordisk Institutt for Studier Av Innovasjon, Forskning Og Utdanning NIFU*. <https://hdl.handle.net/11250/3001772>
- Blume, C. (2019). Playing By Their Rules: Why Issues of Capital (Should) Influence Digital Game-Based Language Learning in Schools. *CALICO Journal, 36*(1), 19–38. <https://doi.org/10.1558/cj.35099>
- Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching, 36*(2), 81–109. <https://doi.org/10.1017/S0261444803001903>
- Borg, S. (2011). The impact of in-service teacher education on language teachers' beliefs. *System (Linköping), 39*(3), 370–380. <https://doi.org/10.1016/j.system.2011.07.009>
- Borg, S. (2012). Current Approaches to Language Teacher Cognition Research: A Methodological analysis. In A. Burns & R. Barnard (Eds.), *Researching language teacher cognition and practice : international case studies* (pp. 11–29). Multilingual Matters.
- Borg, S. (2015). *Teacher cognition and language education: Research and practice*. Bloomsbury Academic.
- Borg, S. (2018). Evaluating the Impact of Professional Development. *RELC Journal, 49*(2), 195–216. <https://doi.org/10.1177/0033688218784371>

- Borg, S. (2019). Language Teacher Cognition: Perspectives and Debates. In X. Gao (Ed.), *Second Handbook of English Language Teaching* (pp. 1149–1170). Springer International Publishing. [https://doi.org/10.1007/978-3-030-02899-2\\_59](https://doi.org/10.1007/978-3-030-02899-2_59)
- Borg, S. (2024). Teacher Cognition and Language Teaching. In C. A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics* (2nd ed., pp. 1–7). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781405198431.wbeal20443>
- Borg, S., & Sanchez, H. S. (2020). Cognition and Good Language Teachers. In C. Griffiths & Z. Tajeddin (Eds.), *Lessons from Good Language Teachers* (pp. 16–27).
- Brevik, L. M. (2023). A ‘Mixed Methods Way of Thinking’ in game-based research integrations. In C. Poth (Ed.), *The Sage Handbook of Mixed Methods Research Design* (pp. 346–360). Sage Publications.
- Brevik, L. M., Garvoll, K. K., & Ahmadian, S. (2020). English use outside of school—Gamers, Surfers and Social Media Users. In U. Rindal & L. M. Brevik (Eds.), *Teaching English in Norwegian classrooms: From research to practice* (pp. 190–216). Universitetsforlaget.
- Brevik, L. M., & Skarpaas, K. G. (2016). Digitale ferdigheter i engelsk: forskning og praksiseksempler fra seks klasserom. *Bedre skole*, 3.
- Brinkmann, S., & Kvale, S. (2018). *Doing interviews* (2nd edition.). SAGE.
- Brooks, E., Gissurardóttir, S., Jonsson, B. T., Kjartansdóttir, S. H., Munkvold, R., Nordseth, H., & Sigurðardóttir, H. D. Í. (2019). What Prevents Teachers from Using Games and Gamification Tools in Nordic Schools? In *Springer eBooks* (pp. 472–484). [https://doi.org/10.1007/978-3-030-06134-0\\_50](https://doi.org/10.1007/978-3-030-06134-0_50)
- Chik, A. (2011). Digital gaming and social networking: English teachers’ perceptions, attitudes and experiences. *Pedagogies*, 6(2), 154–166. <https://doi.org/10.1080/1554480x.2011.554625>
- Cornillie, F., Thorne, S. L., & Desmet, P. (2012). ReCALL special issue: Digital games for language learning: challenges and opportunities. *ReCALL (Cambridge, England)*, 24(3), 243–256. <https://doi.org/10.1017/S0958344012000134>
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing Among Five Approaches* (3rd ed.). Sage.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative & Mixed Methods Approaches* (5th edition.). Sage.
- Dondi, C., & Moretti, M. (2007). A methodological proposal for learning games selection and quality assessment. *British Journal of Educational Technology*, 38(3), 502–512.

- <https://doi.org/10.1111/j.1467-8535.2007.00713.x>
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*. Oxford, England: Oxford University Press.
- Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, Administration, and Processing* (2<sup>nd</sup> ed.). Routledge.
- Ekspertgruppa om lærerrollen. (2016). *Om lærerrollen. Et kunnskapsgrunnlag*. Fagbokforlaget. <https://hdl.handle.net/20.500.12199/3010>
- Fives, H., & Gill, M. G. (Eds.). (2014). *International Handbook of Research on Teachers' Beliefs*. Routledge.
- Fjørtoft, S. O., Thun, S., & Buvik, M. P. (2019). *Monitor 2019 - En deskriptiv kartlegging av digital tilstand i norske skoler og barnehager*. SINTEF Digital. <http://hdl.handle.net/11250/2626335>
- Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The Benefits of Playing Video Games. *The American Psychologist*, 69(1), 66–78. <https://doi.org/10.1037/a0034857>
- Grindheim, J. E., Skutlaberg, L. S., Høgestøl, A., Rasmussen, I., & Hanssen, V. W. (2014). *Rapporterings- og dokumentasjonskrav i skolesektoren*. [https://www.regjeringen.no/globalassets/upload/kd/vedlegg/rapporter/rapport\\_endelig.pdf](https://www.regjeringen.no/globalassets/upload/kd/vedlegg/rapporter/rapport_endelig.pdf)
- Hamari, J., & Nousiainen, T. (2015). Why Do Teachers Use Game-Based Learning Technologies? The Role of Individual and Institutional ICT Readiness. *Hawaii International Conference on System Sciences*, 682–691. <https://doi.org/10.1109/hicss.2015.88>
- Han, H.-C. (2015). Gamified Pedagogy: From Gaming Theory to Creating a Self-Motivated Learning Environment in Studio Art. *Studies in Art Education*, 56(3), 257–267. <https://doi.org/10.1080/00393541.2015.11518967>
- Israelsson, C. (2020). *Gaming for language learning: Something to do in schools? What kinds of games and how they can be used in the English classroom to facilitate language learning: a teacher's guide*. [MA thesis, University of Agder]. <https://hdl.handle.net/11250/2681389>
- Johnson, B., & Christensen, L. B. (2017). *Educational research: Quantitative, qualitative, and mixed approaches* (Sixth edition.). SAGE Publications.
- Kagan, D. M. (1992). Implication of Research on Teacher Belief. *Educational Psychologist*, 27(1), 65–90. [https://doi.org/10.1207/s15326985ep2701\\_6](https://doi.org/10.1207/s15326985ep2701_6)
- Kelentrić, M., Helland, K., & Arstorp, A.-T. (2017). *Professional digital competence*

- framework for teachers. [https://www.udir.no/globalassets/filer/in-english/pfdk\\_framework\\_en\\_low2.pdf](https://www.udir.no/globalassets/filer/in-english/pfdk_framework_en_low2.pdf)
- Kubanyiova, M., & Feryok, A. (2015). Language Teacher Cognition in Applied Linguistics Research: Revisiting the Territory, Redrawing the Boundaries, Reclaiming the Relevance. *The Modern Language Journal (Boulder, Colo.)*, 99(3), 435–449. <https://doi.org/10.1111/modl.12239>
- Kultur- og likestillingsdepartementet. (2023). Tid for spill - regjeringens dataspillstrategi 2024-2026. <https://www.regjeringen.no/no/dokumenter/tid-for-spill-regjeringens-dataspillstrategi-2024-2026/id3018409/>
- Levin, B. B. (2014). The development of teachers' beliefs. In H. Fives & M. G. Gill (Eds.), *International Handbook of Research on Teachers' Beliefs* (pp. 48–65). Routledge.
- Lone, N. (2023). *Digital Games in EFL Classrooms: Beliefs and Practices of Norwegian Lower Secondary School Game Pedagogues and Students* [Master thesis, uis]. <https://uis.brage.unit.no/uis-xmlui/handle/11250/3076125>
- Lund, A., Furberg, A., Bakken, J., & Engelen, K. L. (2014). What does professional digital competence mean in teacher education? *Nordic Journal of Digital Literacy*, 9(4), 280–298. <https://doi.org/10.18261/ISSN1891-943X-2014-04-04>
- McNeil, L. (2018). Introducing teachers to digital game-enhanced pedagogy: Successes and challenges in a graduate course. *TESOL Journal*, 9(3), 580–584. <https://doi.org/10.1002/tesj.383>
- Medietilsynet. (2022). *Spillfrelste tenåringsgutter og jenter som faller fra Slik gamer barn og unge*. [https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2022/221109\\_gamingreport.pdf](https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2022/221109_gamingreport.pdf)
- Meld. St. 22 (2010-2011). (2011). *Motivasjon – Mestring – Muligheter Ungdomstrinnet*. Kunnskapsdepartementet. <https://www.regjeringen.no/no/dokumenter/meld-st-22-2010--2011/id641251/>
- Ministry of Education. (2019). *National Curriculum for Knowledge Promotion 2020*. Curriculum in English (ENG01- 04). <https://www.udir.no/lk20/eng01-04/om-faget/kjerneelementer?lang=eng>
- Mortensen, T. E. (2009). *Perceiving play: The Art and Study of Computer Games*. Peter Lang.
- Munkvold, R. I., & Sigurðardóttir, H. D. I. (2018). Norwegian Game-Based Learning Practices – Age, Gender, Game-Playing and DGBL. *Proceedings of the European Conference on Games-Based Learning, 2018*, 460–468.
- Munthe, E., Erstad, O., Njå, M., Forsström, S., Gilje, Ø., Amdam, S., Moltudal, S., & Hagen,



- S. (2022). Digitalisering i grunnopplæring; kunnskap, trender og framtidig kunnskapsbehov. *Kunnskapssenter for utdanning*: Universitetet i Stavanger.
- National Curriculum for Knowledge Promotion 2020. (2019) English subject curriculum (ENG01-04). Oslo: Ministry of Education. Retrieved from <https://www.udir.no/lk20/eng01-04>
- Norhagen, S. L., Krumsvik, R. J., & Røkenes, F. M. (2024). Developing professional digital competence in Norwegian teacher education: a scoping review. *Frontiers in Education*, 9. <https://doi.org/10.3389/educ.2024.1363529>
- Norwegian Directorate for Education and Training. (2022). *Information for newly arrived parents and guardians: The education system in Norway*. udir.no. <https://www.udir.no/laring-og-trivsel/minoritetsspraklige-og-nyankomne/minoritetsspraklige/informasjon-til-nyankomne/information-for-newly-arrived/>
- Norwegian Directorate for Education and Training. (2022). *The Education Mirror 2022*. Retrieved from <https://www.udir.no/in-english/the-education-mirror-2022/>
- Nousiainen, T., Kangas, M., Rikala, J., & Vesisenaho, M. (2018). Teacher competencies in game-based pedagogy. *Teaching and Teacher Education*, 74, 85–97. <https://doi.org/10.1016/j.tate.2018.04.012>
- Prensky, M. (2001). *Digital game-based learning*. McGraw-Hill Companies.
- Prensky, M. (2005). In Educational Games, Complexity Matters Mini-Games are Trivial— But “Complex” Games Are Not an Important Way for Teachers, Parents and Others to Look at Educational Computer and Video Games. *Educational Technology*, 45(4), 22–28. <http://www.jstor.org/stable/44429218>
- Reinhardt, J., & Thorne, S. (2016). Metaphors for digital games and language learning. In F. Farr & L. Murray (Eds.), *The Routledge Handbook of Language Learning and Technology* (pp. 415–430). Routledge.
- Scholes, L., Rowe, L., Mills, K. A., Gutierrez, A., & Pink, E. (2022). Video gaming and digital competence among elementary school students. *Learning, Media & Technology/Learning, Media and Technology*, 1–16. <https://doi.org/10.1080/17439884.2022.2156537>
- Skagen, K. (2014). Digitalisering som statlig avdidaktisering av klasserommet. *Norsk pedagogisk tidsskrift*, 98(6), 440–451. <https://doi.org/10.18261/ISSN1504-2987-2014-06-05>

- Skaug, J. H., Husøy, A., Staaby, T., & Nøsen, O. (2020). *Spillpedagogikk: dataspill i undervisningen*. Fagbokforlaget.
- Skjermbrukutvalget. (2023). *Konsekvenser av skjerm i skolen – et kunnskapsgrunnlag fra Skjermbrukutvalget*. <https://skjermbrukutvalget.no/temanotater/>
- Skott, J. (2014). The promises, problems, and prospects of research on teachers' beliefs. In H. Fives & M. G. Gill (Eds.), *International Handbook of Research on Teachers' Beliefs* (pp. 13–30). Routledge.
- Starkey, L. (2020). A review of research exploring teacher preparation for the digital age. *Cambridge Journal of Education*, 50(1), 37–56.  
<https://doi.org/10.1080/0305764X.2019.1625867>
- Strøm, B., Borge, L.-E., & Haugsbakken, H. (2009). *Tidsbruk og organisering i grunnskolen: Sluttrapport*.  
[https://www.regjeringen.no/globalassets/upload/kd/vedlegg/rapporter/sof\\_rappor\\_04\\_09.pdf](https://www.regjeringen.no/globalassets/upload/kd/vedlegg/rapporter/sof_rappor_04_09.pdf)
- Sykes, J. M. (2018). Digital games and language teaching and learning. *Foreign Language Annals*, 51(1), 219–224. <https://doi.org/10.1111/flan.12325>
- The Core Curriculum. Values and Principles for Primary and Secondary Education*. (2017). Oslo: Ministry of Education. Retrieved from  
<https://www.udir.no/lk20/overordnet-del/om-overordnet-del/?lang=eng>
- Thorvaldsen, S., & Madsen, S. S. (2020). Perspectives on the tensions in teaching with technology in Norwegian teacher education analysed using Argyris and Schön's theory of action. *Education and Information Technologies*, 25(6), 5281–5299.  
<https://doi.org/10.1007/s10639-020-10221-4>
- Tıraşın, K. D. (2023). *Games Teachers Play: An investigation of upper secondary EFL teachers' practices, beliefs, and attitudes regarding digital game-based language learning in Norway*. [Master thesis, uis]. <https://uis.brage.unit.no/uis-xmlui/handle/11250/3076126>
- Utdanningsforbundet. (2021). *Et spørsmål om tid, del 2 – rapport fra undersøkelse om arbeidstid i skolen*. [https://www.utdanningsforbundet.no/globalassets/var-politikk/publikasjoner/rapporterutredninger/rapport\\_03.2021\\_et\\_sporsmal\\_om\\_tid\\_del\\_2.pdf](https://www.utdanningsforbundet.no/globalassets/var-politikk/publikasjoner/rapporterutredninger/rapport_03.2021_et_sporsmal_om_tid_del_2.pdf)
- Whitton, N. (2014). *Digital Games and Learning: Research and Theory*. Routledge.  
<https://doi.org/10.4324/9780203095935>
- Young, M. F., Slota, S., Cutter, A. B., Jalette, G., Mullin, G., Lai, B., Simeoni, Z., Tran, M.,

& Yukhymenko, M. (2012). Our Princess Is in Another Castle: A Review of Trends in Serious Gaming for Education. *Review of Educational Research*, 82(1), 61–89.  
<https://doi.org/10.3102/0034654312436980>

# Appendices

## Appendix 1



### **Spørreundersøkelse om engelsklæreres tanker og opplevelser rundt bruken av dataspill i engelskundervisning**

Med dataspill menes spill på digitale plattformer, og ikke quiz-baserte spill slik som Kahoot eller liknende.

#### **Bakgrunn**

##### **Hvor mange år har du fullført på høyere utdanning?**

- Mindre enn 3 år
- 3 år
- 4 år
- 5 år
- Mer enn 5 år

##### **Hvor mange års erfaring har du som engelsklærer?**

- Mindre enn 1 år
- 1-5 år
- 6-10 år
- 11-15 år
- Mer enn 15 år

##### **Vennligst velg ditt kjønn**

- Mann
- Kvinne
- Annet
- Ønsker ikke oppgi

##### **Ble dataspill diskutert eller tatt opp som et tema under lærerutdanningen din?**

- Ja
- Nei

##### **Har du mottatt opplæring eller kursing om dataspill i engelskundervisningen?**

- Ja
- Nei
- Ja, men ikke spesifikt for engelskundervisning

##### **Hvordan vil du beskrive den gjennomsnittlige størrelsen på engelsklassene dine?**

- Mindre enn 15 elever
- 15-30 elever
- Mer enn 30 elever

##### **Hvor mange av elevene dine spiller dataspill på fritiden?**

- Ingen
- Et par

Noen  
Flere  
Mange  
Vet ikke

**Har skolen din tilgang på følgende utstyr?**

Du kan krysse av flere

Datamaskiner  
Chromebook  
Nettbrett  
Spillkonsoller (xbox, playstation, switch, o.l.)  
Gamingrom  
Dataspill

**Hvor ofte spiller du dataspill på fritiden?**

Aldri  
Sjelden  
Av og til  
Regelmessig  
Ofte

**Lærerens oppfatninger****I hvilken grad tror du elevene dine ville ha vært interessert i å inkludere dataspill som en del av undervisningen?**

Overhodet ikke  
I liten grad  
I noen grad  
I stor grad

**I hvilken grad mener du dataspill kan styrke språklæring?**

Overhodet ikke  
I liten grad  
I noen grad  
I stor grad

**I hvilken grad føler du at dataspill er et passende verktøy i engelskundervisningen?**

Overhodet ikke  
I liten grad  
I noen grad  
I stor grad

**I hvilken grad føler du at læreplanverket åpner for bruken av dataspill i engelskundervisningen?**

Overhodet ikke

- I liten grad
- I noen grad
- I stor grad

**Hvor selvsikker føler du deg i å bruke teknologi i din engelskundervisning?**

- Overhodet ikke selvsikker
- Litt selvsikker
- Nokså selvsikker
- Svært selvsikker

**Hvor selvsikker føler du deg i å bruke dataspill i din engelskundervisning?**

- Overhodet ikke selvsikker
- Litt selvsikker
- Nokså selvsikker
- Svært selvsikker

**I hvilken grad tror du dataspill kan imøtekomme elevenes ulike læringsstiler og evner i engelskundervisningen?**

- Overhodet ikke
- I liten grad
- I noen grad
- I stor grad

**I hvilken grad tror du dataspill gir mulighet for differensiering i engelskundervisningen?**

- Overhodet ikke
- I liten grad
- I noen grad
- I stor grad

**I hvilken grad anser du lærerens rolle som avgjørende for å bruke dataspill på en pedagogisk og lærerik måte?**

- Overhodet ikke
- I liten grad
- I noen grad
- I stor grad

**Opplevelser, tanker og utfordringer knyttet til dataspill**

**Har du noensinne brukt et dataspill i din engelskundervisning?**

- Ja
- Nei

**Hvor ofte bruker du dataspill i din engelskundervisning?**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Ukentlig

- Månedlig
- Hver 3. måned
- Hver 6. måned
- Sjeldnere enn hver 6. måned
- Jeg bruker ikke lenger dataspill

### **Kan du forklare hvorfor du ikke lenger bruker dataspill i engelskundervisningen?**

*Dette elementet vises kun dersom alternativet «Jeg bruker ikke lenger dataspill» er valgt i spørsmålet «Hvor ofte bruker du dataspill i din engelskundervisning?»*

### **Har du noen gang samarbeidet med andre lærere for å ta i bruk dataspill i undervisningen?**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Ja
- Nei

### **Hvordan reagerer elevene på bruken av dataspill i din engelskundervisning?**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Svært positivt
- Positivt
- Nøytralt
- Negativt
- Svært negativt

### **Hva har vært den mest positive opplevelsen din ved å bruke dataspill i undervisningen?**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

### **Kryss av de utfordringene du har opplevd i forbindelse med bruken av dataspill i engelskundervisning**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

Kryss av alle som gjelder

- Begrenset tilgang på utstyr
- Mangel på passende dataspill
- Utilstrekkelig opplæring i integrering av dataspill
- Tidsbegrensninger
- Forstyrrelser fra elevene
- Mangel på relevans til tema
- Mangel på relevans til læreplan
- Utfordringer knyttet til klasseledelse
- Vansker med å begrunne eller forsvare bruken av dataspill i undervisningssammenheng
- Dårlig læringsutbytte
- Jeg har ikke opplevd noen av utfordringene over

### **Kan du utdype eller beskrive eventuelle utfordringer du har møtt når du har brukt dataspill i din engelskundervisning?**

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

### Hvilke ressurser eller støtte mener du kan gjøre det enklere for engelsklærere til å ta i bruk dataspill i undervisningen?

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

### I hvor stor grad anser du det som viktig å legge til rette for diskusjoner og refleksjoner i klasserommet i forbindelse med bruken av dataspill i undervisningen?

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Overhodet ikke
- I liten grad
- I noen grad
- I stor grad

### I hvilken grad tror du dine egne holdninger til dataspill påvirker elevenes oppfatninger og engasjement?

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Overhodet ikke
- I liten grad
- I noen grad
- I stor grad

### Hvilke spesifikke utfordringer eller forbehold assosierer du med bruken av dataspill i engelskundervisningen?

*Dette elementet vises kun dersom alternativet «Ja» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

### Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?

*Dette elementet vises kun dersom alternativet «Nei» er valgt i spørsmålet «Har du noensinne brukt et dataspill i din engelskundervisning?»*

- Ja
- Nei
- Usikker

### Kan du utdype hvorfor du velger å ikke bruke dataspill i din engelskundervisning?

*Dette elementet vises kun dersom alternativet «Nei» er valgt i spørsmålet «Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?»*

### Kryss av punktene som reflekterer dine opplevelser eller meninger om bruk av dataspill i engelskundervisning

*Dette elementet vises kun dersom alternativet «Nei eller Usikker» er valgt i spørsmålet «Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?»*

- Manglende interesse
- Manglende tro på dataspill som et effektivt verktøy
- Dårlig læringsutbytte
- Bekymringer knyttet til klasseromsledelse
- Distraksjon for elevene
- Begrenset tilgang til teknologi
- Begrenset tilgang til dataspill
- Begrenset tid til å planlegge opplegg med dataspill
- Begrenset antall undervisningstimer
- Manglende kunnskap



Tro på at tradisjonelle metoder er mer effektive  
Læreplanen legger ikke til rette for bruken av dataspill  
Ingen av punktene reflekterer mine opplevelser eller meninger

**Hvilke ressurser eller støtte mener du kunne motivert deg til å prøve dataspill i engelskundervisningen?**

*Dette elementet vises kun dersom alternativet «Nei eller Usikker» er valgt i spørsmålet «Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?»*

**Ville du vurdert å prøve dataspill i engelskundervisningen dersom det fantes passende ressurser eller støtte?**

*Dette elementet vises kun dersom alternativet «Nei eller Usikker» er valgt i spørsmålet «Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?»*

Ja  
Nei  
Usikker

**Hva er grunnen til at du ikke har brukt dataspill i engelskundervisningen enda?**

*Dette elementet vises kun dersom alternativet «Usikker» er valgt i spørsmålet «Kunne du tenkt deg å prøve ut dataspill i din engelskundervisning?»*

**Har du kollegaer som bruker/har brukt dataspill i undervisningen?**

Ja  
Nei  
Vet ikke

## Appendix 2

### Intervjuguide

**Definisjon av digitale spill:** Spill som spilles på digitale plattformer som inneholder de fire elementene; (1) *interaktivitet*, (2) *handlefrihet*, (3) *innlevelse* og (4) *historiefortelling*.

#### 1 Bakgrunn:

1. Hvor mange år har du jobbet som lærer?
2. Hvor mange år har du jobbet som engelsklærer?
3. Hvor mange års utdanning har du? Gjerne fortell litt om hvilke fag du har tatt
4. Hvordan vil du beskrive ditt forhold til digitale spill?
5. Spiller du spill selv?
6. Har du fått noe opplæring vedrørende bruk og tolkning av spill fra en eller flere av disse: utdanningen din, kurs i regi fra arbeidsstedet, kurs som man har meldt interesse for selv, kolleger?
7. Dersom du har fått opplæring fra en eller flere av de overnevnte opplæringsressursene hvilken av disse typene opplæring har vært mest nyttig for deg og hvorfor?
8. Dersom du har fått opplæring, hva gikk denne opplæringen ut på?

## **2 Rammefaktorer:**

1. Hva er rammefaktorene for bruk av spill i ved din skole? Rammefaktorer er de ressursene som er tilgjengelige for deg når du underviser. Det kan være eksempelvis være klasseromsmateriell eller andre ressurser.
2. Hvilken type maskiner bruker elevene til undervisning og har skolen lagt noen føringer på hvilke datamaskiner elevene skal bruke?
3. Hvordan vil du beskrive miljøet på skolen du jobber på når det kommer til dataspill?
4. Hva synes du om LK20?
  - Synes du den åpner for muligheter?
5. Hvordan opplever du at LK20 gir mulighet til å bruke digitale spill i engelskundervisningen?

## **3 Lærerens oppfatninger:**

1. Har du brukt spill i din engelskundervisning før?
2. Hvilke (type) spill mener du egner seg best i engelskundervisningen?
3. Ønsker du å bruke (mer) spill i undervisningen din?
4. Hva tror du er nødvendig for å støtte lærere i å integrere digitale spill i sin undervisning?
6. Hvordan vurderer du behovet for opplæring og støtte for lærere som ønsker å bruke digitale spill i undervisningen?
7. Er det spesifikke ressurser, retningslinjer eller initiativer som kan være til nytte for lærere som ønsker å inkludere digitale spill i engelskundervisningen?
8. Det er kjent at elever selv mener de lærer mye av å spille dataspill på fritiden, hva mener du om det?

9. Hvordan er ditt syn på bruken av digitale spill i undervisningen?

- Hvorfor mener du det?

#### **4 De som har prøvd spill (Path 1):**

1. Hvorfor velger du å bruke/ikke bruke digitale spill i engelskundervisningen din?

2. Hvilke deler i engelsk faget opplever du at det fungerer greit å bruke spill i engelskundervisningen?

3. Hvilke av engelskpensumet opplever du at det ikke fungerer spesielt godt med bruk av digitale spill?

4. Hvis du har brukt spill i undervisningen tidligere, har du opplevd noen utfordringer knyttet til dette? Isåfall, hvilke utfordringer?

5. Hvordan foretrekker du å undervise engelsk, hvilke metoder bruker du?

6. Hvilke verktøy bruker du i din engelskundervisning? (F.eks. lærebøker, skjønnlitteratur, osv.)

7. Hvor ofte vil du si at du bruker de verktøyene du nevnte?

8. Hva var læringsutbyttet av timen du brukte digitale spill?

9. Tror du elevene hadde fått et bedre læringsutbytte dersom du hadde valgt et annet undervisningsmedium?

#### **5 De som har prøvd men ikke lenger bruker (Path 2):**

1. Hvorfor velger du å ikke bruke digitale spill i engelskundervisningen din?

2. Hva har fått deg til å slutte med dataspill?

3. Hvilke utfordringer har du opplevd knyttet til dataspill i undervisningen?
4. Hva var læringsutbyttet av timen du brukte digitale spill?
5. Tror du elevene hadde fått et bedre læringsutbytte dersom du hadde valgt et annet undervisningsmedium?
6. Hvilke verktøy bruker du i din engelskundervisning? (F.eks. lærebøker, skjønnlitteratur, osv.)
7. Hvor ofte vil du si at du bruker de verktøyene du nevnte?

**6 De som ikke har prøvd spill (Path 3+4):**

1. Hvis du ikke har brukt spill i undervisningen tidligere, hva har stoppet deg fra å gjøre dette?
2. Hvilke utfordringer tror du lærere opplever knyttet til dataspill i undervisningen?
3. Hvilke verktøy bruker du i din engelskundervisning? (F.eks. lærebøker, skjønnlitteratur, osv.)
4. Hvor ofte vil du si at du bruker de verktøyene du nevnte?

**7 Negativ-oppfølgingsspørsmål (Path 4):**

1. Hvorfor velger du å ikke bruke digitale spill i engelskundervisningen din?
2. Hvordan foretrekker du å undervise engelsk?
3. Hvilke verktøy bruker du i din engelskundervisning? (F.eks. lærebøker, skjønnlitteratur, osv.)

4. Hvor ofte vil du si at du bruker de verktøyene du nevnte?
  
5. Hva mener du skolen/kommunen/staten burde bruke penger på eller satse på istedenfor spill?
  
6. Hva mener du er den største utfordringen med bruken av spill i undervisningen?

## Appendix 3



# Vurdering av behandling av personopplysninger

**Referansenummer**  
528431

**Vurderingstype**  
Standard

**Dato**  
22.11.2023

**Tittel**

Engelsklærere på norske ungdomsskoler sin opplevelse og utfordring av å bruke digitale spill i språkundervisning

**Behandlingsansvarlig institusjon**

Universitetet i Stavanger / Fakultet for utdanningsvitenskap og humaniora / Institutt for kultur- og språkvitenskap

**Prosjektansvarlig**

Dina Lialikhova

**Student**

Hedda Ripland Moberg

**Prosjektperiode**

01.11.2023 - 31.05.2025

**Kategorier personopplysninger**

Alminnelige

**Lovlig grunnlag**

Samtykke (Personvernforordningen art. 6 nr. 1 bokstav a)

Behandlingen av personopplysningene er lovlig så fremt den gjennomføres som oppgitt i meldeskjemaet. Det lovlige grunnlaget gjelder til 31.05.2025.

[Meldeskjema](#)

**Kommentar**

OM VURDERINGEN

Sikt har en avtale med institusjonen du forsker eller studerer ved. Denne avtalen innebærer at vi skal gi deg råd slik at behandlingen av personopplysninger i prosjektet ditt er lovlig etter personvernregelverket. Vi har nå vurdert at du har lovlig grunnlag til å behandle personopplysningene.

**FØLG DIN INSTITUSJONS RETNINGSLINJER**

Det er institusjonen du er ansatt/student ved som avgjør hvordan du må lagre og sikre data i ditt prosjekt og hvilke databehandlere du kan bruke. Husk å bruke leverandører som din institusjon har avtale med (f.eks. ved skylagring, nettspørreskjema, videosamtale el.).

Personverntjenester legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

**MELD VESENTLIGE ENDRINGER**

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til oss ved å oppdatere meldeskjemaet. Se våre nettsider om hvilke endringer du må melde: <https://sikt.no/melde-endringer-i-meldeskjema>

**OPPFØLGING AV PROSJEKTET**

Vi vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

# Vil du delta i forskningsprosjektet

## «Engelsklæreres tanker og opplevelser rundt bruken av dataspill i engelskundervisning»?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å utforske engelsklæreres tanker og opplevelser knyttet til bruken av dataspill i engelskundervisningen.

I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

### Formål

Forskningsprosjektet har som mål å utforske engelsklærere sine tanker, meninger, og opplevelser knyttet til bruken av dataspill i engelskundervisningen ved norske ungdomsskoler. Prosjektet forsøker å svare på tre forskningsspørsmål; «hvor utbredt er bruken av dataspill i engelskundervisningen på norske ungdomsskoler?», «hvilke utfordringer opplever lærere knyttet til bruken av dataspill i undervisningen?», og «hva mener lærere kan være nyttig for å ta i bruk dataspill i undervisningen?».

Dette forskningsprosjektet er en masteroppgave. Formålet for denne datainnsamlingen er for å kunne svare empirisk på forskningsspørsmålene.

### Hvem er ansvarlig for forskningsprosjektet?

*Universitetet i Stavanger* er ansvarlig for prosjektet.

### Hvorfor får du spørsmål om å delta?

For å gjennomføre mitt prosjekt ønsker jeg å intervju seks engelsklærere som jobber på ungdomsskole i Norge.

### Hva innebærer det for deg å delta?



Hvis du velger å delta, innebærer det at du stiller til et intervju. Det vil ta deg omtrent én halv time. Intervjuet omhandler dine meninger og eventuelle opplevelser knyttet til bruken av dataspill i engelskundervisning på ungdomsskole. Jeg kommer også til å be deg om å gi noen opplysninger om deg selv i intervjuet. Disse omhandler opplysninger rundt arbeidsstilling, og utdanning. Jeg kommer til å ta lydopptak av intervjuet, som jeg vil bruke til masteroppgaven min.

### **Det er frivillig å delta**

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

### **Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger**

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

Student Hedda Ripland Moberg vil ha tilgang til dine opplysninger. Ingen uvedkommende vil under

noen omstendigheter få tilgang til dine personopplysninger. Det kommer til å bli iverksatt tiltak for å sikre dette, hvor navnet ditt og kontaktopplysningene dine vil bli erstattet med en kode som lagres på egen navneliste adskilt fra øvrige data.

### **Hva skjer med personopplysningene dine når forskningsprosjektet avsluttes?**

Datamaterialet med dine personopplysninger vil anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er ved midten av mai 2024. Lydopptaket vil slettes ved prosjektslutt

### **Hva gir oss rett til å behandle personopplysninger om deg?**

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra *Universitetet i Stavanger* har Sikt – Kunnskapssektorens tjenesteleverandør vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

## Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med:

- *Universitetet i Stavanger* ved Dina Lialikhova. Hun kan du kontaktes på:  
[dina.lialikhova@uis.no](mailto:dina.lialikhova@uis.no)
- *Universitetet i Stavanger* ved Hedda Ripland Moberg. Hun kan du kontaktes på:  
[hr.moberg@stud.uis.no](mailto:hr.moberg@stud.uis.no)
- Vårt personvernombud: [personvernombud@uis.no](mailto:personvernombud@uis.no)

Hvis du har spørsmål knyttet til vurderingen som er gjort av personverntjenestene fra Sikt, kan du ta kontakt via:

- Epost: [personverntjenester@sikt.no](mailto:personverntjenester@sikt.no) eller telefon: 73 98 40 40.

Med vennlig hilsen

Dina Lialikhova  
(Forsker/veileder)

Hedda Ripland Moberg  
(Forsker)

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**Samtykkeerklæring**

Jeg har mottatt og forstått informasjon om prosjektet [*Engelsklæreres tanker og opplevelser rundt bruken av dataspill i engelskundervisning*], og har fått anledning til å stille spørsmål.

Jeg samtykker til:

å delta i intervju

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet

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(Signert av prosjektdeltaker, dato)