

Gaming in the English Classroom

Gaming as a tool for language learning and a source of communication in a 10th grade class.

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Abstract

The purpose of this study was to investigate how gaming can function as a learning tool in a 10th-grade class in Norway. This includes an intervention in the classroom, along with an examination of students and teachers attitudes towards gaming and language learning. The thesis investigates earlier studies on video games and second language learning, and the importance of peer interaction for developing and learning language. In addition, the thesis looks at how the competence aims, basic skills and core elements in the English subject curriculum can support the use of gaming in the classroom. A mixed method approach was applied to address the three research questions, and the data was collected in a 10th-grade class that played the game *Keep Talking and Nobody Explodes*, followed by a survey about the students' gaming habits. Additionally, a semi-structured interview with the teacher of the class was conducted to get more information and a teacher's perspective. My study supports previous research, suggesting that gaming that are used in an educational context can be motivating and improve learning outcome for the students. The findings also suggests that depending on the game chosen for teaching, the students can learn other skills besides the linguistic content. A goal with the thesis was to gain more knowledge about the possible benefits gaming can contribute with for learning English as a second language, and how gaming can be used as a tool in the English classroom. Additionally, the thesis aims to provide more knowledge in the field and make it easier for other English teachers to try gaming in their teaching.

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1.0 Introduction

There are great opportunities associated with the increased use of computer games as a learning resource in schools. Games can contribute to critical reflection on consequences of choice, develop students' digital skills and understanding, better language skills and give students a deeper understanding of a subject. (Ministry of Culture, 2019, p.40).

1.1 Background

Gaming is a popular activity and an essential part of children's and young people's media use in everyday life, but gaming can also contribute to entertainment, exploration, and aesthetic experiences. In addition, games can increase creativity, curiosity, collaboration, learning, and planning skills for the students. Playing games can also offer a feeling of belonging and be an arena for social interaction (Ministry of Culture, 2019).

The use of digital games has become more popular among some teachers, and over the last years, games have been increasingly used as a tool in teaching. Due to the updated curriculum, digital teaching aids, including games, have come into a focus, both in the competence aims and as part of the students' digital skills. Some Norwegian schools hire specific gaming pedagogues and build gaming rooms for the students (Ministry of Culture, 2019). The use of games in teaching can therefore contribute to socialization, increase engagement, and improve students' digital competence.

Numbers of studies regarding games and second language learning (L2) have provided evidence that digital games can contribute to L2 development. Although they may not specified the mechanics or connections, there is a positive correlation between gaming and second language learning. Most point out that games provide visual, audio, and graphics that put vocabulary into context, leading the learner to "interact to complete meaningful, goal-oriented tasks" (Reinhardt, 2019).

Despite intensive research on extramural gaming, there is not much research on how digital games can be used in teaching in Norway. Especially studies where oral activity and development of language by using digital games are the focus are still lacking. That is why this master thesis will contribute to the field by investigating how gaming can contribute to language learning and development.

1.2 The aims of the study

This master thesis takes a closer look at the use of digital games in the teaching of English. How games can contribute to language learning and oral activity, what attitudes students and teachers have to the use of games, and how it can be used as a tool to learn and develop language. In addition, the game *Keep Talking and Nobody Explodes* is used in a 10th-grade class to see how language is used while playing and what strategies are used in communication. In general, the aim is to investigate how digital games can be used in English teaching for language learning and development.

This study will strive to answer three research questions (RQ):

RQ1: How much English and what type of communication strategies are used while playing Keep Talking and Nobody Explodes in a 10th- grade class?

RQ2: What are the attitudes towards gaming and language learning amongst the students and their teacher?

RQ3: How can gaming function as a tool for language learning?

The first research question looks at how the students complete the game *Keep Talking and Nobody Explodes*, focusing on how much English they use and their communication strategies. The collected data material, audio-recordings, will be linked to the relevant theory of communication strategies and interaction between students to answer this question.

Research question two looks at students' and teachers' attitudes and thoughts about gaming and language learning. Here, both a students' questionnaire and a teacher's interview will be compared before the findings are seen against previous research and relevant theory.

The third and last research question addresses how digital games can be used as a tool for language learning and development in English. In order to answer this question, the online questionnaire, interview answers from the teacher and observation from the intervention will be seen together and further be linked with previous relevant findings and theories.

1.3 Limitations of the thesis

Several limitations have been made to narrow the investigation down in order to fit the circumstances and the timespan for this project. Since this project had some specific requirements, such as the use of computers and not Chromebooks, it was challenging to find a school and class that could meet these requirements. However, through the collaboration between the university and local schools, one school was assigned for my project, and one class in the 10th-grade agreed to participate together with their teacher. Since the participation was voluntary, only ten students agreed to participate, which means that the study consisted of fewer participants than desired. Since there are few participants, the results cannot be generalized, and one can discuss whether the participants are representative of a 10th-grade class in Norway. Still, the results can contribute with novel and interesting observations to the field.

To conduct an intervention study is time-consuming so, a limitation was, therefore, to only look at one class of students in year 10. The reason for choosing year 10 was because they are old enough to decide whether they want to participate or not, which makes the practical features of the study more accessible. In addition, they are in the age group where many of them play games and spend much time gaming in their spare time. The particular game used in this study requires students to be at a certain English language level that allows them to communicate in English with each other and understand the manual that comes with the game. The manual is complex and could therefore be too complicated for younger students. Students in this age group will also be able to reflect on their language skills to a greater extent than younger students. On the other hand, if this study had been conducted with younger students, they would have been in an earlier phase in terms of language learning and development, and thus they could have benefited more from it than older students.

1.4 Outline of the thesis

This thesis consists of six chapters, where chapter one is the introduction. Chapter two presents the theoretical background of the field and other relevant theories helpful for this project. The chapter starts with a brief description of what gaming is before it moves on to the curriculum for the subject of English, which provides in detail how competence aims, basic skills, and core elements can be used to argue why gaming should be incorporated into English classrooms. Moving on, how gaming can be included in a school context is explained, including different types of games, motivation and engagements amongst students and

gaming, and why student interaction is essential when learning a language. Followed by communication strategies, where Nacey and Greadler's (2013) study is used as a foundation regarding communication strategies for this project. Previous research about gaming and language learning wraps up the theoretical chapter. The third chapter presents the methodology with a description of the methods used for this study and the analytical procedure. Chapter four will present the findings of this study before the collected data are presented and discussed on the backdrop of the theory in chapter five. The last chapter of the thesis will summarize the findings and provide suggestions for further research.

2.0 Theory

The following chapter investigates the theoretical framework behind video games in education. The first section, 2.1 gives a brief explanation of what games are, before the English subject curriculum is presented in section 2.2 with competence aims, basic skills and core elements. Section 2.3 takes a closer look at gaming in schools, covering the different types of games, motivation and engagement and the importance of student interaction in the classroom. Followed by section 2.4 which gives a description of communication strategies and examples of them. The last section, 2.5, presents language learning theories relevant for digital games.

2.1 What is gaming?

A survey conducted by The Norwegian Media Authority (2020) reported that as much as 86% of 9 to 18-year-olds play video games, which makes gaming not new for children and young adults in Norway today. This thesis investigates how gaming can contribute to learning and how it can function as a teaching tool, therefore, a definition of the term is a good starting point. The definition of gaming that was most useful for this study was found on the website "Techopedia". Techopedia (2018) defines gaming as:

Gaming refers to playing electronic games, whether through consoles, computers, mobile phones, or another medium altogether. Gaming is a nuanced term that suggests regular gameplay, possibly as a hobby. Although traditionally a solitary form of relaxation, online multiplayer video games have made gaming a popular group activity as well.

The terms video games and games will both be used in the thesis referring to the same, as according to Gee (2007a) video games involve games that are played on game platforms such as PlayStation, Wii, Xbox, or game consoles and games that are played on computers.

2.2 English subject curriculum

In 2020, the national curriculum was renewed and implemented in Norwegian schools. In the renewal of all subjects, competence aims were reduced and thus, more freedom in choice of methods and topics was given. The subject renewal was initiated to facilitate in-depth learning, connect the different subjects and other curriculum parts, and make it more relevant

for the students (Ministry of Education, 2020). There is a structure for all subjects in the new curriculum, and they are divided into three parts. The first part is information about the subject, which includes a description of the relevance for the students, society, and work life, core elements, specific information for each subject about values and principles in the core curriculum, interdisciplinary topics, and basic skills. The second part is competence aims divided into years, and the last part is about assessment, both formative assessment and final assessment that are subject-specific.

2.2.1 Competence aims, basic skills and core elements

The new curriculum in English (ENG01-04) does not mention video games or gaming in any of the competence aims, however, based on the competence aims, basic skills, and the core elements in the subject, it is natural to think that video games should be included in the teaching of English (Ministry of Education, 2020; Norwegian Directorate for Education and Training, 2020).

Many changes have been made to the competence aims with the new curriculum. Even though gaming is not explicitly mentioned, there are several aims one can tie to the use of games. In the competence aims after year 10, digital tool are mentioned several times:

- Use different digital resources and other aids in language learning, text creation, and interaction.
- Use sources in a critical and accountable manner.
- Explore and present the content of cultural forms of expression from various media in the English-speaking world that are related to one's own interests.

In addition, the national framework for basic skills (oral skills, writing, reading, and digital skills) recommends that students' digital skills should be strengthened by reducing the focus on digital tools, instead the focus should be on how digital competence can facilitate student learning (Brevik, Lund, Skarpaas & Røkenes, 2020).

In accordance with the new curriculum, digital skills are a basic skill in the English subject. The use of digital media and resources should be included in the teaching to strengthen language learning and meet authentic language models and conversational-partners in English to acquire relevant knowledge in the English subject. Considering this, critical and reflected practices with the use of digital forms of expression in English, as well as in communication with others must be included in English classes. The development of digital skills in English proceeds from exploring the language to interact with others, text

creation, and acquiring knowledge by collecting, exploring, and critically assessing information from a variety of English-language sources (Norwegian Directorate of Education and Training, 2020). Digital skills are not described in detail, and by acknowledging the importance of including different types of media in teaching, it gives the teachers opportunities to decide how to teach digital skills. The teacher can use various digital tools, find the most suitable teaching tool for the students, and meet the students' interests.

Another basic skill that is mentioned in the curriculum is oral skills. The section about oral skills mentions that students should create meaning through listening and speaking and be able to engage in conversations. It involves students being able to present information, adapt the language to the purpose, person, situation, and choose suitable strategies. To develop oral skills in English, the spoken language should gradually become more precise and with more implications to communicate on different topics. This applies both in formal and informal situations where various receivers with different linguistic backgrounds are present (Norwegian Directorate of Education and Training, 2020).

The description of writing as a basic skill focuses on how working with texts in English facilitates language learning and emphasizes that "the concept of text is used in a broad sense: texts can be spoken and written, printed and digital, graphic and artistic, formal and informal, fictional and factual, contemporary and historical. The texts can contain writing, pictures, audio, drawings, graphs, numbers and other forms of expression that are combined to enhance and present a message" (Norwegian Directorate of Education and Training, 2020). Based on this description, video games can be considered as a text in this sense. When playing a game, the possibilities to meet several of the aforementioned different types of texts are likely.

The last basic skill in the English subject is reading. In English, reading includes understanding and reflecting on the content of various texts, both on paper and screen, and contributes to reading pleasure and language acquisition. That involves reading and finding information using multimedia texts with competing messages and using reading strategies to understand both explicit and implicit information. In the English subject, the reading skills should develop and progress from experimenting with phonemes and speech sounds, spelling patterns, and syllables to reading varied and more complex texts with fluency and comprehension. Additionally, an increasingly be able to critically reflect and assess various types of texts (Norwegian Directorate of Education and Training, 2020). As many video games include reading of rules, back stories and character description, gaming can contribute to this basic skill as well.

Additionally, communication is a core element in the subject of English.

Communication in the English subjects points out that learners should create meaning through language and that they can use the language in formal and informal settings. Moreover, learners should use suitable strategies when they communicate, both in oral and written form, in various situations, and use different types of media and sources. Students should also "experience, use and explore the language from the very start" (Norwegian Directorate of Education and Training, 2020). Consequently, the teaching should therefore give students opportunities to use the language in authentic and practical situations. Communicating with other players can be seen as such an opportunity.

2.3 Gaming in schools

Games used for learning are not a new phenomenon, and games have previously been used to teach a variety of skills, for example strategy, management and business skills. However, digital games for learning are relatively new and thus of increasing interest among researchers (Whitton, 2014).

The use of games in an educational context can open new learning opportunities, and that can cause enthusiasm amongst learners. Games are often associated with spare time, creativity, interactivity and collaboration. When games are used in school contexts, they can be tied to the educational framework and basic skills, such as reading, writing, numeracy, and oral skills. A combination of entertainment, excitement, reflection, challenges, and different tasks that need to be completed, makes digital games worthwhile to reach curricular aims in various ways in teaching (Skaug, Staaby & Husøy, 2017). Thus, the pedagogical benefits of using games also have an exciting potential for students who struggle with school motivation and can be more appealing compared to other activities in teaching (Imsen, 2014).

However, the use of games in a school setting can also cause challenges and problems, which researchers and educators acknowledge. The often mentioned problems are "short lessons, physical space, variation in game competence among students, installation, costs, and teacher preparation time" (Egenfeldt-Nielsen, 2006, p. 188; Egenfeldt-Nielsen, Smith & Tosca, 2013). Besides, an essential aspect of gaming in a school context is to keep in mind that there is an ocean of different types of games one can use with different content, elements, and goals, and hence the learning outcome for each learner must be considered carefully.

2.3.1 Different types of games

Games can be categorized into different types of games based on the game purpose and content. When digital games are discussed in a school context, a distinction between learning games, commercial games, and gamification needs to be clarified. Games used in a school context are more prevalent in recent years, and therefore, the Norwegian Directorate for Education and Training has made their definitions of game types (Skaug et al. 2017). In this project, the game *Keep Talking and Nobody Explodes* is used, and that is designed close to traditional learning games (Skaug et al. 2017). However, a presentation of all the different types follows.

Learning games are designed and developed for educational purposes or to help students learn specific skills or subject material. Within learning games, some games focus on language or numeracy, whereas others focus on social questions or conflicts from the real world (often referred to as serious games). The focus of these games is learning rather than entertainment, and therefore they are often claimed to be not engaging enough. According to Whitton (2014), learning games do not offer the same engagement as commercial games. However, well-designed learning games and serious games with specific goals can be helpful and engaging in pedagogical contexts, despite often being based on behavioristic learning theories and extrinsic motivation (Skaug et al., 2017). That being said, other types of games can contribute to learning as well, even though they are not explicitly made for educational purposes.

Commercial games are first and foremost created for entertainment purposes. The budget is often larger, more extraordinary gaming experience, they have better graphics, and offer more excitement than educational games (Skaug et al. 2017). The content in learning games is often tied to a subject or specific aims, but commercial games give the players more flexibility and facilitation (Whitton, 2014). On the other hand, the learning goals in a commercial game do not usually overlap with learning goals in the school subjects (Whitton, 2014). Some commercial games have been used as a supplement or even used as a replacement for books and other learning resources in recent years. Even though commercial games are seen more often in a school context, there is a challenge regarding distribution. As of now, there are no arrangements for purchasing games in schools, which can cause difficulties when it comes to purchasing, licenses, and installation (Skaug et al. 2017).

Gamification is not a necessarily a specific medium of digital games, but it means taking advantage of game-like reward and motivation systems (Skaug et al. 2017). Although

it is not necessarily a digital game, the term is often used about digital games in a school context, but it is imprecise. In school context, gamification is often used for short lessons or activities. However, it can also be used for more ambitious lessons where the curriculum and the classroom function as a game itself. Gamification is criticized for many of the same things as learning games because the focus is often more on external motivation and the repetition of facts. In gamification, elements such as scores and levels are applied to the game, which is also one reasoning for the criticism. Whereas the quiz tool "Kahoot!" can make gamification a suitable tool for activities in the classroom (Skaug et al. 2017).

2.3.2 Motivation and engagement

The term motivation is used to explain what causes activity in each individual, and Ryan & Deci (2000) claim that to be motivated means "to be moved to do something" (p.54). In an educational context, student motivation explains how much attention and effort the student invests in different types of activities (Imsen, 2014). Motivation can be divided into two categories based on the goal or reason to perform an action: intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to an action or activity that is interesting or enjoyable. In other words, with intrinsic motivation, the action or activity is something the learner wants to do. In contrast, extrinsic motivation refers to "doing something because it leads to a separable outcome" (Ryan & Deci, 2000, p. 55).

The teacher plays a vital role in motivating the students toward the learning goals in the classroom, and the teacher often sets the learning goals. According to Gee (2007a), the school can, for some students, be too easy and for others too difficult, all in the same classroom, and the motivation lies in challenges that are challenging but at the same time doable. In addition, not all students have intrinsic motivation to learn (all) school subjects. For some, the motivation to learn is partially or fully extrinsic, e.g. grades.

Motivation is often the most prominent argument for using video games in education. Skaug, Staaby & Husøy (2017) argue that this argument can be based on three assumptions:

1. Games are fun
2. Learning is (often) boring
3. That's why: learning is fun with games

Although the authors argue for using video games because they are fun and motivating, a critical aspect in the discussion of video games for educational purposes is that games can sometimes have the opposite effect. First, there is a chance that not all students find games fun or motivating (Skaug et al., 2017; Whitton, 2007). Second, learning is not always boring, and since all students are different, one cannot assume that all students find every method or activity either fun and motivating or boring. In addition, there are no guarantees that a pleasant experience with gaming will be of transferable value to the learning goals. Although there are cases where some students will experience an increased desire to learn when using games, there are no guarantees that games generate motivation. The motivational aspect is also influenced by several types of games, subjects, and the fact that all students have their own internal or external motivational factors for learning (Skaug et al. 2017).

Krashen's (1987) affective filter hypothesis can explain why motivation is essential for learning. Krashen's hypothesis argues that performers who are motivated, self-confident, and in a low anxiety situation are more likely to acquire language (p.31). If learners lack these affective variables, the input is less likely to be received and stored, and therefore, highly motivated students that are confident and believe in themselves in low anxiety learning environments are a vital element for language acquisition. Additionally, Krashen argues that "performers with high motivation generally do better in second language acquisition" (p.31). If learners find language learning unmotivating, it can result in filters that prevent input from reaching the part of the brain that is responsible for language acquisition. Therefore, students who are intrinsically motivated in school should be able to store their input, which will increase and improve their language acquisition (Krashen, 1987). Digital games can be the motivation element many students need.

2.3.4 Student interaction in the classroom

There are several benefits of peer interaction in the classroom, and many teachers use communicative approaches for language teaching, which allows students to practice what they are learning. Previous research shows that communicative practice is essential for language learning and that explicit vocabulary or grammar teaching is not the primary condition for language learning (Adams, 2018; Burner, Carlsen & Kverndokken, 2019).

Interaction between two peers who are both in the process of learning a second language can be helpful when learning a language. The input learners hear during the interaction is simple and has more errors than native speakers, however, the learners are able

to speak and produce more language in peer interaction. Research on peer interaction shows that interaction in language classrooms is different from interaction with a more proficient speaker of the target language. Still, research also show that peer interaction provides unique language learning opportunities compared to interaction with more proficient speakers (Adams, 2018).

Adams (2018) provides five benefits of peer interaction, and the first one is that learners get to talk more. In interactions with a more proficient speaker (often a teacher or more proficient learner), learners tend to limit their contribution to the conversation, and often rely on the other speaker to keep the communication going. In comparison, when learners communicate with each other, they speak more and work more to keep the conversation going. Additionally, learners get the chance to practice using the language in a broader range, which helps them develop the communication strategies needed to use the target language for communication. Since learners are not proficient in the target language, they need to build on each other's utterances and correct themselves. Students should adjust their language to different speakers, and that is specified as one of the curricular aims (Norwegian Directorate of Education and Training, 2020).

The second benefit of peer interaction is that learners get to experiment and learn from their mistakes. When learners are interacting with each other, they have more control over the conversation, and therefore, they can try out new language forms they are learning. Moreover, learners have to work together to be able to express what they want to express, correct mistakes, and find solutions if they get stuck when communicating. Learners who make mistakes and corrections often causes new learning.

A third benefit is that learners get to consolidate what they have learned. Peer interactions move slowly compared to interactions with a more proficient speaker, and since it moves slower, the learners get a chance to control the conversation and how it develops. When the learners are in control, they can stop and reflect on how they can apply what they have learned to their language use (Gass & Mackey, (2006) as cited in Adams, 2018). If the learners are not able to practice what they have learned, it is unlikely that they will use it in communication. More importantly, learners of a foreign language have limited access to native speakers, and therefore, it is essential that they are given the opportunity to interact with a peer in the classroom in order to apply language learning in a meaningful context.

Next, the fact that learners get a chance to socialize is another benefit of peer interaction. Young learners are more likely to be more equivalent developmentally and socially, and therefore, they are more likely to share the same interests (Hartup, (2011) as

cited in Adams, 2018). Especially social equivalence can be beneficial when it comes to language learning. Students need to understand how language works, and to use appropriate language in different settings, and how they should use the language to achieve their personal aims.

The last benefit is that learners can get low anxiety language practice. Research shows that peer interaction is often more playful and relaxed compared with teacher-student interaction (Cekaite & Aronsson, (2005) as cited in Adams, 2018). Students who interact with similar language level users experience less stress than interactions with more proficient language users. Since the students are more equivalent in skills, they can speak with someone that understands and can give suggestions on the language in a low anxiety setting, which again can increase the chances of language learning (Valmori, (2016), and Damon, (1984) as cited in Adams, 2018). Using games as a topic of conversation or games that require oral communication, can fulfill all the benefits of peer interaction perfectly.

2.4 Communication strategies

When communicating in a second language (L2), there are different types of strategies one can use if or when communication breaks down or when the speakers struggle. Over several years, many different taxonomies of communication strategies have been suggested and organized in different ways. Additionally, a variety of terms has been developed by researchers to refer to roughly the same strategy, e.g., code-switching/ language switching. Nacey & Graedler (2013) made a taxonomy based on pre-existing classification systems. For this project, their taxonomy is used as a base for communication strategies used and presented in the results. Their description of the different strategies are presented below.

Reduction		Achievement							
Message abandonment	Topic avoidance	Cooperative			Compensation				
		Non-verbal signal	Verbal signal	Explicit appeal	Retrieval	L1-based		L2-based	
	Code switching				Foreignizing	Calques	Restructuring	Word coinage	Paraphrase

Table 1: Communication strategy taxonomy overview created by Nacey & Graedler (2013)

Nacey and Graedler (2013) divided the communication strategies into two main categories: reduction strategies and achievement strategies. Reduction strategies cover the situations when the communicated messages are reduced as the learner changes the message they want to convey, either by message abandonment or topic avoidance. Message abandonment means that the learner tries to convey something but then gives up, while topic avoidance means that the learner refuses to discuss specific topics or subjects (Nacey & Graedler, 2013). Even though reduction strategies were not included in this project, it is essential to acknowledge that different types of strategies can appear in communication and can be relevant in other projects.

While communicating, if the learners maintain the flow of the conversation despite disruptions, then they use achievement strategies. Cooperative strategies and compensation strategies are two subcategories of achievement strategies. If cooperative strategies are used, then the learner appeals for assistance, either through:

- Non-verbal signal: when learners use e.g. rising intonation or hesitations (empty or filled pauses).
- Verbal signal: when learners explicitly says that they do not know the English word.
- Explicit appeal: when learners ask “what do you call it in English?”

In contrast, with compensation strategies, the learners try to figure out communication challenges themselves rather than rely on the help of others. The compensation strategies are divided into three subgroups: retrieval, first language-based (L1-based), and second language-

based (L2-based). Retrieval strategies means that the learners feel that they know what they want to convey but need a moment to access what they want to communicate. Often, these strategies are characterized by disfluencies such as empty or filled pauses and can sometimes be followed by the learners trying to say a word but then suddenly breaking off.

The L1-based strategies consist of three different types of strategies:

- Code-switching: when words from the first language are inserted into the target language.
- Foreignizing: modification of a first language term to follow the structure or rules of the target language.
- Calques: literal translation of a first language expression or term into the target language.

While L2-based strategies consist of four types:

- Restructuring: learner tries to express something but then abandons the attempt before a new attempt in a different manner.
- Word coinage: the learner creates a non-existent target language word or expression.
- Paraphrase: rewording the information in a sufficient target language manner.
- Approximation: use of target language terms that share semantic features with the target lexis.

(Nacey & Greadler, 2013)

When students play a game that requires communication, such as *Keep Talking and Nobody Explodes*, they need to negotiate the meaning of the unfamiliar concepts. The real communicative needs train the students in the use of the strategies above.

2.5 Digital games and language learning theories

Researchers advocate that video games should be included more in education because of their educational potential and pedagogical benefits for language learning (Gee, 2007a; Reinders & Wattana, 2012; Whitton, 2007). Egenfeldt-Nielsen (2006) claims that the current findings regarding learning outcomes from the educational use of video games are positive and promising. This section will investigate some of the reasons to include video games in education.

Gee (2007b) defines several learning principles encouraged by gaming, and these principles are claimed to be applied to language learning. The focus is not specifically

towards second language learning, but his work can be transferred to L2 acquisition. An example is the first principle, "Active, Critical Learning Principle," which states that "all aspects of a learning environment (including the ways in which the semiotic domain is designed and presented) are set up to encourage active and critical, not passive, learning" (Gee, 2007b, p. 220). In other words, video games are engaging for students and involve active learning. Another relevant principle is the "Practice Principle," which is about the amount of time learners spend on gaming. It says, "learners get lots and lots of practice in a context where the practice is not boring" (Gee, 2007b, p.68). Furthermore, the principle "Regime of Competence" advocates that when gaming, learners can "operate within, but at the outer edge of, his or her resources, so that at those points things are felt as challenging but not "undoable" (Gee, 2007b, p.68). Based on the principles presented above, while gaming, learners can practice and acquire language in a challenging situation, but at the same time, doable and not overwhelming for the learners. This also aligns well with Vygotsky's perspective on learning with the Zone of Proximal Development (ZPD). The Zone of Proximal Development is characterized by the distance between what a learner can do without support, and what they can do with support from someone with more knowledge. If learners get the support they need, they will achieve more than they would do on their own (Vygotsky, 1978). Subsequently, gaming can contribute to collaboration between students and make them perform at a higher level beyond their ability.

Krashen (1987) claims that the classroom is of benefit when it functions as a source of comprehensible input. Second language learning in a classroom is not necessarily an informal place to acquire language. However, if the classroom is filled with optimal input for acquisition, then it is "quite possible that we can actually do better than the informal environment" (p. 58). If gameplay in the classroom creates an informal and low anxiety setting for the language input, it can in fact foster language acquisition.

A study by Sylvén and Sundqvist (2012) in Sweden about students' proficiency in English and their time spent on gaming outside of school reported that a vocabulary test correlated positively regarding second language vocabulary with the time spent on gaming. Similarly, a study by Sundqvist and Wikström (2015) in Sweden found a positive link between the amount of time spent on gaming and the English proficiency amongst the students. The study consisted of 80 students between the ages of 15-16. Sundqvist and Wikström found that students who played games for a minimum of five hours a week wrote more complex words than the students who reported that they did not spend time gaming. Additionally, a more recent study by Sundqvist (2019) shows that those who spent time on

games in their spare time gain a large English vocabulary and are good at difficult words compared to those who did not play. In the same study, Sundqvist (2019) also found a correlation between the time spent gaming is of great importance for vocabulary. Even though these studies are about games played outside of school and vocabulary in a written context, it is natural to assume that this will also apply to oral language and gameplay in the classroom.

Reinhardt and Thorne (2016) point out that "The language use in, around, and about games has increased in quantity, quality, and diversity, as game playing has become a truly global, interactive, multiplayer, and often multilingual practice" (p.416). They also point out that there is an increasing number of second language learners who play digital games outside of the classroom. Games are produced in an increasing variety of game genres and languages, which has made it easier to imagine digital games as authentic, consequential, and widely applicable second language learning resources (Reinhardt & Thorne, 2016). The teacher's job is then to choose a suitable game to meet the learning goals in the classroom.

3.0 Methodology

This chapter outlines the methods and design of the study. In the study, both qualitative and quantitative approaches are used to collect data to address the research questions. Section 3.1 describes the choice of methods used. Following, section 3.2 provides a description of the quantitative approach used in the current study before section 3.3 describes the qualitative approaches used. Section 3.4 provides information about the data collection process, followed up by section 3.5, which describes the data analysis procedure. Section 3.6 considers the reliability and validity of the project and the final section, 3.7, describes the ethical considerations of the study.

3.1 Choice of method

This study aims to investigate the connection between language learning and gaming and how gaming affects oral skills and classroom activity amongst students. Additionally, students' attitudes towards using games as a part of language learning and a teacher's perspective on the topic are also explored. Both qualitative and quantitative approaches were considered suitable methods to use at an early stage of the project, and as a result, the project uses a mixed-methods approach. A mixed-methods research design provides a better understanding of the research and utilizes the strengths of quantitative and qualitative methods (Creswell, 2014).

In order to discuss the topics mentioned above, different sources of data were collected. The primary source of information was a planned intervention in the 10th grade, which included a gaming session. The gaming session was audio-recorded and would provide information about how much English the learners used during the game and what type of strategies were used when they struggled to find words or did not know what to say. Participation in this study was voluntary, and the ten students who volunteered to participate were considered highly proficient in the English subject. Due to the students being considered highly proficient in English, the results of this study might not be as valid as they could have been if the participants had to a greater extent consisted of different levels of English.

After the gaming session, an online survey was created to gather more information about the students' gaming habits outside of school and what they think about gaming and language learning. As a final step, a semi-structured interview was conducted to gather information from the teacher in order to get a deeper understanding of the data.

3.2 Quantitative approach – online survey

A survey is considered a quantitative approach to research and works as an effective method to collect data, as it gathers a large amount of data in a relatively short time (Creswell, 2014). Surveys are widely used by researchers in educational contexts, and the findings are claimed to be generalizable because they often include many respondents. Even though questionnaires are often designed to gather data from large numbers of respondents, if the survey is carried out on a small sample with few respondents, one cannot generalize the findings (Basit, 2010). The participants in the online survey were the students from the class assigned for this project, and their teacher published the link to my survey on the class English group on the learning platform (Its Learning). This ensured that the respondents were from the class who agreed to participate in the project. When opening the link, the participants got information about the thesis and purpose of the survey, anonymity verification, and an approximate time it would take to answer. Since the sample is small, the results are perhaps not generalizable but they complement the quantitative results from the classroom observation.

3.3 Qualitative approach – observation and interview

3.3.1 Observation

According to Creswell (2014), observation is "the process of gathering open-ended, first-hand information by observing people and places at a research site" (p. 235). Observation is a valuable method for data collection from actual events in the classroom. The researcher needs to take a particular role as an observer, and there are several roles one can take. Changing observational roles often occurs if the researcher enters as a nonparticipant and later becomes involved as a participant (Creswell, 2014). In this project, the researcher had a changing observational role because information and explanations of the activity were given before the project started. Additionally, the researcher ended the lesson when the game was finished. During the game session, the role of the researcher was nonparticipant. However, one student was late for the lesson, and an explanation of the activity was given when the rest of the class had started. Additionally, for one of the groups some guidance on the game was provided in order for them to start as soon as possible.

A discreet method to gather observational data is through audio-recording. Using audio-recording is especially useful if verbal communication is to be observed. When oral communication is recorded, a verbatim recording will provide helpful information regarding the observation, particularly when the researcher cannot take notes. On the other hand, an

audio-recording will not give nonverbal communication and information, and if the voices are unclear, parts of the data may be lost. Furthermore, it may be difficult to identify individuals when audio-recordings are used to gather data material (Basit, 2010). In this study, audio-recordings were used to gather oral communication data from the students when they played the game *Keep Talking and Nobody Explodes*. The aim was to investigate how much English they used and what types of communication strategies they used while playing. In order to collect enough quality data, it was decided to use a recorder for each group because it would have been difficult for one researcher to gather good data material alone.

3.3.2 Interview

In addition to the questionnaires, a semi-structured interview with the class teacher was held. The interview aimed to investigate some questions in-depth and get more insight from a teacher's perspective. The interview was semi-structured (see the interview guide in Appendix 10), and this type of interview is the most favorable in educational research (Basit, 2010). A semi-structured interview allows asking follow-up questions, asking for clarification, and elaborating to get the information needed. The interview had preplanned questions and prepared supplementary questions to provide flow during the interview and ensure enough data. Furthermore, in a semi-structured interview, the researcher is open to other questions, thoughts, or topics the respondent introduces (Postholm & Jacobsen, 2018).

The interview was conducted face-to-face in Norwegian to ensure there were no misunderstandings. A disadvantage with the use of interviews that are conducted face-to-face is that the researcher can affect the respondent's response by being present (Creswell, 2014). However, the respondent seemed comfortable sharing ideas and was not hesitant to speak. The participant was also informed about the project and the purpose of the interview, prior to the data collection, both in written and oral form. Information about the process was also given, and that the interview would be recorded, transcribed, and coded by the researcher.

3.4 Data collection

The intention of the intervention was to investigate how gaming can function as a tool for language development and classroom activity, where video games were used as an approach. The researcher's role was to stay in the background when the students started playing and not interrupt the classroom activity. Therefore, it was natural to collect the data through audio-

recordings of the students, followed by a survey after the gaming session. The interview with the teacher was conducted last. The data was collected in February 2022.

3.4.1 The game "Keep Talking and Nobody Explodes"

Keep Talking and Nobody Explodes is a digital game where the players need to cooperate in disarming a bomb with a time limit. The key is to communicate to solve the different modules in the game to make sure the bomb does not explode. The game was created and developed by Steel Crate Games. *Keep Talking and Nobody Explodes* has simple gameplay, and it does not have many choices. The game is played in pairs or in small groups where one of the players sees a computer screen with a bomb and the other player has a "Bomb Defusal Manual". The player sitting by the screen has a digital suitcase bomb in front of him or her. During the game, the player needs to control the bomb with the use of a mouse and be able to turn the bomb around to disarm the different modules. The other player or players have the "Bomb Defusal Manual" and they need to give instructions on how to solve the various modules to disarm the bomb. To understand the manual, it is crucial that the player or the players can read and understand the text. The player with the screen cannot see the "Bomb Defusal Manual", and the player with the manual cannot see the screen. To disarm the bomb, good cooperation and communication between the players is the key to stopping the bomb from exploding (Statped, 2020).

3.4.2 Materials

Before the start of this project, some materials were needed, such as a game license and memory pens. The researcher purchased game licenses prior to the project, and they were then uploaded on memory pens. Since the game was on memory pens, the students did not have to download the game on their computer and could play from the memory pen.

3.4.3 Participants

To participate in this study was voluntary, and only the highly proficient students of English wanted to participate. Since the students that participated were described as highly proficient in English by their teacher, naturally, that will affect the validity of the results. The groups were divided randomly by the teacher, only with instructions from the researcher about the group size.

All the student participants were from the same class, and they were in year 10. Many students were absent the day the data was collected due to COVID-19, and some did not want

to participate. Ten students participated in the gaming session, where eight were boys, and two were girls. Even though there were 10 in total who participated in the game, 12 students started to answer the online survey. However, two of them did not participate in the gaming session, which made it difficult to answer all the questions, and that is why they did not finish the survey. The answers of the two students who did not play the game but nevertheless started the survey were excluded from the analysis. Additionally, the in-depth interview was conducted with the English teacher of the class.

3.5 Data analysis procedure

After the collection, the data analysis was done to ensure accurate raw material when transcribed. For this thesis, the primary data were the audio-recordings of the students and the interview with the teacher.

3.5.1 Online survey

The online survey consisted of 15 questions (see the entire length of the survey in Appendix 8). The online survey was created in a survey tool called SurveyXact. The survey was made in Norwegian to avoid misunderstanding or confusion, and the students answered the questionnaire at school after the gaming session. The questionnaire consisted of multiple-choice and free-text questions, and the free-text answers were translated into English by the researcher, for the use in the result section.

Since the online survey consisted of both multiple-choice questions and free-text questions, different methods to describe the data and results were used. The statistical data included in the thesis are presented in either tables or figures created in Microsoft Excel. Since the number of participants was small, it was easy to see the free-text answers in one and, therefore, find the most frequent words and phrases used.

3.5.2 Audio- recordings

One audio-recorder was placed in each group, and the audio-recorders were placed on the students' desks between those who interacted. The students were given instructions from the researcher on when to start and stop the audio-recorder because all communication was considered valuable data.

The audio-recordings from each group were carefully transcribed and anonymized before they were analyzed. All the recordings were listened through several times to ensure

all the information was included. The transcriptions are written as the students spoke, and therefore, there are mistakes and errors in the material. Additionally, bad language or swearing is transcribed to maintain the authenticity of the conversation. The transcribed material was printed on paper for analysis. First, marks were made when the game started and when the bomb exploded, time was up or when they were done. When the marks were made, all the words spoken when the game was running were counted, except communication strategies that were used (retrieval and code-switching). In addition, Norwegian words that occurred when the game was running were counted for each group. Furthermore, communication strategies were tagged and summarized based on the strategy. Subsequently, a table overview was made for each group to organize the numerical data. Some of the numbers were also made into percentages. General findings were also analyzed, such as when they used L1 (Norwegian) and retrieval strategies apart from when the game was running.

In this project, only the communication strategies that occurred the most are included in the analysis of the results, and therefore, they are the ones presented in the results chapter. However, all the strategies are presented in the theoretical chapter because it can be beneficial to have some knowledge about the strategies to understand the difference.

3.5.3 Interview

The interview followed an interview guide made in advance (Appendix 10) to collect more information and get a teacher's perspective. The interview was recorded, transcribed, anonymized, and quotations used in the result section were translated into English by the researcher. Further, the interview was listened through several times to ensure accurate transcription and to avoid mistakes. The transcribed material was then printed out on paper and read through multiple times before the data were analyzed, and the information was divided into categories (Appendix 11). Descriptive analysis was used to structure the material by categorizing and creating keywords, making it easier to get an overview of the data collected (Postholm & Jacobsen, 2018). Since only one participant was interviewed, the term teacher was used when transcribing to ensure the anonymity principle. In the result chapter, either teacher or respondent is used when presenting the data from the interview.

3.6 Reliability and validity

In this project, the decision to use a mixed-method approach was taken to strengthen the validity of the research. A combination of qualitative and quantitative research can make the

findings more generalizable and help increase overall reliability and validity. Mixed method research can eliminate the weaknesses of one method with the strengths of another method. If the results from the audio-recordings, survey, and interview correspond, it improves the validity and reliability of the study. However, since this study is narrow with few participants (ten students and one teacher), the findings will not provide enough information to generalize the results. Therefore, one cannot apply the results to the population of English teachers or 10th grade students in Norway simply based on this study.

Additionally, the students who participated in this study are considered by their teacher to be highly proficient learners of English. Hence, this will influence the validity. To ensure that this study contained clear and valuable questions, the questions for the questionnaire and the interview were read through and given feedback on prior to the study. Both the questionnaire and interview were conducted in Norwegian to reduce the risk of misunderstandings and misinterpretation by the respondents. Furthermore, the survey consisted of multiple-choice and free-writing questions, allowing the students to explain their answers.

Lastly, the researcher's bias is considered a threat to the reliability and validity of the results. The researchers' attitudes and feelings can affect the questions and reactions during the interview, which again can affect the respondent. Additionally, beliefs about the topic may affect the process of gathering data material, transcribing, and analyzing. However, the researcher started the project with an open mind. In addition, self-reflection during the entire process was used in attempt to hinder research bias. Since the findings from this study correspond with previous research in the field, the findings may indicate that the study is reliable. However, the validity can be questioned due to the limitations found in this project.

3.7 Ethical considerations

Ethical considerations are essential when conducting research, and the researcher must ensure that the research is carried out according to ethical standards. It is essential that the participants are taken care of and that they are not harmed or hurt during the research process (Basit, 2010).

Since this study gathered personal information, the project had to be reported and approved by the Norwegian Centre for Research Data. All the participants were informed about the project and their right to withdraw at any time during the project. A consent form, one for students and one for the teacher, was made and signed by the participants before data collection started. According to the Norwegian Centre for Research Data (2022) guidelines,

children and young adults above the age of 15 can consent to research participation without approval from their parents. This applied to this study since all students were over the age of 15, and no sensitive information about the students was collected.

The students were informed that the audio-recordings were only available for the researcher and that they would be transcribed and anonymized, and that no names would be included in the thesis. The questions in the survey were asked in a way that would not reveal the students' identities. For the interview with the teacher, the recordings were also available for the researcher only and deleted after transcription. The teacher that participated in the interview was informed about anonymity and confidentiality prior to the interview.

All data collected for this study were securely uploaded and stored to the university's cloud storage. Audio-recordings and interview-recordings were transcribed, anonymized, coded by the researcher, and deleted after transcription.

4.0 Results

This chapter presents the results of the study. As previously mentioned, the data were collected using audio-recordings from the gaming session, questionnaires, and interview with the English teacher of the class. The aim of the data collection was to answer the research questions:

- How much English and what type of communication strategies are used while playing *Keep Talking and Nobody Explodes* in a 10th grade class?
- What are the attitudes towards gaming and language learning amongst the students and their teacher?
- How can gaming function as a tool for language learning?

The results from each data source are presented separately. Section 4.1 presents the audio-recording findings, numerical data, and quotations to present the findings. The recordings are transcribed, and the quotations are translated into English. Section 4.2 presents the results from the questionnaire, and since the questionnaire contained both close-ended and open-ended questions, the results are presented as a mix of numerical data and quotations. The last section, 4.3 presents the interview with the teacher, which has been transcribed, and quotations are translated to English.

4.1 Audio-recording findings

Besides the data found while the game was running, some general findings, such as use of L1 and pauses before, during, and after the game was running are presented here. The students' L1s are not known, but in this study it is reasonable to expect that their home language is Norwegian, thus, in this thesis, L1 represents the use of Norwegian. All the students use Norwegian at some point, and several empty and filled pauses are found in all groups.

Group one consists of three students, and all of them use Norwegian at some point. They use L1 before the game starts, where they talk about how they are supposed to do it and ask questions. Additionally, their teacher helps them out because they could not figure out how they should navigate, both in the manual and on the computer. Example will follow, and Appendix 4 will provide full transcription.

- Student 1: I see some wires in different colors. I see some orange boxes. There is six squares, four of them are orange.
[long empty pause]
- Student 1: Jeg tror ikke, vent, jeg tror ikke det er starten, går det an og, du (navn på lærer), fort, det haster! Det er ikke begynt enda, vi har starta den (Translation: I do not think, wait, I do not think this is the start, is it possible to, you (teacher's name), quick, it is urgent! It has not started yet. We started it)
- Teacher: Nei, det har ikke starta enda, du må bare trykke på den (Translation: No, it has not started yet, you must press this).

The students speak English most of the time during the game, but as soon as the bomb explodes, they speak Norwegian. In addition, the group uses Norwegian when they are changing roles during the game.

There is also one incident when one of the students speaks Norwegian, and then another student says "English," indicating that they need to remember to speak English.

- Student 2: Can you count them?
- Student 1: Six. One minute and 45 seconds left.
- Student 2: Assa, vi må gjøre det på nytt. Se på den. (Translation: We need to start over. Look at it)
- Student 1: English.

Group two consists of two students, and several instances of Norwegian and pauses (retrieval strategies) are found. An example from the conversation will follow (Appendix 5 for full transcription):

- Student 2: Just a ... [empty pause] ... star
- Student 1: Okay, it's supposed to be this one. Eh [filled pause], okay, ehhh [filled pause]... Bottom left?
- Student 2: Bottom left, eh [filled pause], it's a smiley face with its tongue out. [empty pause]
- Student 1: Eh [filled pause], okay, yeah, I see it. And then, the bottom left?

In addition, both students use Norwegian at least once. When the bomb explodes, they use a mix of English and L1, but they use primarily English when they speak. When the game is running, they say "hva" (what in Norwegian) several times, but it does not hinder

communication, and the conversation flows even though they use L1. Additionally, one of the students asks, "hva var det det het? firkant," which can be translated into "what is it? square" because the student does not remember the English word square.

Group three consists of three students and all of them use Norwegian at one point, and there are several instances where they use either empty or filled pauses. An example from the conversation follows (Appendix 6 for the entire transcription):

- Student 3: Do you see a small box with some text?
- Student 2: With some text, eh [filled pause], on the outside of the box?
[empty pause]
- Student 2: It's a red, red box, eh [filled pause], a red rectangle with FRK inside of it.

Even though they all used Norwegian at some point, one of the students used only one Norwegian word and that was "hæ?" which can be translated to "what?" in English. Besides the one case with "hæ" they use some words in Norwegian when the bomb explodes. They use primarily English when they communicate but have a few sentences in Norwegian, such as "du bomma på alle sammen", which can be translated to "you missed all of them". Alternatively, "Den sprenget veldig fort", which means that the bomb exploded extremely fast.

The last group, **group four**, consists of two students, and both use Norwegian at some point. When the game is running, they use short words in Norwegian, as exemplified by this part of the conversation (Appendix 7 for the entire transcription):

- Student 2: It's four weird numbers.
- Student 1: Now, wait, eh, eh [filled pause], yeah, okay. Eh [filled pause], besides det der (that in English) with the circle in the box, is it a lion besides it?

The use of Norwegian words does not interrupt the flow of the conversation. However, the students seem insecure about the next step, and they sometimes hesitate towards the approach for solving the different tasks. In addition, they use L1 when the bomb explodes, and they talk about how they are supposed to solve the tasks.

Besides the data presented in the general findings, a more analytical approach was used to determine how many words they spoke, how many times they used Norwegian words, and when they used communication strategies. A total of 271 instances were found where

different communication strategies, retrieval or L1-based, were used during gaming. The average per group is 67,75 instances, which is 27,1 per student. However, the number of instances differs for each group from 39 to 104. In all cases, the students resort to achievement strategies, and they use compensation strategies rather than cooperative strategies (see Table 2 below). In 88% of the instances, the students use retrieval strategies, and the use of this strategy may indicate that the students need breathing room to search for the right word or to find out how she or he wants to express themselves. L1-based strategy only represents 12% of the total instances of communication strategies used.

Achievement strategies 100% (n=271)	
Compensation strategies (n=271)	
Retrieval 88% (n=239)	L1-based 12% (n=32)

Table 2: Overall distribution of communication strategies

As shown in Table 2, the students prefer compensation strategies, which indicates the respondents attempt to solve problems in communication themselves rather than rely on others.

Retrieval is the most frequent strategy out of the two strategies included in this study with 88% of instances. The students often use empty or filled pauses to navigate themselves when communicating with each other. This is the case for both the student reading the manual and the one with the computer. However, filled pauses are more commonly used by those who read the manual.

L1-based strategy is used far less during gaming compared to the retrieval strategy. Perhaps, this is not that surprising given that the students who participated in the project were among the students with higher proficiency in English from the class. Still, all of them rely on L1 at least once during the game. The subtype that occurred most in this project was code-switching. The use of code-switching during the game occurred six times for two of the groups and ten times for the other two.

Group 1 (three students)			
Words in total	Norwegian words (total number of words used during the game)	Communication strategies	
1028	29	Retrieval (empty or filled pauses)	Code switching instances (amount of instances Norwegian were used during the game)
		62	10

Table 3: Overview of group one

Group 2 (two students)			
Words in total	Norwegian words (total number of words used during the game)	Communication strategies	
1951	16	Retrieval (empty or filled pauses)	Code switching instances (amount of instances Norwegian were used during the game)
		98	6

Table 4: Overview of group two

Group 3 (three students)			
Words in total	Norwegian words (total number of words used during the game)	Communication strategies	
1625	9	Retrieval (empty or filled pauses)	Code switching instances (amount of instances Norwegian were used during the game)
		50	6

Table 5: Overview of group three

Group 4 (two students)			
Words in total	Norwegian words (total number of words used during the game)	Communication strategies	
945	12	Retrieval (empty or filled pauses)	Code switching instances (amount of instances Norwegian were used during the game)
		29	10

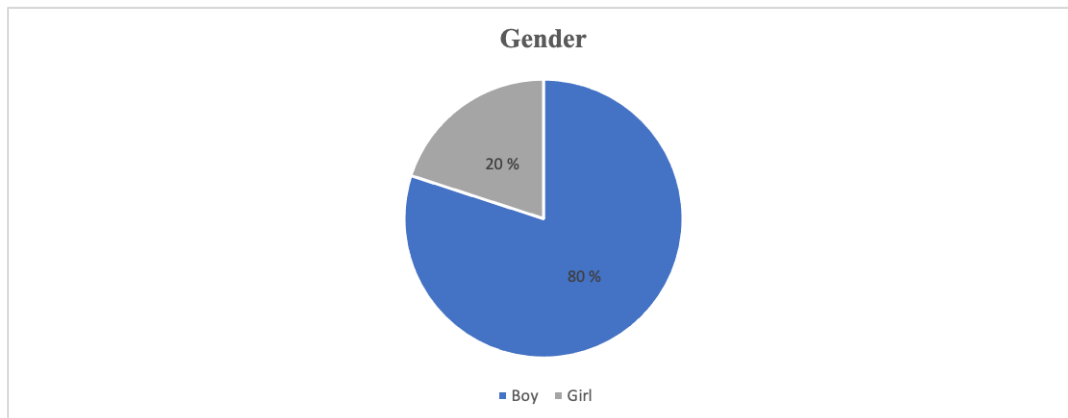
Table 6: Overview of group four

4.2 Online survey results

The data collected through the questionnaire were meant to gather information about the students' thoughts about the English subject, their gaming habits, and learning outcome from games. The online survey was answered by ten respondents. All the respondents are from the 10th grade class that played the game. The students were asked to answer 15 questions: first some general questions, before moving on to gaming-specific questions, and the last question is directly regarding the game used in the project.

Question 1- Gender

Figure 1: Gender



To find out the distribution of gender, the first question asks what gender the respondents identify themselves with. Most of the respondents, 8 out of 10 were boys, and only two girls.

4.2.1 English as a subject and language

The first aim with the questionnaire was to find out what the students think about the English subject, if they are usually orally active in class and where they learn English.

Question 2 and 3:

All students report that they like the English subject. Since there were only ten respondents from the class, the answers would most likely not be the same if all students from the class had answered this question.

Further, when asked if they were orally active in the English lessons, 70% of the students said sometimes, and the remaining 30% reported that they were orally active. Surprisingly, even though all students said that they liked the subject and that the students were pointed out as highly proficient in English, only 3 out of 10 reported that they are usually orally active. Since the question was closed, there was no possibility of explaining why they reported what they did.

Question 4: Where do you learn English?

Figure 2: Where do you learn English?

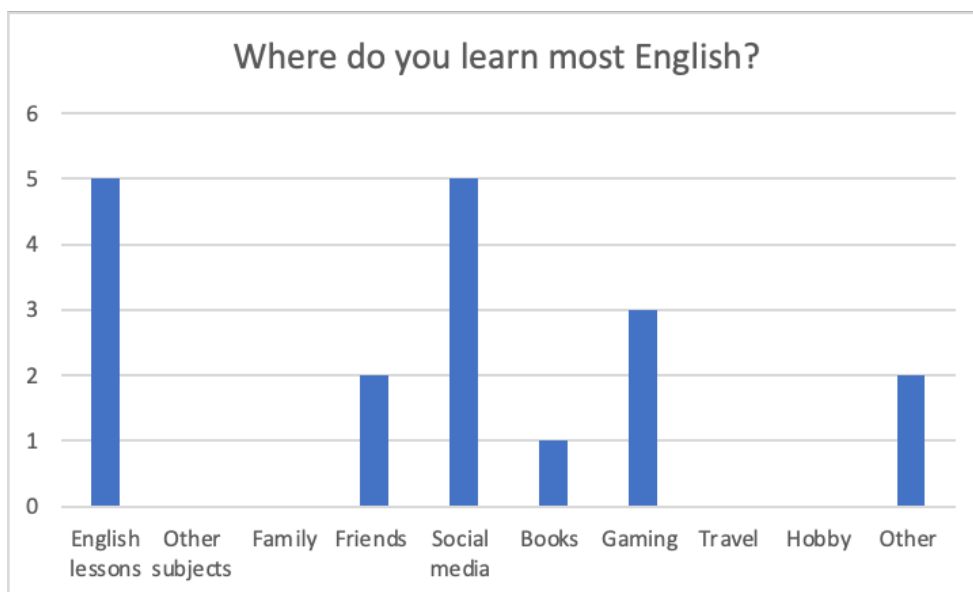


The most frequent answers to where the students learn English are in English lessons, social media, and gaming. The respondents could also choose several opinions and they were also given the opportunity to choose "other (specify)". The answers given were:

- Movies, series, and YouTube
- TV and series

Question 5: Where do you learn the most English?

Figure 3: Where do you learn the most English?



In addition to where the students feel they learn English, they were also asked where they feel they learn the most English. Here, the most popular answers are English lessons and social media with the same scores. Compared to the previous question, gaming is now the second most popular answer. This time, the students also had the opportunity to answer "other (specify)", and the answers were:

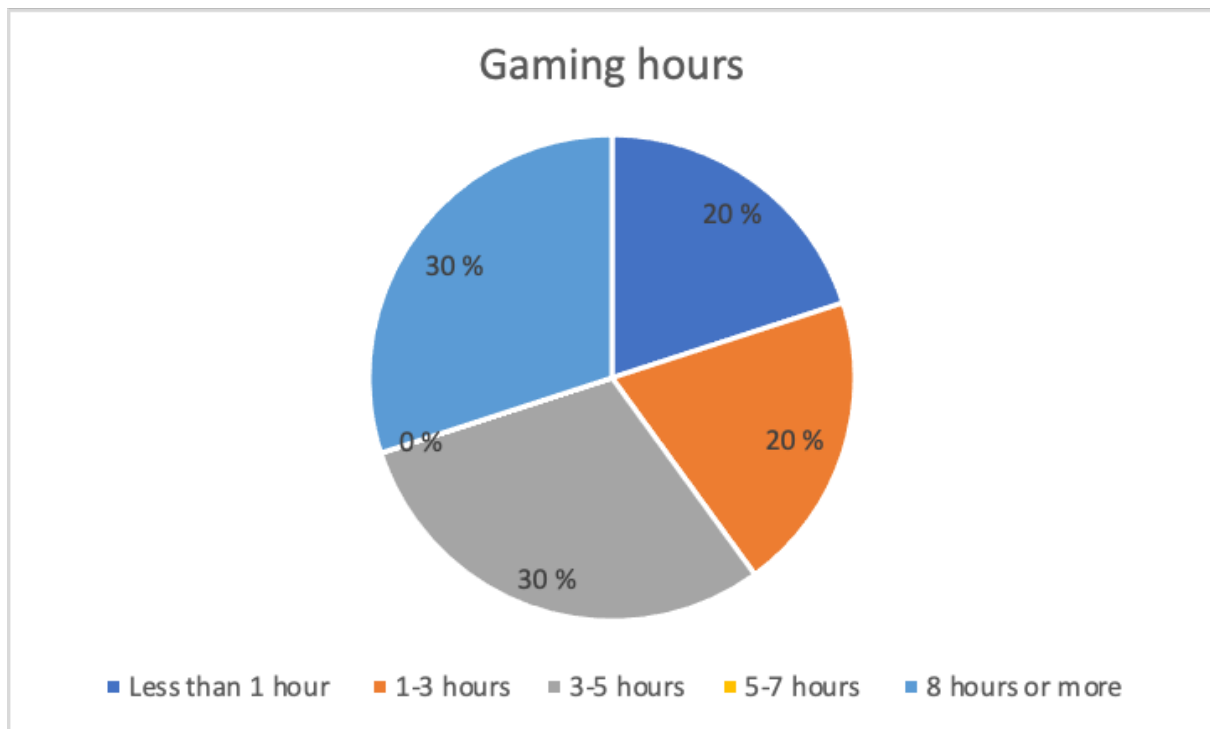
- Movies, videos, series, and YouTube
- Series, documentaries, etc.

4.2.2 Gaming and learning outcome

The second aim of the questionnaire is to find out about the students' gaming habits. Additionally, if the students think they learn something from games and how they feel about speaking English in class.

Question 6: How many hours a week do you spend on gaming?

Figure 4: Gaming hours per week



When the students were asked about the amount of time they spend on gaming in their spare time, the answers are distributed evenly. 20% of the respondents report that they spend less than 1 hour during a week, and another 20% report that they spend between 1-3 hours.

While 30% report 3-5 hours, and, the remaining three students report that they spend 8 hours or more on gaming.

Question 7: What games do you play at home?

The students who answered that they spent more than 1 hour a week gaming were asked about what types of games they play at home. The answers given were:

- Fortnite
- Hay Day, have played others as well
- Battlefield 5, Battlefront, Fortnite, Clash Royal, Asphalt
- Rocket League, Minecraft, Fortnite
- I play different games, I don't play as much now as I did but I play a little bit of Fortnite. I play Battlefront and Apex Legends.
- Rainbow Siege
- COD, Destiny
- CSGO, Fortnite, Roblox, OSU, Paladins and a little bit of Call of Duty

Question 8: Do you think you have learned something useful in the games? Explain.

Here, the respondents were asked to give a written answer. They responded to this question if they answered that they spent more than 1 hour gaming a week. Eight responded to this question, and a summary of what they wrote will be presented here. See Appendix 9 for all answers written in Norwegian.

The students point out that they do not feel they learn that much from games. One respondent said: "Nah, not that much when it comes to language. I don't learn new English, but I think that is because I know it so well". Another respondent said: "I expand my English vocabulary and get better at communication". Some also mentioned that they learned more English and then understood it better as well.

Question 9 and 10:

In question 9, the students were asked if the game or games they play are in English. 87% said yes, and the remaining 13% answered some. When the students were asked if they used English while playing in question 10, they reported that they mainly read or speak, but some also write in English. None of them said that they do not use English, which indicates that the games they usually play are in English and that they use the English language in some

way or another. Notably, this corresponds with the answer to question 9, where 87% play games that are in English.

Question 11: Do you experience that gaming contributes to a better mastery of English language? How and why?

Question 11 asked the respondents to write an answer to their experience with gaming and if that contributes to mastering the English language better, and explain how and why. The length of the answers varied from one word to several sentences. All eight respondents are positive towards gaming and its role in mastering the English language. Although they are positive about gaming and its contribution to the English language, they also write that they are not entirely convinced that gaming is a significant help to master the English language. One respondent wrote: "I feel that it can help a little bit, but not much because when I play, I play with friends, and we speak Norwegian".

Another said: "I think it can make you become good in English, but that is not the case for me because I do not play that much. I do not play games in English and then there are few words in English. It is not that varied, only the same words all the time". Some said that they learn more words, and that they get more used to using the language. Additionally, one mentioned that gaming could contribute to maintaining the language. One respondent wrote, "I don't know why and how, but I think it is because I see and talk a lot when I play with, for example, English friends" (Appendix 9 for all answers in Norwegian).

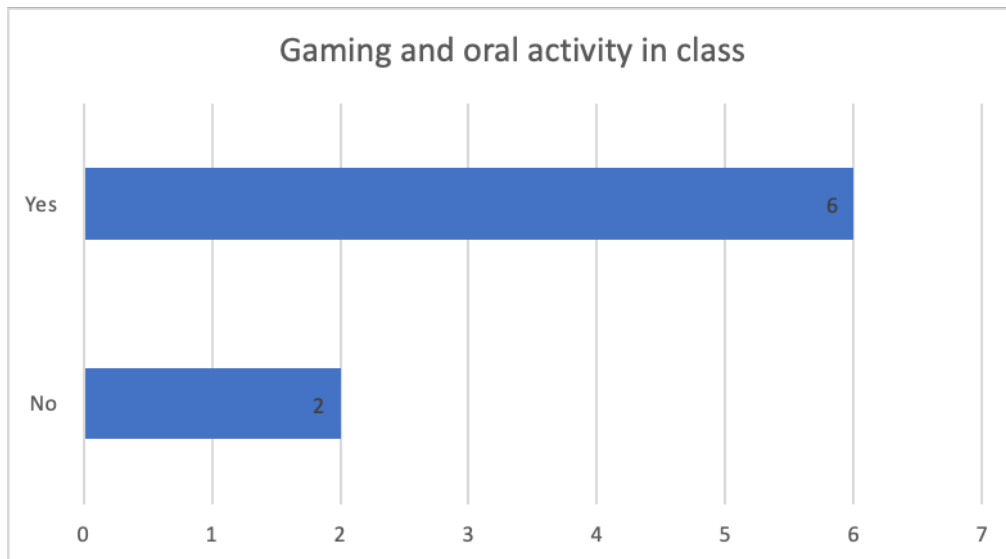
Question 12: Do you feel confident speaking English in class? Justify the answer.

Question 12 asked the students about their confidence with speaking in class and to justify their answer. All respondents were asked this question regardless of how many hours they spend gaming. Based on the comments given, the respondents were divided in their answers to this question (All answers in Norwegian can be seen in Appendix 9).

One respondent said: "Yes, I don't care about what people think about my English". Another one explained: "Both yes and no. I feel confident, but I don't do it as much as I should, and I know I am good and should talk more". Several wrote that they feel confident speaking English because none of their classmates make fun of them, but also that they sometimes can feel insecure because of the pronunciation. One student said "Sometimes, it depends on my mood". Another student wrote "I don't know, not quite there yet".

Question 13: Do you believe that gaming helps you feel more confident speaking English in class?

Figure 5: Gaming and oral activity in class



6 out of 8 said that they believe that gaming is a part of what makes them more confident with speaking English in class. The other two students said no, and therefore, they do not believe that gaming has something to do with the feeling more confident or not speaking English in class.

Question 14: Do you experience that you can apply what you learn through gaming in the English lessons at school?

Question 14 was a free-text answer question where the students were asked if they can use what they learn through games in the English lessons. All answers in Norwegian can be seen in Appendix 9.

One respondent wrote "Yes, a little bit, I learn some words I can use". Another student said "No, not with the games I play. More from series and stuff like that helps me. But gaming is something that helps others with their flow in the language. Better English and bigger vocabulary. I know several people that are quite good in English because they have been gaming a lot through their childhood". The last student is aware that some may find the things they learn through games are something they can use at school but feels that this is not the case for this student. Neither did another student who said "When I play, there is a small chance for me to hear or read about stuff we have learned at school, and the same with vocabulary. The way one speaks is different, and by that, I mean how the sentences are built and the way the language is used in different situations."

On the other hand, there is one student who did experience that one can apply what you learn through gaming in the English lessons. The student said, "I get better at communication and problem solving".

4.2.3 Gaming session

The last question they asked to answer was how they experienced the lesson with the game *Keep Talking and Nobody Explodes*. All students got this question and they had to write free-text answers. See Appendix 9 for all answers given in Norwegian.

8 out of 10 used the term "fun" to describe their experience with the game. One respondent said: "It was very fun because I miss that our lessons are in English. It is often more Norwegian, and that makes the lessons very boring". Another respondent wrote "It was very fun and nice to speak English. It was good that we spoke English because many can learn from it, both pronunciation and how to use the language". Similarly, one student also mentioned that it was fun because it was stressful and added that they (students) had to communicate well with each other.

Others wrote that the game was challenging in the beginning, but after a few times it got better. One example from one of the students: "It was fun and stressful. In the beginning, nothing made sense, but after a while trying, it became easier, and we understood it more. A good game". In contrast, one respondent said that it was challenging to both read the manual and to navigate the computer. The same respondent also said that it was complicated, but it became easier and that they (the group) made it in the end, but with some cheating.

Not surprisingly, the most frequent answer was that they thought it was fun. Additionally, some of them mention learning aspects of the game as well, such as pronunciation, language learning and communication skills.

4.3 Interview results

The class teacher participated in a semi-structured interview. The teacher had been teaching for five years in the Norwegian school system. The teacher is working at a secondary level, currently teaching 8-10th graders in English. However, the teacher also had experience with teaching 5th to 7th grade. The interview was held in Norwegian (Appendix 11), and therefore, the information and data have been translated into English by the researcher. The teacher will be referred to as the respondent or teacher in the following.

4.3.1 The gaming session

When asked about the experience from the gaming session, the respondent noticed good engagement and that students did not give up. Additionally, the teacher said that it seemed like the students used a variety of strategies to solve the tasks. However, the students who participated in the project were among the strongest students orally in English, and "in a "normal" class where all students participate, there would be more challenges." Still, the teacher concluded with a positive response to the lesson. The first follow-up question asked was: "How much oral activity is normal?". The teacher said it was less than the teacher likes, but when you have a class, there are always some orally active students, some who are more active in smaller groups, and some students who never say anything.

When asked, "Keeping the students who usually are active in mind, how did they do now, was it the same, more or less?", the response given was that with oral tasks, it was more now because this is something they find engaging. Although it was more now, the respondent also added that usually, when they are given oral tasks, they talk as much as they did now if it is motivating for them. Notably, the teacher said that one of the students who participated in the project usually does not speak in class but talked in this lesson.

Further, the teacher was asked if some students were less active in this lesson compared to "normal" lessons. The response was, "yes, a little bit in the beginning". The respondent added that this also could be argued with a lack of understanding of the task and that it could have been beneficial for the groups of three to have two manuals instead of one. Furthermore, the respondent said that one of the students got more engaged when they changed roles and understood more of the task. The conclusion of the question was that the main issue was the division of the different tasks and finding out how to solve the tasks in the most viable way.

When the respondent was asked if this game was something the respondent would use themselves in class, the immediate answer was "Yes, absolutely!". The respondent also said that this game had been considered before this project and that it was extra fun to see how it worked in practice. Then the respondent added that the advantages of this game are active use of decoding, reading, communication, vocabulary, and there are so many aspects of the language one needs to implement to solve the different tasks in the game.

4.3.2 Digital tools

When asked about using games as a digital tool in the English subject, the respondent was positive about it. The respondent said that trying out new tools and using what works is

something the respondent was interested in. The respondent also added that they had used a game in the same class before, but then the format was wrong. Some of the games the teacher mentioned was *Gone Home* and *Minecraft*. Therefore, the conclusion was that to be successful with games as a tool, it is essential that the students are "hands on" without being passive. When the students play themselves, it makes them more engaged than passive. However, the respondent was skeptical about using technology for the sake of technology, but if it is used for pedagogical purposes, then the respondent was optimistic about the use. When asked, "What do you think about the use of gaming as a tool for language development and learning? The respondent was positive about the use of gaming as a tool for language development because the respondent had valuable experience with that at a personal level. The teacher also explained that vocabulary would expand, and when one is engaged in something that is fun, the learning happens unconsciously.

The respondent was also asked about the positive and negative aspects of the use of games in teaching. The immediate response was that this was a good question and that it was challenging to give a general answer. Even though the respondent thought it was difficult to give an answer, the respondent said that there are many diverse types of games for various levels or ages that are important to keep in mind. The game used in this project was also mentioned, and the manual written for the game is technical, and for some students, that can be challenging to understand. Hence, the teacher needs to adapt and prepare both the stronger students and the weaker ones. Furthermore, the respondent said that no matter what you use, whether it is games, texts, videos, or audio, you need to meet the students at their level and give them challenges they can reach.

Further, the respondent was also asked about the positive and negative aspects when it comes to language development triggered by gaming. The respondent said that first, the students could meet technical terms and vocabulary they usually do not use, which again can increase the total vocabulary. Additionally, the respondent said that students need to use different communication strategies, for example, as they did with this (*Keep Talking and Nobody Explodes*) game, such as asking, "how should we solve this?" and thinking, "how can I explain this in the best possible way?".

When the negative aspects were introduced, the respondent said that it was challenging to describe opposing sides with the game used for this project but that other games can have a language that one would not like the students to learn. However, it was added that it is naive to think that a teacher or school can stop their interference with that type of language because they are exposed to that language in their spare time. Lastly, the

respondent said that there were no immediate disadvantages when it came to language development and that all use of language is an advantage.

4.3.3 Gaming and the Subject Curriculum

In the subject curriculum, it says specifically that one should use digital tools to develop and learn a language. Therefore, the question regarding the curriculum was: "How do you think this requirement can be fulfilled?" The respondent said that digital tools could be a lot of different things. Another point that was mentioned was the attitudes amongst the teachers and that they need to think, "yes, this is something I would like to try." In addition, the respondent said that it is important that experiences are shared, share ideas, and give guidance to each other. The respondent said that some teachers are always enthusiastic about new things and others are not. That is why it is essential to share and help each other develop. Notably, the respondent said that teachers should also consider students' daily media use to secure student participation and relevance. Adding that digital educational tools, such as Microsoft Excel and Microsoft PowerPoint, are something students need to learn, but including other digital sources that students are familiar with should be reflected upon. That is why teachers should not be afraid to introduce and use new digital tools that they might not be familiar with.

Oral skills are also one of the basic skills in the subject curriculum, and a core element in the English subject is communication. To a question about the development of oral skills, the teacher said that the goal with every foreign language is to be able to be understood and communicate with others. Additionally, the respondent said that you need to communicate with other people, whether it is through work, international relations, gaming, in your spare time, and so on. Moreover, the teacher mentioned that one needs to be able to use a common language because one meets people that do not share the same first language. Further, the respondent added that if you are good at writing but never practice using the language and formulate sentences "on the fly," then you do yourself a disservice. Moreover, if there is one place where you can practice oral skills, it should be in the English lessons.

4.3.4 Planning and pedagogical use

The respondent was asked if the knowledge about the students' use of digital tools outside the school was something that affected the planning, and if it was, was it then used in the classroom. The response was that it is easier to talk about it than to do it. The answer was not really, because they often teach theme-based, and then it is much easier to search and use

tools and sources that will provide the correct information. However, the respondent admitted that it is possible to be creative and use other types of platforms and sources to present the students' work instead of a PowerPoint presentation or a written text. The teacher said that being more creative when it comes to using other tools to present student work is something they (teachers) can focus more on and improve.

The respondent said that the thought is good, but a disadvantage is a challenge with privacy with, for example, applications such as TikTok and Snapchat. The teacher elaborated to some extent that privacy is challenging when using media and digital tools where much personal information is shared. Examples that were given were digital footprints, such as position, interests, and tracking of history. Again, the respondent pointed out that privacy is something that should be taken seriously.

4.3.5 Learning outcomes and motivation

The respondent believes that gaming can contribute to learning and motivate the students. The teacher starts by saying that it can be challenging to measure if the students have a linguistic effect from gaming and that the students mostly speak Norwegian with each other. However, the respondent said that every opportunity where they use the language is a possibility to develop. Hence, the respondent believes that students can learn something, but it is hard to measure.

Furthermore, the respondent is asked about the utility value of the language learned from gaming. The answer was clear, and the teacher believes that it has value even though they are exposed to inappropriate language. It is not only in the classroom that the students learn English, but they meet it everywhere. When they are exposed to authentic language situations, they need to listen, decode and proceed based on the situation.

When it comes to motivation, the teacher said that the general motivation for school could increase. If the students are motivated and the learning outcome is appropriate, there is no problem using digital tools or games in teaching. The respondent also said that games could be very motivating and fun, and with games, the learning becomes pleasurable because they are so engaged in what they do. In addition, the teacher said that it is essential to choose a game where the students can learn something engaging and a game where they need to use the language. However, it is important not to forget that gaming is a supplement, it is one tool out of many, so as a teacher, one must not rely on games only to develop as English learners.

4.3.6 Economy and technology issues

The respondent mentioned economic and technical issues without specific questions about them. The teacher said that it is often easy to state that something would be fun to try, but schools do not have the resources to do it. If schools should buy computers or iPads, or whatever, the question is to find something strong enough and the right quantum. Also, there are some technical issues such as license and distribution. The teacher said that they had used other games before, but not with remarkable success because of technical problems and limitations. However, if all the components worked as they should, the teacher was very positive.

The respondent also mentioned that it would be a benefit to have someone who is invested in these types of things to see the possibilities. However, the teacher was optimistic about the future and that gaming is something that would take a more significant part in the teaching. Additionally, the teacher said that gaming is a huge resource that the school should benefit from because it is something many students are familiar with and something they like.

5.0 Discussion

“I know several people that are quite good in English because they have played video games a lot growing up.”

Student, 10th grade class, 2022

Gaming has become a popular spare time activity, and more schools are showing an increasing interest in using games as a tool for learning. Teachers and researchers claim that students can learn English through gaming, and that is why it is interesting to see whether Norwegian students agree and if their teachers believe the same. Previous research claims that frequent gamers tend to have a higher English proficiency than non-gamers (Sundqvist & Wikström, 2015; Sylvén & Sundqvist, 2012). However, the use of games in the classroom is still disputed. Teachers and researchers argue that games in the classroom are very time-consuming, not valuable enough, are not interesting for all learners, and teachers do not have enough knowledge about it (Egenfeldt-Nielsen, 2006; Egenfeldt-Nielsen, Smith & Tosca, 2013). Although there can be challenges with using games in a school context, the subject curriculum, and the computer game strategy, "Spillerom 2020-2022" (Ministry of Culture, 2019), opens for and encourages the use of games in teaching. Previous research has also found positive and promising findings regarding gaming and learning outcomes (Egenfeldt-Nielsen, 2006). That is why many researchers advocate that video games should be acknowledged as an educational tool because of the positive pedagogical benefits they have for language learning (Gee, 2007a; Reinders & Wattana, 2012; Whitton, 2007).

Digital competence in the English subject is even more critical with the new subject curriculum from 2020 than it was with the previous one. The national framework for basic skills suggests a strengthening of students' digital skills, focusing on how digital competence can enhance learning compared to a focus on specific digital tools. The Ministry of Culture also wanted the schools involved in the development. Therefore, they created a computer game strategy called "Spillerom 2020-2022", which would help increase knowledge and ensure that schools have the resources necessary for video games to be used for teaching together with other areas in society.

Pedagogical use of gaming can facilitate learning with an increasing vocabulary, practice problem-solving strategies, and increase student motivation (Imsen, 2014). Additionally, if learners interact with each other, that can reduce learners' anxiety (Adams,

2018) and provide authentic learning situations (Reinhardt & Sykes, 2014). Even though there are pros and cons with the use of games in a school context, the base for this thesis is the advantage gaming can bring to learning English. Additionally, how gaming as a learning tool corresponds with the subject curriculum is of interest because teachers need to use the curriculum as a base for planning the teaching.

5.1 Communication strategies while gaming

One important criterion when selecting a game for the study was to choose a game that requires communication and interaction between students. One of the benefits of *Keep Talking and Nobody Explodes* is that the game allows student interactions, which previous research believe is essential for language learning. The game offers excellent English language input and output opportunities because the players need to give precise instructions and explanations to complete the tasks. In addition, the game facilitates opportunities to practice formulating questions as the players need to ensure that they understand and do the tasks correctly. The "Bomb Defusal Manual" contains complex language, which can be challenging for some learners. The manual is in written form in English, which also gives opportunities for reading practice. Notably, the game is very well suited for practicing oral and communication skills as these skills are essential to complete the game and disarm the bomb.

The first interesting finding was that all the students who participated used mostly English when they played the game. Since they used English most of the time, it was interesting to look at the communication strategies they used while playing. A benefit of peer interaction is that the students practice using the language themselves, which can help them develop communication strategies that are useful for their communication also in everyday life. This allows the students to experiment with the target language (English) and have more control of the conversation. For this study, the students need to help each other to both understand and make each other understood in order to complete the game, which is also mentioned in the curriculum (Norwegian Directorate for Education and Training, 2020). They need to find a solution if they lack the vocabulary or feel uncertain about what they want to convey (Adams, 2018).

The findings in this study show that the students use different communication strategies in order to express themselves while playing the game. The most frequent strategies are empty or filled pauses (retrieval) and code-switching. The use of empty or filled pauses

can indicate that the students need some time to orientate themselves to find the right word, find out how to formulate themselves, or find out how to explain or ask questions that make sense. On the other hand, it can also indicate a lack of vocabulary needed to understand the manual and complete the game. There was also a slight difference between those who read the manual and those who navigated the game on the screen when it came to pauses.

In the case of code-switching, all groups use Norwegian at some point during the game, as presented in the results. All the groups use Norwegian when the game is not running, for example, when they talk about changing roles regarding who should read the manual and who should sit with the computer. There can be several reasons why students use Norwegian while playing. For instance, it is conceivable that the students are unaware of which language they use. Especially considering that the students most likely have Norwegian as their first language, it will be natural for them to think in Norwegian. Even though the study was conducted in an English lesson and the game was in English, it is a natural explanation for why Norwegian words appear in the conversation between the students, especially in heated moments.

Another reason why the students switch to Norwegian may be a lack of vocabulary, but some may also have used it deliberately to ensure flow and not to interrupt the communication. At the same time, it is essential to emphasize that the Norwegian words used while playing were most often short words in Norwegian, such as "yes", "no", and "what". Again, this can illustrate that the students think in Norwegian and thus, this is their immediate reaction or want to keep the flow of the conversation. Perhaps, if the study had contained a larger sample size, several other communication strategies would have been found. If more students participated in the study, the findings of various communication strategies would be more diverse than in the current project. In addition, several strategies might be present if there was more variation among the students' levels of English. If this were the case, the results would be more representative of a 10th grade class in Norway. Another interesting aspect would be to conduct the study in different grades and to compare the data to see whether some communication strategies are more prominent based on the students' age.

In the online survey, the students were asked about their experience with the game. The most often repeated answer was that they thought it was fun. Some of the students elaborated on their answers and mentioned, for example, that *Keep Talking and Nobody Explodes* was a good game. They also pointed out some learning aspects of the game. A few of the learning aspects mentioned were that they got a chance to practice pronunciation, develop their communication skills, and contribute to language learning and development.

Another student expressed excitement towards the game and claimed that "regular" English lessons are boring because they tend to use primarily Norwegian. In contrast, the teacher stated that the students are orally active when they receive exciting tasks and that the amount of output was more or less the same when they played the game as during normal classes. The teacher also added that the amount of oral participation in a normal class is less than the teacher wants regularly.

Again, as mentioned earlier, the students who participated in this project were considered by their teacher to be highly proficient in English. Therefore, it may be that the student that reported that they often use Norwegian in the English lessons experiences a lack of challenges when it comes to developing the language. Another reason for the student's expression can be that the teacher gives instructions or messages in Norwegian or that the teacher often translates from English to Norwegian during teaching.

It is also possible that the student thinks that gaming is fun compared to other teaching methods and activities. In the game *Keep Talking and Nobody Explodes*, it is the students who talk to each other, and that is one of the benefits Adams (2018) mentions in her article about peer interaction. Students of the same age are probably more on the same level linguistically, which means that they can support and develop each other if they meet challenges in the interaction. In addition, Adams (2018) mentions that it is crucial that students are given the opportunity to practice communication with other students in the classroom to increase language learning in a meaningful setting.

5.2 Attitudes towards gaming

Students and young learners often know more about gaming than their teachers, which can increase their motivation because they feel they can contribute more. As a result, the students can become more self-confident learners, which Krashen (1987) advocates as necessary for acquiring language. This is also emphasized in the core values of the subject curriculum and the importance of developing confident English speakers who can use the English language "to learn, communicate and connect with others" (Ministry of Education, 2020; Norwegian Directorate for Education and Training, 2020).

From the students' perspective in this study, even though the students state that they learn English from gaming, they do not believe gaming is an activity where they acquire most English. However, 6 out of 8 said that they believe gaming contributes to feeling more confident with speaking English in class. One can also try to ensure that the students take a

more significant part of their learning process by playing on their terms and pace through pair and group work. Additionally, when the students can interact with each other in an authentic setting, as gaming can be described as, that can provide learners with a social setting.

Interaction between students is more likely to be more equivalent, both mentally and socially, and socially equivalent interaction can benefit language learning (Adams, 2018).

Moreover, when students play a game with each other, especially if the game requires cooperation, it allows the learners to practice the language in a low anxiety situation. When students are given a chance to practice language use in a low anxiety setting, it is more likely that they will increase their chances of language learning. The current study could not measure language learning, but the interviewed teacher was confident that gaming contributes to developing and learning the English language. Interestingly, students report that gaming is not an activity where they feel they learn the most English. However, at the same time, they claim that gaming makes them more comfortable when it comes to oral participation in class. It can be argued that they learn more than they are aware of while gaming and this unconscious language acquisition can contribute to their fluency nevertheless.

An essential element of this study is that participation, as mentioned before, was voluntary. This means that the students who participated may be optimistic about gaming, and therefore, the results may not be representative of a 10th grade class in Norway. Several students were absent the day the study took place due to COVID-19, and some did not want to participate. The reason they did not want to join is unknown, but it is conceivable that they may not be interested in gaming, do not feel "good" enough in English, or are insecure about the project. When implementing gaming in teaching it is essential to include all students so the participation of weaker or reluctant students should be examined in further research.

Another interesting implication of the findings from the survey was when the students were asked whether they experienced that they could apply what they learned through gaming in the English lessons at school. Most of the students reported that the games they played outside the classroom were in English and that they speak, read and write English as they play. Still, some of the students felt that they do not feel that what they learn through gaming is something they can bring with them into English lessons. One of the things mentioned was that the language they learn through gaming differs from what they learn at school. A possible explanation might be that the students are unaware of how the language affects them and that the input becomes something they learn unconsciously. Three of the participants also reported that they spend more than eight hours a week gaming, and according to one of Gee's (2007b)

principles, the time learners spend on gaming will help students get much practice in a context that is seen as not boring.

Gee (2007b) points out that video games' benefits are that multiple modalities support each other, such as words, images, actions, sounds, and point in the same direction to create a more meaningful and satisfying whole. This indicates that video games function as a multimodal teaching tool and thereby have the potential of creating comprehensible, graspable, and varied input which again might benefit students learning outcomes. Notably, the learning outcome will most likely vary in terms of the type of game used. As previously presented in the theory (section 2.3.1), many different types of games are to be found with different content and, therefore, varying benefits when it comes to learning.

The interviewed teacher was positive towards gaming and learning. Although, it was mentioned that it could be challenging to actually measure if the students have a linguistic effect from gaming. Previous research has looked at how gaming affects and increases vocabulary. They found that the time spent gaming also affects vocabulary (Sylvén & Sundqvist, 2012; Sundqvist & Wikström, 2015; Sundqvist, 2019). However, the main focus of these studies has been written work. One can assume that this can be transferable to oral language and skills. Even though the language in this study is not measured, the teacher believes that every opportunity to use the language (English) is a possibility to develop. Moreover, the teacher expresses that authentic language situations, like gaming, give the students a chance to listen, decode and proceed based on the setting. According to Henry, Sundqvist & Thorsen (2019), the use of authentic materials is motivational because it provides the students an opportunity to work with materials they are familiar with. Gaming is a well-known spare time activity, and bringing that into the classroom places high demands on teacher resources and their knowledge.

Since gaming in schools is a relatively new method to use for many teachers, those who use games in the English subject are often interested in gaming and are frequent gamers outside of work. The teacher also pointed this out in the interview. Naturally, some teachers do not have as much gaming knowledge. Some reasons for the lack of knowledge can be because they are not interested in it, or maybe they avoid it because they do not know how it works, and therefore, the easy way out is to avoid it. In every school, there will naturally be some teachers who are enthusiastic about new methods and activities, and they find value in pedagogical development. In contrast, others are more skeptical and keep doing what they are familiar with. In the interview, the teacher mentioned the different teacher types and added that sharing experiences and ideas and guiding each other to gain more knowledge and

develop was of importance in schools. Skaug, Staaby & Husøy (2017) claim that teachers with gaming experience are more likely to use games in teaching and make connections to the curriculum. This may apply mainly to the use of commercial games because the use of these games in schools is not necessarily apparent to everyone.

5.3 Gaming as a tool for language learning

Although there is an interest in using games in a school context, the resources and economy are important factors that must be considered when planning to use games. As the teacher stated, both schools and teachers have limited resources. The teacher said that a central challenge in schools is teachers' varying knowledge and interest when it comes to using games in teaching. As a result of the variation of knowledge, the teacher empathizes that it is essential to share knowledge and ideas and give guidance to each other to develop.

The school economy is also an issue when it comes to most games, especially since the purchase of games can be beyond budget. However, a determined investment with, for example, gaming rooms, where the equipment is strong enough, stable internet access, and a gaming room can make it easier when it comes to distribution and licenses. The Ministry of Culture addresses in the computer game strategy, "Spillerom 2020-2022," that several schools have made targeted investments when it comes to gaming in schools. They have created gaming rooms and employed their own game educators. The teacher also mentioned in the interview that people who are interested and have gaming knowledge could be an advantage for the schools. In addition, the teacher believed that gaming is an excellent resource that the schools should make use of, especially since many students are interested in gaming.

The main goal of the strategic plan was to make video games a cultural expression. The Ministry of Culture wanted the schools to introduce the students to gaming as a learning tool, and as a cultural expression, not only a spare time activity. In the plan, the teachers should take a significant part in implementing gaming in their teaching. The Ministry of Culture also claims that there are great opportunities when it comes to the use of games as a learning activity. That is why they wanted schools to be an arena where gaming as a culture is appreciated to the same extent as music and films that are already used as cultural forms of expression in teaching (Ministry of Culture, 2019). However, they do not say anything about how this should be done. Since it is not explicitly mentioned how they want the schools and teachers to implement gaming as a cultural expression, it will be up to each individual teacher to implement gaming as a part of their teaching.

The subject curriculum contains fewer competence aims than the previous curriculum. Although the new curriculum consists of fewer competence aims, and the aims are broader with fewer details, it means that the teachers are given more freedom when it comes to choosing methods and activities to achieve the aims. Since the new subject curriculum opens for more interpretation and students are supposed to use different digital tools for language learning, gaming can help the students achieve several competence aims and develop communication skills and strengthen the basic skills.

Several types of games can aid in learning different things, such as oral and written language, vocabulary, strategy, critical thinking, problem-solving, and digital skills. The students in the online survey also mentioned some of these aspects in general and for the specific game used for this project. Although games can contribute to learning different skills and competence aims, a key factor to remember is that students will learn the language and skills the game demands to progress and achieve the tasks needed. As previously mentioned (section 2.3.1), one prominent aspect separating educational and commercial games is the explicit learning goal rather than the indirect one. Since commercial games do not have specific learning goals, that makes them more challenging to use for learning purposes than educational games. Unlike commercial games, educational games and other "traditional" teaching methods often have an educational focus with specific learning goals. That is why commercial games require teachers to determine the learning goals and the purpose of the use and make the students aware of what they will learn from it.

One advantage of commercial games is that they tend to be more motivational and offer more excitement than educational games. However, an important element to keep in mind is that no matter what game that is used in the classroom, some students will most likely find the game fun and engaging, while others will not. Based on the response from the students in this study, it seems like all of them liked the game, although some of the students found the game challenging at first.

From the interview with the teacher, it was mentioned that gaming can contribute to motivation amongst the students. The teacher believes that digital tools in the English subject can be motivating and an advantage, but digital tools should not be used without a purpose. The motivating factors that the teacher mentioned were that gaming is experienced as fun, it adds variation and contributes to something more interactive, which in turn adds variation to a more "traditional" day at school. One argument often used is that gaming is fun while learning (often) is boring. Therefore, digital games in the classroom can create curiosity, interest, and excitement (Imsen, 2014; Skaug et al., 2017). Indeed, the game the teacher chooses to play

should attract the students, and be exciting and doable, which again can facilitate highly motivated students.

Krashen (1987) also points out how vital motivation is regarding learning and claims that students who are motivated, self-confident, and in low anxiety situations are better suited to acquiring language. Motivation is often used as a prominent argument for using video games in teaching. However, there is a chance that not all students find gaming motivating, and then the use of games can have the opposite effect. In this study, the students were asked about the game used and their experience after the gaming session. The majority of the students said it was fun, which can indicate that the game used for this study was motivational and that it can be used to practice oral communication, both the ability to understand and to be understood despite incorrect or limited vocabulary.

To summarize, gaming should be used as a tool in the English classroom to learn and develop language. Research has found a positive correlation between gaming and language learning, but the use of games should be planned according to the subject curriculum. Teachers might not have enough knowledge about gaming and how to use it for educational purposes, but the students are often more than happy to help. Since gaming is experienced as fun and engaging by many students, is it possible to believe that the students increase internal motivation. As Krashen (1987) states in his affective filter hypothesis, highly motivated students will perform better in second language learning.

6.0 Conclusion

The purpose of this research was to investigate how a game like *Keep Talking and Nobody Explodes* can function for communication practice and develop the English language.

Secondly, teachers' and students' attitudes towards gaming and language learning were examined, as well as the possibility for gaming as a tool for language learning. The research shows that the students mostly use English when they communicate with each other during the game and they use a variety of communication strategies in order to express themselves. In the online survey, some of the students expressed insecurity when they were asked about whether they feel that what they learn through gaming is something they can use in the English classroom. A few students also wrote that they were unsure if they had linguistic benefits from gaming, however, others wrote that they felt they expanded their vocabulary, practiced communication skills and problem-solving. All the students reported that they found the game used in this study fun and engaging, despite challenges for some of them in the beginning. As mentioned, there were only ten students in this study and an uneven gender distribution, the results might not represent a typical 10th grade class. Nevertheless, these are interesting findings that can contribute in the field of gaming in a school context.

The teacher claimed that there were many positive and interesting aspects with the use of games for English lessons, but made it clear that some teachers are more skeptical about gaming. It was also stressed that although gaming can be a tool for language learning, it should not replace the use of textbooks and other activities, but it should be used as a supplement.

The subject curriculum does not state what types of digital tools one should use, but it stresses that students should learn to use a variety of digital tools to learn language. Findings from the interview with the teacher indicates that digital tools can be many things such as interactive boards, computers, phones and so on. The competence aims, basic skills and core elements can defend the use of gaming in the English subject. However, at the end, it is up to the teachers to decide whether they want to use gaming or not as a tool for language learning. According to the Ministry of Culture (2019), gaming should be considered as a cultural expression along with music and films. The strategic plan they made for 2020-2022 specifically mentioned schools as an arena to introduce gaming. However, the plan does not mention how teachers and schools should implement video games as a cultural expression. Due to a lack of knowledge amongst teachers, as also claimed by the teacher in the interview, this can be challenging. If teachers and schools lack knowledge, equipment and economy to

introduce digital games, it can make it challenging even though some teacher and students are interested. Despite some struggles, there is an increasing interest for gaming in schools.

When studying the results, there seems to be various opinions amongst the students regarding gaming and language learning. However, the teacher was very positive and optimistic about it. Still, the teacher acknowledges that not all teachers were as enthusiastic about gaming. It can be challenging for teachers to keep up with the development and include gaming in their teaching despite students interests, if they feel uncertain about how to use it and for what. Technology and digital tools have developed quickly, and new developments are presented at a high speed which will continue in the future.

6.1 Limitations

The current study has a number of limitations. The first limitation, as also mentioned in the validity section, is the low number of participants which makes it difficult to generalize the results of the study. Ideally, the study would have contained a larger sample size and included participants from different schools. Additionally, the uneven gender distribution makes the results less representative compared to a “normal” and more even distribution of gender that is usually found in classes. If the number of participants had been higher it might have reduced the gap in gender and thereby, made the results more representative for a 10th-grade class in Norway. Another limitation was the short time of the study (only two English lessons), which could impact how the students accomplished the game. Some students expressed that it was difficult to understand the game when they started, and since these students, as mentioned earlier, were seen as highly proficient in English, it would possibly have been more challenging if all students from the class participated due to diverse levels of English.

The third limitation in this study is the lack of comparable teaching methods for oral skills, communication practices, and control groups. Preferably, different teaching methods or activities would have been compared with each other or to other groups that used another game. This would provide opportunities to compare both how motivation is affected and attitudes and thought towards gaming and language learning. In addition, this study had to be carried out at a school where they used computers due to the format requirements for the game, which did not make it easy to find a suitable school and class for the study. Additional limitations were posed by COVID-19 and the limitation on how much time one could expect from schools and the teacher.

The final limitation is researcher bias. The researcher has tried to be as objective as possible when collecting the data material and in the analytical procedure, however, it is impossible to be completely objective, and that is why it is important that the reader keeps that in mind when reading the thesis.

6.2 Suggestions for further research

There is less research on gaming in an educational context compared to other pedagogies. There has been conducted research on extramural gaming and its effect on language, where they have found positive and promising results. However, there is a need of more research on why games are effective and which language skills they support best. The current study is only covering a narrow selection of the field, therefore, there is still need for further research on both the elements from this study and other aspects regarding gaming in schools. Theory and results from this study support and recognize gaming as a language learning tool, but future research should explore *how* teachers implement gaming in their teaching and on the actual learning outcome in terms of language.

Further studies should explore how gaming holds up against other, well known, pedagogies for language learning. The use of control groups could also provide useful comparison for different teaching methods and activities with gaming and its effects. Another possibility is to use different games to see if some games or genres are better suited for the classroom than others, or one can use specific games that the class has experience with from their spare time.

Furthermore, this study used one game and it would be interesting to see if other games would provide other results. Considering that the data collection only consisted of two English lessons, it would be interesting to see how students develop communication strategies and language if they used gaming on a regular basis for a longer period.

I also believe that more knowledge about digital games and how to use it should be a goal to implement in teacher education and to make sure that teachers in schools have the knowledge needed to use digital games in the classroom. Last but not least, the importance for teachers to keep up with recent research and develop themselves to meet the students and their interests.

7.0 References

- Adams, R. (2018). Enhancing student interaction in the classroom: Part of the Cambridge Papers in ELT series, [pdf] Cambridge University Press. Retrieved from: https://www.cambridge.org/us/files/4815/7488/4742/CambridgePapersInELT_EnhancingInteraction_2018_ONLINE.pdf
- Basit, T.N. (2010). *Conducting Research in Educational Contexts*. Continuum.
- Brevik, Lisbeth M.; Lund, Andreas; Skarpaas, Kaja Granum & Røkenes, Fredrik Mørk (2020). Language and technology: Digital competence in English. In Brevik, Lisbeth M. & Rindal, Ulrikke Elisabeth (Red.), *Teaching English in Norwegian classrooms: From research to practice* (p.43-64). Universitetsforlaget.
- Burner, T., Carlsen, C. & Kverndokken, K. (2019). *101 Ways to Work with Communicative Skills- Theoretical and Practical Approaches in the English Classroom*. Fagbokforlaget.
- Creswell, J.W. (2014). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (4th ed., Pearson new international edition). Pearson.
- Egenfeldt- Nielsen, S. (2006). Overview of research on the educational use of video games. *Nordic Journal of Digital Literacy*, 1(3), 184-214. <https://doi.org/10.18261/ISSN1891-943X-2006-03-03>.
- Egenfeldt-Nielsen, Smith, J. H., & Tosca, S. P. (2013). *Understanding video games : the essential introduction* (2nd ed.). Routledge.
- Gee, J.P. (2007a). *Good video games + good learning: collected essays on video games, learning, and literacy*. P. Lang.
- Gee, J. P. (2007b). *What video games have to teach us about learning and literacy* (2nd ed.). St. Martin's Griffin
- Henry, A., Sundqvist, P., & Thorsen, C. (2019). *Motivational practice: insights from the classroom*. Studentlitteratur.
- Imsen, G. (2014). *Elevenes verden: innføring i pedagogisk psykologi* (5th ed.). Universitetsforlaget.
- Krashen. (1987). *Principles and practice in second language acquisition*. Prentice-Hall International.
- Ministry of Culture. (2019). *Spillerom—Dataspillstrategi 2020–2022*. Retrieved 05.04.2022 from:

<https://www.regjeringen.no/contentassets/42ac0925a3124828a2012ccb3f9e80c9/spillerom---dataspillstrategi-2020-2022.pdf>

Ministry of Education. (2020). *Core curriculum- values and principles for primary and secondary education*. Retrieved 18.03.22 from:

<https://www.regjeringen.no/contentassets/53d21ea2bc3a4202b86b83cfe82da93e/core-curriculum.pdf>

Norwegian Media Authority. (2020). *Barn og medier- undersøkelsen 2020. En kartlegging av 9-18 åringers digitale medievaner*. Retrieved 29.03.2022

from: <https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2020/201015-barn-og-medier-2020-hovedrapport-med-engelsk-summary.pdf>

Nacey, S. & Graedler, A.-L. (2013). Communication strategies used by Norwegian students of English. In S.Granger, G. Gilquin & F. Meunier (Eds.) *Twenty Years of Learner Corpus Research: Looking back, Moving ahead*. Corpora and Language in Use- Proceedings 1, Louvain-la-Neuve: Presses universitaires de Louvain, 345-356.

Norwegian Centre for Research Data. (2022). *Samtykke og andre behandlingsgrunnlag*.

Retrieved from: <https://www.nsd.no/personverntjenester/oppslagsverk-for-personvern-i-forskning/samtykke-og-andre-behandlingsgrunnlag/>

Postholm, Jacobsen, D. I., & Søbstad, R. (2018). *Forskningsmetode for masterstudenter i lærerutdanningen*. Cappelen Damm akademisk.

Reinders, H. & Wattana, S. (2012). Talk to Me! Games and Students' Willingness to Communicate. In Reinders, H (Ed.), *Digital Games in Language Learning and Teaching* (pp. 156–188). Palgrave Macmillan UK.

https://doi.org/10.1057/9781137005267_9

Reinhardt, J. (2019). *Gameful Second and Foreign Language Teaching and Learning : Theory, Research, and Practice*. Springer International Publishing: Imprint: Palgrave Macmillan.

Reinhardt, J. & Sykes, J. M. (2014). Digital game and play activity in L2 teaching and learning. *Language Learning & Technology*, 18(2), 2–8.

Reinhardt, J., & Thorne, S. L. (2016). Metaphors for Digital Games and Language Learning. In F. Farr & L. Murray (Eds.), *Routledge Handbook of Language Learning and Technology*. (pp. 415-430). Routledge.

- Ryan, R. M. & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54–67.
<https://doi.org/10.1006/ceps.1999.1020>
- Skaug, J.H., Staaby, T. & Husøy, A. (2017). *Notat fra Senter for IKT i utdanningen: Dataspill i skolen*. Downloaded from: https://www.udir.no/globalassets/filer/spill_i_skolen_-_notat_-_revidert_2018.pdf
- Statped. (23.09.2020). *Keep Talking and Nobody Explodes*. Retrieved from: <https://www.statped.no/laringsressurser/sammensatte-larevansker/keep-talking-and-nobody-explodes/>
- Sundqvist, P. (2019). Commercial-off-the-shelf games in the digital wild and L2 learner vocabulary. *Language Learning & Technology*, 23(1), 87–113.
<https://doi.org/10.125/44674>
- Sundqvist, P. & Wikström, P. (2015). Out-of-school digital gameplay and in-school L2 English vocabulary outcomes. *System (Linköping)*, 51, 65–76.
<https://doi.org/10.1016/j.system.2015.04.001>
- Sylvén, L. & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCALL*, 24(3), 302-321.
 doi:10.1017/S095834401200016X
- Techopedia. (2018). Definition- What does gaming mean? Retrieved from: <https://www.techopedia.com/definition/1913/gaming>
- The Norwegian Directorate for Education and Training. (2020). Curriculum in English (ENG01-04). Downloaded from: <https://data.udir.no/k106/v201906/laereplaner-1k20/ENG01-04.pdf?lang=eng>
- Vygotsky, L. S. (1978). *Mind in society: the development of higher psychological processes*. Harvard University Press.
- Whitton, N. (2007). Motivation and computer game based learning. In *ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007*.
<http://www.ascilite.org.au/conferences/singapore07/procs/whitton.pdf>
- Whitton, N. (2014). *Digital games and learning: research and theory*. Routledge.

List of appendices

The transcriptions of the audio-recordings are in English, but the online questionnaire and interview transcription are in Norwegian.

Appendix 1 NSD Approval

Appendix 2 Student consent form

Appendix 3 Teacher consent form

Appendix 4 Audio-recording transcription: group 1

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Appendix 6 Audio-recording transcription: group 3

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Appendix 8 Online survey questions

Appendix 9 Online survey answers

Appendix 10 Interview guide

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Appendix 1 – NSD Approval

Meldeskjema for behandling av personopplysninger

22.04.2022, 19:41

NSD NORSK SENTER FOR FORSKNINGSDATA

Vurdering

Referansenummer

965535

Prosjekttittel

Gaming for language learning

Behandlingsansvarlig institusjon

Universitetet i Agder / Avdeling for lærerutdanning

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Lenka Garshol, lenka.garshol@uia.no, tlf: 41376747

Type prosjekt

Studentprosjekt, masterstudium

Kontaktinformasjon, student

Kaja Bengtson, kaja_96@live.no, tlf: 93450280

Prosjektperiode

01.01.2022 - 30.06.2022

Vurdering (1)

21.12.2021 - Vurdert

Det er vår vurdering at behandlingen vil være i samsvar med personvernlovgivningen, så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet den 21.12.2021 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige personopplysninger frem til 30.06.2022.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og 7, ved at det er en

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Meldeskjema for behandling av personopplysninger 22.04.2022, 19:41

frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake.

For alminnelige personopplysninger vil lovlig grunnlag for behandlingen være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 a.

TAUSHETSPLIKT

Vi vil minne om at lærerne har taushetsplikt. Den strekker seg lenger enn å unnlate navnene til barna. Lærerne kan ikke fortelle historier på slik måte at andre opplysninger kan identifisere en nåværende eller tidligere elev direkte eller indirekte. Dere er i fellesskap ansvarlige for at elevene blir omtalt i generelle ordelag under samtalen. Vi anbefaler at dere diskuterer personvern i forkant av intervjuet.

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen:

- om lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lenger enn nødvendig for å oppfylle formålet.

DE REGISTRERTES RETTIGHETER

NSD vurderer at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18) og dataportabilitet (art. 20).

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD 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).

For å forsikre dere om at kravene oppfylles, må prosjektansvarlig følge interne retningslinjer/rådføre dere med behandlingsansvarlig institusjon.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilken type endringer det er nødvendig å melde: <https://www.nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema>
Du må vente på svar fra NSD før endringen gjennomføres.

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Meldeskjema for behandling av personopplysninger 22.04.2022, 19:41

OPPFØLGING AV PROSJEKTET

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

Kontaktperson hos NSD: Tore Andre Kjetland Fjeldsbø Lykke til med prosjektet!

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Appendix 2 – Student consent form

Vil du delta i forskningsprosjektet *Gaming for Language Learning?*

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å se på sammenhengen mellom gaming og språklæring i engelsk. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Vi vet at mange barn og ungdom gamer på fritiden og at noen lærere bruker digitale spill i undervisningen. Nå ønsker jeg å se på hvordan gaming kan bidra til språklæring og hvordan det påvirker muntlige ferdigheter i engelsk. Problemstillingene denne oppgaven vil se på er hvordan gaming kan være med på å utvikle språket og hvor mye engelsk som brukes i en 10.klasse mens elever spiller «*Keep Talking and Nobody Explodes*». Hvilke holdninger og tanker elever og lærere har til gaming og det å lære språk vil også bli inkludert.

Forskningsprosjektet er en masteroppgave i engelsk ved avdeling for lærerutdanning ved Universitetet i Agder.

Hvem er ansvarlig for forskningsprosjektet?

Avdelingen for lærerutdanningen ved Universitet i Agder er ansvarlig for prosjektet.

Hvorfor får du spørsmål om å delta?

Du har fått spørsmål om deltakelse fordi din klasse ble valgt ut til å delta i prosjektet. Du står likevel fritt til å velge eller avslå at vi samler opplysninger om akkurat deg.

Hva innebærer det for deg å delta?

Det at klassen din deltar i prosjektet innebærer det at du er med å gjennomføre spillet «*Keep Talking and Nobody Explodes*» i en time sammen med dine medstudenter. Det vil bli tatt opptak av lyd hos de gruppene som er med og har samtykket. Jeg vil notere ned hvor du sitter i klasserommet på papir og ta opptak av det som sies i din gruppe mens dere spiller. Etter jeg

har skrevet ned det som ble tatt opp, blir alt lydopptak slettet og det blir ikke mulig å identifisere deg i den transkriberte teksten.

I etterkant av spillet skal du fylle ut et spørreskjema, og det vil ta ca. 5-10 min.

Spørreskjemaet inneholder spørsmål om hvor du lærer engelsk og dine spillevaner. Dine svar fra spørreskjemaet blir registrert elektronisk.

Jeg vil også utføre et intervju med din lærer i etterkant av timen for å høre hvordan han/hun opplevde timen. Her kan din deltakelse bli nevnt, men dette vil bli anonymisert når jeg transkriberer intervjuet og opptaket slettes.

Om du eller dine foresatte har spørsmål kan jeg kontaktes på mail, kaja_96@live.no.

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.

Dersom du ikke ønsker å delta i prosjektet vil du ikke måtte være i klasserommet mens prosjektet utføres. Du vil få et alternativt opplegg som vil handle om å utvikle muntlige ferdigheter, og dette vil være gjennom ulike aktiviteter hvor muntlig kommunikasjon er fokuset. De ulike aktivitetene vil innebære spørsmål og svar/ beskrivelser eller å sammen lage en fortelling basert på bilder. Aktivitetene vil utføres i par/ små grupper på engelsk, men uten digitale spill og dette utføres på samme tid som prosjektet pågår i klassen.

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.

Det er kun forsker Kaja Bengtson som vil ha tilgang til opplysninger som kan være identifiserende. Prosjektveileder Lenka Garshol vil ha tilgang til opplysninger som vil være anonymisert.

Ditt navn vil bli erstattet med kode som lagres på egen navneliste adskilt fra øvrige data på en trygg måte. Navnelisten vil destrueres etter prosjektet er avsluttet og du vil ikke kunne bli gjenkjent i den publiserte masteroppgaven. Alle lydopptak vil bli anonymisert og transkribert slik at det ikke vil være mulig å identifisere deltakerne.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er 1.juni 2022. Alle funn vil anonymiseres og kan kun knyttes til koden som benyttes. Det som kan knytte kode til personopplysninger vil destrueres.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Agder har NSD – Norsk senter for forskningsdata AS 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:

Universitet i Agder ved Lenka Garshol (lenka.garshol@uia.no / + 47 41376747)

- Vårt personvernombud: Ina Danielsen (ina.danielsen@uia.no / +47 452 54 401)

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost (personverntjenester@nsd.no) eller på telefon: 53 21 15 00.

Med vennlig hilsen

Lenka Garshol
(Forsker/veileder)

Kaja Bengtson

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *Gaming for Language Learning* og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i prosjektet «Gaming for Language Learning» og derunder:
 - å delta i timen med spilling hvor det vil bli tatt lydopptak
 - å delta i spørreundersøkelsen i etterkant av spillingen

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

(Signert av prosjektdeltaker, dato)

Appendix 3 – teacher consent form

Vil du delta i forskningsprosjektet *Gaming for Language Learning?*

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å se på sammenhengen mellom gaming og språklæring i engelsk. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Formålet med prosjektet og problemstillingene er å undersøke hvordan gaming kan fungere som et verktøy for språklæring og hvordan elevene bruker det engelske språket i en time hvor vi skal spille spillet «*Keep Talking and Nobody Explodes*». I tillegg skal det undersøkes hvilke holdninger, tanker og erfaringer elever og lærere har i forhold til språklæring og gaming.

Forskningsprosjektet er en masteroppgave i engelsk ved avdelingen for lærerutdanningen ved Universitetet i Agder.

Hvem er ansvarlig for forskningsprosjektet?

Avdelingen for lærerutdanningen ved Universitet i Agder er ansvarlig for prosjektet.

Hvorfor får du spørsmål om å delta?

Du har fått spørsmål om å delta i prosjektet fordi du har godkjent utføringen av prosjektet Gaming for Language Learning.

Hva innebærer det for deg å delta?

Hvis du velger å samtykke til å bli med i prosjektet innebærer det at du er med i klasserommet mens elevene spiller spillet «*Keep Talking and Nobody Explodes*». Det vil under spillingen bli tatt lydopptak.

Jeg vil også utføre et intervju med deg i etterkant av timen for å få mer informasjon om deg som engelsklærer, hvordan du opplevde timen, samt dine tanker og holdninger til gaming og språklæring. Intervjuet vil bli tatt opp og transkribert, samt anonymisert. Det vil ta ca. 1 time å gjennomføre intervjuet.

Dersom det er spørsmål før eller etter gjennomføringen, kan du ta kontakt med meg på mail: kaja_96@live.no

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.

Det er kun forsker Kaja Bengtson som vil ha tilgang til opplysninger som kan være identifiserende. Prosjektveileder Lenka Garshol vil ha tilgang til opplysninger som vil være anonymisert.

Ditt navn vil bli anonymisert, intervjuet vil bli transkribert og datamaterialet vil lagres på en låst server. Det vil ikke være mulig å identifisere deg på den publiserte masteroppgaven. All data som er hentet inn vil destrueres ved prosjektets slutt.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er 1.juni 2022. All data vil anonymiseres og transkriberes, og det som kan knyttes til personopplysninger vil destrueres.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Agder har NSD – Norsk senter for forskningsdata AS 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:

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Med vennlig hilsen

Lenka Garshol
(Forsker/veileder)

Kaja Bengtson

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *Gaming for Language Learning* og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i prosjektet Gaming for Language Learning og derunder:
- å delta i timen mens elevene spiller hvor lydopptaker vil benyttes
- å delta i intervju i etterkant av timen

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

(Signert av prosjektdeltaker, dato)

Appendix 4 – Audio-recording transcription: group

1

Transkribering gruppe 1

Elev 1: Hva sa du?

Elev 2: The code, 241

Elev 1: Mhm

Elev 2: What do you see?

Elev 1: Wait

Elev 2: Laughing

Elev 1: Eh, I see a box with six ... pause... squares

Elev 2: Ok

Elev 1: I see some wires in different colors. I see some orange boxes. There is six squares, four of them are orange.

[Long empty pause]

Elev 1: Jeg tror ikke, vent, jeg tror ikke det er starten, går det an og, du (lærerens navn), fort, det haster! Det er ikke begynt enda. Vi har starta den.

Lærer: Nei, det har ikke startet enda, du må bare trykke på den.

Elev 1: Ja.

Lærer: For nå viser den bare hvordan det fungerer, sant, eh, du må bare

Elev 1: Ja, men slipper de greiene

Lærer: Ja, men du må bare

Elev 1: Kan den bare være på?

Lærer: Ja

Elev 1: Ja, okei

Lærer: Så må du liksom bare gjøre det som

Elev 1: Åja

Lærer: Bare følg disse instruksjonene, også er dere i gang snart

Elev 2: Hva?

Lærer: Mhm, right click to deselect, høyreklikk. Også ser du at her er det litt annerledes. Press the big button.

Elev 1: Ok, vi starter nå.

Elev 2: What do you see?

Lærer: Nei, men jeg tror fortsatt dette bare er fortsatt opplæring.

Elev 2: Det er så vanskelig.

Lærer: Right click, hold and drag. Hvis du holder inne høyre museknapp, også, bare trykk på knapp, høyre museknapp, også drar du rundt, beveg musen, så kan du se, okay, her er det en underside, her er høyre side og venstre side. Okei?

Elev 1: Hvorfor høyre? Det var veldig vanskelig

Lærer: Men hvis du gjør det med 2 hender, slik som det her så blir det mye lettere.

Elev 1: Ok

Lærer: Deselect the bomb to put it back down. Da høyreklikker du også er du ferdig med opplæringen på en måte.

Elev 1: Men den går?

Lærer: Den går, men h*n bare skipper dette første. Vi skal ha the first bomb, du har fem minutter, tre moduler og tre forsøk.

Elev 2: Okei, vi begynner

Elev 2: Ja, what do you see?

Lærer: Ehm, ja det kommer snart.

Elev 1: Okay. I see this box with, ehm six squares, I see the time of the bomb. I see... pause... I see a box, the bomb. I see a menu

Elev 2: Laughing, okay. Ehm, do you see a square with a light in the right corner?

Elev 1: Yeah, it says 9.11

Elev 2: Seriøst?

Elev 1: Ja

Elev 2: Eh

Elev 1: Yes

Elev 2: Okay, so, I don't know how, but it is supposed to become green

Elev 1: The clock?

Elev 2: No, the square with the light in the right corner.

Elev 1: Yeah, that's the bomb.

Elev 2: Oh, you sure?

Elev 1: Mhm

Elev 2: Is that green?

Elev 1: It's yellow, it's blue, it's red.

Elev 2: Do you see any wires?

Elev 1: I do.

Elev 2: How many wires do you see?

Elev 1: Eh, six.

Elev 2: Six, okay. Eh, is there yellow wires?

Elev 1: Mhm

Elev 2: Is there one yellow wire?

Elev 1: Two, and two red, one black and one blue. And there is a clock ticking down. There are two orange things. There are some symbols.

Elev 2: Okay, so there is one yellow wire

Elev 1: Two

Elev 2: Are there more than a white wire? One white wire?

Elev 1: There none white.

Elev 2: Is there no red wires?

Elev 1: There are two red

[Long empty pause]

Elev 1: I can click on the wires and the symbols....

Elev 2: Yeah, don't do that

Elev 1: And hold the blue button and the clock says 9:13. There is a battery

[Empty pause]

Elev 2: Where there any white, nei, red wires?

Elev 1: Yeah, two. Two red, two yellow, black and blue.

Elev 2: And there are six wires, you sure?

Elev 1: Mhm, yeah

Elev 2: Can you count them?

Elev 1: Six. One minute and 45 seconds left.

Elev 2: Assa, vi må gjøre det på nytt. Se på den.

Elev 1: English.

Elev 3: Ehm, can you see some yellow wires?

Elev 1: Yes.

Elev 3: Is the last wire black?

Elev 1: No. First and last are yellow.

Elev 3: Was there more than one red wire?

Elev 1: Yeah. Pause. One minute left.

Elev 3: Ehhh, cut the last red wire.

Elev 1: Wich one?

Elev 3: The last
Elev 1: The bottom one?
Elev 3: Yes.
Elev 1: Okay.
Elev 3: Eh, eh
Elev 2: What do you see?
Elev 1: The same, I just cut it and there are 17 seconds left.
Elev 2: Okay, eh. So you have 5 wires right now?
Elev 1: Mhm
Elev 2: Okay. Ehhh, which one did you cut?
Elev 1: The red bottom one.
Elev 2: The red bottom one, okay.
Elev 3: Laughing
Elev 2: Are there black wires?
Elev 1: Tiden gikk ut.
Elev 2: Åh....
Elev 1: Okay, we try, kom igjen, hallo
Elev 1: Det er bare fem minutter, det går sånn her *knipser*
Elev 1: Okay, okay. Five minutes, go. I see some wires again. Five wires.
Elev 2: The colors?
Elev 1: Three red, one white, and one blue.
Elev 2: Cut the second wire
Elev 1: Red?
Elev 2: No, don't do this!
Elev 1: I think I can undo it if I
Elev 2: Okay, cut the second wire
Elev 1: It's red, cut the second from the top?
Elev 3: No, yes, the last red. Cut that.
Elev 1: The bottom one, it's red. Alright, what now?
Elev 2: You told me there was no black wires
Elev 1: This time, there isn't
Elev 2: Okay. How many wires do you have now?
Elev 1: Four.
Elev 2: Okay, colors?

Elev 1: Red, white, blue. Still.

Elev 2: Are there two red wires?

Elev 1: Yeah.

Elev 2: Is the last wire yellow?

Elev 1: There's no yellow.

Elev 2: Okei, men jeg kan ikke huske det.

Elev 1: Blue, white and red. Pause. I can also see some symbols and a star. Pause. And a yellow "hold" button.

Elev 2: Eh, okay. Is there any blue wires?

Elev 1: Yeah, one.

Elev 2: One, okay. Cut the first wire.

Elev 1: The top one?

Elev 2: Yes.

Elev 1: That one is red.

Elev 2: How many wires?

Elev 1: Three.

Elev 2: Colors?

Elev 1: Red, white, blue.

Elev 2: Is the last wire white?

Elev 1: The bottom one is blue. There is two minutes left.

Elev 3: Eh, did you say it was one blue wire?

Elev 1: Yeah.

Elev 3: Ehh.. Cut the first wire.

Elev 1: A light turned green.

Elev 2: Okay.

Elev 1: And there is one minute left.

Elev 2: What do you see?

Elev 1: A white and a blue wire. The white is on top of the blue and there is 30 seconds left. A green light and some symbols. I see a star and a yellow "hold" button.

Elev 2: Is the How many seconds left?

Elev 1: Times up.

Elev 2: Ahhh

Elev 3: Hva er det her for noe? Fyfaen assa.

Elev 1: Eh, hm. Skal vi bytte på hvem som prøver? Du trykker på retry også.. Okay, retry.

BYTTER PLASSER

Elev 1: Okay, what do you see?

Elev 3: I see a box

Elev 1: With?

Elev 3: Eh, eh, I see some wires and eh, there is a timer on it, a clock.

Elev 1: How many wires?

Elev 3: Three wires

Elev 1: Are there any red wires?

Elev 3: Two red

Elev 1: Is the last one, the bottom one white?

Elev 3: No.

Elev 1: Are there any blue ones?

Elev 3: No.

Elev 1: Cut the last wire, the bottom one.

[Short empty pause]

Elev 1: Did anything happen?

Elev 3: Yes, the light turned green

Elev 1: Which color is the button? The hold button, I think.

Elev 3: The?

Elev 1: The hold button. The big.

Elev 3: Oh, Which color?

Elev 1: Yeah.

Elev 3: White

[Short empty pause]

Elev 1: Can you see anything .. eh car? It says car

Elev 3: Car?

Elev 1: A lit indicator with label car.

Elev 3: Eh... I don't understand what you see.

Elev 1: Can you turn eh.., can you turn the bomb and see if there is more than one battery? I think it's under.

Elev 3: No, I can't turn the box

Elev 1: Eh, you have to use the right eh, not the left. Click it.

Elev 3: I doesn't work

Elev 1: Whatever. Which symbols do you see? A star or a?

Elev 3: Eh, I see a star

Elev 1: Okay

Elev 3: Then I see a C, yes a C, eh then it is a I don't know how to say that

Elev 1: Eh, the top left, what do you see there? Symbol?

Elev 3: A C

Elev 1: Eh, a C with a dot?

Elev 3: Eh, no it's a circle and inside there is a C

Elev 1: Okay, click that one.

Elev 3: Now it turned green

Elev 1: Eh, top right, what symbol is there?

Elev 3: It's like a question mark, kind of

Elev 1: Click that one

Elev 3: That was red

Elev 1: Eh, eh down left, what symbol is there?

Elev 3: It looks like, eh, it looks like a control, eh kind of

Elev 1: Click that one.

Elev 3: Yes, green.

Elev 1: And top right, what's there?

Elev 3: The question mark, thing

Elev 1: Ser du? (til elev 2) Upside question mark?

Elev 3: No

Elev 1: Eh, click it

Elev 3: Yeah, green

Elev 1: And right, eh, right down, what symbol?

Elev 3: It's a star

Elev 1: Click the star

[Empty pause]

Elev 1: Is there any time left?

Elev 3: Yes, ... minutes (uklart, hører ikke tiden).

[Empty pause]

Elev 1: How many wires do you have left?

Elev 3: We are done, times up

Elev 2: Men jeg skjønner virkelig ikke

Elev 1: Vil du prøve?

Elev 2: Ja

Elev 1: Vil du ta pc'n?

Elev 2: Skal jeg ta pc'n?

Elev 2: Eller vil du (navn på elev)?

Elev 1: Okay, retry. Nå går det fort. Vil du?

Elev 3: Ja, jeg kan gjøre det hvis du vil

Elev 1: Ja, okay, retry. Men, men du, du vet når du liksom skal bruke sånn den og ikke den, skjønner du?

Elev 3: Den?

Elev 1: Klar, ferdig, gå. How many wires?

Elev 3: Hold on. Eh.. Pause, there are six wires.

Elev 1: Okay, are there any yellow ones?

Elev 3: Yes, one.

Elev 1: Cut the third wire, from the top, the third

Elev 3: Okay. No, it was wrong

Elev 1: Eh, is there one yellow wire?

Elev 3: Yes

Elev 1: Okay, don't cut the third wire... eh... are there any white ones?

Elev 3: Yes, one, on the top

Elev 1: Eh, are there any red ones?

Elev 3: No

Elev 1: Cut the bottom one

Elev 3: It was right

Elev 1: Eh.. [pause].. What color is the button?

Elev 3: It is red

Elev 1: Ehm, oh God, eh.. Ja. Does it say hold?

Elev 3: Yes

Elev 1: Eh, press it and release the button. What symbol do you see, top left?

Elev 3: It didn't work to hold it.

Elev 1: Click it and eh..

Elev 3: Eh, ja den eksploderte

Elev 1 & 2: Laughing

Elev 2: I don't get it

Elev 1: Det er vanskelig, skal jeg prøve?

Elev 3: Ja, start den på ny

Elev 1: Okei, [pause].... There are three wires

Elev 3: Okay, do you have any red wires?

Elev 1: No

Elev 3: Ehm, cut the second wire from the top

Elev 1: A light turned green

Elev 3: Okay

Tiden for spillingen var ute.

Appendix 5 – Audio-recording transcription: group

2

Transkribering gruppe 2

Elev 1: Okay, have you started the timer?

Elev 2: No, starting now

Elev 1: Okay, so there is supposed to be some wires. Can you see some wires?

Elev 2: Ehh, wait, still testing. Load in, there.

Elev 1: Can you see wires?

Elev 2: Yeah

Elev 1: Okei, how many wires can you see? There is supposed to be between three and six wires.

Elev 2: Six

Elev 1: Six?

Elev 2: Six

Elev 1: Okay, so it says eh... it says here in the information, that if there are no yellow wires, and the last digit of the serial number is odd, cut the third wire. Is there a yellow wire?

Elev 2: Yes

Elev 1: Okay, there is, so that doesn't count. Otherwise, if there is exactly one yellow... Is there one yellow?

Elev 2: One yellow

Elev 1: Ehh, one yellow wire, there is no more or that, if there is more than one white wire... Is there more than one?

Elev 2: No, only one

Elev 1: Only one, cut the fourth, otherwise, if there are no red wires

Elev 2: There is one

Elev 1: There is one, okay, otherwise cut the fourth wire. Let's see, so there is one yellow, right?

Elev 2: Yes

Elev 1: And one white?

Elev 2: Yes

Elev 1: Okay, so it says here that if there is no yellow, that doesn't count. There is exactly one yellow wire, and there is more than one white. Okay, doesn't count. If there are no red wires

Elev 2: There is one

Elev 1: Okay, then it has to be the fourth wire. Cut the fourth wire

Elev 2: If there is one, okay

Elev 1: Count from the top and cut the fourth

Elev 2: Yes

Elev 1: Was it correct?

Elev 2: Yes

Elev 1: And then there is like a new subject or new task

Elev 2: Yeah, okay

Elev 1: Is there a button?

Elev 2: Okay, yeah

Elev 1: Can you see a button?

Elev 2: Yes

Elev 1: Okay, nice. It says here, follow these rules bla bla bla. If the button is blue, is there a blue button?

Elev 2: No

Elev 1: No, eh if there is more than one battery on the bomb and the button says detonate

Elev 2: Ehh, no, there is no battery

Elev 1: There is no battery?

Elev 2: No, I don't think so

Elev 1: Okay and the button doesn't say detonate either?

Elev 2: It does

Elev 1: It does, okay. If the button is white, is the button white?

Elev 2: No

Elev 1: It's not white, eh if there are more than two batteries and there was no batteries?

Elev 2: No, no batteries

Elev 1: If the button is yellow

Elev 2: Yes

Elev 1: It is yellow?

Elev 2: Yes

Elev 1: Okay, so if the button is yellow, hold down the button and refer to release a held button. And the button is yellow, right?

Elev 2: Yes, it's yellow and it has detonate on it.

Elev 1: Eh, let me see if there is a thing in the room that can be yellow. Button is red, no. If none of the, eh, okay, so it's yellow, then you hold the button and refer to release a held button. Is there anything more than the button? Can you see something more? Like a handle...

Elev 2: Yes, there is another thing

Elev 2: What does it say, or what is it?

Elev 2: It's a keypad I guess

Elev 1: Keypad? Oh

Elev 2: It has a bunch of weird symbols

Elev 1: Okay, just button, go back to the button. Hold down the button...

Elev 2: Okay

Elev 1: And refer to release held button and release the button I guess

Elev 2: Yes

Elev 1: It worked?

Elev 2: Yeah

Elev 1: Nice, okay. Perfect. So, eh, next thing. There is supposed to be a keypad, right?

Elev 2: Yeah, mhm, keypad

Elev 1: With some rear symbols

Elev 2: Mhm

Elev 1: Or at least to put some in. Okay, so it says here, only one column below has all four of the symbols from the keypad. Press the four buttons in order, in the order the symbols appear from top to bottom with that column. Okay. Eh, is there any symbols on the screen?

Elev 2: Ehhh, yes

Elev 1: There is?

Elev 2: Yes

Elev 1: Four of them?

Elev 2: Yes, four symbols

Elev 1: Okay, can you tell me, eh, first is it like in a cube pattern?

Elev 2: In a?

Elev 1: In a cube, like a square?

Elev 2: Yes, yes square

Elev 1: Can you tell me, eh, to your upper left?

Elev 2: Upper left, eh, a weird eh B-shape

Elev 1: B-shape?

Elev 2: Yeah

Elev 1: B-shape

Elev 2: Like a B with a

Elev 1: Is it like a B with a, with like a bench almost at the top?

Elev 2: Thing in

Elev 2: Yeah, kind of, kind of

Elev 1: That's your upper symbol, right?

Elev 2: Yeah, yeah, yeah

Elev 1: Eh, okay

Elev 2: Only 40 seconds left. We have to...

Elev 1: Okay, can you tell me the one to the upper right?

Elev 2: Up right, a star

Elev 1: Just a regular star?

Elev 2: Mhm

Elev 1: With no color in it? Just

Elev 2: Just a star

Elev 1: Okay, it's supposed to be this one. Ehh, okay, eh. Bottom left?

Elev 2: Bottom left, eh, it's a smiley face with its tongue out

[Empty pause]

Elev 1: Ehh, okay, yeah I see it. And then, the bottom left?

Elev 2: Shiiit

Elev 1: A what?

Elev 2: It blew up

Elev 1: Oh, we didn't have time? Åja okei

Elev 2: We didn't have.

Elev 1: So next time we need to think about the time as well and say the time. How much time do we have?

Elev 2: Hæ, five minutes

Elev 1: Yeah, vi tar det på nytt da.

Elev 2: Ja, skal jeg lese den eller skal du?

Elev 1: Du kan bare ta pc igjen, så leser jeg her.

[Empty pause]

Elev 2: Okay

Elev 1: Okay, still wires, right?

Elev 2: Yeah, still wires

Elev 1: How many wires can you see?

Elev 2: Eh, six

Elev 1: Is it six wires again?

Elev 2: Yeah, six wires again

Elev 1: Ehm, what color is the wire?

Elev 2: Yellow on top

Elev 1: Eh, just forget that one. If there is, are no yellow one, there was a yellow one, right?

Elev 2: Yeah, yellow

Elev 1: Eh, otherwise if there is exactly one yellow, is there one yellow?

Elev 2: One yellow

Elev 1: Just one, okay. And there are more than one white?

Elev 2: Yeah, more than one white

Elev 1: Eh, cut the fourth wire

Elev 2: Yes! Okay, and there is a button

Elev 1: Yes, it's the same order, I guess. Okay, if the button is blue and the button says abort.
Is the button blue?

Elev 2: Eh, no

Elev 1: No blue

Elev 2: It has abort on it

Elev 1: Yeah, if there is more than one battery?

Elev 2: Eh no, no batteries

Elev 1: No battery. If the button is white

Elev 2: No

Elev 1: No white

Elev 2: No white

Elev 1: If there are more than... No batteries, okay. If the button is yellow

Elev 2: Eh, yes

Elev 1: It is yellow? Eh, hold down the button and refer to release, okay. Just hold down the button and then release after

Elev 2: There

Elev 1: The symbols again, I guess. How much time do we have?

Elev 2: Eh, three minutes, three and a half minutes

Elev 1: Okay, try the symbols again. I'm not sure, bla bla bla. Only one column below has four symbols from the keypad. Okay. Fine. Okay. Tell me, tell me, eh, one symbol. Upper left.

Elev 2: Upper left. Ehm, it's kind of a three, the number three, but the bottom part broke and is hanging under, kind of.

Elev 1: So, it's laying on its back, kind of, or?

Elev 2: Eh, no. The bottom part

Elev 1: Does it have a wave in the middle?

Elev 2: Eh, you know a three? This part under broke and it's hanging down

Elev 1: Okay, fine. I think it's this one. It's like a snake, bottom, right?

Elev 2: Hm, snake? What?

Elev 1: Yeah, it looks like a snake at the bottom, right?

Elev 2: No

Elev 1: Is it the number three with like a think hanging out, at the bottom?

Elev 2: Yeah

Elev 1: It's like a snake shape, right?

Elev 2: Yeah, okay.

Elev 1: I guess it's that one. Eh, upper right?

Elev 2: Up right, a star without anything in it.

Elev 1: Yeah, okay, normal star. And then bottom left?

Elev 2: Bottom left, eh, a, eh, I don't know. Eh, a kind of an C and an A, close together and connected on the bottom.

Elev 1: C and A, eh

Elev 2: Oh, I mean C and O.

Elev 1: Okay

Elev 2: Really close together

Elev 1: Yeah, okay, I think I see what you mean.

Elev 2: Okay

Elev 1: Yeah, and then the last symbol?

Elev 2: The last symbol is, eh, kind of a, like an X with eh, I in it

Elev 1: Yeah, okay. I think it's this one. Eh, press four buttons in the order of the symbols.

Okay, so, first press the C with the, eh, eh, wait, wait. What was the first symbol you said? Up left.

Elev 2: A star? No, the first I said?

Elev 1: The first you said

Elev 2: The three with the broken under, or the snake.

Elev 1: Okay, was there, eh, yeah okay. Eh, press the C with the O first.

Elev 2: Yeah, okay

Elev 1: And then the X with the I in the middle.

Elev 2: Yeah

Elev 1: And then the weird three shape.

Elev 2: Yeah

Elev 1: And the star.

Elev 2: Yes. 41,99 seconds left

Elev 1: Oh, shit. Eh, Simons says, okay. One of the four colored buttons will flash

Elev 2: Eh, but I don't have timer or anything.

Elev 1: Hæ?

Elev 2: No, it's coming on, the light is green

Teacher: You're done.

Elev 1: Oh

Elev 2: Yeah, we're done.

Elev 1: Oh, okay, let's try again then. Klarte en med da.

Elev 2: Mhm. Okei, greit.

Elev 1: Prøver på nytt da. Okay wires again.

Elev 2: Yes, eh

Elev 1: Can you see the wires?

Elev 2: Eh, it's

Elev 1: Did you start the timer?

Elev 2: There, starting. Yes.

Elev 1: How many wires can you see?

Elev 2: Six wires

Elev 1: Again, okay. Is there a yellow one?

Elev 2: Yes, one yellow

Elev 1: Okay, eh, just one yellow?

Elev 2: Yes, just one yellow

Elev 1: More than a white wire?

Elev 2: Yes, more than one white wire.

Elev 1: Okay, cut the fourth wire.

Elev 2: Yes, there.

Elev 1: Okay, button again. Is the button blue?

Elev 2: There is no button.

Elev 1: Okay, eh, what do you see then?

Elev 2: It's a keypad and a weird

Elev 1: Okay, okay. What symbols do you see in the keypad?

Elev 2: Symbols, I see, eh, in which corner? Eh, top left?

Elev 1: Yeah, top left.

Elev 2: Yeah, it's kind of oo

Elev 1: An O, okay

Elev 2: No, a, you know, eh oo or a double w with a eh, instead of sharp sides

Elev 1: Yeah, okay

Elev 2: Mhm

Elev 1: An eye in the middle?

Elev 2: Yeah

Elev 1: Okay

Elev 2: Top right, is a star without anything in it

Elev 1: Okay

Elev 2: Eh, on the bottom left is a eh, C in a ring

Elev 1: A C in a ring?

Elev 2: Yeah

Elev 1: Okay

Elev 2: And the last one is a, eh, kind of, or it's a Y turned upside down and with, eh

Elev 1: Yeah, I see which you mean

Elev 2: With a stick in it

Elev 1: Yeah, ehh, I just need to find the correct one.

Elev 2: Yes

Elev 1: Omg, [empty pause], eh what was the first you said?

Elev 2: Eh, it was kind of v

Elev 1: Yeah, I remember

Elev 2: Mhm

Elev 1: It must be this one. It was kind of weird. Eh, it doesn't match any of them

Elev 2: Hm?

Elev 1: Okay, eh, it was weird.

Elev 2: It doesn't match any?

Elev 1: No

Elev 2: The star doesn't have anything in it

Elev 1: Yeah, I know. Okay, can you say all the symbols again?

Elev 2: Eh, the star is on the top right

Elev 1: Mhm, it doesn't matter where it is, just say them

Elev 2: Yeah, the star, and the C with the circle

Elev 1: Mhm

Elev 2: Yeah, and the Y upside down with a stick in it and a double v with a, eh, not or not, eh, and a double v with, that doesn't have any sharp sides. Just eh, curvy

Elev 1: Yeah, I know which you mean

Elev 2: And an eye kind of on the top. Like over, both of the sides of the double v

Elev 1: Yeah, I know. It doesn't match any here. Just restart.

Elev 2: Restart? Okay.

[Empty pause]

Elev 2: Vent hva? I guessed one correctly. Okay, no.

Elev 1: Just start again. Reset the timer.

Elev 2: Eh, it's restarts. Retry. Okay. Retry. Eh, there. It's a button, a keypad and a weird thing. What would you like to start with?

Elev 1: You don't see wires?

Elev 2: No, no wires

Elev 1: Okay, go to the button first then.

Elev 2: Yes

Elev 1: Eh, oh shit, eh. Is the button blue?

Elev 2: No

Elev 1: No, is there a battery there?

Elev 2: No

Elev 1: Is the button white?

Elev 2: No

Elev 1: Okay, no batteries. Is the button yellow?

Elev 2: Eh, no

Elev 1: Is the button red?

Elev 2: Yes

Elev 1: Does it say hold?

Elev 2: Yes

Elev 1: Okay, press and immediately release the button. So it's just a short press

Elev 2: There, yes.

Elev 1: Keypad, right?

Elev 2: Yeah, keypad.

Elev 1: Okay, tell me all the symbols

Elev 2: It's æ

Elev 1: Okay.

Elev 2: Mhm, and a six looking number

Elev 1: Mhm

Elev 2: And eh, you know the color line logo?

Elev 1: Mhm

Elev 2: Yeah, that with two, ehh

Elev 1: With toddles (tødler) on top?

Elev 2: Hæ?

Elev 1: Toddles on top, like two, two marks on top

Elev 2: Two marks on top, yeah

Elev 1: It's called toddle

Elev 2: And ehhh

Elev 1: And?

Elev 2: And, eh, what's that? Ehh

Elev 1: Is it a circle?

Elev 2: Yeah, kind of a circle

Elev 1: With two legs kind of?

Elev 2: Yeah, with two legs

Elev 1: Ohm, it's the symbol we learn in science.

Elev 2: Okay

Elev 1: So press the six first

Elev 2: Yes

Elev 1: And then the color line logo, with the toddles on top

Elev 2: Yes

Elev 1: Æ

Elev 2: Yes

Elev 1: And then the o with the legs

Elev 2: Yes, okay

Elev 1: Next

Elev 2: Eh, thing, it has

Elev 1: Is it a square?

Elev 2: Yes, it's a square with, eh

Elev 1: Four pieces?

Elev 2: Yeah, four pieces

Elev 1: Yeah, okay. Simon says. Okay, one of the four buttons will flash

Elev 2: Mhm, yes

Elev 1: It does flash?

Elev 2: Yes

Elev 1: Okay, using the correct table below, press the button with the corresponding color.

Let's see. Ehm, what? Eh, okay, what color does it flash?

Elev 2: Eh, oh, eh, no it doesn't flash, it's blue, not it's, it's a red thing which I guess it's just me and then it's a bunch of eh, four, eh, with

Elev 1: Hæ?

Elev 2: Hva var det det het? Firkant

Elev 1: Square.

Elev 2: Square, with a bunch of squares where I guess you could go

Elev 1: How many squares?

Elev 2: And, eh, how many squares.

Elev 1: What, what do you see? Is there like four squares in a box, or?

Elev 2: It's six by six

Elev 1: Six by six?

Elev 2: Yes, six by six

Elev 1: Like, eh, oh yeah. Like a display on top?

Elev 2: Eh, a display on top, like a triangle

Elev 1: No. Eh, tell me again, what is it

Elev 2: Eh, six by six square with a bunch of squares inside. Two of the squares

Elev 1: Six by six, you mean six squares?

Elev 2: Six on top, six on the sides

Elev 1: Yeah, okay, all squares

Tiden gikk ut.

Appendix 6 – Audio-recording transcription: group

3

Transkribering gruppe 3

Elev 1: Okay, let's go

Elev 2: I see a bomb on a table. The bomb has four modules and a screen. Five ledninger, eh
wires

Elev 1: Okay.

Elev 2: That's what I see

Elev 1: Okay, so you are going to try to disarm the bombs. There can be, no, each bomb will include up to 11 modules that must be disarmed, and the modules is discrete and can be disarmed in any order.

Elev 1: You can, you have a timer on the bomb which it looks like is five minutes and a strike indicator that if you get over three strikes, then bomb explodes.

Elev 2: Oh fucking hell

Elev 1: No swearing

Elev 2: I'm sorry.

Elev 1: Eh, you need to gather information and, ehh

Elev 3: Hm?

Elev 1: Just read that

Elev 3: What?

Elev 1: That

Elev 3: Hele?

Elev 1: Hehe yeah, you need to follow it

Elev 3: Some instructions will require specific information about the bomb, such as the serial number. This type of information can typically be found on the top, bottom, or the sides of the bomb casing. See Appendix A, B, or C for identification instructions that will be useful in disarming certain modules.

Elev 1: Okay, section 1 modules.

Elev 3: Modules can be identified by an LED in the top right corner. When this LED is lit green, the module has been disarmed. All modules must be disarmed to defuse the bomb.

Elev 1: So you need to get all LEDs to light green.

[Empty pause]

Elev 1: Okay, so how many wires do you have?

Elev 2: I see one red, no, two red, one white, one blue and one yellow.

Elev 1: So five?

Elev 2: Yes

Elev 1: Så må vi lese der da.

Elev 2: English.

Elev 3: If the last wire is black and the last digit of the serial number is odd, cut the fourth wire. You don't have any black wires?

Elev 2: I don't see any serial number, but

Elev 3: You can turn the bomb around to see if you find something

Elev 1: Otherwise, if there is exactly one red wire and there is more than one yellow wire, cut the first wire.

Elev 2: Say that again, please.

Elev 1: Otherwise, if there is exactly one red wire, eh, and there is more than one yellow wire, cut the first wire. Is that not the case for you?

Elev 2: It's not the case for me.

Researcher: Eh, have you started the game? You are supposed to have a timer when you play, so this is just the tutorial.

*Researcher helps the students to start the game

Researcher: Ok, now, here you have the game and when you open this, the game will start and so will the timer.

[Empty pause]

Elev 1: Ready, set, go

Elev 2: Okay, let's gooo

Elev 1: Okay, soo

Elev 3: How many wires do you see?

Elev 1: Yeah

Elev 2: Ehh, I'm still loading.

Elev 1: Okay, so what is the timer on?

Elev 2: I don't know, she went out because there was something wrong.

Elev 1: Loading, loading

Elev 2: Yes, it's loading, loading

Elev 1: So you can't, laughing, you can't see on the

Elev 2: Yes, five minutes

Elev 1: Eh, so, eh, how many strikes can you get?

Elev 2: Eh, I can't see that I think. But I see three wires

Elev 1: Three? Okay. Which color is the wires?

Elev 2: Eh, all of them are red.

Elev 1: All of them are red?

Elev 2: And I see a button that says press and up in the right corner I see some symbols. Four symbols

Elev 1: Okay, yes, eh. If we read that, three wires, if there are no red wires, cut the second wire. That's not the case.

Elev 2: Not the case.

Elev 1: Otherwise, if the last wire is white, cut the last wire. Otherwise, if there is more than one blue wire, cut the last blue wire. Otherwise, cut the last wire.

Elev 2: There is no blue

Elev 3: Cut the last wire

Elev 2: If there no other

Elev 2: If I don't have any blue I cut the last wire?

Elev 1: Yeah, if you don't have any

Elev 2: I'm going to cut the last one, yes it was green

Elev 1: Okay, nice

Elev 3: Then we are done with this

Elev 2: My serial number ends with one, you said something about odd serial number

Elev 3: Yes, but that was on five wires.

Elev 2: Okay

Elev 1: Okay, so where are you now?

Elev 2: I'm at the same place, but with one wire less

Elev 1: Okay, eh, but the LED in the top right corner is green?

Elev 2: Green. I have three minutes left.

Elev 3: Do you see a small box with some text?

Elev 2: With some text, eh, on the outside of the box?

[Empty pause]

Elev 2: It's a red, red box, eh, a red rectangle with FRK inside of it.

Elev 1: Okay, so that probably is that.

Elev 3: Ahh

Elev 2: Can you guys hurry up? I have two-and-a-half minutes left.

Elev 1: Yes, eh

Elev 3: Follow these rules in order they are listed. Perform the first action that applies. If that one is right, we don't do that one. Okay, if the button is blue, eh, and the button says abort, hold the button, and refer to, eh, to releasing a held button.

Elev 2: Ah, I don't have any buttons. My only button says press and it's white.

Elev 2: Okay, but the text inside is FRK?

Elev 2: No, that's on the side. I have a button that says press.

Elev 2: Yeah

Elev 2: It's a rectangle.

Elev 3: Just trying... If there are more than two batteries on the bomb and there is a lit indicator with label FRK, press and immediately release the button.

Elev 2: Press?

Elev 1: And immediately, eh ja, just tap.

Elev 2: Wait, red, I got a mark.

Elev 1: Okay, that was bad. Okay, we just going to eh.

Elev 3: If there is more than one battery on the bomb and the button says detonate, press and immediately release the button.

Elev 2: Mine says press.

Elev 1: Okay, If the button is white, and there is a lit indicator over, eh, nei, a lit indicator with label CAR hold the button to refer to releasing a held button.

Elev 2: I don't have any car. Doesn't say car in it.

Elev 3: If the button is yellow, hold the button and refer to releasing a held button.

Elev 2: I'm out of time.

Elev 1: Seriously? So the bomb exploded?

Elev 2: Yes, it did. The bomb exploded.

Laughing

Elev 2: I retry, I retry.

Elev 1: Den sprengte veldig fort.

Elev 2: It was five minutes.

Elev 3: Shall we switch?

Elev 1: Yeah

Elev 2: No, no, I'll take another one

Elev 1: My turn! No, we switch.

Elev 3: Now it's (name on student) turn.

Elev 2: He talks so, you like hm, eh, hmm

Elev 3: Now it's (name) turn

Elev 1: Now it's my turn. It's my turn now? (Asks the researcher)

Researcher: You can choose.

Elev 2: No!

Elev 1: Yes, two, eh

Elev 2: You got to talk faster, you talk like, if you

Researcher: But then you need to move so you don't see the screen.

BYTTER PLASS

Elev 1: Retry

Elev 3: You are bad at defusing bombs

Elev 2: No, no, laughing

Elev 2: Okay, are you in?

Elev 1: Yes

Elev 2: How many wires do you see?

Elev 1: Eh, I see six wires. Two blue, one red, two white and one yellow. The timer is now 4.38 by the way.

Elev 2: You said one yellow wire?

Elev 1: Yes

Elev 2: Is it more than one white wire?

Elev 1: Yes

Elev 2: Cut the fourth wire.

Elev 1: Okay, read that one more time.

Elev 2: If there is exactly one yellow wire, and there is more than one white wire, cut the fourth wire.

Elev 1: Is it the fourth from the top?

Elev 2: No

Elev 3: Yes

Elev 1: Okay, so that one. Yes. It's green.

Elev 2: Okay, good.

Elev 3: The subject of the button. So, do you see the, eh, find the, eh, a small box with text? It should be a small rectangle on the right side and a small circle above it. Do you see that?

Elev 1: Ehhhh

Elev 2: It also has a like, a box over it with a button

Elev 1: Is there like, eh, yeah, eh, there is one

Elev 2: It's a circular button

Elev 1: Yeah, it's white and says press

Elev 3: Eh, if the button is white and there is a lit indicator with label CAR, hold the button and refer to releasing a held button.

Elev 2: If you right click, and then just move around the bomb you can see like the, the, when I saw the FRK, it's one of the sides. Just, you can drag

Elev 1: Okay, so, I press the white button?

Elev 2: I don't know, you got to check, if it's any press or with a CAR.

Elev 1: There is an LED in the top right corner.

Elev 2: No, you, eh, right click and you move around it, you can see the sides of the bomb. The serial number and everything.

Elev 3: Releasing a held button, you start holding the button down and a colored strip will light up on the right side of the module. Based on its color, you must release the button at a specific point in time.

Elev 1: Okay, so I'm, eh

Elev 3: Press the button

Elev 1: So, I'm just going to give you some information

Elev 3: Okay, press the button and then you tell us the

Elev 1: Press the white button who says press?

Elev 3: Yes. Do you see the stripe on the side under the button?

Elev 1: On one side I see a serial which ends with a eight

Elev 2: That's not an odd number

Elev 1: Okay

Elev 3: There should be a

Elev 1: Under, I see two batteries, eh, on the top I see one that says FRK who is not lit, and one that says NSA that is lit. On the left side I see one that says AND. So the one who is lit says, eh, NSA.

Elev 2: If there is more than two batteries on the bomb, and there is a lit indicator with label FRK, press immediately, press and immediately release the button.

Elev 1: There is a lit indicator which says FRK, but it isn't lit.

Elev 2: Okay.

Elev 1: Should I just try?

Elev 2: Yeah

Elev 1: Okay, I got a red

Elev 2: Okay. On the subject of keypads

Elev 1 Okay, 30 seconds again

Elev 2: Left

Elev 1: Left

Elev 2: Eh, only one column, it's like the symbols I talked about.

Elev 1: Yeah.

Elev 2: Only one column below has all four of the symbols from the keypad. Press the four buttons in order, in the order the symbols appear from bottom to top within the column.

Elev 1: Ohh, that was the time we got.

Elev 2: Yeah, you see

Elev 1: Yeah, you talked so slow

Elev 3: Now it's my turn.

Elev 2: Yeah, you too!

Elev 3: Now it's my turn.

Elev 1: Yeah, it isn't very easy.

Elev 2: Sit down bitch

Elev 1: Okay, now we switch roles and (name on student) is there.

BYTTER PLASS

Elev 3: Oi denne stolen her var litt høy (name on student).

Elev 1: Yes, I like to sit high.

Elev 2: Testing, testing.

Elev 3: Okay, now it's loading.

Elev 2: Then we are

Elev 3: Okay.

Elev 1: Maybe we should not be on that side

Elev 3: Okay.

Elev 2: I know, I know. How many wires do you see?

Elev 3: I see six wires, three blue, one yellow, one red and the last one is white. So its start with two blue, then a yellow, then a blue again, then the red one and the white, the last one.

Elev 2: Is there more than one white wire?

Elev 3: Eh, no

Elev 2: If you right click and move around, you can see the serial number. If the serial number is an odd number, cut the third wire.

Elev 1: The last

Elev 2: Yeah

Elev 1: You said third

Elev 2: Oh

Elev 3: Serial number, 4M3TVO

Elev 2: The last number

Elev 3: The last number, it's a serial, or 10, an O

Elev 2: Hæ?

Elev 1: The last number

Elev 2: The last digit

Elev 3: Yes, on the serial

Elev 1: Yeah, is?

Elev 3: It's zero or O

Elev 1: O?

Elev 3: Yeah

Elev 2: Is that an odd number?

Elev 1: Ehh, I don't think so

Elev 2: Do you have any yellow wires?

Elev 3: Eh, yes, I have one

Elev 2: Okay. No red, eh, is there a red wire?

Elev 3: Yes

Elev 2: Cut the fourth wire

Elev 3: Yes, green light

Elev 1: Okay, good.

Elev 2: Eh, do you have a button that says abort?

Elev 3: Abort?

Elev 2: Yeah

Elev 1: Or do you have a white button that says press?

Elev 2: Can you say what on

Elev 3: I have a blue button that says press

Elev 2: Okay, blue button, blue button, blue button, blue button, blue button

[Empty pause]

Elev 2: Can you what's on, like, if you drag around, and the left side I think, you see a lit indicator. What's the color of it and what do you see?

Elev 1: Or on the top

Elev 2: Yeah

Elev 3: I have two and one on the side says FRQ and the one at the bottom of the bomb says MSA

Elev 1: Okay, which one is lit?

Elev 3: No one

Elev 1: Okay, is there one on the side or on the top?

Elev 3: Eh, there is one at the side

Elev 1: Okay.

Elev 3: Says FRQ

Elev 1: Okay, and is it lit?

Elev 3: No

Elev 1: Okay.

[Empty pause]

Elev 1: Eh

Elev 2: Ehh, if none of the above apply, hold the button and refer to releasing held button

Elev 3: Eh

Elev 2: Just hold the button

Elev 3: The color is blue now

Elev 2: Yeah, yeah, it's nothing, ehh

Elev 3: So I just?

Elev 1: Just try!

Elev 2: Hold the button

Elev 3: It's green

Elev 1: Yeah, yes!

Elev 2: Good, good

Elev 3: Now I see

Elev 1: Okei, now the

Elev 2: Subject of the keypad, it's the symbols

Elev 1: The symbols, the symbols

Elev 3: I see, ehh

Elev 2: Can you try to explain to us?

Elev 3: I see like a smiley face with the tongue out, like two dots and then like a u and then

Elev 2: Yeah, I see it, I see it

Elev 3: And then I have like, ehh, eye in the middle, like, nei the

Elev 1: Is there a backwards C?

Elev 3: I in the alphabet, and then there is

Elev 1: Backwards E?

Elev 3: Backwards E? No, I don't see that. But there is an upside-down question mark and like, like a number six.

Elev 2: Yeah, I see.

Elev 3: And then it's like the I, like in the alphabet I, a big I and then there is like two K's on the side that goes each way

Elev 2: Yeah, I see it.

Elev 3: What, shall I press it?

Elev 2: Ehh, I don't know.

Elev 3: Go from the top and then go down

Elev 2: You got an upside down and eh

Elev 3: I have 20 seconds

Elev 2: Okay, eh, you have on last one, explain. I got the smiley, the upside down, and the I with the K

Elev 3: And then the six

Elev 2: Six

Elev 1: Den

Elev 2: Start with the I- K, and then the question mark, and then the smiley and then the six

Elev 3: Du bomma på alle sammen

Elev 2: Okei

Tiden gikk ut og bomben gikk av.

Appendix 7 – Audio-recording transcription: group

4

Transkribering gruppe 4

Elev 1: I spot a code with, eh, the need of three numbers

Elev 2: Okay.

Elev 1: Ehh, it goes from 1-9 and eh, ja

Elev 2: Ja

Elev 1: I said japp

Elev 2: Japp, haha, okei

Elev 1: My man

Elev 2: Can you explain it again?

Elev 1: I see a code, a verification code, with the need of three numbers. Yeah.

Elev 2: Is the code a straight line?

Elev 1: Yes, a straight line

Elev 2: Laughing, okay. And a three, eh, it needs three, ehh

Elev 1: Three numbers, yes

Teacher: You need the code from the first page, 241. Dere har ikke startet enda. Først vil dere få se hvordan dette fungerer.

Elev 1: Am I supposed to explain what I see?

Researcher: Yes.

Elev 1: Okay, eh, so I see a few weird letters, one of them looks like a six, the other one looks like a “æ” and the two others that’s kind of weird, ehh.

Researcher: You (the one with the manual) can ask questions as well.

Elev 2: Eh, do you have any wires?

Elev 1: Yes, I have one red, black, two shite, another red and another red.

Elev 2: In total?

Elev 1: Six, wires

Elev 2: If there are no yellow wires, and the last digital, nei, eh digit

Elev 1: Digit

Elev 2: Digit, of the serial number is odd, cut the thurd wire.

Elev 1: Thurd?

Elev 2: Eh, wait, eh, is it a yellow wire?

Elev 1: No, I see two red, two black and two white.

Elev 2: Okay, okay, no yellow wire, then, eh, the last, is the last digital serial number odd?

Elev 1: What's odd?

Elev 2: Okay, fuck det, laughing. Cut the thurd wire.

Elev 1: Third wire? Pause. It's green now.

[Empty pause]

Elev 1: And then, what's the next thing I got to do after I cut the third wire?

Elev 2: It's that you need to find to defuse

Elev 1: Eh, so I have this code with .. (don't show me that shit (manual)) with four types of letters or numbers, I don't know. One that looks like a "æ", one that kind of looks like a "h" with a line up instead of in the middle

Elev 2: Shh, I see, okay, I think I have it

Elev 1: And one that looks like a six

Elev 2: Okay, okay, eh

Elev 1: So, yes, you are supposed to give me the gold

Elev 2: I think this is the gold, yeah, yeah, yeah. Okay, can you click on it to choose other?

Elev 1: I can choose, I can click on one, like different one of them. I have four of them and I can click on one here, one here, one there and one there

Elev 2: So you can eh, shift?

Elev 1: Yes

Elev 2: Can you shift the first one?

Elev 1: Shift?

Elev 2: Is there one on the left and one on the right, and under it's the same?

Elev 1: Yes

Elev 2: So it's a square?

Elev 1: Mhm

Elev 2: Okay, on the top left, left, it's a n?

Elev 1: No

Elev 2: No, but can you shift it to an "n"?

Elev 1: Åja

Elev 2: An "n", but eh

Elev 1: No, I can't, I can't. Now I just clicked wrong. Ah, what?! Time is going by fast now.

Elev 2: Laughing

Elev 1: Okay, I have one last strike. It's only 30 second left.

Elev 2: Bro

Elev 1: No, its too late, too late.

Elev 2: Vi, eh. Det gikk ikke så bra.

Researcher: No, that's ok. You can try again.

Elev 1: Okay, we try again. Retry.

Researcher: Now you know how it works, so maybe it gets easier when you try again.

Elev 1: But I didn't understand the one with the four with letters or numbers.

Elev 2: Er det den?

Researcher: Yes. What is the first thing in the manual? Open the first pages where it starts.

Elev 1: So this is the second?

Researcher: You can start with this and ask questions.

Elev 1: Do you see wires?

Elev 2: Yes, there is three wires. One red, one black and one yellow.

Elev 1: It was one red?

Elev 2: It is one red, one black and one yellow. That's it.

Elev 1: Is the last wire white?

Elev 2: No, it's one red, one black and one yellow

Elev 1: Wait, I don't remember that

Elev 2: The first one is red, the second is black

Elev 1: Otherwise, one blue wire

Elev 2: Keep going

Elev 1: Is there more than one blue wire?

Elev 2: No less

Elev 1: So there is none blue wires?

Elev 2: No

Elev 1: Cut the last wire.

Elev 2: Uhhh. Okay, okay, so the second task, we got three minutes left.

Elev 1: Okay, okay, do you see a box with a circle in it that it stand some text in?

Elev 2: Yeah

Elev 1: Yeah. Is it blue and says abort?

Elev 2: No, it says abort but it's not blue.

Elev 1: Which color is it?

Elev 2: Red

Elev 1: If the button is red and says hold

Elev 2: Its red and says abort

Elev 1: Releasing a held button. Hæ? If none of the above, hold the button and refer to releasing a held button. What the fuck is a held button?

Elev 2: Laughing.

Elev 1: Laughing.

Elev 2: Eh.

Elev 1: Hva skjer?

Elev 2: It's just opened by itself, I didn't click shit, but the button just opened. I didn't click the button, but now, eh, yeah I don't know.

Elev 1: What happened? Is it green?

Elev 2: What?

Elev 1: Is it green?

Elev 2: No, its not green. Eh, but I have another code to the left, that we have to, have to, eh I think defuse.

Elev 1: Is it with some weird numbers?

Elev 2: Yes

Elev 1: Fuck

Elev 2: It's four weird numbers

Elev 1: Now, wait, eh, åh, yeah, okay. Eh, besides det der, with the circle in the box, is it a lion besides it?

Elev 2: What do you mean?

Elev 1: Like a side that goes upwards

Elev 2: Yeah

Elev 1: Okay, which color is that?

Elev 2: Eh, I don't know, white or silver

Elev 1: Okay.

Elev 2: But I think that just a line in between the different codes, because it's in on all the sides. Including the outline of the box.

Elev 1: I didn't understand this.

Elev 2: We go 30 seconds left

Elev 1: Okay, tell me that numbers

Elev 2: Tell you the numbers?

Elev 1: Wait, only the column below has all four of the symbols

Elev 2: Okay, we got 15 seconds left

Elev 1: Oh, wait! Eh, what can you change the numbers, nei, what can you change that numbers on, the three numbers to?

Elev 2: I can't change it.

Elev 1: So it's stuck on that?

Elev 2: Yeah, faen.

Elev 1: How the fuck are we supposed to do it?

Elev 2: Jeg vet da faen hva du mener med skifte nummer?

Elev 1: Can you click on one of the numbers and shift?

Elev 2: Ja, men da bruker jeg en av strikesa.

Elev 1: Hva faen er strikes?

Elev 2: Eh, det er forsøk. We got three strikes

Elev 1: Yes, okay.

Elev 2: Retry. Okay. Retry the code first.

Elev 1: No, we start with the wires first.

Elev 2: This time I got four black wires, one blue and one red.

Elev 1: Okay, okay, okay. What, eh

Elev 2: What?

Elev 1: What can't you say?

Elev 2: Nothing

Elev 1: What can't you say, eh, nei.

Elev 2: I have six wires

Elev 1: If it's more than one red wire, and the last. Is it more than one red wire?

Elev 2: No

Elev 1: If the last wire is yellow, is the last wire yellow?

Elev 2: No

Elev 1: If there is exactly one blue wire, is it just one blue wire?

Elev 2: Yes

Elev 1: Cut the last wire

Elev 2: That didn't work, we did just striked again

Elev 1: Otherwise if there is exactly one blue wire, cut the first wire

Elev 2: Should I try to cut the blue wire?

Elev 1: No

Elev 2: Okay.

Elev 1: If there is more than one yellow wire, is there more than one yellow wire?

Elev 2: No, there is none

Elev 1: Cut the second wire then

Elev 2: Åh fyfaen, sorry for my bad language but I think this game is rigged because it didn't work.

Elev 1: Wft?

Elev 2: We try again, so eh, okay. So I start it again now, the timer has started.

Elev 1: Okay.

Elev 2: I start with the wires

Elev 1: Yes

Elev 2: I have three wires

Elev 1: Okay, is there any red wires?

Elev 2: No

Elev 1: Cut the second wire

Elev 2: Åh, oh, de første 20 sekundene

Elev 1: Shoooot

Elev 2: Okay, we go over to the code as soon as we do this

Elev 1: No

Elev 2: Why not?

Elev 1: We have to do the circle in the box

Elev 2: *Laughing*, it didn't work. Do I just have to click the button?

Elev 1: No! Don't click it!

Elev 2: Yeah, okay.

*Both laughing

Elev 1: What does it stand in?

Elev 2: Don't do that. What do you mean?

Elev 1: What the text saying?

Elev 2: Press

Elev 1: And color of the circle?

Elev 2: Blue

Elev 1: Press blue. Eh, no, no!

Elev 2: I didn't press it.

Tiden var ute.

Appendix 8 – Online survey questions

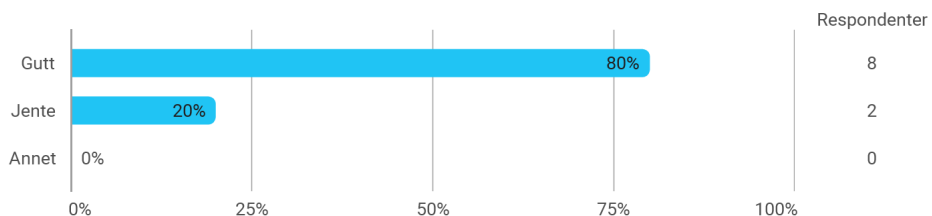
Spørsmål til spørreundersøkelse

1. Kjønn: (obligatorisk)
 - Gutt
 - Jente
 - Annet
2. Liker du engelskfaget? (obligatorisk)
 - Ja
 - Nei
3. Pleier du å være aktiv i engelsktimene? (obligatorisk)
 - Ja
 - Av og til
 - Nei
4. Hvor opplever du at du lærer engelsk? (obligatorisk)
 - Engelsktimer
 - Andre timer på skolen
 - Familie
 - Venner
 - Sosiale medier
 - Bøker
 - Gaming
 - Reise
 - Hobby
 - Annet (spesifiser)
5. Hvor opplever du at du lærer mest engelsk? (obligatorisk)
 - Engelsktimer
 - Andre timer på skolen
 - Familie
 - Venner
 - Sosiale medier
 - Bøker
 - Gaming
 - Reise
 - Hobby
 - Annet (spesifiser)
6. Hvor mange timer bruker du på gaming i løpet av 1 uke? (obligatorisk)
 - Mindre enn 1 time
 - 1-3 timer
 - 3-5 timer
 - 5-7 timer
 - 8 timer eller mer

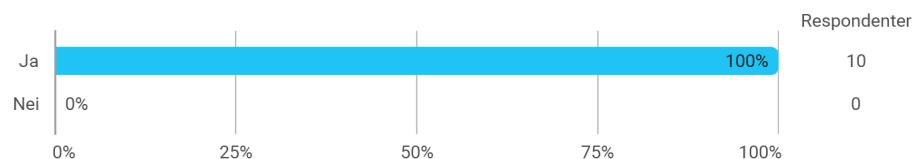
7. Hvilke spill spiller du hjemme? (Bare de som gamer mer enn 1 time får dette spørsmålet)
8. Mener du at du har lært noe nyttig i spillet/ spillene? Forklar.
9. Er spillet/spillene på engelsk?
 - Ja
 - Noen
 - Nei
10. Hvis ja eller noen på forrige spørsmål: Bruker du engelsk når du spiller?
 - Leser
 - Skriver
 - Snakker
 - Nei
11. Opplever du at gaming bidrar til at du mestrer engelsk bedre? Hvordan og hvorfor? (obligatorisk)
12. Føler du deg trygg på å snakke engelsk i timene? Begrunn svaret.
13. Mener du at det er gaming som gjør deg tryggere?
 - Ja
 - Nei
14. (De som spiller 1 time eller mer) Opplever du at du kan bruke det du har lært gjennom spilling, i engelsktimene på skolen? (lesing, muntlig, skriftlig)
15. Hvordan opplevde du du timen med spillet «Keep Talking and Nobody Explodes»? Begrunn svaret ditt.

Appendix 9 – Online survey answers

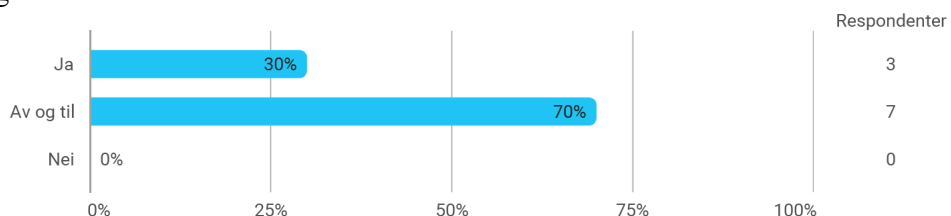
Kjønn



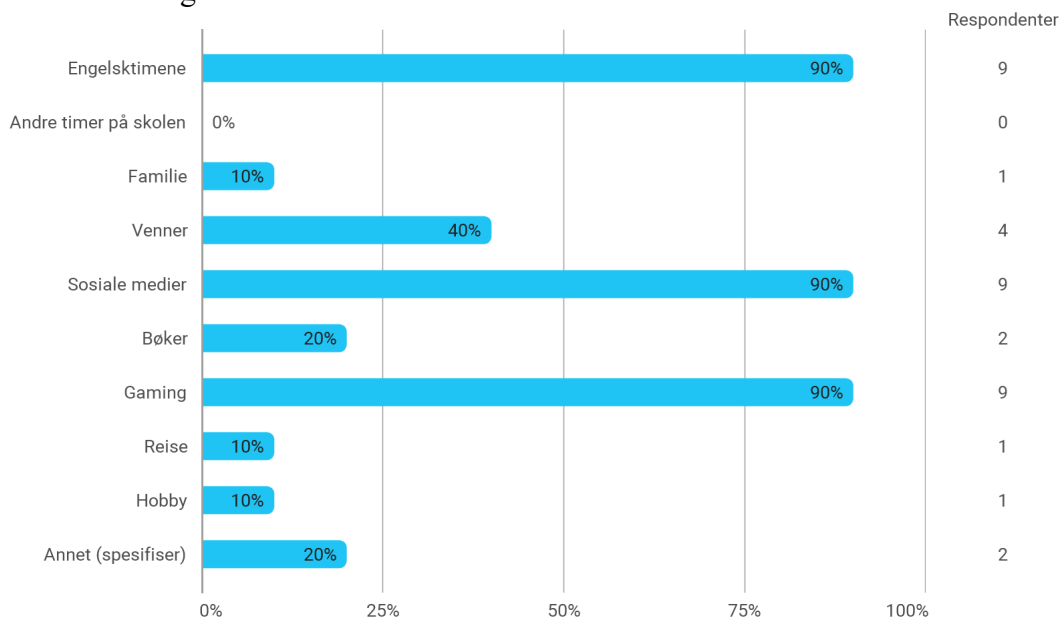
Liker du engelskfaget?



Pleier du å være aktiv i engelsktimene?



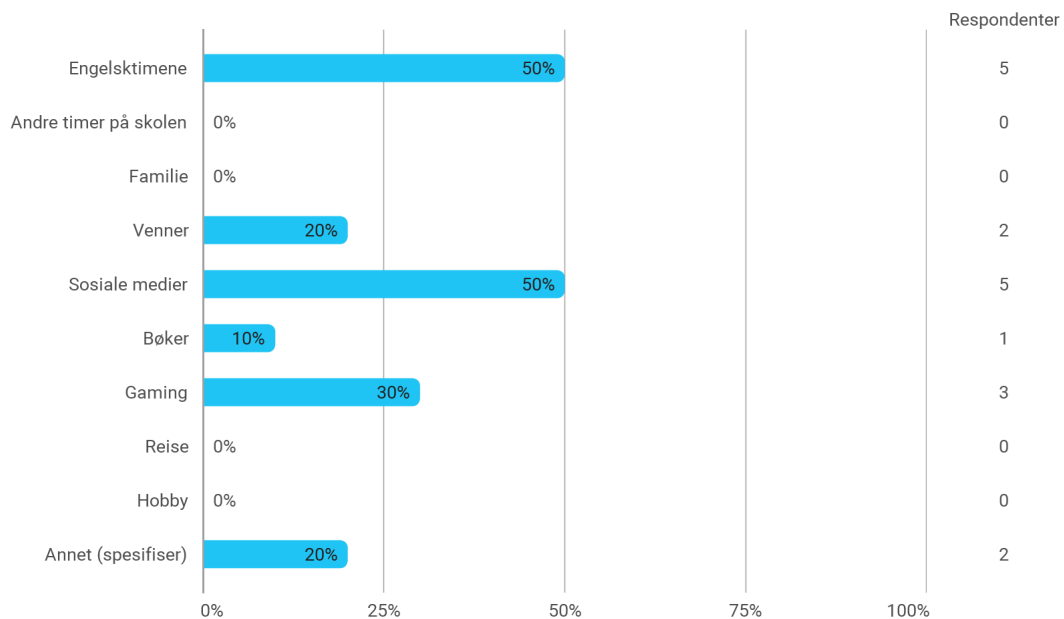
Hvor opplever du at du lærer engelsk?



Hvor opplever du at du lærer engelsk? - Annet (spesifiser)

- filmer, serier, youtube
- TV, og serier.

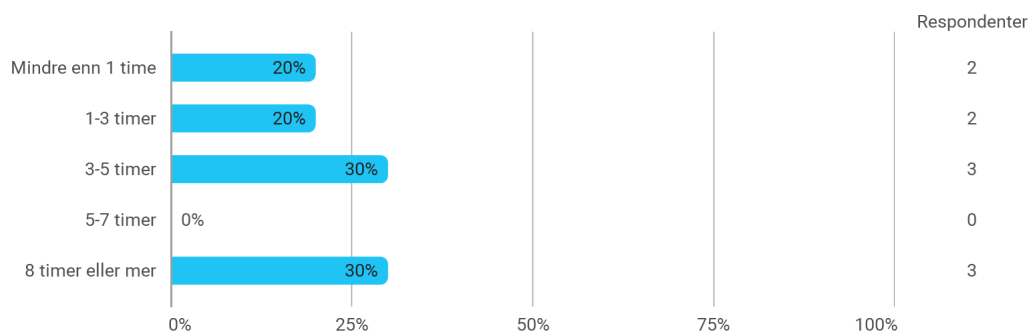
Hvor opplever du at du lærer mest engelsk?



Hvor opplever du at du lærer mest engelsk? - Annet (spesifiser)

- film video serie youtube
- serier, dokumentarer osv

Hvor mange timer bruker du på gaming i løpet av 1 uke?



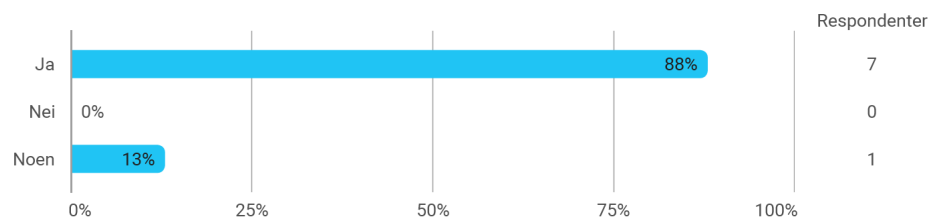
Hvilke spill spiller du hjemme?

- Fortnite
- hayday
spiller/har spilt mange andre også
- battelfield 5, battelfront, fortnite, clash royal, asphalt.
- Rocket League
Minecraft
Fortnite
- i play different games, i dont play as much now as i did but i play a little bit of fortnite, i play battlefront and apex legends
- rainbow siege
- Cod, Destiny
- csgo, fortnite, roblox. osu, paladins, og litt call of duty

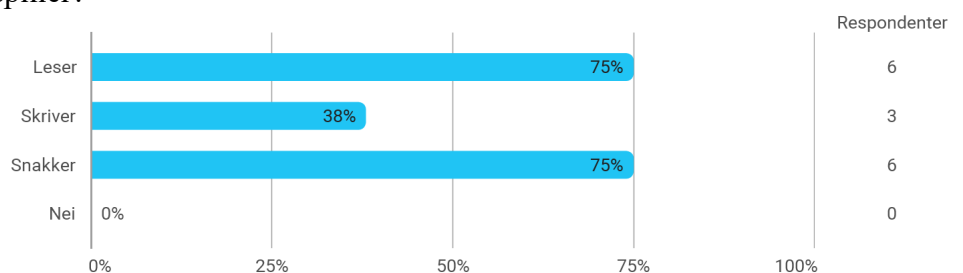
Mener du at du har lært noe nyttig i spillet/ spillene? Forklar.

- Nei ikke så mye
- nei, bare tilfeldige ord ikke så nyttig
- næh, ikke på det språklige tenker jeg. Jeg lærer ikke så mye nytt engelsk av spill. jeg tror det er fordi at jeg kan det så godt fra før av.
- Jeg utvider ordforrådet mitt og blir bedre på kominikasjon.
- i dont really know, but i feel like i understand english more and more.
- nei
- Lærer mye Engelsk og ordbruk.
- ja, jeg lærte mest engelsk da jeg var og og spilte fornite med andre folk jeg ikke kjente.

Er spillet/ spillene på engelsk?



Bruker du engelsk når du spiller?



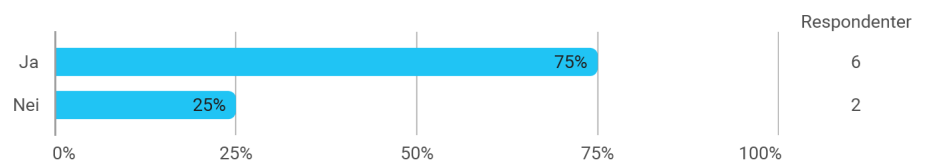
Opplever du at gaming bidrar til at du mestrer engelsk bedre? Hvordan og hvorfor?

- Jeg føler at det hjelper litt men ikke så mye, fordi når jeg spiller spiller jeg med venner og da snakker vi norsk.
- jeg tror det kan gjøre en ganske flink i engelsk ja. ikke akkurat meg fordi jeg spiller ikke så mye, jeg spiller heller ikke engelske spill med så mye engelske ord i seg. ikke så variert eller mye forskjellig bare de samme ordene hele tiden.
- Ja. Blir vant til å bruke engelsk, og holder språket vedlike.
- ja fordi jeg kan flere ord.
- i dont know why and how, but i think it is because i see and talk it alot when i play with for example english friends
- noen ganger
- Jeg føler det hjelper en god del. Man bruker engelsken ganske mye, og jo mer man snakker og hører, jo mer vandt til språket blir man.
- ja

Føler du deg trygg på å snakke engelsk i timene? Begrunn svaret.

- Ja, jeg tneker ikke på hva folk tneker om engelsken min.
- Både og. Jeg tror jeg føler meg trygg ja men så gjør jeg det ikke så mye, selvom jeg er flink og burde.
- ja, jeg føler meg alltid trygg fordi jeg vet at jeg kan språket veldig godt. også er det viktig for karakter..
- ja jeg føler meg trygg på å snakke engelsks i timene fordi at ingen gjør narr av engelsk utalen til andre medelever.
- jeg føler meg ganske trygg i timene, jeg snakker ofte, men blir av og til litt usikker på uttalen min
- yes, i do. I feel quite safe talking english in class, cause im very comfortable with speaking it, since i have a english friend in class.
- ja
- nei fordi jeg snakker engilsk veldig bra.
- Av og til, kommer litt an på humøret og stemningen.
- jeg vet ikke, ikke helt ennå

Mener du at gaming bidrar til at du føler deg tryggere på å snakke engelsk i timene?



Opplever du at du kan bruke det du lærer gjennom gaming, i engelsktimene på skolen?

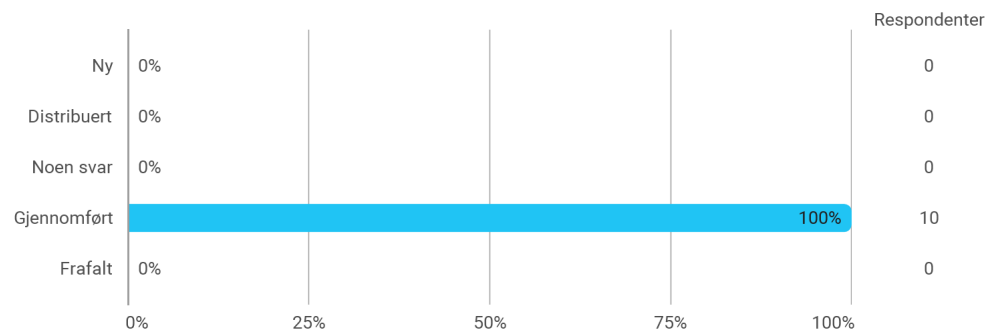
Forklar.

- Ja litt, jeg lærer noen ord som jeg kan bruke.
- Nei ikke akkurat meg, med spillene jeg spiller eller har vært borti. Mer serier, filmer og lignende som hjelper meg. Men gaming hjelper helt sikkert andre med flyten i språket, bedre engelsk akksant, større ordforråd. kjenner flere som er ganske så flinke i engelsk fordi de har gamet mye, i oppveksten sin.
- føler ikke egt at jeg får bruk for de ferdighetene så veldig mye.
- jeg blir bedre på kommunikasjon og problemløsning.
- i dont actually know how, or why. I think it just helps to play game where they speak english, since i get more used to hearing it.
- ja fordi når du spiller med venner så lærer du nytt ord
- Når jeg spiller vil jeg lite sannsynlig høre eller lese om ting vi har hat i engelsktimene, og ordbruket og , måten man snakker på er litt annerledes. Med det mener jeg hvordan setningene er bygd opp og måten de bruker språket i de forskjellige situasjonene.
- ja, fordi jeg lærer mye nytt der

Hvordan opplevde du timen med spillet "Keep Talking and Nobody Explodes"? Begrunn svaret ditt.

- jeg syntes det var gøy, men jeg hadde en dårlig lagkamerat.
- Det var ikke så lett, verken å forklare eller å sitte ved pcen og spille, litt komplisert, men ble lettere. klarte det til slutt, men med litt juksing.
- Det var veldig gøy fordi jeg savner timen er på engelsk. det er ofte veldig mye norsk, og det gjør timen veldig kjedelig.
- Det var veldig gøy å veldig fint å snakke engelsk. Det var bra vi snakket engelsk siden det er noe mange kan lære, det påvirker utalen og hvordan man snakker språket.
- jeg syns det var gøy fordi det var ett stressелеment og vi måtte kommunisere godt.
- i think it was fun, it was a little hard understanding every feature with it like the four letter code at first, but when i got more into it, it was alot easier.
- var gøy, utfordrene
- jeg vett ikke
- Var gøy og stressende. I starten ga alt lite mening, men etter en god stund med testing, ble det lettere og man forsto mer. Et bra spill.
- det var gøy og spennende

Samlet status



Appendix 10 – Interview guide

Spørsmål til intervju

1. Hvor lenge har du jobbet som lærer?
2. Hvilke fag har du i fagkretsen din?
3. Har du formell kompetanse i engelsk?
4. Hvor lenge har du hatt denne klassen?
5. Hvor mye erfaring har du med engelskundervisning?
6. Hvor mye engelsk underviser du?
7. Hvordan opplevde du timen med gaming? Forklar.
 - a. Hvor mye muntlig aktivitet pleier det å være?
 - b. Var det mer/ mindre nå?
 - c. Er alle i klassen vanligvis aktive i timene?
 - d. Har du lagt merke til noen som var mer aktive nå enn vanlig?
 - e. Har du lagt merke til noen som var mindre aktive nå enn vanlig?
8. Hva er dine tanker rundt det å bruke teknologi og digitale hjelpemidler i engelskundervisningen?
9. Hvilke tanker har du om bruk av gaming i engelskundervisningen som et verktøy for å lære språk?
 - a. Hvilke fordeler og ulemper mener du det har i skolesammenheng?
 - b. Kunne du brukt det i egen undervisning? Hvis ja, hvordan? Begrunn.
10. I den nye læreplanen nevnes det spesifikt at det skal brukes digitale hjelpemidler til å utvikle og lære språk, hvordan kan man møte dette kravet?
 - a. Hvorfor er muntlige ferdigheter så viktig i engelsk?
11. Dersom du har kjennskap til spill og annen input på engelsk som elevene får utenfor skolen, bruker du din kunnskap om det i timene?
12. Ser du en språklig effekt spillene har på elevene som spiller på fritiden i timene? Det språket elevene lærer gjennom spilling, er det nyttig? Nyttig i den form at de har et større ordforråd, tryggere på å snakke og bruke det engelske språket. Begrunn.

Appendix 11 – Interview transcription

Transkribering intervju med lærer

F: forsker/ researcher

L: lærer/ teacher

F: Hvor lenge har du jobbet som lærer?

L: Eh, dette er 5.året.

F: Hvilke fag har du i fagkretsen din?

L: Jeg har engelsk, krle, musikk og samfunnsfag.

F: Har du formell kompetanse i engelsk?

L: Ja, 60 studiepoeng.

F: Hvor lenge har du hatt denne klassen?

L: 3 år. Hatt de siden de startet på us.

F: Hvor mye erfaring har du med engelskundervisning?

L: Eh, jaa, har undervist i engelsk i de fem årene+ vært både på mellomtrinnet og ungdomsskolen. Så eh, fem år er ikke så lenge, men ja.

F: Hvor mye engelsk underviser du?

L: Underviser engelsk både i 8, 9 og 10. Klasse nå.

F: Hvordan opplevde du timen med gaming?

L: Eh, godt engasjement,engasjementet var høyt. De gav seg ikke, eh, tror de prøvde ulike strategier. Så skal det også nevnes at de som var her er blant de sterkest muntlige, slik at i en vanlig klasse som alle skal gjennomføre, så hadde det nok vært større utfordringer. Eh, ja, men synes det gikk veldig fint.

F: Hvor mye muntlig aktivitet pleier det å være?

L: Mindre enn jeg liker. Eh, du har en håndfull elever som er muntlig aktive, så har du noen som er det når de sitter i mindre grupper også har man de som ikke sier et pip. Så det er god spredning.

F: Men med tanke på at de som var med nå er blant de som pleier å være muntlig aktive, hvordan var det nå, like mye, var det mer, mindre?

L: Det er, eh.. Skal vi se. Når det kommer til muntlige oppgaver, var det nok mer nå, fordi dette va noe så engasjerte de mer. Det tror jeg. Ved muntlige oppgaver ellers så er det, så

lenge de er motiverte så er dette helt standart mengde språk de bruker for å løse oppgaver, hvis det ga mening? Det var faktisk også en av elevene som så å si aldri snakker engelsk, men det gjorde vedkommende nå denne timen.

F: Var det noen du så, uten å nevne navn, som var mindre aktive nå enn det som vanligvis pleier å være?

L: Ja, eh, litt i starten. Men lurer på om det har like mye med om de skjønner oppgaven helt, om det at de har en manual og ikke to, at de kan sitte å se parallelt om det hadde hjulpet litt, men etter hvert når de fikk bytte litt rundt så så jeg at vedkommende ble aktiv igjen. Så jeg tror, tror ikke at det hindra noe dette opplegget, tror mer det var er arbeidsfordeling innad i gruppen og forståelsen av hvordan løse dette på best mulig måte. Hvis det gav mening.

F: Ja, absolutt. Det kan jo ofte ta noe tid før man kommer helt inn i det. Generelt, hva tenker du om å bruke teknologi og digitale hjelpemidler i engelskundervisningen?

L: Eh, ja, jeg er veldig for. Jeg er veldig for å prøve og for å bruke de tingene som vi ser fungerer. Jeg tenker teknologi for teknologiens skyld er et feilskjær, men jeg vil aldri være redd for å bruke det. Jeg har brukt spill i denne klassen før, eh i 8.klasse, men da var formatet feil. Eh, ser det at for at det skal lykkes må elevene være “hands on” uten å være passive tilskuere på en måte. Fordi da er det bare de så engasjerer seg så tar en del i det, men jeg er positiv til det som funker, men ikke teknologi for teknologiens skyld, men teknologien for å løse didaktiske problemer på et vis.

F: Nå har vi jo prøvd et digitalt spill og gaming er jo veldig, som jeg nevne innledningsvis veldig mange unge som bruker mye tid på det. Hva tenker du om å bruke gaming som et verktøy for å utvikle seg i engelsk for å få til å lære seg bedre språk?

L: Ja, ehm, jeg tror egentlig, at mitt forrige svar da hadde jeg gaming i tankene på en måte. Jeg er for, fordi jeg har erfart selv for min egen del hvor viktig det er for ordforråd, engasjementet du opplever ved å gjøre noe som du synes er gøy, så blir læring, tror jeg, en del av det, du tenker ikke at du lærer, men du gjør det fordi du er så oppslukt i det du gjør, hvis du liker det du gjør, og både muntlige aktiviteter som her, hvor det er lesing, avkoding og kommunikasjon er kjempefint. Men så tror jeg det er stor forskjell mellom spill, jeg tror ikke nødvendigvis at spill som “Counter Strike” liksom, eller online skytespill. Det er klart at det kan funke hvis man er på lag og kommuniserer muntlig, men eh, det, jeg tror man ta spill for, se an spill for spill. Det er stor forskjell mellom online skytere og det som vi brukte nå, og for eksempel det som kalles digitale noveller som egentlig er en historie fortalt gjennom

spillmedium, slik som for eksempel "My Child Lebensborn" tror jeg det heter, eller "Gone Home", eh, det har jeg brukt. Vi bruker Mine Craft, så vi har brukt det, men med ymse, ikke at vi har gått skikkelig inn for det, men vi har hatt noen tekniske utfordringer. Eh, men jeg vet at det absolutt er mye å hente i spillmedie. Det tror jeg. Men slik jeg sa, vet ikke om dette er en avsporing, men med Minecraft har vi hatt problemet med oppsettet. Vi får, jeg kan ikke lage en server som de kan koble seg til som jeg har laget, så da ender det opp med at det blir elevstyrt og da mister vi litt kontroll. Så det er på en måte aberet skulle jeg til å si med å bruke spill i klasserommet, fordi man har ofte en teknisk begrensning som kan komme å forkludre, men eh, når det funker så er jeg veldig for.

F: Det leder meg litt inn på neste spørsmål, altså fordeler og ulemper med å bruke spill. Du har jo allerede nevnt noen, men har du flere fordeler og ulemper med å bruke spill i skolesammenheng?

L: Eh, godt spørsmål. Eh, jeg synes det er vanskelig å si på et generelt grunnlag, jeg tror nok kanskje man kan tenke oss at det er ulike spilltyper som kan passe for ulike enten nivåer eller årstrinn, man har jo dette med aldersgrenser. Eh, vi vet at alle elevene her spiller spill som det er 18 årsgrense, eller har gjort, sant? Skolen kan ikke ta en del i det, eller oppfordre til det, synes jeg da. På samme måte må vi bruke vettet når det kommer til hvilke filmer vi viser og slike ting, ikke sant. Jeg vet ikke, eh, jeg tror vi møter de samme utfordringer som vi møter når vi bruke hvilken som helst annen tekst, hvis man ser på spill som en tekst form, en multimodal tekst hvor man har både lyd, bilde og tekst. Så vil noen slite med å henge med på hva som skjer, eh, slik som dette her er, "Keep Talking and Nobody Explodes" manualen er veldig teknisk. Det er jo skrevet for voksne egentlig, det er ikke et barnespill med tanke på nivået. Slik at det er nok mange som vil slite, nå satt vi igjen med en gruppe med sterke engelskspråklige elever, både muntlig og skriftlig, så de klarer å løse oppgaven. Men det å passe på at det er noe alle kan mestre på et vis. Men igjen, det handler jo om lærerens evne til å tilpasse og fange opp både de sterke og svake elevene, og det møter man uansett om man bruker spill, eller tekst, video eller lyd eller..

F: Men hvis man tenker språklig, hvilke fordeler og ulemper ser du da?

L: Jeg tror det første er, fordelene er at det er, eh, det er todelt da. Eh, jeg vet at spill kan være veldig motiverende og da har man den, du gjør noe du synes er gøy. Skoledagen kan være

monoton, så det å bryte det opp med noe som er mer interaktivt tror jeg er en kjempe fordel. Både for den generelle motivasjonen, for trivsel på skolen, men og i læringssituasjonen som jeg sa tidligere, at du glemmer at du kanskje driver på med engelsk eller et fag fordi du er så oppslukt i det. Så tror jeg man møter faguttrykk eller ordforråd som du nødvendigvis ikke vanligvis bruker, som hva er det engelske ordet for “ledning”? Eller, eh, ja det er en del tekniske ting man kan komme inn på som kan utvide ordforrådet. Pluss at du må trene deg på ulike strategier, slik vi var inne på i klasserommet nå. Hvordan løser vi dette, hvordan kan jeg forklare dette på best mulig måte?

Når det kommer til ulemper, så, er jeg usikker, jeg er nok de blant de mer sånn åpne for nye ideer og ha teknologi inn. Eh, ulemper, det får du ikke i det spiller her da, men i spill generelt så har man av og til ufiltrert språk, så du har, det kan være sjargonger som man ikke ønsker at elever skal ta til seg, så kan man på en måte, må man være obs på det. Men igjen tilbake til det samme med aldersgrensestyrt og ja. Jeg tror det er naivt å tro at vi kan hindre de å ta en del av den sjargongen, om det er banning eller slures, eller hva det er. Det er naivt å tro at vi kan hindre det i skolen, fordi de tar del i det uansett på fritiden. Så jeg ser ikke noen umiddelbare ulemper med tanke på språkinnlæring, jeg tenker bruk av språk i alle settinger er positiv bruk av språk.

F: Eh, og du nevnte jo at du har brukt spill tidligere, kunne du brukt dette spillet i egen undervisning?

L: Definitivt! Jeg har vært innom tanken før og, før du kom, eh, så derfor var det ekstra gøy å se hvordan det fungerte. Dette er jo et spill som trener avkoding/ lesing, kommunikasjon, ordforråd, det er så mye om foregår som du må, du må innom så mange ulike deler av språket for å løse denne oppgaven. Så ja, definitivt.

F: Så kjekt. I den nye læreplanen nevne de spesifikt at man skal bruke digitale hjelpemidler til å utvikle og lære språk. Hvordan tenker du at man kan møte det kravet?

L: Digitale hjelpemidler er jo så mye. Det kan være skjermen som henger på veggen, det er et digitalt hjelpemiddel. Det er pc foran dem, det er ulike, det er mobilen deres. Det er så mange ting som det begrepet rommer. Så jeg tenker det at en grunnholdning til læreren må være “ja, dette har jeg lyst til å prøve”, tror jeg. Erfaringsdeling er ekstremt viktig. I et hvert kollegium har du slike som meg som er veldig entusiastiske, eh også har man de som ikke er så vant til å bruke det, som er mer sånn “dette synes jeg er litt ubehagelig eller dette vet jeg ikke hvordan

funker”. Så det å være raus med hverandre og ha det som en grunnleggende holdning, at idedeling, veiledning, det er avgjørende tror jeg. Også tror jeg faktisk det er en ide å lytte til elevene og. Tiktok, sant? Aner ikke, har aldri brukt det og det er en verden jeg ikke kjenner til, men det er en del av deres virkelighet. Det å kunne klare å bruke medier som de er vant til på en god måte, eh, ikke være redd for den mobilen, sant? Det er den de bruker. Så må vi også lære de å bruke de “tunge” verktøyene, sant. De kommer til å møte Excel, de komme til å måtte holde et muntlig foredrag, om de gjør det gjennom tiktok eller en powerpoint, altså, vi må kunne kurse de i å bruke varierte oppgaver, og metoder og verktøy, eh, på best mulig måte. De må ha opplæring. Også tror jeg ikke vi må være redd for å ta i bruk andre verktøy enn det vi selv er vant med.

F: Hvorfor er muntlige ferdigheter så viktig i engelsk?

L: Eh, *tenketid*

Målet med et hvert fremmedspråk er jo å gjøre seg forstått og kommunisere med andre. Både i jobbsammenheng, selvfølgelig, sant, du vil møte internasjonale sammenhenger, du vil, i gaming, sant, det å være i stand til å kommunisere med andre på fritiden med folk som er fra andre deler av verden som ikke deler samme morsmål som deg, så er dette her med muntlige ferdigheter helt essensielt. Hvis du er livredd for å snakke det, du kan ha et kjempegodt skriftlig språk, men hvis du aldri får øvd deg i å bruke språket og formulere setninger “on the fly”, eh, så tror jeg du gjør deg selv en bjørnetjeneste. Og hvis det er en plass du virkelig kan legge til rette for det så må jo det være i engelsktimene. Eh, ekstremt store spørsmål, *ler*. Men, jeg tror, det er altså kommunikasjon. Evnen til å kommunisere med den andre.

F: Ja. Eh, hvis, eller det virker jo som du har en del kjennskap med spill selv, kjenne du til på en måte spill og andre kanaler, du nevner blant annet tiktok, men også andre kanaler der elevene får input av engelsk utenfor skolen. Hvis dette er noe du kjenner til, vi har vært inne på det litt tidligere, bruker du det i undervisningen din, bruker du det i planleggingen din, har det i bakhode? Du nevnte jo at man kan høre med elevene og legge seg på deres “kanal”.

L: det er lettere å snakke om det enn å gjøre det. Eh, og litt og, man har en utfordring med personvern og litt slike ting. Vi kan ikke tvinge elever til å bruke en app som for eksempel tiktok. Jeg vil jo faktisk direkte anbefale å direkte ikke bruke den med tanke på personvern. Eh, det er jo en utfordring med digitale medier og slike ting, eh, som er organisert på en,

eh, grusomme når det kommer til personvern. Du deler så vanvittig mye av dine posisjoner, interesser og historikk. Det er en utfordring, vet ikke om det er en avsporing, eller ikke. Jeg ville ikke brukt tiktok en, et faktisk verktøy, men spørsmålet ditt var vel, eh?

F: Om du bruker, hvis du kjenner til det elevene bruker på fritiden, tar du det med inn i planleggingen og inn i klasserommet?

L: Ja, eh, slik. Nei, ikke egentlig. Det er veldig, vi jobber ofte temabasert, for eksempel FN, rettferdighet, Indigenous people og slikt. Da er det mye lettere og tryggere å søke opp de verktøyene og de ressursene vi vet inneholder korrekt informasjon. Så kan man jo si "ok, en kan man legge til rette for at elevene skal gjengi eller presentere det de har funnet ut ved et annet verktøy enn ved skriftlig tekst eller gjennom PP. Det kan vi nok bli bedre på. Og det, nei, jeg kan ikke si at jeg gjør det. Jeg liker tanken, eh, jeg tror ikke vi skal være redd for å tenke at det finnes muligheter utenfor det som vi er vant til, men jeg tror vi skal være forsiktige med tanke på tiktok og personvern og slikt. Jeg kjenner lite til, eh det er jo tiktok og snap, og er det mer enn det så er det ukjent for meg. Det er en del av det digitale som er utenfor mitt felt.

F: Også, ser du de elevene som spiller på fritiden, ser du at de har en språklig effekt av det i timen? Tar de med seg det de lærer inn i klasserommet?

L: Tja, jeg sier det fordi jeg synes det er vanskelig å måle. Jeg vil utvide det litt også, en del av denne gaming kulturen det er å sitte å se på youtube videoer av andre folk som gamer og kommenterer og slike ting. Jeg merker en viss sjargong som eh, blant de som jeg ser igjen litt fra den type medier. De er gode til å, vi har hatt et prosjekt om gaming der de skulle presentere et spill og lage en podcast om det. Da er det noen som er veldig, legger seg veldig på denne her youtube stilen med, eh, ja. Så ja jeg gjør kanskje det, men samtidig mange av disse som gamer snakker med hverandre muntlig, men de snakker jo først og fremst på norsk. Så jeg synes det er vanskelig å si, men jeg vil jo tro det. Enhver instans der de bruker språket er en mulighet til å utvikle seg, så jeg tror jo det, men det er vanskelig å måle.

F: Ja, muntlig er på denne måten vanskelig å måle på en god måte. Vi har vært inne på det før, de du vet gamer, er det språket de lærer av gaming, er det nyttig? Eller er mer ufint språk? Har det en nytteverdi?

L: Jeg tror absolutt det har nytte for seg. Jeg tror det er en del sjargonger eller slures som de plukker med seg, men det tror jeg er en naturlig del av det fordi de blir eksponert av en type språk som, banning er jo også autentisk, det er jo en del av språket. Men jeg ser ikke det at de som gamer har styggere eller mer utbredt bannende språk enn andre, så jeg tror vi bare må godta at det er en del av pakken. Eh, også tror jeg definitivt at de har nytte av det. Det er ikke bare i klasserommet du lærer engelsk, det er på bussen når du ser en tiktok video eller du lærer det når du sitter foran en pc og gamer fordi du får, du blir utsatt for autentisk språksituasjoner som du må, eller må eller kan respondere til om det er skriftlig, at det er spillet som forteller deg noe, om det er en karakter i et spill, et historiebasert spill som forteller deg hva du skal løse, forklare hva du skal gjøre, du må lytte, du må tolke og agere ut ifra det. Eller om det er en lagkamerat som ber deg om å gjøre noe for laget, en ekte person da, så er det kommunikasjon og kommunikasjonstrening. Også er det jo slik at man lærer språk ut ifra kontekst og, så hvis det er et ord du ikke kjenner til, så kan man jo enten har du muligheten til å spørre “hva mener du?”. Litt slik med det spillet vi hadde nå, at man kan si at man ikke skjønner hva du mener, kan du forklare det på en annen måte? Eller du kan forstå ut ifra kontekst. Tror jeg svarte på spørsmålet.

F: Jeg har ikke flere spørsmål, men hvis du har noen flere spørsmål eller noe du ønsker å legge til så må du gjerne det.

L: Ja, nei. Det jeg savner, når vi snakker om gaming, fordi det er fort gjort å si “det hadde vært kult å få til”. Også har man sjeldent ressurser, skolen til å kjøpe inn, enten pc eller ipad eller hva det skulle være, selve plattformen som er sterke nok også skal du ha riktig kvanta. Det er en del tekniske utfordringer som hvert fall har hindret meg i å bruke det aktivt, fordi hadde man hatt en datalab med pcer stående og kunne hatt lisenser på de kontra at hver elev har egen pc. Så er det en del, det kompliserer det litt med tanke på distribusjon, men så er det vanskelig. Det krever nok noen som er litt inni det, for å se mulighetene, men jeg tror og håper vi kommer til å se mer av det. Jeg synes det er en kjemperessurs som vi som skole har godt av å utnytte fordi det er en plattform og et medium som elevene liker og er kjent med. Jeg er for.

F: Ja, hvis det brukes på en god måte tenker jeg det er en god ressurs som treffer elevene på noe de liker.

L: Jeg tror det hjelper på skolehverdagen også, indre motivasjon. Du lærer i fellesskap hvis det er sosiale spill slik som dette her. Eh, men slik jeg sa innledningsvis, det å bruke teknologi for teknologiens skyld er et feilskjær. Fifa tror jeg ikke har nytte for seg, du er oppslukt i det du gjør, det er ikke snakk om kommunikasjon, helt mekanisk. Spill som enten presenterer en historie du må tolke, eller presenterer en utfordring som fordrer kommunikasjon eller avkoding av tekst. Det tror jeg absolutt elevene kan ha nytte av.

F: Spill kan jo kategoriseres ut ifra hva de lages til, og noen er jo laget mer for læring, mens andre typer spill, slik som det vi har brukt nå, som har et læringsutbytte, men man glemmer at det kan være en læringsituasjon.

L: Ja, og ikke bare bruke på riktig måte, men velge ut spill som man kan lære noe av. Jeg tenker at så lenge det oppleves givende på et vis, og må bruke engelsken på ulike måter så tenker jeg dette er et pluss. Så må man ikke glemme at dette er et supplement, og ikke basere engelsken på det. Det er et verktøy av mange, i en stor verktøykasse.

F: Absolutt. Men da, hvis det ikke er noe mer så sier jeg tusen takk.

L: Jo, selv takk. Det var veldig spennende.