

UNIVERSITY OF HELSINKI

The Sims™ 4 as an Extramural Learning Environment for Vocabulary Development of L2 English Learners

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Abstract: With the integration of digitalisation into daily life and education, video games have emerged as valuable tools for learning and teaching. The use of video games in both school and EE contexts has garnered increasing attention. However, given the evolving nature of this field and the vast array of available games, there remains a need to explore teachers' attitudes towards video games as digital learning environments and to identify suitable games for this purpose. Therefore, this thesis examines The Sims™ 4 as an extramural learning environment for vocabulary development of L2 English learners.

This study analyses the materials gathered from the gameplay recordings of The Sims™ 4, by six EFL teachers, their interviews, and their gaming sketches. The interviews comprised three parts, with the second dedicated to teachers experiencing gameplay. This research employs mixed methods, using multimodal analysis to examine The Sims™ 4 and qualitative content analysis to analyse the interviews and gaming sketches.

The analysis reveals the following key findings: Firstly, The Sims™ 4 provides a multimodal digital learning environment that enhances exposure to the target language, fostering vocabulary development and other skills for L2 English learners. Secondly, while EFL teachers acknowledge the benefits of extramural English activities and video games, they lack the necessary competence to integrate them effectively. Addressing this gap through targeted training can enhance their ability to utilize such resources. After initially hesitating to use or recommend video games due to perceived incompetence, EFL teachers shifted their stance upon experiencing The Sims™ 4. This highlights the potential for teacher training to address perceived barriers and facilitate digital learning environments.

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1 Introduction

Digitalisation has become an inevitable part of the everyday lives of human beings as a result of technological developments. Its undeniable significance reveals a necessity for its integration with learning environments to succeed in education and catch up with current trends. Digital environments, particularly by breaking the concept of distance and bringing people from different languages and cultures together easily, have created an area for the utilization of foreign languages. Thus, digital learning environments that can be used in foreign language learning process have emerged. Eventually, digital learning environments have created diverse benefits and opportunities for English as a foreign language (EFL) and extramural English (EE).

Digital learning environments have recently started to be used by both teachers and learners increasingly in EFL and EE settings (Sylvén & Sundqvist, 2012; Meyer, 2012; Scholz, 2015; McNeil, 2020; Beauprez, 2021; Ipek & Mutlu, 2022). One of the materials for digital learning environments, i.e. video games, due to various reasons such as the potential to provide authentic English exposure and to create high motivation for language learning has drawn attention from scholars (e.g., Miller & Hegelheimer, 2006; Ranalli, 2008; Sundqvist, 2019; Larenas, Palma & Valdés, 2023). As a few studies (Miller & Hegelheimer, 2006; Ranalli, 2008) have shown some teachers use video games in classroom settings. However, due to the fact that using video games as EE activities is an emerging topic which has just started to draw attention, there is still a need for conducting more research to demonstrate teachers' attitudes towards the utilization of video games as digital learning environments in an extramural context.

Additionally, EFL teachers as the material selectors and guides in this context have a significant role in the utilization of video games which will be used as digital learning environments. Teachers, who influence the learners outside of the school context as well as school settings, are the first-hand sources that students are reaching regarding their English needs most of the time. Furthermore, technological developments have influenced the competencies that they should have, to be more prominent and successful in teaching. Namely, they should be aware of the digital learning environments and materials for them. Therefore, both as being the guide for L2 English learners and contemporary competent English teachers, their knowledge regarding digital learning environments and video games

should be sufficient to integrate and propose a video game for EE as they would recommend an English book.

Teachers' attitudes towards video games as extramural digital learning environments should be researched to reveal their position in the utilization of video games for L2 learning. Even if EE activities are done outside of the classroom for mainly entertainment purposes, not solely to support language learning, as they increase the exposure to the language and serve the ultimate goal of L2 teaching, the teacher's role in both EFL and EE contexts is highly significant to interpret the material to be used to decide whether it can be beneficial or not. Teachers as the guides are expected to be aware of numerous materials for teaching and learning such as novels, activity books, songs, etc.; however, a similar expectation is not raised for teachers' knowledge regarding video games whose significant effect on language learning was demonstrated in a variety of studies such as Uuskoski (2011).

Teachers are responsible not only for teaching in classrooms but also for sustaining the goal of language teaching by providing the necessary support, such as suggesting materials that students can use during their out-of-school time. By increasing their knowledge of video games and gaining experience to decide which games and how they can be used for language learning, they can provide sufficient information to learners. Thus, learners can be aware of video games which they can play and improve language skills in EE contexts without constant external help. Thanks to it, the flexible time learners spend outside of the classroom can be utilised by playing teacher-suggested video games, which provide authentic input and increase exposure. In addition, while keeping their motivation high, this will make learners more autonomous yet controlled in a way thanks to teachers' approval of video games for their language learning potential.

With today's technological development and opportunities to access digital learning environments within seconds as well as considering the learners' interests and motivation to use video games, the potential of video games as extramural digital learning environments should not be wasted. Thus, teachers' approaches to EE and digital learning environments should be explored further as well as their beliefs about video games and their competencies. Moreover, a video game as an extramural digital learning environment from the perspective of teachers should be examined to investigate their opinions regarding digital material selection.

This study aims to reveal the importance and feasibility of above-discussed issues by selecting a video game, the analogue of which was found beneficial for L2 learning (Miller & Hegelheimer, 2006; Ranalli, 2008), The Sims™ 4 as an extramural digital and multimodal learning environment to analyse the attitudes of 6 EFL teachers who played it for the first time to share their opinions. In the light of these issues, this study poses three research questions.

1. What type of a multimodal environment does The Sims™ 4 provide for extramural English in terms of vocabulary development?
2. What are the EFL teachers' attitudes to video games as Extramural English activities?
3. What are the EFL teachers' attitudes towards The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners?

After examining such issues, it can be seen whether teachers already feel competent or not regarding the utilization and integration of video games and digital learning environments in EFL and EE contexts. In addition, their material selection practices can put a possible need for supplementary material forward that teachers can reach. Thus, it can be discussed if there is a need for teacher training, curriculum change, and so on in order to increase the competence of EFL teachers to succeed in digital learning environments which have been influenced by recent technological developments.

This thesis is structured into several sections. Chapter 2 delves into the theories relevant to the research topic. Following this, Chapter 3 elaborates on the materials and methods utilized in this study. In Chapter 4, the analysis and results are presented. Then, Chapter 5 addresses the research questions and discusses the significance of the findings in relation to previous research. Lastly, Chapter 6 suggests areas for further research and concludes the thesis with final thoughts.

2 Theoretical Background

2.1 Extramural English

Extramural English (EE) is an umbrella term that was coined by Sundqvist (2009) to define the use of English language learning (Ipek & Mutlu, 2022) outside of the school context. According to Sundqvist (2009), it refers to “the English that learners come in contact with or are involved in outside the walls of the classroom” (p. 1). The activities that learners do voluntarily with interacting with the language have started and progressed naturally (Ipek & Mutlu, 2022) outside of the school context without any obligation of school such as homework, school projects, and so on are accepted as EE activities. Similar to Sundqvist, Benson (2001) mentions out-of-school activities as “any kind of learning that takes place outside the classroom and involves self-instruction, naturalistic learning or self-directed naturalistic learning’ (p. 62); however, makes a distinction from EE activities as considering them as a part of school by citing “additional programs in school that are less formal than regular lessons and possibly organized by students themselves” (Benson, 2011, p. 9). Thus, Benson (2011) accepts extra activities that learners do for language learning as out-of-classroom activities; however, in the school context. Even though extracurricular activities such as courses at schools or study groups are organized out-of-school time, they are conducted at schools and related to school themes. Therefore, following Sundqvist’s (2009) definition, which makes a certain distinction of EE and renders it apparently compared to out-of-school language learning activities, will be more accurate.

The EE activities that learners can engage in learning a language are various. Playing video games (Sundqvist, 2009; Coşkun & Mutlu, 2017), reading e-/books (Ipek & Mutlu, 2022), news or magazines, listening to music (Sundqvist, 2009), watching series, movies, or digital content on social media platforms (Sundqvist, 2009; Schurz & Sundqvist, 2022), texting in English (Schurz & Sundqvist, 2022) and so on can be given as examples of EE activities. Learners can find the most feasible, motivating, and beneficial EE activity according to their interests by experiencing the options in time.

EE activities do not require external support; thus, promote autonomous learning (Ipek & Mutlu, 2022). Therefore, learners follow their own learning strategies and opt for the one that suits their interests most. However, during their selection process, teachers’ role in motivating their students to take part in EE such as playing video games may be crucial

(Sundqvist, 2009). In other words, learners can be influenced by their teachers while choosing EE activities. For instance, teachers may mention about a film in L2 during the class and tell it may help students improve their listening and vocabulary skills. Hence, nevertheless learners decide whether they will watch it or not at the end of the day, teachers' effect on motivating them to watch it is undeniable. While boosting autonomy and creating possibilities for using learners' interests, EE activities increase motivation (Coşkun & Mutlu, 2017; Beauprez, 2021). Eventually, learners benefit from engaging EE activities and become more autonomous.

As a part of their content, playing video games may provide more opportunities than some other EE activities. To begin, playing video games as an EE activity may take more time so that it might increase the exposure to the target language more than other activities can. Furthermore, learners' interaction with the setting in video games such as interacting with the visuals and text, manipulating the game environment, etc. requires active participation which might not be necessarily required in other EE activities such as reading books or listening to music during which the learner is mostly in a position of recipient. Moreover, playing video games may offer a combination of different EE activities. For instance, in his study, Gee (2003) mentions that playing video games creates a new literacy type similar to writing pen and paper and reading books (Sundqvist, 2009). Therefore, by blending the EE activities in one, playing video games as an EE activity offers a setting in which learners may benefit from examples of other EE activities as well. Ultimately, using video games as an EE activity will increase students' motivation to learn language outside of the school context, ensure their autonomy, and increase their exposure to English.

2.2 Digital learning environment

The learning environment is one of the most significant factors in language learning process. As being the part of the context in which they are practiced, the things which are expected to be learnt are directly related to the environment where they are learnt and demonstrated (Escudeiro & Carvalho, 2013). Digitalisation and technological developments have created possibilities for new learning environments. Some of these learning environments can be manipulated according to the goals and needs of learners. For instance, digital learning environments offer a variety of engaging features for learners and provide creativity, accessibility, and freedom. Digital video game-based learning environments go a step

further and include more features by allowing learners to manipulate the environment as well. By combining video games with the digital environment, they create a setting, in which learners have roles in stimulated realities that they may not be able to do in real life, for almost everything that they would like to do (Pavlova, 2012).

Playing a game to learn a language or in other words, using a digital game-based learning environment provides learners “quiet time” (Rudis & Poštić, 2018, p.120), visualization, and an opportunity to be active participants which eases the learning process. Firstly, the quiet time enables learners to have a moment to think and look something up. In some games, players may have a chance to do the quests over again which lets them decide what they wish to do during play time. There can be some times in which players may not have to do anything but have time to plan what they will be doing next thanks to the quiet time as well. Additionally, in some others, this feature is provided by giving control to the player to pause the game which gives the learner a moment to think or do whatever is needed such as looking for a word; however, most of the in-class activities cannot be ignored and may take more time. If you lose your chance to answer, you lose it.

Secondly, player-learners get a chance to see the visualization and read or hear the target linguistic input and contextualize it thanks to digital game-based learning environments. Having visualization in a learning environment is significant that visuals support the target words to be learnt (Sundqvist, 2009). For instance, when a phrase or word is shown on the screen with an object or a visual referring to it, the learning process gets quicker relatively in comparison to the other learning environments (Rudis & Poštić, 2018). Therefore, digital learning environments provide contextual settings in which learners can practice materialities in different forms together.

Thirdly, being an active participant in a game setting and learning while practicing with visuals help effectively to the learning process as mentioned above. As Rudis and Poštić (2018) state “Games, even in the most rudimentary cases, revolve around player agency. Instead of being a passive observer, a player in the game is an active participant.” which lead them to think and spend more time on the actions that they will do and decision that they will make in order to succeed (p.120). Therefore, the time player-learners spend on the game, during which they are exposed to the target language material by not only observing,

but also participating actively in situations, is used more efficiently than other activities which limit the learner to be a recipient.

2.2.1 Why video games?

Video games are authentic materials which can be used in foreign language teaching (Sylvén & Sundqvist, 2012). The new generation approaches digitalisation from a closer point than previous ones and sees it as an opportunity to access information more easily and in a shorter way by accepting technology as an integral part of their everyday lives (Matijević & Topolovčan, 2019). Moreover, as Matijević and Topolovčan (2019) point out “they prefer gaming to working”, they adopt gaming into their lives more than working which is one of their routines due to a necessity (p.8). As they mention, this new “net generation or game generation” may have an important impact on learning (Matijević & Topolovčan, 2019, p.8). Additionally, studies such as Uuskoski’s (2011), in which he finds that video game players have significantly higher English grades than the ones who do not play video games and argues that there is an undeniable relation between learning English and playing video games, demonstrate the benefits of video games in terms of EFL learning. Thus, adapting the game and learning environment may offer significant benefits that meet the needs and expectations of the current learning process and motivate the learners. Seeing the learning process as engaging, learners can keep their motivation high to spend more time on activities. At this point, the combination of EE activities and a digital game-based learning environment may offer above mentioned opportunities for engaging learning or ‘gaming for learning’. Especially when language learning is considered as a pretty long process, making this long path fun and keeping learners’ passion to learn high will ease the burden of learning a foreign language.

2.2.1.1 Motivation

An essential necessity to learn a foreign language is motivation (Sylvén & Sundqvist, 2012; Mašić & Tarabar, 2021) which feeds the determination, passion, and continuity without a doubt. Video games offering an engaging atmosphere are highly motivating for player-learners (Sylvén & Sundqvist, 2012; Rudis & Poštić, 2018; Escudeiro & Carvalho, 2013; Matijević & Topolovčan, 2019; Ranalli, 2008; Scholz, 2015; Reinders & Wattana, 2014; bin Zainuddin et al., 2021). Studies on using video games in language learning have revealed that students’ motivation increases thanks to the engaging (Escudeiro & Carvalho, 2013) and

confidence-boosting environments of video games. Supportively, Larenas, Palma, and Valdés (2023) mention a case study (Kongmee et al., 2012 cited in Larenas, Palma & Valdés, 2023) on Thai English as a second language (ESL) learners. As the study presents, the confidence of player-learners regarding English use and their motivation increase due to the engaging atmosphere of video games when they participate in virtual worlds. Furthermore, various studies have shown that using video games in a digital context increases students' motivation to participate in the activities and learn the target language (Sylvén & Sundqvist, 2012; Pavlova, 2012; Reinders & Wattana, 2014). Alyaz and Genc (2016) state that motivation is the determining factor for students to have positive perceptions of games. Moreover, the interactivity that video games set as a base for player-learners, which they can benefit from while practicing, plays a role in motivation as well (bin Zainuddin et al., 2021). Therefore, motivation is one of the most significant factors for success in using video games in language learning.

2.2.1.2 Time

Sylvén and Sundqvist (2012) claim that time is an indication of motivation that L2 learners spend playing video games voluntarily in their free time. Thus, seeing this as a referent the time that player-learners spend in game playing may suggest that video games can be used as a tool in EFL teaching and learning. However, there are two crucial points, such as seeing video games as a waste of time and time-taking (Larenas, Palma, & Valdés, 2023), which should be discussed beforehand. First, some parents, teachers, and even students may think that they would waste their time while playing video games. From the parents, teachers, and students' perspectives, video games may be seen as spare-time activities which do not serve any informative purposes. Nevertheless, as it is mentioned, Uuskoski (2011) presented that video games are not a waste of time, instead they are beneficial for foreign language learning. Moreover, even most of the commercial off-the-shelf games (COTS) (Sundqvist, 2019), games which are designed for entertainment rather than educational purposes, include numerous informative tasks which players can benefit in terms of language learning. Thus, to overcome their misinformation or groundless thoughts regarding video games as time-wasting, parents, teachers, and students should be informed. Second, due to the wide range of topics and comprehensiveness of the video games they may take more time than the usual ones. However, if the ones that serve the best of the learning goals are selected and they are used as EE activities, the problem will cease. Apart from this, using them as an EE activity

will assure player-learners to use their time more efficiently compared to doing another activity which does not serve the purpose of language learning. Consequently, player-learners can benefit from the time they spend on video games by turning the odds in their favour.

2.2.2 Benefits of video games as digital learning environments

Video games are more than engaging activities that people play to amuse themselves and spend some time. Contrary to the common belief ‘video games are a waste of time’, even most of the commercial off-the-shelf games (COTS) (Sundqvist, 2019) do include informative tasks or a context which can be used as a learning environment that player-learners can benefit from their various aspects. Video games that are released nowadays do “facilitate the learning of entrepreneurial skills, which makes them suitable for learning and means that they are of benefit to the player” (Eichenbaum, Bavelier, & Shawn, 2014 cited in Matijević & Topolovčan, 2019, p. 5). Previous research (Matijević, 2016 cited in Matijević & Topolovčan, 2019) on people who have played video games during their childhood has shown that there are significant beneficial outcomes such as lifelong competencies that playing video games may bring along. When these outcomes are put together and divided into categories, eight main groups are formed respectively: “entrepreneurial skills, teamwork, creativity, motor competence, effective learning skills, managing emotions, multiculturalism and career guidance” (Matijević & Topolovčan, 2019, p. 6). Apart from these, video games give autonomy (Larenas, Palma & Valdés, 2023) to the player-learners and promote independent learning. Moreover, thanks to their pressure-free environments that do not have strict evaluation methods to determine player-learners’ learning progress, the self-esteem of player-learners increases (Rudis & Poštić, 2018). Therefore, using video games as learning environments will enhance important skills and create outcomes that are sought and promoted in learning and improve the competencies of learners in a variety of ways.

2.2.3 The type and environment of a game

Thanks to the developments in the gaming industry, there are various types of games. Although games may have their own complexity, not every game genre may suit the goals of a learning plan. Even when the scope is narrowed down to ‘video games’, it has numerous

genres some of which consist of only visuals or sounds that do not serve the purpose of English language teaching. Therefore, choosing the right genre and game is significant to achieve the goals of foreign language learning. Thus, thanks to the selection of the genre and environment of the video game, it can be assured whether a meaningful setting is provided for learning or not.

When the environment of a game is supported by the learning objectives, the outcome can be more meaningful. As Escudeiro and Carvalho (2013) state “If the game structure is directly related to the learning objectives, as in a simulation, it can be even more effective, since it combines the challenge of a game with a safe place to practice real-life skills” (p.646). Even though there is no need to set learning objectives in the case of extramural English activity, using simulations can be more efficient than other types of video games due to the context they provide in which both imaginary and real-life scenarios can be practiced. The nature of simulations sets the rules and goals for the games and creates opportunities for learning. Hence, choosing a simulation game contributes to language learning in a digital game-based learning environment without external support, instead, it forms its own support.

2.2.4 Simulations

Simulations offer authentic, real-like settings both for imaginary and real-life situations that learners can act as themselves or someone else in an environment which is pressure-free and re-experienceable. Miller and Hegelheimer (2006) define simulations from the use of students’ perspective, and they draw attention to learners’ active participation and decision-making, “a simulation includes a realistic setting in which the student is presented with a problem, the student executes a series of inquiries, decisions, and actions, and the student receives information about ways the situation changes based on the decisions and actions” (p.312). Therefore, although simulations are not necessarily based on reality, they provide an environment in which participants, in this case learners, can learn and practice with real inputs by making decisions and participating actively.

Simulations which are regarded as a subcategory of educational games (Alyaz & Genc, 2016) or in other words serious games, create a basis for learners to experience language learning in different -most likely- real-life scenarios by minimising the fear of making mistakes

(Miller & Hegelheimer, 2006; Ranalli, 2008). While offering an environment where learners can take on roles and act as others as well as themselves, simulations decrease the reluctance to take part in the activities due to fear of making mistakes. Thus, they are safe places to practice real-life skills which provide a pressure-free atmosphere for language learners (Escudeiro & Carvalho, 2013).

As taking the language from the real world (Miller & Hegelheimer, 2006), simulations provide a variety of different words that EFL learners may not come up with in their daily lives easily. Thus, a simulation ensures learners experience and utilize language in numerous topics and offers contextual learning. Furthermore, simulations have been mentioned as beneficial for vocabulary development (Reinhardt & Han, 2021), ranked among the top suggested genres for game-based language learning (bin Zainuddin et al., 2021; Reinhardt & Han, 2021), and preferred in L2 vocabulary teaching because they provide a basis for various words to appear together in a meaningful context. Having been used in language classrooms in several ways and proposed for use in language learning for decades (Ranalli, 2008), simulations set upon the idea that “activity and situations are integral to cognition and learning” (Brown et al., 1989, p. 1; cited in Miller & Hegelheimer, 2006), are useful for vocabulary development both as tools for in-class activities and extramural English activities.

Simulations promote active participation and offer learner-centred activities (Miller & Hegelheimer, 2006). In simulations, learners need to participate actively in order to learn more about the presented situations and problems to succeed. Therefore, when doing English activities in simulation forms, the learners practice English by experiencing it. In other words, they take part in learner-centred activities which provide an opportunity to learners for finding a solution without “the authoritative persuasion of a teacher” (Ranalli, 2008, p.442) to accomplish the given tasks. Their active involvement demonstrates that simulations promote learning by experiencing and provide opportunities for outcomes such as learning subconsciously and autonomously. So, as being the ones who experience rather than being the outsiders or needing external support from teachers, learners acquire higher levels of thinking and cognitive processing as well as achieving autonomy.

The player-learners receive instant feedback and guidance from the simulation when there is a need to explain the events occurring, quests, and goals in it (Ranalli, 2008). Additionally,

the simulation ensures them to be their own guides which supports their decision-making skills. Furthermore, the learners can stop to think more, opt for their decisions, try again, and start from the point that they wish thanks to the simulations that have pause and repeat features. Such features offer doing the activities, pausing the game, and re-experiencing the situations in the simulation as much as the learners desire. Therefore, simulations offer more flexibility in terms of using the time for decision-making, re-experiencing the simulated situations, creating the context that various words can be used, and allowing the learners to be active participants during the process.

2.3 The Sims™ series

By providing a wide range of content, The Sims™ series (respectively The Sims™, The Sims™ 2, The Sims™ 3, and The Sims™ 4) have become different focus points for a vast number of studies (Miller & Hegelheimer, 2006; Hsiao, 2007; Ranalli, 2008; Rak, 2015; Cansever & Poyraz, 2021; Pettini, 2021) since early 2000s. The most notable of these studies in terms of teaching English are Miller and Hegelheimer's (2006) and Ranalli's (2008) research on using The Sims™ as a learning environment for ESL students' vocabulary development.

Miller and Hegelheimer (2006) consider The Sims™ and simulations as a possible learning tool and examine the game in the light of Chapelle's (2001, cited in Miller & Hegelheimer, 2006) framework for evaluating tasks. While noting that the majority of the control belongs to the learner, they (Miller & Hegelheimer, 2006) see this freedom as a challenge that hinders preparing students for the linguistic features which they come across during the gameplay time in the course. However, there is a point which they do not consider. The challenge that they accept is the reflection of real life. Not every single linguistic feature can be encountered in the daily lives of ESL or EFL learners either. Thus, the proposed challenge is limited. In their examination, Miller and Hegelheimer (2006) find that students' results in the vocabulary section of the quiz increase after they receive explicit vocabulary instruction. Furthermore, Miller and Hegelheimer (2006) state that "the role of the instructor is crucial and computer simulation games in no way provide a substitute for ESL practitioners" (p.323). Therefore, they draw attention to the importance of the instructor and instruction of target content and input. Even though they point out the challenges of using The Sims™ and the importance of instruction for vocabulary learning, Miller and Hegelheimer (2006) finalise their words by mentioning that with further developments The

Sims™ may meet the necessities and go beyond ESL. Their eventual approach to The Sims™ can be interpreted in relation to their students' feedback because students have expressed that The Sims™ assisted them in their vocabulary development and found the game enjoyable and informative (Miller & Hegelheimer, 2006). Fortunately, further research on The Sims™ series and its use in English teaching and learning provides a comparison and consideration of the statements that they made.

A further and significant study on The Sims™ was done by Ranalli in 2008. In his research, Ranalli (2008) focuses on the utilization of The Sims™ as a classroom activity by selecting 30 words from the game context and using vocabulary exercises to observe the game's effect on vocabulary acquisition of 9 intermediate-level ESL students who study at an American university. According to the findings, a COTS game The Sims™ can be adapted to serve as a tool for ESL students, and additional materials, which are used to support the playtime, have an effect on vocabulary acquisition (Ranalli, 2008). Additionally, it is stated students agreed that The Sims™ helped them improve their English. Furthermore, a majority of the participants indicated that playing the game with partners is efficient and not only promotes discussion during the gameplay time, but also helps figuring out what they should do next. Although Ranalli (2008) states the limitations of the study such as the small sample size and the use of self-reporting data that are used in the study hinder making a general conclusion, he mentions that findings support Miller and Hegelheimer's (2006) quantitative findings which suggest at least there are remarkable tendencies. Consequently, despite the limitations, the study (Ranalli, 2008) represents an important example of the use of The Sims™ as a learning environment which is found effective according to the research and opinions of the participants.

Both studies (Miller & Hegelheimer, 2006; Ranalli, 2008) constitute milestones for the use of The Sims™ and vocabulary acquisition research. They assess the game and present the benefits and drawbacks of its utilization. First, using the game in a school context and providing supplementary materials and instruction show that it is possible to adapt a COTS game, The Sims™, and use it as a learning environment. Second, the opinions of participants display that they find the game beneficial and engaging. However, in both studies, researchers (Miller & Hegelheimer, 2006; Ranalli, 2008) mention the limitations of the studies and draw attention to the need for further research. From this aspect, considering that both studies were done more than a decade and a half ago, the drawbacks that Miller

and Hegelheimer (2006) and Ranalli (2008) pointed out may have lost their impact. Apart from this, approaching the topic from different points and opting for the context are necessary to ensure the effect of the game on vocabulary development. Therefore, both studies establish instances and represent the possibility of using The Sims™ for vocabulary teaching and learning while mentioning that it is important to do more research on it.

2.4 Multimodality

Multimodality, which is an attention-taking topic in academia, has a vital significance in EFL teaching and learning. It should not be considered separately from multimodal aspects due to the interconnectedness of the skills that constitute language. Bateman, Wildfeuer, and Hiippala (2017) define and briefly exemplify this relatively new genre to academia as follows;

“Multimodality is a way of characterising communicative situations (considered very broadly) which rely upon combinations of different ‘forms’ of communication to be effective—the TV programme uses spoken language, pictures and texts; the book uses written language, pictures, diagrams, page composition and so on; talking in the cafeteria brings together spoken language with a host of bodily capabilities and postures; and the computer game might show representations of any of these things and include movement and actions as well” (p.7).

Such a definition presents fundamental examples of its importance to EFL well. While learning and teaching skills such as listening, writing, speaking, reading, and vocabulary are essential, their relationship with each other is significant and inevitable for success in EFL. Multimodality represents the relationship between these in EFL. For instance, statements and activities that are done, and tools and materials that are used in the learning and teaching process; in other words, from very basics to diverse materialities to be used in the process, serve multimodality to make the communication more comprehensive and meaningful. In a more detailed example, using a bare short text, such as ‘She plays video games’ on a computer screen, prompts reading skills of the learners. However, if it is supported with a voice recording and presented to learners with a visual on the screen both reading and listening skills can be targeted within a medium. Thus, activities that use a variety of skills at the same time serve both multimodality and its significance to EFL teaching and learning by making activities more comprehensive. Additionally, multimodal

elements in video games lead players to interpret the game (Toh & Lim, 2021). From the video games perspective, multimodality in video games offers visualization with text, sounds or voice recordings, writing and speaking interaction, and so on to the player-learners. Such an offering makes video games more appealing to EFL teaching and learning.

2.4.1 Multimodal analysis of a video game

Video games have been researched for decades; however, they have recently started to draw attention in terms of multimodality (Bateman, Wildfeuer & Hiippala, 2017). Thus, there is a need for more detailed research on multimodality and video games. In their book Bateman, Wildfeuer, and Hiippala (2017) discuss computer and video games from a multimodal perspective -by adopting the analytical perspective- and touch on crucial points to do a multimodal analysis of video games by presenting examples.

Bateman, Wildfeuer, and Hiippala (2017) note that to grasp the multimodality of video games, it is better to watch some recordings or play the game so that one can experience the game first hand and ensure its multimodality because “the activity of playing is always subjective and situated” (p.366). As a starting point to do a multimodal analysis of a video game Bateman, Wildfeuer and Hiippala (2017) focus on the identification of player’s role in the game. To determine the player’s role, they centre upon their activeness in participation and manipulation of the game elements. In the next step, they identify the type of canvas that the game has. At this point, they use a screenshot of the game to focus on the sub-canvases of the game to analyse better and to exemplify the particular points that they demonstrate. Furthermore, they identify the “combinations of semiotic modes that are mobilised to help the player” and discuss how and why they occur so (Bateman, Wildfeuer & Hiippala, 2017, p.370). In addition, they point the linear canvas which hosts the sound stream. They finalise their analysis by discussing the relationship between sub-canvases and noting that “one should become familiar with the entire game” (Bateman, Wildfeuer & Hiippala, 2017, p.372) for a successful multimodal analysis.

2.5 Vocabulary development and video games

The variety of video game types offers a vast range of language learning contexts for L2 skills. Some video games may not be sufficient to provide feasible contexts for every language skill

so that different sorts of games are associated with different language skills and proficiency levels (Sylvén & Sundqvist, 2012). Studies have shown that the most benefited area in terms of language skills from video games is vocabulary development (Rudis & Poštić, 2018; Uuskoski, 2011; Larenas, Palma, & Valdés, 2023). Furthermore, either used in classrooms or as an EE activity and COTS, video games (Sundqvist, 2019) have a significant effect on L2 vocabulary proficiency.

Vocabulary development is the core of language learning (Zainuddin et al., 2020; Masic & Tarabar, 2021). It is undeniable that language learning does not occur without words. Thus, other language skills cannot be fulfilled unless vocabulary develops. Additionally, vocabulary is a part of a dynamic process so that it should be seen as a development or progress instead of acquisition which may be a misleading term. In other words, it is a continual process of development rather than an eventual state of acquisition (Scholz, 2015). Therefore, vocabulary is in every part of the language learning process either subtle or salient. Eventually, its inclusivity in L2 makes it possible to make use of it in video games in terms of EFL learning more than other language skills which may be the reason of vocabulary as the most benefited area of language skills from video games as mentioned above.

A variety of studies have been conducted on video games and vocabulary development. A vast range of such studies revealed significant results related to the relationship between playing video games and an increase in vocabulary size (Miller & Hegelheimer, 2006; Ranalli, 2008; Sundqvist, 2009; Sylvén & Sundqvist, 2012; Sundqvist, 2019; Mašić & Tarabar, 2021; Larenas, Palma, & Valdés, 2023). The studies which used video games in a school context indicate that video games can be used as beneficial activities to increase the vocabulary of EFL students. Ebrahimzadeh's study (2017), which investigated vocabulary acquisition of high school students who used a video game compared to the so-called traditional method, divided students into three groups. While one group of students read to learn vocabulary, the other two groups (one of which played a video game and the other watched the videos of the game that their friends watched) used video games for vocabulary learning. The study concluded that players and watchers of the video game outperformed the readers. Therefore, the study sets a significant example for video games "can be beneficial complementary activities for vocabulary acquisition in high school classrooms" (Ebrahimzadeh, 2017, p.1). Similar to Ebrahimzadeh's (2017) findings, Salvati and Salehi

(2016, cited in Matijević & Topolovčan, 2019) have conducted research on the effects of video gaming on vocabulary acquisition of Iranian students. As Matijević and Topolovčan (2019) note, the group of video game players has had an important difference in vocabulary retention compared to so-called traditional learners who read written texts to learn. Another research on the contributions of a video game to pre-service teachers' vocabulary size (Alyaz & Genc, 2016) has demonstrated that there is a significant difference between the pre-tests and post-tests of vocabulary sizes of participants. The study reveals that participants' vocabulary has developed thanks to the game. Moreover, there are two important studies (Miller & Hegelheimer, 2006; Ranalli, 2008) that were mentioned in detail in the section 2.3, which had been conducted on adult L2 English learners with the use of a simulation game *The Sims*TM. Both studies point out the positive effect of using *The Sims*TM on participants' vocabulary after adapting the course content into the game. Therefore, these studies present significant examples of vocabulary development by using video games in classroom contexts.

Furthermore, the research conducted on video games and vocabulary development is not limited to only these school groups; however, there is a study on young learners' video gaming and vocabulary development as well. Meyer's (2012) study on *Mingoville* which is a video game intended for preschool learners presents the use of video games for language learning at an early age. Meyer (2012) notes that features in the game such as the tree that demonstrates the words the child learns visualizes their achievement for both parents and educators. Thus, video games are not only beneficial for vocabulary development but also representatives of the progress of learning.

As well as the use of video games for vocabulary development in school contexts, there are studies that are done on the utilization of video games in EE contexts. In her research on extramural English use of ninth graders, Sundqvist (2009) has found that there is a positive correlation between playing video games and vocabulary development. Similarly, Sylvén and Sundqvist (2012) note a positive correlation between the young learners who have played video games as an EE activity and their vocabulary knowledge. These findings relate the rich content and input in games that can be benefited in terms of vocabulary development. Therefore, they represent examples of how playing video games increases vocabulary knowledge and this situation is not solely related to school or adaptation of materials and course content to video games. However, video games themselves present settings for

learning vocabulary regardless of the context. In short, either in a school context or extramural contexts, video games are beneficial for vocabulary development.

2.6 Teachers and video games

The knowledge, thoughts, and competencies that teachers have regarding video games, influence their use and proposals of video games and thus digital video game-based learning environments in EFL teaching and learning processes. Due to the insufficient number and variety of studies conducted so far on teachers' attitudes towards using video games in the classroom and proposing them as EE activities, the core points that constitute their attitudes cannot be presented in a completely positive or negative way. However, these can be pointed out as fundamental factors.

When considered from different angles, teachers' perspectives on video games are diverse. Teachers who are interested (Pavlova, 2012; Cf. Alyaz & Genc, 2016) or have experience in using video games, may see video games as a tool for motivation. In a study (Admiraal et al., 2011) that uses games in teaching, a teacher shares his students' enthusiasm to be more active and eager to be engaged in activities and mentions that some of his students would not participate if games were not used. Another study (Alyaz & Genc, 2016) that focuses on pre-service teachers' position in using Digital game-based language learning demonstrates that after playing a digital game for vocabulary development, pre-service teachers find digital games more appealing than traditional games and would like to use them in their teaching. Similarly, a recent study (bin Zainuddin et al., 2021) has presented that teachers who are willing to use digital game-based learning tools believe that their students' motivation can be increased thanks to games. Moreover, there are studies which claim that teachers believe their students can benefit from video games in terms of learning (Sylvén & Sundqvist, 2012) regardless of their age (Matijević & Topolovčan, 2019). Alongside of proposing video games to improve learners' foreign language skills, teachers can raise awareness of their students to "the possible benefits of digital gaming" (Sylvén & Sundqvist, 2012, p.317). For instance, video games can be used to prompt as "opportunities to learn to use computers" for incentivising both "gamers and non-gamers" (Chapelle, 2001, p.165, cited in Sylvén & Sundqvist, 2012, p.317). Therefore, the opinions and experiences of teachers influence their choice of using video games from various perspectives.

Teachers' insufficient knowledge and inexperience in games and technology are important factors in deciding whether to use and recommend video games or not. According to Beauprez (2021), teachers' inexperience in the use of digital technology raises their scepticism towards digital technology. Hence, their incapacibilities in using video games may affect their choice of proposing or using them as well. A study which was conducted by Chik (2011) demonstrates that video game activities are not accepted as a valuable source for language learning by the majority of the teachers who took part in the research because of their lack of knowledge and experience in gaming. Supportively, above mentioned studies (Admiraal et al., 2011; Alyaz & Genc, 2016) state that technical issues which occur during gameplay times cause problems and demotivate player-learners.

Video games may be seen as a waste of time and opinions of teachers may be sceptical. Even though it has not been reflected clearly whether it is due to teachers' inexperience or not, in a study that was conducted by Koçak (2023), teachers have highlighted that their "students should not waste their time for learning the game" (p.104). Such so-called issue may arise because of the difficulty level of the game plot and technical hindrances or teachers' inexperience which is not stated out loud most of the time. As it is a common perception that video games are a waste of time, some teachers may be sceptical about the effects of the games (Pavlova, 2012). Nevertheless, it would be wrong to cite that these teachers have decided to defend such a claim after they have had an experience. On the contrary, they might have made such a decision due to their lack of experience.

Furthermore, there are counter opinions regarding the influence of the teachers' interests on using video games. For instance, Pavlova (2012) states that teachers who are interested in video games can use their students' interest to use video games as an attention of the discussion. Nevertheless, Alyaz and Genc (2016) mention that pre-service teachers' interests (being a gamer or non-gamer) do not have significance and thus they do not form a parameter to use video games as a tool. Hence, teachers' thoughts on using or proposing the game differ.

Teachers' opinions on video games, which will be used and proposed as EE activities in EFL learning, are significant because they may be the role models, the guides, the source of information, and the very first people who know the target language that learners encounter in their lives. In other words, teachers' role in motivating their students to take part in EE

activities such as video game playing may be crucial (Sundqvist, 2009). During teaching, teachers have a meaningful context where they can guide and encourage learners to be more autonomous. This does not necessarily have to be for in-class activities. Instead, learners' participation in EE activities can be promoted for more autonomy and motivation. Thus, more flexibility in terms of topic and genre, and time to benefit may be ensured by suggesting EE activities. In this way, teachers can help learners discover their own learning strategies by showing them that English is everywhere in daily life rather than solely being in the books or at the school (Ipek & Mutlu, 2022). For this, teachers do not have to be gamers or experts in video games; however, they should be open to “see the value of harnessing games for learning” (Toh & Lim, 2021, p. 19).

3 Materials and Methods

This chapter aims to indicate the materials and methods used to investigate what type of a multimodal environment The Sims™ 4 provides for extramural English in terms of vocabulary development and explore EFL teachers' attitudes towards video games as EE activities and The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners. Firstly, materials will be presented. Secondly, the material selection and collection process will be discussed. Lastly, methods to analyse the materials will be explained to answer the posed questions.

3.1 The Sims™ 4

The Sims™ 4 is a single-player life simulation game in which players can create characters named sim, build houses, setting their scenarios as they wish (Electronic Arts, n.d.). The game is developed by Electronic Arts studios and designed both for computers and consoles. Players can access the base game by downloading it digitally without a charge and extend their game experience by purchasing expansion packs.

In-game characters 'sims' are controlled by the player who has semi-god power which allows them to manipulate the game as much as the game permits. Sims live in neighbourhoods, go to work or school, improve their skills, socialize, and go beyond regularities in accordance with the player's creativity. Briefly, they can be seen as representatives of humans in a simulation game. Hence, The Sims™ 4 offers the player to imitate, reflect, dramatize, and experience real-life situations and to do more in a digital environment.

The Sims™ 4 was selected as a game to be analysed due to three main reasons. First, the author claims that it has the potential to be used as an extramural learning environment for vocabulary development because she believes that she has learnt numerous English words thanks to another game of the series that is The Sims™ 3. In addition, as being a simulation game in which the players can practice and act real-life situations, it offers an authentic setting that learners encounter with words in diverse topics that they can increase L2 vocabulary development. Second, The Sims™ 4 is the most recent game of The Sims™ series. Thus, it offers recent graphics and updated content to its players. Third, it is free of charge so that accessible. Therefore, both the EFL teachers and L2 English learners may find it

visually appealing and can financially access it without spending a high cost. To conclude, the game was chosen due to the researcher's personal interest and being more lucrative than the other games of The Sims™ series which are less convenient to utilize due to technical and economic reasons.

In addition, The Sims™ 4 was used in the interview process of EFL teachers which will be briefly mentioned below. Even though the updated version was done on the 1st of January in 2024 for the use of The Sims™ 4 in the second part of the interviews, the update did not have an effect on gameplay. Instead, it fixed some bugs.

3.2 Interviews and the gaming session

Interviews were conducted with 6 EFL teachers in English, 2 females, and 4 males, to investigate the attitudes of EFL teachers towards video games as EE activities and The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners. EFL teachers were selected according to their experience in teaching English as a foreign language in terms of years. Teachers who graduated in the last 15 years and who had experience in teaching at least for a school term were chosen to find interviewees who possibly know current trends in digital learning environments and have taken courses related to them during their education. Therefore, it is aimed to interview the teachers who will teach English in the following years and educate the next generations. Interviewees were selected among graduates of Turkish universities and teachers of students, whose ages are above 12 due to the PEGI (Pan European Game Information, 2014) recommendation for the players who can play The Sims™ 4, at schools and institutions in Türkiye. Thus, the context of the study is set on EFL teachers and L2 English learners in Türkiye. The context was chosen according to the familiarity of the researcher with the current position of EFL and curricula that are implemented in Türkiye and the inaccessibility of The Sims™ 4 in terms of the official language of Türkiye. The Sims™ 4 can be played in different languages including Finnish which is spoken in the context where this thesis is written; however, it does not have Turkish language support. Thus, it is approached more meaningful to conduct the study in a context where the target group may not be able to play the game in the official language of their setting.

Interviews and the gaming session, which took 37 minutes to 52 minutes, had three main parts respectively, video games and extramural English, the gameplay time, and opinions on The Sims™ 4. In the first part, teachers were asked to share their practices, suggestions, and opinions about video games and extramural English. So, it was aimed at obtaining teachers' general thoughts about gaming and extramural English. The first part of the interviews included 11 questions posed to gather background information regarding teachers' attitudes towards video games, as well as information about the students for whom they select materials. In addition, despite having more questions than the other parts, the first part set a warm-up function for the upcoming parts in which teachers would need to pay attention to the game and details in the questions. In the second part, which will be separately discussed in this section, teachers were invited to play The Sims™ 4 to experience the game. Despite being one of the interviews' main parts, the second part only included 3 questions designed to keep the teachers' attention on the game to focus on its utilization as a digital learning environment. In the third part, teachers were requested to express their attitudes towards The Sims™ 4. Therefore, 8 questions related to The Sims™ 4 and teachers' opinions about the game after playing it were posed in the third part of the interviews. Additionally, some follow-up and clarification questions were asked when they were deemed necessary.

Due to the fact that the second part of the interviews included a gameplay time, they were planned to be conducted in person in order to use the interviewer's computer that she set up the game and necessary environment for the interviewees. However, 5 out of 6 interviews were conducted in person while 1 teacher was interviewed on Discord because of their private reason. Hence, the interviewee downloaded the game to their computer and shared their screen via Discord. Even though the other interviewees' gameplay time was not screen recorded, their gameplay was recorded by the interviewer while recording the complete interview. For this reason, recordings of the interviews include voice recordings of 6 interviewees as well as the screen recording of 1 interviewee.

3.2.1 The Sims™ 4 gameplay time & gaming sketches

Teachers were requested to experience the game by playing so that their attitudes to propose the game to L2 English learners could be set on a meaningful basis as the researcher's claim on 'EFL teachers should be able to suggest a video game as an EE activity for their students as if recommending a book in English to support their English learning. In order to be

competent for such and material selection, they should experience video games' suggests that the teachers should play the game before proposing.

The gameplay time took 15 minutes of the complete interview time. In this part, teacher interviewees were provided with game sketches to note points regarding the game that they would like to share such as the features and issues that they encountered in the game. Teachers were ensured to write their thoughts down freely without an external factor. Nevertheless, some questions which would lead them to free writing, or a possible discussion were provided to speed up the flow. Therefore, teachers were asked to take notes on game sketches during the gameplay session about the game and its use as an extramural English activity in a digital learning environment. The gaming sketches, which included the handwriting of the interviewees, were collected after the interviews, and typed electronically by the researcher to prevent privacy issues.

Some technical assistance was provided by the interviewer when the interviewees needed it. However, they were left free to explore the game environment to ensure that they experienced the game as similar to L2 learners who would potentially play the game after their teachers' suggestions. Hence, it was aimed to create similar situations.

3.3 Methods

In this study, both multimodal analysis and content analysis were used to analyse the materials. The former was chosen to reveal the significant role of multimodal environment of *The Sims™ 4* in establishing a strong basis for vocabulary development. The latter was deemed appropriate to highlight the important points which reflect EFL teachers' attitudes towards video games as EE activities and *The Sims™ 4*.

As setting the method of Bateman, Wildfeuer, and Hiippala (2017) the basis, a multimodal qualitative analysis was done to analyse *The Sims™ 4*. In addition, for the analysis of the game, the latest PC version of *The Sims™ 4* which was updated on the 27th of February in 2024 was used. The game was analysed on its 30-minute-long gameplay recording which was played and recorded by the researcher. Apart from this, despite having no effect on analysis, the recording of the game contained items and features from some expansion packs. In game content was analysed multimodally to reveal the importance of multimodal materialities that the game has. However, due to the limited time, which will be mentioned

in the limitations part of the study in section 5.4, not every single game element could be analysed. Nevertheless, multimodal elements that the game presents and its multimodal environment were revealed as following the methodology that Bateman, Wildfeuer, and Hiippala (2017) suggested.

The interviews and gaming sketches which were gathered from teachers after the gaming session were analysed according to qualitative content analysis method (Dörnyei, 2007). Both voice recordings of the interviews and gaming sketches were transcribed into a word document by using dictate feature. All the words were double-checked manually to ensure they were transcribed correctly. Necessary changes were made by the researcher. Moreover, the schemes that teachers drew on the gaming sketches were included manually as well. After gathering the interview and gaming sketches' data in two separate word documents, close reading and colour coding were done to highlight the important points teachers expressed. Finally, the findings were separated and grouped according to their contents to be reported.

In conclusion, while multimodal analysis was used to analyse The Sims™ 4, qualitative content analysis of the interviews was done on transcriptions of the voice recordings and gaming sketches which were accepted as referents of teacher ideas that reflect their gameplay time. Thus, mixed methodologies were applied to analyse The Sims™ 4, the interviews, and the gaming sketches.

3.4 Ethical considerations

This study analyses The Sims™ 4 and the interviews that were conducted with teachers. To prevent privacy violations and possible issues, ethical considerations were taken into account according to TENK guidelines (Finnish National Board on Research Integrity TENK, 2019). The former material is a COTS game which is available free of charge. The researcher and the teacher interviewer downloaded the game from its official Steam page by legal means. Materials of the latter were collected with the consent of the participants by sharing a GDPR notice (see Appendix 3). In addition, any personal identifiers including names, pronouns, and so on which might reveal the identities of the participants were not included in the thesis.

4 Analysis and Results

This chapter is dedicated to reporting the analyses of the materials that were gathered to answer the posed research questions and their results. Analyses were divided into two main sections. The first section presents the multimodal analysis of The Sims™ 4 conducted to uncover its role in establishing a strong foundation for vocabulary development. The second section involves a content analysis of the teacher interviews and gameplay sessions which included gaming sketches of the interviewees. These sections also encompass the respective results.

4.1 Multimodal analysis of The Sims™ 4

The Sims™ 4 is a simulation game which includes a combination of 2D and 3D spaces. The dimensions that the game offers vary according to the scene presented on the screen. While it presents main and interval menus, maps, icons, texts, some objects, and visuals both in build/buy and live modes, briefly the interface and few visuals, in two-dimensional form, sims, sim icons, some objects, buildings, and animals, in other words, most of the visuals are displayed three-dimensionally. Therefore, the canvas of The Sims™ 4 hosts both 2D and 3D materialities and they occur at the same time usually according to the situation which eventually forms its canvas as ergodic.

As shown in Figure 1 (see Appendix 2), text, icons, and some of the visuals appear in 2D spaces on the screen while some visuals are presented in 3D. This motion creates a perception that players are manipulating, interpreting, and receiving information from an outer position and they can approach the game stream both as an in-game player and as an outer controller which can be interpreted as semi-god. When the genre of the game is taken into account, dimensionality choice is feasible to make the player involved by ensuring game comfort and accessibility to the game elements. 2D elements which are mostly presented in the interface interact with the player to give details about the game while the vibrant game keeps going on in the 3D space behind the 2D features on the screen. Presentation of both dimensions at the same time is an important facilitator for the players because the type of the game does not provide any strict story that players can follow. Instead, players are free to do what they wish to do. In addition, items which are presented in 2D are guiding the players to enhance their game experience in a 3D vibrant game.

Furthermore, the combination of the dimensions facilitates the use and effect of text, visuals, and icons. Thus, players can vividly see and interpret the connection between them. Therefore, while notifications, cue cards, or information boxes are presented in 2D, in the interface, players can follow the game clearly without any hindrance thanks to the icons and texts which are neatly located and distributed over the edges of the canvas. Additionally, the constant location of the icons provides traceability which eases the gameplay and gives automatization to the player after playing a while. Thus, players familiarize themselves with the icons, texts, and their meanings which eventually leads to learning.

The player is free to manipulate the game to a large extent which makes them semi-god. They can interact with the icons, visuals, and other game elements and control them as much as game limits allow. For instance, the time element can be controlled by the player which gives an opportunity to them to think and make connections between the icons, texts, and visuals. So, they can control the manipulation of the computer over the game when it is paused, or they can slow down and accelerate the process during the live mode. Therefore, the player has the active and main role to manipulate the game and its canvas while the computer's role can be accepted as an assistant. Precisely, the game does not provide full authorisation or power to the player due to its complexity and relevance to real life; however, it does not have strict guidelines or rules which are enforced on players either because of its genre. Eventually, the player has semi-god power that is supported by the artificial intelligence of the game while they are playing The Sims™ 4.

The main components of the game, icons, visuals, and text, which are clearly and conspicuously displayed to ensure that the game continues in a meaningful and engaging way, are the most important elements that The Sims™ 4 provides for potential vocabulary development. They have connections and common points with each other in terms of meaning and composition, placement and order, shape and size. However, a separate analysis for them should be mentioned first before putting forward their commonalities, to ensure their importance for vocabulary development.

Icons that The Sims™ 4 presents take the attention of the players to their simplicity yet complexity while using universal symbols to strike the meaning easily and more complex ones for players to comprehend meanings of symbols which they may not encounter in their daily lives mostly. When players manipulate an icon by dragging the mouse on it as shown

in Figure 2 (see Appendix 2), they access the text form of it in a written form which gives details about the meaning of the icon. Therefore, unless the player grasps the meaning of an icon, they can see the description. Alternatively, they can interpret the words that they do not know by looking at the icons which support vocabulary development. As visualization has an undeniable importance for vocabulary teaching and learning, player-learners will benefit from this salient feature that the game provides. Moreover, the placement and order of the icons in the canvas help players find different categories and make connotations easily. For instance, while the icons for interaction with the game modes, maps, options, etc. are located together, icons for sims' personal needs, skills, and wishes are exhibited together. Thus, such groupings include vocabulary related to the themes which simplifies vocabulary development by presenting a group of words that player-learners may encounter in similar contexts. In addition, the shape and size of the icons serve the same purpose by taking the attention of players to the importance degree of the icons to the game and consequently to the words that they may encounter most in the game.

Similar to the icons, visuals due to their nature reveal their meanings connected to the items that they represent. Thanks to their detailed forms in design, they are easy to notice and grasp. Their harmony in the environment that *The Sims™ 4* is settled on makes the composition well developed. Although visuals are dynamic and as a result sometimes subtle to recognize unlike static icons which are displayed at the same position most of the time during the gameplay, they create a real-like environment for the players as the type of the game suggests and lead the player-learners to explore and discover the meanings and word form counterparts of the visuals freely. Thus, the variety of the visuals and their representation in the game environment prepares the player-learners to be active and make them exposed to the targets while presenting the word counterpart of the visuals numerous times. Even though players' main intention is not to learn, their repeated exposure to and interaction with the items, which is an inevitable situation due to the nature of the game, will result in making connections or connotations and learning at a rate that will vary according to the time they spend.

Figure 3 (see Appendix 2) demonstrates the interaction of the player with visuals. As it is shown, when clicking on an item such as a chess board in the example, Figure 3, the player encounters options that they can decide to continue to play. These options are displayed in written form. In addition, after selecting an option, the player can see the action visually and

comprehend the meaning of the word that they chose as illustrated in Figure 4 (see Appendix 2). In other words, when the player clicks on 'play' in this example, they see what happens when they choose that option even though they do not know the meaning of 'play' which helps them experience and learn. Therefore, the game provides meaningful situations where they can practice the input for vocabulary development. Apart from this, repeatability of the situations such as clicking on 'play' many times and pausing the game to decide what to do or re-starting the save file to change what they have done before increases the experience and exposure of the player. Hence, a meaningful setting for vocabulary development occurs.

Some visuals such as the objects in live mode are placed according to the player's wish so that they can be interacted with while the other visuals like the thoughts of sims in a cloud of thoughts which are demonstrated in Figure 3 and buy mode objects shown in Figure 1 cannot be changed. Briefly, the placement of the visuals depends on the situation. However, this does not create any hindrances for vocabulary development. Instead, when the player wants to manipulate them, a text occurs to inform the player about the details of the items as shown in the chair example in Figure 1, or a text informs that interaction can be done with a different sim according to the situation as represented in Figure 5 (see Appendix 2). Unless there is any possible interaction with the selected visual, an icon which displays 'no interaction can be done' occurs as demonstrated in Figure 6 (see Appendix 2). All in all, these examples show how players may encounter different situations in which they can improve their vocabulary development in The Sims™ 4 environment thanks to a variety of visualizations and texts that appear together or one after the other.

During the gameplay, texts appear within a time to ensure an engaging atmosphere for the players with notifications regarding the progress or events as in Figure 7 (see Appendix 2), and mostly after the player manipulates the items. Text comprehension is provided with icons and visuals from the very beginning of the game to the player in The Sims™ 4. Furthermore, players cannot make meaningful progress without them because the game is set on texts, visuals, and icons. Due to lacking listening input rather than songs and the Simlish reactions of Sims which are ineffective for communication, texts are essential for The Sims™ 4. Therefore, they appear as situated in different shapes of places and orders, and font sizes to take the player's attention in accordance with the degree of importance to sustain good gameplay. As seen in Figure 7, notifications are displayed in different colours of boxes with a variety of font sizes. Moreover, they are accompanied by visuals which ease

grasping the target message that varies in length. Thus, they compose inputs both for vocabulary development and reading. Additionally, in shorter texts such as presented in Figure 4, players can opt and manipulate the actions that will take place providing situations in which players can experience and learn the meaning of them as mentioned above. Besides, a variety of topics and diverse use of different word forms in text in several contexts provide authenticity. Consequently, texts with the assistance of icons and visuals, which appear together in The Sims™ 4 canvas majorly during the gameplay, form and present The Sims™ 4 atmosphere as a possible learning environment for vocabulary development.

The use of icons, visuals, and texts altogether is harmonical and slightly necessary to make the game engaging for its target community. The Sims™ 4 is not aiming to teach words to its players. Instead, as being a COTS game, it focuses on entertainment. Thus, icons, visuals, and texts are designed to make the game interesting, smooth, accessible, and eventually playable. However, it presents these items in a way that players can benefit from in terms of vocabulary development as well. For instance, in addition to providing texts with visuals and icons, which is a significant and widely utilized method in vocabulary teaching, it uses the effect of colours to draw attention to different situations. So, it contains another method used in teaching vocabulary despite using it to highlight the game items and make it enjoyable and easy to play as the main purpose.

Colour palette is an auxiliary factor that increases the effectiveness of icons, visuals, and texts in The Sims™ 4 canvas. Appearing with icons, visuals, and texts, colours represent topics, emotions, pragmatics, success and failure, and so on in the game. Hence, they create a basis for players to make connotations and understand what they mean, and what they should expect which is a facilitator for vocabulary learning as well. To illustrate, Figure 8 (see Appendix 2) is a good example by presenting various colours at the same time to highlight different emotions. As it is shown, being '*flirty*' is connotated with pink colour which is usually used for romance or love universally. In addition, red is used for anger, and navy blue is used for passiveness. To give one more example, Figure 9 (see Appendix 2) demonstrates the colour choice for the needs of sims and reflects that green is used for good condition, while yellow is used to notify that the condition of the sim is still stable; however, it is getting worse. Therefore, with such colours the game informs the player about the process and makes them understand what they are doing, and what they need to do. For instance, if a player selects an option that they do not know its meaning while their sim is

talking to another sim, they can understand how it will turn out while seeing the colour of the addressee's emotion as shown in Figure 10 (see Appendix 2) as well as their reactions mentioned above. So, colours not only have a unique effect on the game flow but also contribute to its environment by easing vocabulary development.

Overall, The Sims™ 4 presents linguistic material in its interface in which icons, visuals, and texts with the assistance of colours serve the game's initial purpose while creating a possible learning environment for players to improve their vocabulary development authentically and engagingly.

4.2 Analysis of the interviews and gameplay session

Teacher interviews and gameplay sessions are analysed in two parts. The first part of the analysis focuses on teachers' approach to video games and extramural English while the second part explores their opinions about The Sims™ 4. Briefly, while the former analyses the first part of the interviews, the latter analyses the second, which is dedicated for gameplay sessions, and third part of the interviews.

4.2.1 Analysis of teachers' attitudes towards video games and EE

All of the teachers expressed that they do suggest EE activities to their students. Although some of them mentioned that they rarely (T1) and sometimes (T4) suggest EE activities, the rest stated they usually (T3 & T6) and always (T2 & T5) suggest EE activities.

(1): "I suggest because you know they love watching TV series or movies, so it makes the learning English much more fun." (T1)

(2): "I want them to watch something especially movies or TV series that they can understand, but specifically I want them to watch with English subtitles because I think it would increase the exposure and also it can be more meaningful inputs." (T4)

(3): "I always tell them you should integrate your life into English." (T5)

As can be seen in examples 1 to 3, teachers suggest EE activities according to students' interests, to make learning English more fun, to make English a part of students' everyday

lives, to increase students' exposure to English, and to make them practice English outside of the school context. The activities that teachers suggest are mainly watching TV series and movies, listening to songs, and video games. However, there were three teachers (T3, T4 & T5) who shared that they tell their students to do something in English according to their interests rather than giving specific names for suggested activities. Even though they mentioned these three categories explicitly, they added that they give more open-ended suggestions. Apart from students' interests, three teachers expressed that their suggestions are related to their own experiences as well. For instance, T2 and T6 cited that they think they have learnt English easier thanks to the activities that they did. Thus, they share these activities with their students as demonstrated in example 4.

(4): "I always suggest my students listen to music because when I was in high school, I spent my whole time listening to music. It's a good way to learn how to pronounce words. So, they can actually practise." (T2)

Some of the teachers (T1, T2, T4 & T5) expressed that they would not suggest playing video games to their students while the others (T3 & T6) mentioned they already suggested video games. Firstly, the teachers who do not suggest video games to their students indicated frankly that they do not know video games well and that is why they would not suggest something they do not know. T1 and T5 stated that first, they need to search for games. In addition, they would suggest video games if they could know better. T4 mentioned that they suggested a video game called *Second Life* as an EE activity and their students downloaded and tried the game. However, it did not work as expected because the game was too informative and didactic. Thus, students stopped playing it after a few tries. This situation might influence T4's decision about not suggesting video games. Unlike these teachers, T2's reason for not suggesting video games depend on their students' gaming habits. T2 expresses that "I don't suggest playing video games for my students. I have never ever because I already hear them now talking about some games that I'm familiar with. They're playing games already, so I don't need to say". Hence, they do not suggest video games by saying that their students already play video games and use various words that they learn from video games. Apart from these, it should be noted that all the teachers stated that they do suggest their students to do something related to their interests. Despite not mentioning it explicitly, they might have been suggesting video games implicitly.

Every teacher believes that video games improve their students' language skills. T2, T3, and T6 believe that video games improve language skills because they have experienced themselves. T4 believes that video games increase exposure to the language in an authentic way and motivate students. Similarly, T2 thinks thanks to exposure students will learn words by citing "So yes, I believe that it's good for students to learn words even if they don't want to learn, they will learn it somehow". Even though T1 and T5 have not experienced themselves, they have encountered people who expressed they have learnt English while playing video games. T1 states "I have many students that they learn English while playing video games. So, I think it helps students to catch their attention to learn English. So, it helps."

The answers of teachers varied when they were asked how long they had been suggesting EE activities. On the one hand, T4 and T6 expressed that they have been suggesting EE activities since the very beginning of their professional careers while T3 shared they have started to suggest EE activities right after starting to work with young adults. On the other hand, T1 and T5 stated they started to suggest EE activities after a certain amount of time in their career. As example 5 illustrates, T5 mentioned that the reason was related to students' accessibility to the tools and opportunities.

(5): "To be honest I've just started to suggest it like four or five years ago. Because before that I couldn't do. Because I was teaching in a high school in a disadvantaged area, so I knew that they didn't have phones. So, I wouldn't tell them that you should also integrate because I didn't have internet and have that capacity or like opportunity or so. But I've been doing it since I have." (T5)

Therefore, it should be noted that teachers' suggestions are not only dependent on the type of activities, experiences of teachers, or students' interests. However, students' backgrounds or economic factors also influence teachers' suggestions.

Teachers (T1, T2 & T5) shared that they have not suggested any video games to their students whereas teachers (T3, T4 & T6) expressed they discussed video games during classes or have made suggestions to their students. Firstly, T1 mentioned that they need to experience the game they would suggest as example 6 displays.

(6): “OK so if I want to suggest a video game to my students then I need to experience it first.” (T1)

Secondly, example 7 illustrates that despite offering a different reason, T2 said that they have never suggested games either.

(7): “No, I haven’t. The thing is I am almost close to some of my students’ age and so I don't want to go like ‘hey play this game’. And they will be like ‘hey teacher, do you play games, can we play together?’ I don't want that”. (T2)

As can be seen from Table 1, which includes T2’s one-time trial of a game during class time as well, T3, T4, and T6 have mentioned the games that they have suggested or discussed in the classroom. The games vary in terms of genre and years of releasement.

Table 1. The Video Games Mentioned by Teachers

No.	Teacher	Video Game	Genre	Release Year
1	T6	Age of Empires	RTS	1997
2	T3	Baldur's Gate 3	RPG	2020
3	T3	Dragon Age: Origins	RPG	2009
4	T3	Football Manager	Sports, Strategy	Various
5	T3	GTA series	Action, Crime	Various
6	T6	Minecraft	Sandbox	2011
7	T2 & T6	Roblox	MMO, Sandbox	2006
8	T4	Second Life	MMO, Sandbox	2003
9	T6	Stardew Valley	Simulation, RPG	2016
10	T3	The Witcher 3	RPG, Action	2015

As illustrated in Table 1, the number of the games that T3 and T6 mentioned is larger than others. Moreover, teachers (T3 & T6) pointed out that T3 plays video games for at least an hour per day, while T6 plays for 4 hours a week. Thus, this demonstrates that T3 and T6 might know more about video games and be more interested in gaming than other teachers. However, T3 and T6’s interest in video games does not result in their preference to use video games in teaching as tools. They state that they have never played video games during class hours. Instead, T3 utilizes them as discussion starters. This shows that despite knowing some video games, teachers may not know the strategies that they can employ them for their teaching and learning purposes sufficiently.

All of the teachers think that their students believe their suggestions are important. The reason why teachers reckon so varies. Whilst some teachers believe the feedback students give shows whether their students consider their suggestions significant or not, some teachers think it has relevance to the time that they spend together, the motivation of the students, or the time when the teacher makes a suggestion. Teachers T1, T2, T4, and T6 shared that their students give feedback related to their suggestions. Thus, they know their suggestions are considered and followed. As illustrated in example 8, T1 believes due to the age factor of students, their teen students relatively place less importance on their suggestions compared to their young adult students.

(8): “My teen students sometimes don't realise even that they are learning English. So, it is very normal that they don't believe, or they don't think that the things that I do for them are just for to improve their learning improve their English and make learning English environment better. But my adult students yes, they believe it. And they do whatever I adjust for them and they also give positive feedbacks about it.”
(T1)

Similar to T1, T2 cites that some of their teen students are shy and because of their age they do not prefer to say out loud that they follow the suggestions of T2. Instead, their parents give feedback to the teacher. T2 shares an example situation “One of the parents came and said, ‘We are so grateful for you. Our son kept listening to music because you suggested it and he has been improving a lot’.”

T4 mentioned that their students’ motivation is an important indicator of their beliefs about T4’s suggestions. When some students are motivated to learn English, they consider the suggestions and share feedback. However, there are also some students without motivation who are just asking some suggestions or sharing their opinions about T4’s suggestions because they would like to spend time.

Time was notified as a significant point by T3 and T5. T3 believes that when they are suggesting something during a discussion, their students may keep it in mind; however, they see it as a casual chitchat. Thus, T3 thinks the time that they should make suggestions should be appropriate. On the other hand, as can be seen in example 9, T5 approaches the time

factor from a different point and expresses that the more time they spend together with their students, the more their students care about the suggestions and believe their teacher makes suggestions for their sake.

(9): “The more you spend time with your students the more they get used to you. And then, they understand you and they believe that you are doing something. And if you are saying something, it matters.” (T5)

Five out of six teachers think that they have a role as an EFL teacher to suggest extramural English activities to their students. T1, T2, T4, and T6 believe that teaching and learning should not be restricted to the classroom environment but take part in outside of the classroom as well. T1 reckons English should be in every aspect of their students’ lives. T2 includes “I think it’s one of the main responsibilities of a teacher because learning is not only in the class. Especially for a language. It cannot only be done in a class.”. Similarly, T3 believes they have a role; however, they think these suggestions should not be forced. Instead, they should only provide suggestions when there is an appropriate time. Despite the other teachers’ views on believing they have a role as EFL teachers to suggest EE activities, T5 does not accept this as a role. Instead of having a role, they see it as a part of their job, an obligation. They mention they do not do it because it is their responsibility. However, they do it because they think that it will work.

The concept of using video games during class time seems not preferable by teachers. There are issues related to equipment, yearly plans to follow or a syllabus, the enthusiasm that video games bring to the students, and timing. T1 stated that they would like to use video games in their teaching if they had enough equipment or conditions because their students are familiar with and into the technology. Thus, it would be an engaging experience for their students. Similar to the equipment problems of T1, T2 mentioned technological devices that they have influenced the tools that they use by saying “I only used one video game in my teaching because the computer we had wasn't qualified to run other games”. In addition, example 10 illustrates T2’s experience about using a video game in a class who stated that it was a blast, yet not a good idea because of the students’ enthusiasm to keep playing.

(10): I played Roblox with my students in class and after a few minutes I was like OK that's enough, but they wanted to play because it was extra fun for them, but I had

some extra things to do. My principal said I should also be able to catch up with my school plans. And also, they want to play next week. They say “Hey teacher, do you remember what we played last week? Can we play again?” I'm like, “no, sorry” like “I know you like the game, but I have plans to do”. (T2)

Hence, T2 draws attention to high enthusiasm may cause a hindrance to doing the tasks that are expected to be done by the syllabus and principles. Such as T2, T6 believes that they have to follow the syllabus and finish the tasks on their plans first. Furthermore, it is not an easy thing to do for them because they only have four hours a week to teach English. They reckon that the amount of time they have is barely enough to do the tasks on the books. Thus, T6 believes students should play video games, which are time-consuming to play in classrooms, during their spare time as example 11 displays.

(11): So, in Türkiye, we have 4 hours in a week to teach English. It is literally not that much. Not enough. So, in my class hours, I generally focus on new vocabulary, activities, phrases, etc. So, I recommend them to play video games in their free time. (T6)

Although T4 and T5 mentioned that they have enough equipment, they did not have a chance to use video games in their teaching due to the limited time they have to teach as T6 mentioned, and to plan what they are supposed to do. Nevertheless, they expressed that they would like to integrate video games into their class activities.

Teachers T1, T3, T4, T5, and T6 stated that they have never used video games in their teaching due to the reasons mentioned above. As shared, Roblox is the only video game that was used by T2. Apart from this, although they are not video games, T3 and T5 mentioned that they used some games, which are designed according to pedagogical purposes, in their teachings such as Kahoot and Wordwall.

Material selection is an important phase for teachers. Every teacher touched upon significant points that they followed while deciding what they would use or suggest. Teachers T1, T2, and T6 specifically mentioned that the material they select should be appropriate for the ages of their students. At this point, this may result from the groups of students that these teachers are working with. Even though these teachers have experience in teaching

EFL to young adults, they are currently working with teenagers. Unlike these teachers, teachers T3, T4, and T5 mentioned that their main criterion is finding the material related to their students' interests. In this case, the age of their students is above 18 and it does not constitute any problems for the teachers while selecting their material. As example 12 illustrates T1's material selection criterion, T3 expressed that they are choosing materials which are relevant to the course content as well.

(12): "They should be about of course the lesson the topic." (T1)

Furthermore, T1 and T5 stated that they are deciding the materials they will use or suggest according to their students' proficiency levels. While T1 stated "the material should be appropriate for their level", T5 thought "their levels are important for material selection" and they came up with the same criterion.

Moreover, T5 informed that their students' economic backgrounds affect their material selection both for the in-class activities and EE activities as shown in example 13.

(13): "Whether my students have tools or not is also important. Most of them have smartphones, but only some of them have laptops. So, it should be something that could be done or played on smartphones. They should not need a laptop. As well as their tools, I also think about their environment. I don't know but of course, most of my students are staying in dormitories so they should have the space or conditions to do or play with the material that I choose." (T5)

Another point for material selection was stated by T4. T4 specified that timing is an important factor for them, and they decide on materials to be used according to the time that they will take by citing "The second criterion is about timing 'cause I don't have plenty of time. So, the activities should be very short, and I cannot choose some long-term activities or process-oriented ones. They are generally one-shot activities that can be done in 5 mins 15 mins."

When the teachers were asked whether they play video games or not and if yes how frequently they play video games, every teacher cited that they do play video games except for T5. T1 mentioned that they sometimes play a video game called PUBG and nowadays

they usually prefer mobile games such as word finding. Both T2 and T3 mentioned that they play video games almost every day. T3 gave a more specific timing by saying “I play video games at least an hour per day”. While T6 expressed that they play video games 2 or 3 times a week mostly 4 or 5 hours in total, they added that “But in the past, I used to play more because I had more free time. Because now I am a teacher, I have some other responsibilities to do.”. Similarly, T4 mentioned that they used to play, but they did not have a chance to play for a while due to their workload. Therefore, T4 and T6’s workload influences their video gaming preferences.

Teachers played the game in the second part of the interview process which is designed as gameplay time. They were asked to take notes related to the game and their experience, as mentioned in detail in section 3.2. After experiencing The Sims™ 4 in the second part, the interviews continued with the third and final part of the interview process during which The Sims™ 4 related questions were inquired to teachers.

4.2.2 Analysis of teachers’ attitudes towards The Sims™ 4

Teachers were asked to share whether they would consider The Sims™ 4 appropriate and sufficient to be used by EFL learners from the beginner level to the advanced level in terms of language skills. Every teacher drew attention to its extensive potential for vocabulary development of their students whereas some of them pointed out the language skills such as listening and speaking. According to all of the teachers, The Sims™ 4 is great for vocabulary development of all levels of students including the beginners and advanced level students. T2 stated that every proficiency level can find something that they can benefit from the game and exemplified how some levels would use it as shown in example 14.

(14): “I believe that even advanced learners can find things that they can learn here, but I also believe that the beginner level students can play this game. I don't think it will be hard for them. If they get used to a few words they will be like... They will be clicking some buttons and they will discover anyways. Discovering is important in language learning so they will also discover the game while discovering the language.”
(T2)

Contrary to T2's belief, T4 stated that "But for advanced level it would be less appealing because of the limitations. They would lack autonomy because it gives too many automatized options" It may not be so appealing for advanced level students because of its limitations; however, it could be still used. Moreover, T3 shared that The Sims™ 4 includes the topics that they are teaching so that they can consider it as a tool. And added as demonstrated in example 15 that thanks to its visualization and indirect teaching, it can be used by beginners easily.

(15): "Yes, I think it has lots of different topics. For example, you can learn about clothes, some hobbies, also body parts, and neighbourhoods. So, this is basically what we teach. Therefore, I guess it's very suitable. In terms of vocabulary, it is super good because it shows everything in the written form as well as showing the visuals. It is not teaching you through translation, but you just see what it is and then you can just see text. So, I think this is a good way of learning". (T3)

Using The Sims™ 4 as a learning environment for EFL students was approached as a possible and great opportunity by teachers regarding their first impressions and game experiences. While every teacher believed the environment that The Sims™ 4 provides can be used as a learning space, each teacher touched on different aspects of reflections of this environment. First, T1 focused on the uses of The Sims™ 4 as a learning environment both in class and outside of the school. They emphasized that it can be used as a classroom activity. Moreover, when it is played by groups, "they can practice English much better, and they can have fun". T1 added that students need enough conditions such as equipment, time, and place to use it as a learning environment and if these are met, it will be a success for them. In addition to these, there was one more significant point that drew attention from T1, T2, and T4. They believed that student type influences the game's potential to be used as a learning environment. In other words, the game provides a learning environment; however, its impact depends on the students' own endeavour as demonstrated in example 16.

(16): "If they search while playing this, I think they can get better in English. But if they don't search anything in the game, when they see a word in the game they cannot learn. It's up to the student I think." (T1)

Similarly, T2 cited that “It can be completely useful. But each student has their own interests and own unique learning ways. So, I mean for some students it will be beneficial, but for some maybe it will be super beneficial. So, we should investigate and find the students that will benefit from this.” And emphasized the importance of knowing the target player-learner’s profile, their needs, and interests. Furthermore, T4 believed that there should be a distinction between the education level of students to whom this game may be more interesting because some motions of the game appeal to middle school students more than high school students. T4 cited that “Middle and primary school learners are familiar with these kinds of games and probably they will like it because they are provided with many options they will like. When it comes to high school learners probably it’s going to be very short time activity for them because after they discover some motions they will be fed up with the game or they will find it boring”. Hence, according to T1, T2, and T4, student profile has an important role in benefitting from the game.

T5 expressed that their student can use it as a learning environment because they are already spending time on Instagram and scrolling through. Thus, they actually have time. Apart from this, they mentioned that saving and pausing options give more freedom by making the game not obligatory to play every single second and play with full attention. Therefore, they can take a break when they feel it is enough for them and play again when they are ready. Additionally, the game provides learning by experience. For instance, when their students come across a word that they saw in *The Sims™ 4* in their real lives, they will remember and go back to the moment that they saw it, and this may evoke other things.

The final point, which was stated by T6, was related to the difficulty of the game. T6 believed that although “*The Sims™ 4* is definitely can be used as a learning environment, students should get a training before starting to play it”. T6 thought that this training should not necessarily be long; however, it should be given by the teacher about the instructions in the game or students should watch some videos related to the game before playing the game for the first time. This point was mentioned by the T1 as well in the first part of the interview and shared above. It is possible to see that the game may be difficult to get used to playing, for the first-time players, because the game itself is not designed for educational purposes, instead, it was released as a COTS game. Hence, T6’s point may help player-learners to get familiar with the game easily and decrease the possibility of stopping playing the game due to its potential difficulty or the player-learners’ lack of experience in playing *The Sims™ 4*.

When ‘which present items in Sims 4 propose it as an extramural learning environment’ was asked, every teacher touched upon different features of the game as well as mentioning visualization altogether. Both T1 and T2 stated that the game itself proposes it as a learning environment. T1 exemplified that places, buildings, houses, and similar features in addition to these where language or words mostly appear make the game a learning environment for the students because its setting is similar to real life. In addition to these, T2 included that the colour palette of the game such as using different colours to imply that something bad is happening makes it a good feature to be used for learning. For instance, “your sim is hungry and needs to eat something. His hunger is represented with red colour which implies to the player that they should do something otherwise it will not result in good”. Furthermore, as can be seen in example 17, T3 believed that the game teaches pragmatics during its playtime flow.

(17): “I guess it has like some kind of pragmatics are involved in the game I guess because like you can be rude can be friendly etc. In that sense at a very basic level, you learn about pragmatics as well.” (T3)

In addition to these points, T4 and T5 mentioned the creativity side of the game which proposes it as a learning environment. T5 thought that after students use the game as an extramural learning environment, it can be integrated into the lessons and used as a topic generator for their course content as exemplified in example 18.

(18): “It also boosts creativity because while they are speaking, we always want our students to be creative a lot and also develop some skills such as being critical. They need to focus on from a different perspective whenever they write something in English. It will also help finding some ideas because they are focused their life so much. So, they will have another perspective. For instance, I will tell them when they are writing ‘now write as one of your characters in The Sims™ 4 world’. So, for writing skills they can be creative so they will try more I mean at least they could get much more ideas... So, we could broaden their horizons.” (T5)

Similarly, T4 mentioned increasing the imagination potential of the game. T4 stated that even though the game does not serve listening skills, this drawback can be used as a tool to

make students imagine which possible dialogues between sims can occur. Therefore, they can try role-playing or creative drama in the classroom or outside of the school context. Additionally, T4 emphasized that the game might be very beneficial for the ones who feel isolated. Thus, it may psychologically be good for their students. They can make friends easily and feel they socialize with other sims. T4 meant this for both the game settings and real life. Students who are too shy to talk to other students may find a connection through the game and make friends. Besides, T4 believed the game offers collaboration as well. Students can work together to build something even though the game does not offer a simultaneous multiplayer option. Students can share their work such as building houses and sharing these online with friends and The Sims™ community. Thus, they can work on the same projects in The Sims™ 4. Subsequently, they can integrate the topics that they came across during playtime with their friends at school or in their daily lives and interact with each other thanks to the game.

After all these points, the significance of visualization was summarised by T6 as illustrated in example 19.

(19): “Visualization is really important especially for young learners. They learn new things from by playing by seeing. They cannot think outside of the box. So, these visualizations can help them tremendously to learn new vocabulary obviously” and other features, items, and the game setting offer it both as a learning environment and extramural learning environment according to the whole teachers. (T6)

Teachers shared that the first thing that they would mention about the game would definitely be the vocabulary development potential of The Sims™ 4. All of them believed that it promotes lexical knowledge. T1 cited that numerous words appear everywhere in different contexts and there are various topics such as furniture, hobbies, gardening, jobs, and so on that they can come across in their daily lives. Additionally, there are topics that they may not find an opportunity to use or think about usually.

T1 included that “They can learn many things from these topics. They can learn something and maybe they don't realise that they learn it during the gameplay. However, they may realise it after they learn it.”. Furthermore, as shown in example 20, T2 stated that the way how the game promotes vocabulary development is one of the greatest ways.

(20): “The best thing is that this game provides numerous things for lexical knowledge. There are words and images of them everywhere. You can try to buy some furniture and you will see the word and you will see the image, so it is one of the oldest and nicest ways of learning up a word. (T2)

While sharing their beliefs about The Sims™ 4’s vocabulary development potential, T3 expressed that as well as promoting vocabulary learning, it teaches making inferences. For instance, T3 shared a situation where vocabulary teaching is contextualized The Sims™ 4 by exemplifying “We went to the museum in the game. So, we learned vocabulary but also, we learned for example if you go to the museum, you may feel inspired. So, it is not teaching vocabulary in an isolated way. Instead, it is teaching them in a meaningful context.”. Consequently, when vocabulary representation and its contextualization are considered, teachers’ beliefs about the potentiality of The Sims™ 4 to promote vocabulary development are not surprising.

There was a consensus between teachers’ beliefs about the language skills that The Sims™ 4 provides to EFL learners with some additional points made by a few teachers. Every teacher mentioned either vocabulary or reading or both when they were asked to share the language skills that The Sims™ 4 provides. There were teachers who included speaking, writing creativity, and critical thinking as well. For instance, as exhibited in example 21, T3 believed that the decisions that players make during the gameplay might influence their speaking by giving a clue for them to decide what they would like to cite.

(21): “It probably promotes vocabulary and reading skills. Also, probably a little bit of speaking because you are making some choices. It might slightly contribute to your speaking skills as well so you would get an idea of what to say and when to say something.” (T3)

Therefore, although the game does not provide opportunities for some language skills explicitly, it presents a setting in which other language skills could be benefited indirectly. Similarly, the skills such as creativity and critical thinking that T5 stated both form connections between language skills either provided in The Sims™ 4 or not. T5 expressed that when they blend creativity or critical thinking skills with speaking, for example, they

can share the things that they do in the game although they would not be using speaking a lot. Thus, the skills the game promotes and provides help them reveal other hidden skills that the game could potentially evoke.

Language skills that The Sims™ 4 slightly provides or does not provide were accepted as insufficiency of the game when it was examined by the teachers during their gameplay time. Listening skill was the most insufficient due to the game's own language which is Simlish which caused no use of English listening. Furthermore, some skills that are presented or provided less than the others, with an insufficient amount, such as speaking and writing were believed by T4 and T6 that there is a need to support those skills. T4 mentioned that the only part they enacted with writing was at the very beginning of their gameplay. Thus, they think it should provide more open-ended options where they can write. When it is considered, the game provides slightly more options to use writing; however, due to the limited amount of time during the interviews, teacher interviewees could not get enough opportunity to experience all the features the game provides. This will be mentioned in the limitations of the study part. However, writing is obscure in the game as some of the teachers stated. Apparently, the language skills The Sims™ 4 provides were recognized by the teachers as vocabulary, reading, creativity, and critical thinking as sufficient; whereas writing and speaking were stated as slightly insufficient, and listening would not serve for language in any circumstances.

All teachers believed The Sims™ 4 provides and promotes numerous words from various topics that their students might benefit from for their vocabulary development. T6 stated that their students' levels are around A1, A2, and B1. Thanks to the education that they received during middle school; they are good at grammar. However, they are lacking vocabulary. Thus, they stated that "They don't know so pretty common words, so playing The Sims™ 4 would be extremely beneficial for them.". Moreover, as mentioned above by T3, they believe that their students would not only benefit from the words but also make inferences or connections between the words and their bonds with real life. T3 expressed that "they could learn a variety of vocabulary items in their context. I can say that there is relation between the words. For example, if you jog around the neighbourhood you start to feel energetic so you can understand when you can feel energetic or feel sad or bored etc.". Though T2 thought that The Sims™ 4 would be beneficial for their students in terms of

vocabulary development, they mentioned that their students' digital literacy skills would affect how beneficial it would be for them as example 22 demonstrates.

(22): "I think if they are already exposed to the gaming, know some digital things, can use a computer, have played some games before, then they should try it. (T2)

Students' digital literacy is a significant point; however, due to the age that students were born into is prone to the use of diverse technological developments, as T4 shared "I think they were born into this", students would not find it awkward or too challenging. Consequently, according to teachers' beliefs, The Sims™ 4 is beneficial for EFL students' vocabulary development thanks to the variety of words that it includes.

Criteria to follow for material selection is significant for every teacher. All the teachers approached the criterion that they would set to decide whether The Sims™ 4 would be a material that they would use or suggest diligently. Firstly, the most mentioned criterion was age. Four out of six teachers expressed that age would be the first matter that they would take into consideration while choosing to suggest The Sims™ 4 as an EE activity to their students. Besides, it should be noted that every interviewee was notified about the PEGI's age criterion (2014) for The Sims™ 4 which was set as appropriate for players over 12. Both T1 and T2 stated that features such as flirting, and romance would make them consider the game appropriate for learners over 15. T1 noted that they are not even sure whether they should choose age 15 or 18. Additionally, they suggested that "if they are playing the game for the first time maybe a guide on the teacher should be with them actually to give some hints about the game" so that their attention can be drawn to the different parts of the game. Although T1 did not explain the reason why they would follow this age criterion, T2 transparently expressed that they would not suggest this game to 12-year-old students due to their students' cultural background, as shown in example 23.

(23): "I know the culture. If a parent comes to me and asks me what this thing is and tells there is clearly romance and there are some parts like what's going on with the screen?! I would not want that. I should I guess investigate their family background before suggesting such games. I would suggest for the ones who are over 16. I mean I can start suggesting these games as long as I know that their family is not concerned about such things." (T2)

When the age criterion that T1 and T2 would follow for selection of The Sims™ 4 as an EE material showed similarities, T3 decreased the age levels to 13 and 14 years. While T3 stating they would stick to the PEGI's decision (2014), they expressed that 13 or 14 years would be better for them. Furthermore, they added two more criteria which were game genre and gender. T3 mentioned that "I would suggest it to anybody who likes simulation games and to create their character. I don't know maybe it's a generalisation but often according to my observations like girls tend to like it more". Unlike T1 and T2, T3 stated they believed that some content of the game such as alcoholic beverages and sexual content such as flirting would not be an issue because they are not shown explicitly in the game. In this part, the blurring feature of the game comes to the forefront and reduces the age limit of it. As for the other point that T3 indicated, gender as a criterion was mentioned by T6 as well. However, contrary to the beliefs of T3, T6 stated that they would not follow a gender criterion because they believed everyone could play this game regardless of their gender. Nevertheless, T6 expressed that they recognized the game as a child game so they would suggest it to secondary and high school students. Although T4 shared that they would follow a proficiency level criterion instead of a school level, their criterion also fits similar groups of students because they mentioned that they would suggest it to the beginner and pre-intermediate level EFL learners. Lastly, T5 stated every proficiency level would be appropriate; however, students who are younger than secondary schoolers might spend too much time during the gameplay and might get addicted. Thus, they would follow the criterion set by PEGI (2014) and added that they would also consider their students' economic background and their accessibility to the equipment on which the game will be played. In conclusion, it is demonstrated that teachers would take into consideration criteria related to their students' age, cultural background, gender, interests, proficiency level, school level, economic background, and time to select The Sims™ 4 as an EE activity to suggest.

When the teachers addressed a question regarding whether they would propose The Sims™ 4 as an EE activity to their students, teachers shared their beliefs about proposing it as was expected from their previous statements. All teachers stated that they would suggest the game to their students except for T4 who was in a contradiction. However, teachers T2, T4, and T5 expressed the conditions that they would have before they would suggest The Sims™ 4 as an extramural English activity.

Firstly, T2 thought they needed more time to play and explore the game before they suggested it. Moreover, they would like to observe their students' improvement after suggesting the game to decide whether they are learning something or playing just to distract themselves from the real world or spend time. The decision of T2 is justified in terms of their need to explore the game more because it was one of the initial ideas of the thesis that teachers should know the material that they would suggest. This will be discussed further in the next discussion and limitations parts. However, the second point that T2 made does not influence the question asked because to get that point the teacher needs to suggest the game first. Thus, T2's final decision was accepted as "I would" which they made before mentioning their conditions.

Similarly, T4's belief regarding proposing the game was set on conditions. They explained that they would not propose the game to their current student group due to their senior level in the course; however, T4 expressed that they would recommend it if they had different student groups in the future. Hence, T4's decision can be viewed from two different aspects. They would not propose it to their present group; however, they might propose it in the future to other groups of students. During the previous questions, they shared that they found the game more engaging and appropriate for secondary and high school students instead of university students. In view of this statement, their final decision was relevant to their beliefs.

Another teacher who shared that they would propose the game; however, they would consider some points before doing so was T5. According to T5, knowing student profiles would lead them better while proposing The Sims™ 4 to the best target group. They exemplified what needs students would have and to whom they would propose it by saying "I would like to also hear whether they're playing or not any other video games and tell them this could be an option too. If they are focusing on the vocabulary or if they need some ideas to be creative, then I could tell this game to them.". Furthermore, they mentioned that the first thing that they would do when they go to the class would not be proposing this game. Instead, as displayed in example 24, they would wait for the appropriate and best moment to give it as an example.

(24): “I would of course! But it's not it's not the first thing I'm going to do when I just enter the classroom. When it comes to the topic that I can report it, I will tell ‘yes there was also this game so you can play that’.” (T5)

A similar statement was made by T3 before. Thus, it can be seen that teachers are waiting for the correct time to suggest something, and they would follow this for The Sims™ 4 as well.

To analyse the opinions of teachers who did not share any conditions but expressed that they would definitely propose The Sims™ 4 as an EE activity, T1 believed that the game provides an environment where they can socialize, practice and learn the target language nicely. Furthermore, as can be seen in example 25, T3 mentioned that EE activities are beneficial.

(25): “When you say an extramural activity like it's it can never hurt you. I definitely suggest playing it like sandbox games or for example simulation games they try to simulate real life so lots of people say it is best to go abroad if you want to learn language and if you can't maybe you can play simulation game so that way you can learn language. (T3)

Therefore, T3 approached the digital learning environment, or The Sims™ 4 in this case as another environment to practice and learn the target language.

In conclusion, teachers decided to propose The Sims™ 4 as an EE activity to either their current or future students. Even though some of the teachers mentioned they needed to take some points into consideration before suggesting it, eventually these points were accepted as parts of the process instead of seeing them as game-changers. Therefore, by deciding there will not be drastic changes, it can be concluded that teachers approach the Sims 4 as a digital learning environment and would propose it.

5 Discussion

This study aims to explore the multimodal environment The Sims™ 4 provides for extramural English in terms of vocabulary development and attitudes of EFL teachers towards video games as EE activities and The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners. In this chapter, the research questions will be discussed in accordance with the results. Moreover, the limitations of the study as well as the suggestions for further research will be mentioned.

5.1 What type of a multimodal environment does The Sims™ 4 provide for extramural English in terms of vocabulary development?

As the first research question focuses on the environment The Sims™ 4 offers for players as an extramural English activity for vocabulary development, in other words, what it provides for learning English as a second language while players playing a video game, the environment of The Sims™ 4 was analysed multimodally to highlight the materialities it has. Multimodal analysis was considered appropriate to illustrate the significance of the multimodal elements present in The Sims™ 4, which lay a solid groundwork for vocabulary development. Thus, it was aimed to reveal the channels and how inputs were presented in the game. In the light of results, it was found that The Sims™ 4 communicates with the player through icons, visuals, and texts with the contribution of colours. Furthermore, the ergodic setting, which is a combination of 2D and 3D environments, eases and provides a real-like game experience.

Icons, visuals, and texts, which are harmonised with each other and colours, are essential for good gameplay because they constitute the basic elements of the game that sustains a meaningful and engaging atmosphere for the players. Otherwise, players cannot interact with and interpret the game. Therefore, in alignment with the statement by Toh and Lim (2021) regarding the importance of multimodal elements in video games, the findings of this study demonstrate that these multimodal elements lead players to interpret the game. Everything on the screen is composed of icons, visuals, and texts. Players' manipulation of the game depends on their interaction with them such as clicking on an option which is displayed as an icon or a visual and subsequently as a text. Even though the game contains some songs and spoken reactions of the sims, they do not serve as basis for a meaningful communication for the player. Thus, the game is played by merely interacting with the icons,

visuals, and texts which leads the player to manipulate the game with the same channels recurrently. As a result, it increases the exposure of the player to the materialities the game presents such as text and actions. Therefore, it creates an environment in which the player makes connotations between the visuals and texts that they can practice numerous times.

Additionally, considering the time that will be spent during the gameplay, the player can orientate their exposure to a certain topic of words thanks to the presentation of icons, visuals, and texts in The Sims™ 4 environment. At this point, the choice of the game as an EE activity to develop vocabulary is of great importance. So, the player can benefit from the diverse words presented in an authentic atmosphere without a limited time such as a lesson session in a week. Instead, they can set the time and decide the topics they would like to play. Hence, away from learning anxiety, they can be exposed to vocabulary in a meaningful way and an environment which was not specifically designed for educational purposes so that keeps them engaged. Therefore, the game assures the player of inevitable exposure to the words with its engaging atmosphere created on icons, visuals, and texts.

Consequently, the multimodal analysis of The Sims™ 4 has demonstrated that the player manipulates the game by interpreting and interacting with the icons, visuals, and texts that are in accordance with colours. Their significance for sustainable engaging gameplay is indispensable. The fact that they are fundamental and ultimate elements of The Sims™ 4 is the main factor that allows the game to create a setting for word exposure and to practice authentic and meaningful L2 inputs which can be offered as a digital learning environment. Therefore, it is found that The Sims™ 4 provides a digital learning environment which can be used as an extramural English tool for L2 vocabulary development of EFL learners while presenting icons, visuals, and texts that can be used during the gameplay as EE activities.

5.2 What are the EFL teachers' attitudes to video games as extramural English activities?

The second research question was designed to reveal, how current EFL teachers approach video games as digital learning environments and EE learning. To search the attitudes of EFL teachers towards video games as EE activities and digital learning environments, 6 EFL teachers were interviewed. As mentioned in detail in Chapter 3, the first part of the

interviews focused on teachers' general perceptions regarding video games and extramural English activities.

The analysis demonstrated that even though the teachers do not prefer to use video games in their teaching due to reasons mentioned in the analysis and results chapter such as equipment issues, timing in terms of syllabus and video games, and high enthusiasm that they create in classrooms (cf. Admiraal et al., 2011), they are willing to suggest video games as extramural English activities to their students. The results revealed that the reasons why teachers do not prefer video games align with the previous research, despite some contradictions. In spite of identifying equipment issues as a distinct concern, this study found that teachers' reluctance to use or recommend video games is consistent with previous research by Admiraal et al. (2011) and Alyaz and Genc (2016), which identified technical problems during gameplay as a deterrent for teachers. Moreover, to elaborate on a noteworthy outcome, in contrast to the findings of Admiraal et al.'s (2011) study, which suggested that teachers use games in teaching to increase student activity and encourage participation, this study showed that teachers may be hesitant to employ video games due to the excessive enthusiasm they generate. However, in this case, teachers' lack of knowledge regarding video games and their teaching experience, along with the burden of the curriculum, should be considered as factors that may influence their preferences. As, in the light of the analyses, it was revealed that they were eager to use the games by giving reasons why utilization of video games for teaching and learning would be beneficial.

Results of the study showed that teachers are aware of the benefits of video games in terms of learning a foreign language as Sylvén and Sundqvist's (2012) study claimed. Additionally, they approach video games as an opportunity to take students' attention to language learning which they can integrate into their daily lives by using video games. However, the reason why it is mentioned as 'they are eager to do so' is due to their current practices. While the interviewed teachers expressed that they do not utilize video games currently, the majority stated they do not suggest either. As the analysis demonstrated, the former practice is a result of limitations while the latter depends on teachers' lack of knowledge. According to the results, teachers would propose video games to their students as an EE activity thanks to which they can get exposed to the language and practice more than they could in a classroom context if only they knew more about games that they could suggest. These findings align with the previous research (Chik, 2011; Beauprez, 2021) which highlighted

teachers' lack of knowledge and experience regarding video games. However, it should be noted that analysis displayed that teachers who play video games may also have difficulties. Thus, it is significant to indicate that teachers' lack of knowledge is not only related to their competence in video games. Instead, it is related to use of video games as digital learning environments and EE activities. Briefly, rather than solely knowing how to play the game, they should know the content of the game and its use as a learning tool as well.

Teachers' beliefs about their insufficiency in terms of video games which can be used as digital learning environments, put them a step backward when they suggest extramural English activities to their students. Within the light of teacher interviews and gaming sketches analysis, it was revealed that interviewed EFL teachers generally suggest EE activities which are mainly constituting movies, TV series, and songs. However, it was found that most of them do not suggest video games. The reason why they recommend such EE activities instead of video games can be interpreted as their familiarity with the visual media that everyone accesses at any moment on contrary to video games. This interpretation is supported by the opinions of teachers about video games.

As the analysis showed, teachers believe they need to spend time selecting and playing video games before suggesting because some of them think they are not competent enough to give an example to their students. Therefore, this sentence brings the discussion to one of the initial claims of the study which is on teachers' attitudes towards video games. According to such claim which is defended in this thesis, today's EFL teachers, who are in touch with technology, are not yet competent regarding the phenomenon that they should be able to integrate video games, which are becoming increasingly widespread and almost everyone experiences in one way or another, into foreign language learning. In other words, they should be able to recommend video games to their students to improve their English as they would recommend an English book. Hence, there is a need to educate EFL teachers about the utilization of video games as a digital learning environment which they and learners can benefit both at school and extramural English contexts. Moreover, making changes in curricula of EFL teacher education programmes and national curricula of English for primary and secondary schools is necessary for its implementation effectively. In this way, the necessities of the educational era can be met in terms of the use of digital learning environments with a step further.

5.3 What are the EFL teachers' attitudes towards The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners?

The EFL teachers' attitudes towards The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners were searched by conducting interviews and gameplay sessions. Moreover, findings were reported according to the qualitative content analysis of teacher interviews and gaming sketches. By posing the third research question of the study, it was aimed to find whether EFL teachers use The Sims™ 4 and propose it as an EE activity to their students and if so under what circumstances they would. Therefore, the opinions of the EFL teachers were requested and their approaches were documented in this study.

The teachers, who had limited prior knowledge about the game before, believed that The Sims™ 4 would improve vocabulary development of L2 English learners after experiencing the game during the gameplay session. They expressed that the multimodal environment which blends the visualization with the text makes the game a potential and authentic resource for language learning. Furthermore, some teachers mentioned that the game does not only serve as a basis for vocabulary development but also provides a setting for development of pragmatics, digital skills, and other language skills. While the opinions of the teachers in this study may not directly address the same issue, they yielded similar results to those found in Miller and Hegelheimer's (2006) and Ranalli's (2008) study, which demonstrated that a previous game from The Sims™ series could be used as a learning environment.

Although the teachers did not solely view the game as an extramural English (EE) activity and shared some example activities for utilization of The Sims™ 4 in the school context, the findings suggested that its use in the EE context could be more effective. Teachers believed that using The Sims™ 4 as an extramural digital game-based learning environment gives more autonomy to learners to explore and learn more things. Therefore, they stated it is better to use their spare time. In addition, some teachers expressed that the game controls are difficult so that time-taking. Furthermore, few teachers thought that even though the game environment is a simulation of a real world where they could practice rich vocabulary, it is not for everyone. Hence, keeping the motivational side of extramural English activities

in mind, teachers posited The Sims™ 4 as an extramural digital learning environment would be more practical.

The gameplay session that was conducted for the study constituted an exemplary case for the feasibility of possible teacher training mentioned in Section 5.2. The analysis demonstrated that teachers, who played The Sims™ 4, experienced the gameplay and its potential as a use of an extramural digital learning environment. After familiarizing themselves with the game and reflecting on its beneficial elements for vocabulary development, teachers stated they would use and propose The Sims™ 4. As a result, teachers who earlier mentioned they would not utilize or suggest video games without knowing the game, explicitly stated they would recommend the game and indicated that they would integrate the game into their teaching. In other words, after experiencing the game they became more aware of “the value of harnessing games for learning” as Toh and Lim (2021, p.19) suggested. Consequently, the results showed that the use of video games for foreign language learning as digital learning environments is applicable when sufficient knowledge is provided for teachers according to educators.

5.4 Limitations of the study and suggestions for further research

As with many other studies, this study has limitations in generalizing the results. The limitations majorly result from the timing and number of participants. Due to the limited time that a thesis can be done and the small number of participants taking part in this study, it is difficult to make a clear generalization about EFL teachers' attitudes towards video games as EE activities and The Sims™ 4 as an extramural digital game-based learning environment for vocabulary development of L2 English learners. Therefore, there is a need for conducting research with a higher number of participants in a more extended time.

Furthermore, increasing the time dedicated to the gameplay session may provide an opportunity for teachers to see more input and content that the game offers. Even though T2 mentioned they would recommend the game at the end of the day, they believed that they needed to play the game more. So, teachers can share their attitudes regarding after experiencing the game longer. However, keeping the total amount of time that interviews were conducted, it should be noted that the longer sessions will lead interviewees' attention to get distracted. Therefore, limiting the gameplay session time to 15 minutes as seen from the results of the interviews was an appropriate decision.

Another limitation that resulted from the timing was related to the multimodal analysis of *The Sims™ 4*. Although it did not have a strong impact on displaying what type of multimodal environment *The Sims™ 4* provides for extramural English in terms of vocabulary development, the limited time in which the multimodal analysis was done, set a limitation for conducting detailed analysis. Thus, by doing a wider multimodal analysis, the environment of *The Sims™ 4* can be demonstrated by giving more details about the materialities and canvas it has.

By setting an example of COTS game which can be utilized in EE settings for foreign language learning, this study shows that more video games can be experienced by EFL teachers to increase teachers' competence. In addition, it reveals that there is a need for conducting research on other video games which can provide settings for other language skills while stating that *The Sims™ 4* is not sufficient to support language skills such as listening. Therefore, further research on other video games which focus on different language skills can put forward the video games that teachers and learners can use both in classroom and EE settings as well as creating video games portfolio that can be used for teacher trainings on increasing the digital learning environment and video games competences of teachers. Thus, both teachers' lack of knowledge regarding video games can be overcome and materials for EFL teaching and EE context can be provided.

6 Conclusions

This study analysed the multimodal environment The Sims™ 4 provides for extramural English in terms of vocabulary development and EFL teachers' attitudes towards video games as EE activities and The Sims™ 4 as an extramural digital learning environment. In the light of the findings, it is revealed the environment of The Sims™ 4, EFL teachers' attitudes towards video games as EE activities and towards The Sims™ 4.

First, The Sims™ 4 provides a multimodal digital learning environment that players can benefit from in terms of vocabulary while being exposed to diverse words authentically in its engaging atmosphere. Second, EFL teachers are aware of the benefits of video games. However, they think that they are not competent in terms of video games as digital learning environments. Hence, they do not use or suggest them. Third, EFL teachers believe The Sims™ 4 can be used as a digital learning environment both in the school and EE contexts, while stating that utilizing it as an EE activity may bring more benefits. Therefore, the study comes up with a finding that there is a need for training of EFL teachers accordingly to be competent regarding utilization of video games both in classroom and EE settings. Thus, given English language education can meet the needs of the current digital era which leads to the integration of digital learning environments into teaching and aims to make English a part of the daily lives of the learners.

To achieve this goal and reveal the necessities to implement it efficiently, further research on creating a portfolio on selection of video games as digital learning environments for L2 learning and teaching should be conducted. So that a variety of video games can be researched to reveal their potential to be used as materials for teaching and learning. Furthermore, teachers' attitudes regarding these video games should be taken account during the selection period to demonstrate feasibility between the practice and theory. Subsequently, teacher trainings regarding the selection of video games and their implementation in school and EE contexts should be conducted. Ultimately, EFL teachers' competence on video games as digital learning environments can be enhanced and use of digital learning environments for learning and teaching can be facilitated.

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Appendices

Appendix 1 Interview and gameplay session questions

Part 1- Teachers' approach to EE and video games

1. Do you suggest any EE activities to your students?
2. Would you suggest video games as an EE activity to improve your students' language skills?
3. Do you believe that video games improve your students' language skills?
4. Have you ever suggested any extramural English activities to your pupils? (if yes, how long have you been suggesting them, to whom?)
5. Have you ever suggested any video games to your students? If yes, which games?
6. Do you think that your students believe your suggestions are important for them?
7. Do you think you have a role as an EFL teacher to suggest extramural English activities to your students?
8. Do you or would you use video games during class hours?
9. Have you ever used video games in your teaching? If yes, what sort of games and what were their names?
10. What are the points that you are looking for while selecting your material to suggest to your students?
11. Do you play video games and how frequently?

Part 2- The gameplay session

- Why would The Sims™ 4 be beneficial for L2 learning or not?
- Which points of the game could be benefited from or not (Giving examples)?
- What are the hindrances of its utilization according to you?

Part 3- Teachers' attitudes towards The Sims™ 4

1. Would you consider The Sims™ 4 as an appropriate and sufficient tool to be used by EFL learners from the beginner level to the advanced level? (In terms of language skills)
2. According to your first impressions and game experience do you think that The Sims™ 4 can be used as a learning environment for EFL students?
3. Which present items in The Sims™ 4 propose it as an extramural learning environment?
4. After playing the game do you think that The Sims™ 4 promotes vocabulary development? In which ways yes or no?
5. What are the language skills that The Sims™ 4 provides to EFL learners?
6. Do you believe that your students may benefit from The Sims™ 4 in their vocabulary development?
7. Would you follow the criteria to suggest The Sims™ 4 as an EE activity to your students? (i.e. age, gender)
8. Would you propose The Sims™ 4 as an EE activity for your students?
9. Is there anything else that you would like to add?

Appendix 2 Figures

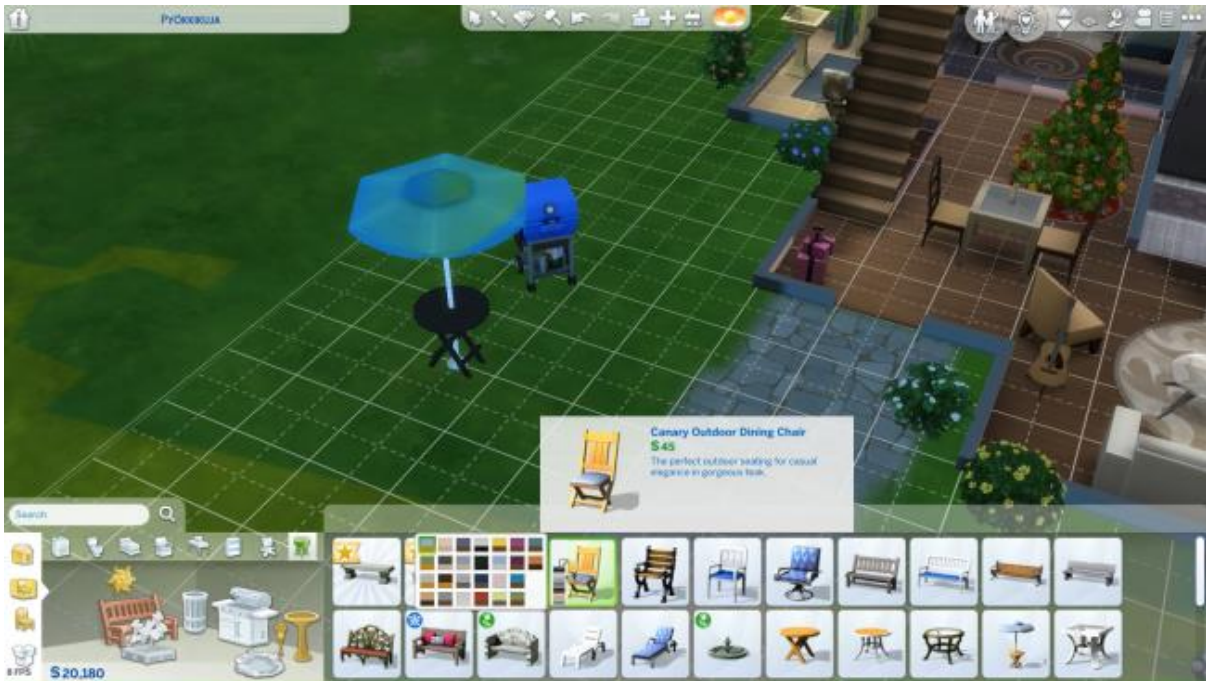


Figure 1. Buy mode



Figure 2. Explanation of an icon in a text form



Figure 3. Interaction with visuals 'Chess board'



Figure 4. Sims are playing chess after selecting 'play' option



Figure 5. Limited interaction with visuals



Figure 6. No interaction icon



Figure 7. Notifications



Figure 8. Colours for emotions



Figure 9. Colours of needs



Figure 10. Conversation

Appendix 3 Data Protection Notice for Scientific Research GDPR

**DATA PROTECTION NOTICE FOR
SCIENTIFIC RESEARCH
General Data Protection Regulation of the EU
Articles 12–14
Date: [30.12.2023]**

Information on the processing of personal data in the research project entitled [The Sims™ 4 as an extramural learning environment for vocabulary development of L2 English learners]

The research project entitled [The Sims™ 4 as an extramural learning environment for vocabulary development of L2 English learners] involves processing of personal data. The purpose of this data protection notice is to provide information on the personal data to be processed, from where they are obtained and how they are used. Detailed information on the rights of data subjects will be provided at the end of this notice.

Your participation in the research project and provision of personal data are voluntary. If you do not wish to participate in the project or you wish to withdraw from it, you can do so without negative consequences.

1 Data Controller

Sevil BAYRAKTAR

Address: PO Box (Fabianinkatu 33), 00014 University of Helsinki, Finland

2 Contact person and principal investigator

Contact person in matters concerning the research project:

Name: Sevil BAYRAKTAR

Faculty/department/unit: Faculty of Arts

Address: PO Box (Fabianinkatu 33), 00014 University of Helsinki, Finland

Phone: 041 7936923

Email: sevil.bayraktar@helsinki.fi

Principal investigator: the contact person

3 Description of the research project and the purpose of processing personal data

This research project examines EFL teachers' attitudes to video games as extramural English activities and The Sims™ 4 as an extramural learning environment for vocabulary development of L2 English learners.

Personal data is processed as part of master's thesis at the University of Helsinki. The student is responsible for the practical management of the data, such as the minimization of the data to be processed, the accuracy and the determination of storage periods and the use of appropriate systems/applications. The risks related to the treatment are assessed in cooperation with the supervisor. The University guides and supports the processing of personal data from planning to the publication of the final work and provides the necessary infrastructure and tools to carry out the research.

4 Personal data included in the research data

The data which is processed as a part of master's thesis at the University of Helsinki includes names, genders, contact details and ages that the target group have as well as including their workplaces and some identifiers of their student groups (such as high school students or university level students).

5 Sources of personal data

The personal data will be obtained from interviews and google forms.

6 Sensitive personal data

No special categories of personal data (i.e., sensitive data), as defined in Article 9 of the GDPR, will be processed in this research.

7 Lawful basis for processing personal data

Personal data are processed on the following basis (Article 6(1) of the GDPR):

Task carried out in the public interest:

- Scientific or historical research purposes or statistical purposes
 - Archiving of research material and cultural heritage material
 - Consent by the research subject
 - Compliance with a legal obligation to which the controller is subject
 - Legitimate interests pursued by the controller or by a third party
- Specify the legitimate interest:

If the processing of personal data is based on the research subject's consent, he or she can withdraw that consent at any time. The withdrawal of consent does not affect the lawfulness of processing based on consent before its withdrawal.

8 Recipients of data

Personal data will not be transferred or disclosed to parties outside the UH research group.

9 Transfer of data to countries outside the European Economic Area

Data will not be transferred to countries outside the European Economic Area, they are processed only within the EEA.

10 Automated decision-making

The research project involves no automated decision-making that has a significant effect on data subjects.

11 Protection of personal data

Personal data included in the research dataset will be processed and kept protected so that only those who need the data can access them.

The data processed in data systems will be protected using the following:

- Username and password

- Registration/log of use
- Access control
- Encryption
- Two-factor identification
- Other, please specify:

Physical material (e.g., data in paper form or other tangible form) will be protected using the following: a locked cupboard that can only be accessed by authorised person.

Processing direct identifiers:

- The controller collects the personal data without direct identifiers.
- Direct identifiers will be removed during the analysis stage and kept separate from the analysed research data.
- The data will be analysed using direct identifiers, because (give grounds for preserving the direct identifiers):

12 Duration of the processing of personal data in this research project:

End of 2024

13 Processing of personal data when the research project ends

- The research data will be deleted
- The research data will be kept for the purposes of validating or replicating the results of this research project:
 - without identifiers identifiers included
- The research data will be kept for later, compatible scientific research in accordance with the requirements of the GDPR:
 - without identifiers identifiers included

The storage of the research data is based on Article 5(1)(b) and (e) of the GDPR.

Data subjects will receive a new data protection notice on the new use of the research data, unless the controller can no longer identify the subjects from the data.

In addition, the data subjects will not be informed of the new research if delivering this

information to them is impossible or involves a disproportionate effort or renders impossible or seriously impairs the achievement of the research objectives (Article 14(5)(b) of the GDPR).

Where and for how long will the data be stored: ____

14 Rights of data subjects and derogations from those rights

The contact person in matters related to research subjects' rights is the contact person stated in section 1 of this notice.

Rights of data subjects

Under the General Data Protection Regulation, data subjects have the following rights:

- Right of access to their own data
- Right to rectification of their data
- Right to the erasure of their data and to be forgotten
- Right to the restriction of processing of their data
- Right to data portability from one controller to another
- Right to object to the processing of their data
- Right not to be subject to automated decision-making

However, data subjects cannot exercise all their rights in all circumstances. The circumstances are affected by, for example, the legal basis for processing personal data.

Further information on the rights of data subjects in various circumstances can be found on the website of the Data Protection Ombudsman: <https://tietosuoja.fi/en/what-rights-do-data-subjects-have-in-different-situations>.

Derogations from rights

The General Data Protection Regulation and the Finnish Data Protection Act enable derogations from certain rights of data subjects if personal data are processed for the purposes of scientific research and the rights are likely to render impossible or seriously impair the achievement of the research purposes.

The need for derogations from the rights of data subjects will always be assessed on a case-by-case basis.

Right to appeal

If you consider that the processing of your personal data has been carried out in breach of data protection laws, you have the right to appeal to the Office of the Data Protection Ombudsman.

Contact details:

Office of the Data Protection Ombudsman

Street address: Ratapihantie 9, 6th floor, 00520 Helsinki

Postal address: PO Box 800, 00521 Helsinki

Phone (switchboard): 029 56 66700

Fax: 029 56 66735

Email: tietosuoja(at)om.fi