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# The Use of Digital Games for Developing Oral Proficiency in English

A Literature Review



Alexander Nilsson

Engelska för gymnasielärare

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## Abstract

This literature review aims to give the reader an overview of the research done on using digital games for developing oral proficiency. Digital games are still a new research field in general but previously conducted research on digital games and their use for language learning have shown that they may have a place in education. The material presented in the review found that digital games for the development of oral proficiency can be rationalized within the upper secondary school curriculum as well as previously established theories on learning. The studies were found to lack empirical data and proper results detailing actual development of oral proficiency and were only able to show that they may have potential as learning tools. The review concludes with a discussion surrounding the research gaps found in the field as well as reflections on how to make the best use out of digital games in a classroom setting. In conclusion, digital games show potential for the development of oral proficiency but require more research and empirical evidence.

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# 1 Introduction

## 1.1 Background

Since their inception, digital games have been the source of many discussions regarding their effects on players. They used to be a source of much controversy in terms of how they affect players given how many contain violent scenes and scenarios which players can partake in, but in recent times more research has been conducted on the beneficial aspects of playing them. One such ongoing discussion is what effects they may have on a student learning a language. The research field concerning digital games and their use for developing oral proficiency is still new with many gaps yet to be filled in and with a lack of literature reviews made in the field. The aim of this literature review is to give a much needed overview on what studies have been conducted in the field as well as their findings. Before providing an overview of these studies (pertaining to oral proficiency) it is important to briefly look at previous research conducted on digital games and their use for language learning as a whole in order to rationalize their place as language learning tools.

Anderson, Reynolds, Yeh and Huang (2008) say that their work demonstrates the possibility that language learning can be supported by digital games. Like movies and any other media, some video games can be a resource that can be tapped for learning. James Paul Gee and Elisabeth Gee (2017) once said that, when it comes to education, we often create sharp boundaries between talk and texts, fiction and nonfiction, reality and media, and the real world and virtual worlds. They go on to state that humans do not strongly distinguish among things they have experienced regardless if it comes from media, games, texts, conversations, virtual worlds or the real world. Instead, Gee and Gee (2017) state that, we tend to forget the origins of our experiences and go on to use the lessons learned as resources for future learning and problem solving. They conclude that this is what makes new digital tools promising because just like literature, they can become “equipment for living” (Burke, 1993, as cited in Gee & Gee, 2017, p. 3) which is what any well-designed experience, in the real world or in virtual worlds, is for human beings.

Much like Anderson et al. (2008), Gee and Gee (2017) create a strong argument for why digital games and the virtual worlds therein should be treated with the same respect and research as e.g. works of literature instead of merely being seen as toys for the sake of entertainment. It is important to examine if digital games, as a language learning tool, have a place in the classroom at all. Klimova and Kacet (2017) found that digital games (educational

ones especially) were effective when it came to students getting more exposure to the target language, enhancement of learners' involvement in communication as well as increased engagement.

However they also found that there were certain downsides in the form of limitations such as the fact that not all games are useful for language learning and that a general lack of knowledge about computer games among institutions and teachers may hinder their proper use. They say that in order to confirm the efficacy of the the use of digital games for language learning, more longitudinal randomized control studies with larger subject samples need to be conducted in this field (Klimova & Kacet, 2017). More studies have been conducted regarding the effects of digital games and how they may differ between games for entertainment purposes and digital games made for educational purposes (Backlund & Hendrix, 2013). In their studies it was found that educational games had a positive effect on learning which led them to conclude that the evidence was strong for educational games being effective as learning materials. They also went on to conclude that games made for entertainment purposes may also hold some value as learning materials but that they can not be applied to a formal classroom situation.

## 1.2 Steering documents

Although there is no passage in the Swedish steering documents for upper secondary school which specifically discusses the use of digital games it may be interpreted as something that is allowed within the classroom if applied for language learning. The steering documents for upper secondary school state that students should make use of different digital tools and work with various sorts of media (Skolverket 2011). Moreover the curriculum also states that students need to understand spoken language and develop their oral proficiency as well as be given opportunities to interact in written and spoken language. As such, by applying the curriculum to the context of digital games, it can be argued that they definitely could be rationalized as language learning tools in a classroom setting.

### 1.3 Aim and Scope

The aim of this literature review is to provide an overview of research on digital games and their effects on language learning. The scope will encompass primarily how digital games, both for entertainment and educational purposes, may develop a student's oral proficiency. The review will limit itself to looking at studies conducted on teenagers and young adults in a classroom setting.

### 1.4 Terminology

Because of how relatively young this research field is compared to others, in this literature review you will encounter a lot of terms unique to digital games which you may not be familiar with. To begin with this literature review will refer to what is known as *CALL* (Computer Assisted Language Learning) which centers around finding and studying the applications of computers in language learning and teaching. There are two distinctions between types of games: *Edutainment* and *Entertainment*. The former refers to games that have been designed to be educational yet entertaining in nature while the latter refers to games that were primarily designed to be entertainment and may or may not hold benefits to language learning and teaching. Primarily in the entertainment class the literature review will be discussing *MMORPGs* (Massively Multiplayer Online Role-Playing Game) and *Virtual worlds* which includes popular online games such as *WoW* (World of Warcraft) or a virtual world MMO (Massively Multiplayer Online) named Second Life. These are digital games that allow players to participate in a large open virtual world where they may meet and interact with other players from all over the world. Players will often complete tasks (Usually known as *Quests*) by working together and communicating with each other either via a written chat function or, more commonly, by speaking to each other directly over a voice chat. Other important terminology includes what is called an *NPC* (Non-Playable Character) which refers to a character within a game that is not controllable by any player but rather follows some form of programming that has been applied to it by the developers so that it may fulfill a function within the game of some kind. An MMO like Second Life is similar to World of Warcraft but contains no set tasks for players to complete and instead offers a large virtual playground where players may simply exist and interact with others as they would in real life (though with added bonuses due to taking place in a fantastical virtual world).

## 1.5 Method

My research method involves primarily looking through databases such as ERIC, Researchgate and Google Scholar. However some sources have been located by consulting the list of references in existing studies and papers. The searches were specifically tailored toward keywords such as *Oral proficiency*, *Digital games*, *ESL* and *CALL*. The primary intent is to give a general perception of research conducted in the field of using digital games for the development of oral proficiency. The time span ranged from 2008 to 2018 with a focus on studies conducted in the more recent years and was chosen as 10 years is an acceptable even number. The studies included are:

Name of study	Reason for inclusion
Goofy Guide Game: affordances and constraints for engagement and oral communication in English.	Chosen due to providing a look into how edutainment games may affect the development of oral proficiency.
Can a 'shouting' digital game help learners develop oral fluency in a second language?	This one was also chosen due to looking into an edutainment game and its use for oral proficiency.
3D Role-playing games as language learning tools.	Though this study does not strictly revolve around oral proficiency it provides insight into how an MMORPG can be used for language learning and brings up how communicative skills were affected.
Skilled linguistic action in English as a second language learners play of World of Warcraft (WoW): A distributed view.	Another study looking into an MMORPG and one that presents some interesting results pertaining to the development of oral proficiency.
Affect and willingness to communicate in digital gamebased learning.	This study also explores the use of an MMORPG and delves into how it may affect oral proficiency.
Designing oral participation in Second Life – a comparative study of two language proficiency courses.	An older study that looks into a virtual world MMO. It was chosen in order to show what yet another type of game may bring in terms of oral proficiency as well as to later compare

	it to a newer study for the same game.
The impact of role-playing games through Second Life on the oral practice of linguistic and discursive sub-competences in English.	This study examines the same MMO as the previous one but is more recent and presents a better look into its use for developing oral proficiency.

## 2 Theoretical Framework

The sociocultural and interactionist perspectives are central when discussing oral proficiency as they promote interaction between students in learning situations. Many digital games promote cooperation and communication between players (such as MMORPGs or certain types of edutainment games etc.) and as such the sociocultural and interactionist perspectives are highly relevant when discussing the use of digital games in a classroom setting. According to Vygotsky (1979), an essential part of learning is communication and interaction by which he means that learning awakens a variety of internal developmental processes that can operate only when a person is interacting with people e.g. and in cooperation with peers. When these processes are internalized they will become a part of the person's independent developmental achievement. He goes on to state that from this point of view learning is not development but rather that properly organized learning will result in mental development and will set in motion a variety of developmental processes that would otherwise be impossible (1979, p. 90).

The Swedish curriculum for upper secondary school can be tied into Vygotsky's sociocultural theories about communication and interaction as it is stated that all students need to develop their oral proficiency in English in order to understand spoken language and to communicate in the English language in a way that is adapted to different recipients and situations (Skolverket, 2011). Furthermore, students are to be given opportunities to interact in both the written and spoken language with help of different resources including different forms of media.

Eun and Lim (2009) state that the fundamental thesis of the sociocultural view on human development is that development proceeds from the outside to within. When a student acquires something from interaction with other people knowledge is then internalized as an individual function. The term mediation refers to when impulsive, unmediated and natural

behaviors are transformed into higher mental processes via socially meaningful activities using instruments or tools (Vygotsky, 1979) (Eun & Lim, 2009). Eun and Lim (2009) say that mediation in turn is defined in relation to the meaningful aspect of speech. Because all of the higher mental processes (which include the learning of a second language) are mediated by the meaningful aspect of language, it becomes essential for second language teaching to focus on the meaningfulness of speech. In the interest of using digital games for language learning it is noteworthy that they also say that second language learning should be based on the learner's own interests, needs and purposes; suggesting that connecting language instruction to the real world is one way to implement that principle.

In Säljö (2012) Vygotsky's Zone of Proximal Development (ZPD) is explained as when a learner understands and has learned something then they are also on the verge of learning something new. In the context of the classroom this could mean that a learner will develop further and move onto the next stage of learning with the help of someone else like a teacher or classmate. Also in Säljö (2012) there is a definition of the term *Scaffolding* as referring to the process of a learner being brought further along their development due to communication with a more competent person who may help them along to understand something new. With scaffolding it is also important that it supports the learner less and less so as to let them reach the next step of learning on their own. All in all these perspectives regard learning as a constant process that lasts throughout an entire lifetime and that the ideal environment for learning to take place is when the learner is interacting via communication and cooperation with someone else who is typically more competent.

### 3 Oral Proficiency and Digital Games

The studies will be presented in groups in the order of edutainment games, MMORPGS and finally the virtual world MMO Second Life. Within the groups the studies are listed in alphabetical order.

Enticknap-Seppänen (2017) began their study with the aim of seeing if an educational digital game designed by a teacher researcher (The Goofy Guide Game) could be used for teaching L2 English to tourism students. They wanted to know if an educational digital game built for this specific purpose could benefit learner engagement and face-to-face oral communication in English between players during game play. The study was piloted in an on-campus game laboratory with two groups of first year tourism students that were split into eight teams of four to six persons where they played the game two teams at a time during four game play sessions. The game was a 2D online audio-visual animation created with the online animation software Go Animate and contained tourist guiding events that ranged from good customer service to poor customer service. After each animated scene the students were made to rate the customer service shown and discuss among themselves whether or not the guide's behavior would be considered appropriate, choosing from 4 alternatives (A, B, C and D).

The teacher researcher collected data through observation, individual learning diaries and questionnaires before and after the game, however the study appears vague in terms of how measurement was handled aside from a mention of the teacher researcher performing a qualitative content analysis. By going over the data a few themes emerged which included speaking English among others. A contradiction was shown between the teacher researcher's observations and how participants construed learning and speaking English as participants showed a lack of oral utterances and oral communication development. According to Enticknap-Seppänen (2017), this was due to the use of *deictic communication strategies* which meant that participants communicated via gazes, pointing or short utterances like “Yes” or “No”. This was made worse by the fact that the game offered very limited time for discussions, especially given the size of the teams (4 to 6 persons). Some students reported that they felt an improvement in their L2 listening comprehension but that using multiple senses simultaneously distracted them from speaking and that areas to improve upon, according to the students, would be to offer them more time to discuss the questions before selecting an answer.

Enticknap-Seppänen (2017) concludes with the observation that these outcomes are somewhat similar to previously conducted research (although these were mainly done on MMORPGs), which results indicated that games could help reduce emotional barriers to communication and allows for collaboration in rich linguistic environments which benefits L2 learning and promotes oral communication. They suggest that further scaffolding such as integrated structured speaking tasks could provide a more positive learning experience. Although the results of this study displayed no remarkable improvement concerning oral communication they argue that the results are still relevant within the discourses of digitalization and game-based learning.

In another edutainment game study, Grimshaw, Cardoso and Waddington (2016) studied whether or not a free mobile game on Android and iOS named Spaceteam ESL could help improve oral fluency in ESL students. The game is a cooperation-based experience where players in teams of two to four must engage in real-time computer-mediated interaction with other players in order to succeed in navigating a spaceship. Every player has their own unique panel with buttons and dials that are labeled with randomly generated noun-verb-adjective combinations based on vocabulary frequency bands. Orders that are time-sensitive appear on the screen and players need to communicate the instructions to each other by reading them out loud from their panels while they also receive orders and commands from other players that they must interpret in order to manipulate the buttons and dials on their panel. As an added twist, players must also complete all of their tasks within a limited amount of time. They brought in 20 students from two high-beginner ESL classes at a French-language college in Canada in order to participate in the study.

One of the classes was made to be the control group while the other became the experimental group that received the treatment of playing the game as a 15 minute warm-up exercise in class during a period of six weeks. Grimshaw et al. (2016) collected quantitative data from all participants via tests that involved recording a participant awhile having them talk about their summer vacation which Grimshaw et al. (2016) then used to calculate the number of syllables per minute. The results showed that there were no significant differences in terms of improvement between the two groups as time went on. While they acknowledge that a small improvement in oral fluency was shown when comparing the pre-test to the post-test results, they found this difference too small to be significant. Comparatively the control group displayed decreased results although Grimshaw et al. (2016) admit to this potentially being the result of a limitation within the study.

Grimshaw et al. (2016) still argue that despite the limitations of their study possibly affecting the results of the control group (thus making them inconsistent), the results show that the treatment group displayed a trend of improving their oral fluency more over time than the control group. They suggest that Spaceteam ESL may be of use as a warm-up activity and was a more effective refresher for English compared to the activity which the control group participated in. They conclude that further research must be conducted under more controlled conditions with a longer period of treatment in order to determine how much the game can influence the development of oral fluency. They also mention that students that participated in the study claimed to have spoken more English in the short 15 minute game play sessions compared to a three hour lesson. They speculate that the game helped make speaking more fun and bring down anxiety barriers thus making participants more willing to participate in oral interactions. Spaceteam ESL thus creates a favorable environment for oral fluency development with the data suggesting that it could serve as an effective warm-up activity for L2 learners.

Apart from edutainment games there are also the entertainment games. In a study conducted by Gooch, Gold and Rankin (2018) they sought to identify the appropriate pedagogical strategy that enables learners to leverage benefits from gaming. They wanted to answer the questions of whether or not the MMORPG Ever Quest 2 could increase the English proficiency of a group of ESL students, if it provides language learning support for ESL students of various backgrounds and what improvements or additional tools would be required to transform MMORPGs into second language learning tools. The study primarily measured the acquisition of vocabulary with improvement to oral proficiency being an afterthought. Five ESL students participated in the pilot study with English skills ranging from high-level beginner to advanced. They completed a questionnaire before the game which identified what their native language was and evaluated their computer literacy skills, confidence level in their ESL communication skills and experience playing games. The participants had to play the game in groups of two during a four week period for a minimum of four hours while Gooch et al. (2018) kept a diary of observations per session.

Initially in the first week they had tutorial sessions where participants were allowed to learn more about the game itself such as explanations of character's classes (this referring to a game play mechanic), professions and species as well as general game instructions like chatting or examining objects within the game. One student withdrew from the study due to an inability to meet the time commitments and thus the results and data collected only reflect four of the students rather than five. The four weeks of game play ended with another

questionnaire. As the study did not focus on the development of oral proficiency, the results concerning it were not measured the same way as vocabulary acquisition making them lacking and only centered around attitude and motivation. Among the results pertaining to oral proficiency in particular one student exhibited a positive perception of the game's ability to assist with ESL acquisition which included conversational skills. They also found that different ESL proficiency levels suggest that every participant brings different learning needs to the game and that the virtual world of Ever Quest 2 lacks the flexibility to support the needs of varying levels of ESL students.

They reached the conclusion that a game like Ever Quest 2 may be too difficult for a student with low English skills as the game environment is not adapted for language learning of all skill levels. Students proposed that more NPCs should have more oral output in order to help them learn the pronunciation of new words. The game environment also proved itself very difficult in the first week due to the game demanding a lot of the player and since the participants had limited experience with video games, there was a steep learning curve which led to frustrations and hindered learning. With digital games such as Ever Quest 2 that were not made with educational purposes in mind it is very important that participants can be taught or eased into the experience by someone who is able to grasp it. This leads to difficulties when applying it to the classroom setting as both the teacher and the students need some level of proficiency with handling the game. However, despite lacking results in terms of oral proficiency development, Gooch et al. (2018) still say that multi-modal inputs are vital to a student's ability to develop oral proficiency in the target language and that these interactions constitute authentic dialogue between native and non-native speakers.

They also note that due to the nature of MMORPGs, students are forced to interact with others and form powerful alliances in order to defeat enemies and accomplish tasks which are not possible to complete alone. They say that the social interactions serve as catalysts for developing students' conversational competence due to chatting in a foreign language as the game is being played. They also claim that without social interaction the students' motivation will suffer and that they will also find a lack of opportunities for practicing target language skills and immediate feedback. The game and other games of the same kind, are turned into CALL tools for second language acquisition for students.

When speaking of MMORPGs it is difficult not to mention World of Warcraft as it is one of the biggest and most popular MMORPGs on the market. Newgarden (2015) made use of the game and says that her study shows how L2 learning can benefit from authentic situations with meaningful outcomes. The data was collected during a semester long course designed by

Newgarden and sought to bring together ESL learners and Native English Speaker (NES) freshman students in order to explore social, cultural and personal values through play and discussion of the game. For the NES students the course was framed as a Service Learning which meant that they would play the role of helping L2 learners practice English and provide sociocultural expertise. The course took place mostly online and made use of discussions and reflections that were intended to provide language practice and feedback as well as cultural knowledge and awareness in terms of recognizing social values and their relationships to culture. The course activities that took place outside of gameplay included readings, videos, discussions, construction of a game knowledge base and written reflection. The students were assigned to small groups of two to three NESs and two to three L2s with at least one more experienced WoW player in each group. The groups were then told to play one hour of WoW each week using Skype conference calling while Newgarden (2015) recorded the gameplay and dialogue.

Concerning how this applies to oral proficiency Newgarden (2015) says that recurrent languaging activities, in the game, such as questing, planning next moves, traveling, learning a skill etc. which constitute WoW gameplay afforded richly contextualized and varied practice with a variety of communicative activities that describe L2 proficiencies in speaking. According to Newgarden, the dialogical system of a small World of Warcraft gameplay group became more coordinated after they played the game together for a semester in a game-centered course (2015). She applied the Linguistic Style Match metric and looked at the calculation of the alignment for players' spoken language. Within and across gameplay episodes, it could be seen that the alignment was higher while in episodes of play in which interactions were more smoothly coordinated (2015). A game-centered course has several benefits according to Newgarden, such as guided discussion and comparative reflection on the internal culture found in the game but more importantly for the sake of oral proficiency; it offers conversational ease, development of a class community and the chance to practice L2 learning by participating in multiple L2 communities (2015).

Another study on yet another MMORPG was conducted by Reinders and Wattana (2015) on 30 Thai EFL students enrolled in a 15-week university language course which was designed and taught by one of the researchers. The aim of this study was to investigate the effects of participating in an online game on EFL learners' willingness to communicate in English. The participants were all third-year students majoring in IT with different English proficiency levels (thirteen elementary students, eight lower intermediate students, seven upper intermediate students as well as two advanced students). This further showed how a

digital game such as an MMORPG (this time a different one named *Ragnarok Online*) has the potential to improve oral proficiency. The study gathered the data by interviewing the participants on their experiences with the game. They found that the majority of the interviewed students thought the use of the game was beneficial for their oral proficiency. They reported feeling less anxiety when speaking the language and their willingness to communicate increased. Out of the five interviewed students four of them found it beneficial. However even the one student who did not have a positive experience mentions feeling less anxious. The reasons offered were that the game offered an environment which provided a certain degree of anonymity and encouraged supportive interaction, as well as an environment where they did not need to be concerned about making mistakes and dared to take more risks.

Reinders and Wattana (2015) go on to state that anxiety has been documented as having a debilitating impact on language learning and that the ability to lower affective barriers is a major benefit to learning as it impacts learners' self-efficacy. They also report that a willingness to make mistakes and learning from them has been identified as one of the characteristics of successful language learners. As such the lowered anxiety as well as increased risk taking among students that previously considered themselves as risk-averse (in a learning culture where making mistakes is not encouraged, especially in public) due to playing the game, could be potentially important in future studies of using digital games in the classroom for language learning, including oral proficiency (Reinders & Wattana, 2015). It should be noted that the study does not display any improvements to oral proficiency outside of how the participants felt about the experience.

Aside from MMORPGs there are other digital games of similar, yet different, nature such as the virtual world game *Second Life* which aims to immerse the player in a virtual environment where participants may engage in various activities of their own choosing. Deutschmann, Panichi and Molka-Danielsen (2009) state that the features and virtual environment of *Second Life* allowed for several kinds of communication with one of them being via voice chat thus allowing for oral communication. Their aim was to use *Kamimo Islands* (the study only explains that it is a network project funded by the Norwegian University program) to provide groups of doctoral students from different language backgrounds with a platform for practicing and developing their oral/aural communicative skills in English. The intent being that it is an authentic professional linguistic setting. Deutschmann et al. (2009) explain that the doctoral students came from several participating universities and that a previously conducted needs analysis had showed that they specifically required more oral practice in English. According to Deutschmann et al. (2009), the study

involved action research in two oral proficiency courses for the doctoral students that took place in Second Life.

In the first course there were six doctoral students and on the second there were seven. The first course worked from a role-play model as one of the involved teachers had worked from this model previously. The game play sessions were documented using a screen recording software. The teachers would take on made-up roles of academics with whom the participants were expected to interact. The overall focus of the first course was production of language and all the meetings included a feedback session. In the second course Deutschmann et al. (2009) decided to take a less central role and to facilitate learner participation rather than directing the actual performance. The teachers mostly managed the conversations with only few instructions given.

Deutschmann et al. (2009) explain that they made the initial mistake (in the first course out of the two) of assuming that role-play tasks would automatically work well since they had done so in entirely different settings outside of Second Life. They go on to say it was also assumed that students were either already familiar with Second Life or that they would quickly become so. They speculate that this could have been a very important contributory factor to the failure of the role-play tasks. It was not the tasks themselves but rather a failure of immersion as the students could not focus on the tasks while trying to figure out the basic functions of the interface, thus leading to increased stress that could have affected motivation and participation. Starting with the second course they found more success because of the authenticity of the tasks, a stronger focus on meaning (due to students finding the discussions more meaningful because of having more research interests in common) and a greater sense of collaboration as students in the second course got to provide content themselves and more elements of socialization were worked into the design. The group feeling was also improved in the second course as opposed to the first where one student expressed frustration over not getting a chance to know the other students better. As the nature of this study focused more on oral participation there is no data to be found in terms of actual development of oral proficiency. They say that their study should be seen as merely the first step when researching what Second Life's environment can offer CALL and then conclude that there is still much left to be done in terms of researching Second Life and its potential for language learning.

In another study by Quintin, Sanz and Zangara (2016) which also examines the use of Second Life, specifically the use of role-playing games through its virtual environment and how it affects oral proficiency. To measure this a multiple case study approach was used which involved ten students in seven role-playing virtual sessions with each one configured as

a case, leading to a constant analysis of each session's dynamics. The methods for collecting data included participant observations, interviews and surveys. It was found that Second Life could be an effective practice for the development of oral proficiency in students and the participants listed numerous reasons as to how the role-playing games in Second Life helped them.

According to the participants, the game helped them to participate with avatars covertly which benefited interactions in terms of decreasing inhibition. Furthermore, because of the use of avatars there was no body language the participants could make use of and therefore they had to make a big effort in making their ideas as clear as possible with their oral proficiency alone. This also assisted them with striving to communicate as naturally as possible and to communicate more spontaneously thanks to the unique context represented in Second Life.

Quintin et al. (2016) argue that the game's virtual environment stimulates the development of oral communication due to providing a particular context that induces students to improve their English speech and that the role-playing conducted in this virtual environment acts as a unique opportunity for interaction that requires oral scaffolding. Students had to make an effort in order to contribute to the dialogue as best as possible due to not knowing each other in real life and the fact that the avatar lacked enough gestures to help with the oral communication. However it was reported that both the students and teachers require specific pedagogical and technological skills and knowledge in order to make the best use out of the digital games. They say that even if the oral practice found within Second Life is useful on its own, it depends on the organization and the follow up of the educational process because simply having synergy of technological and pedagogical elements is not enough to obtain good results. It is up to the teacher to take these elements and transform them according to the cultural and social characteristics that the groups of students possess (Quintin et al., 2016).

## 4 Discussion and Conclusion

This literature review has examined a variety of digital games, some made for edutainment purposes and others strictly for entertainment and commercial use, and how they may or may not be beneficial to the development of oral proficiency. What becomes immediately apparent is a large research gap when it comes to the field. Much of what is brought up in the studies are either issues regarding the practicality of their use or how participants felt when exposed to the medium. Very few of them measure oral proficiency specifically. Common patterns that emerged instead involved the acquisition of vocabulary or motivation with oral proficiency often appearing as an afterthought or not at all. Even the studies concerning oral proficiency do not properly measure whether or not there has been any development in speech.

In Enticknap-Seppänen (2017) results are presented through observation and what the participants felt about the exercise. They manage to show that there could be some potential but ultimately do not prove anything concrete. (Grimshaw et al., 2016) compared results before and after the testing period of their game and interestingly they did find signs of improvement in the oral proficiency of the participants. However, the limited nature of their study and interruptions (the control group was distracted by other school activities) affected the results and puts them into question. Even so, they concluded that what was shown regarding the improvement of oral proficiency cannot be deemed to be of much use. At most the study shows that digital games may be useful as warm up exercises but anything beyond this is unknown.

Gooch et al. (2018) is another study where the oral proficiency appeared to be more of an afterthought. Their focus were mostly on the acquisition of vocabulary although Ever Quest 2's potential for improving conversational skills was noted. Unfortunately this continues the trend of studies mostly displaying the potential of digital games rather than actual results. Newgarden (2015) does provide some more insight however. After recording game play and audio from participants playing the game together throughout the semester long course, she conducted a multi-modal transcription analysis and compared the results of participants during and outside game play. What she found was that participants performed better while playing compared to when they were not, displaying e.g. greater coherence. So far this study is the most definitive when it comes to showing that digital games can be beneficial for oral proficiency development.

Reinders & Wattana (2015) conducted interviews in their study much like most previous ones and this yielded yet another account where participants expressed how they felt about the MMORPG they played. Once again this hints at a potential for oral proficiency development but (like most of the previous studies) show more results for students' accounts of perceived motivation than any actual development. Deutschmann et al. (2009) does not feature much to discuss. It considers itself a learning experience in terms of how to best apply digital games in the classroom and considers itself a first step toward learning more. While this is all relevant to oral proficiency in general it does not display any results regarding the development of said proficiency aside from increased motivation. Finally, Quintin et al. (2016) show that a virtual environment can potentially be beneficial for oral practice. Again, the study only shows results in terms of how the participants felt about it and how it could motivate them to engage in more oral activities. While this is useful and essential for the development of oral proficiency it does not prove or clearly show that digital games can be used as a tool for developing it. There is far too little empirical evidence to claim that they have anything but potential.

What stands out the most in the studies is how to correctly apply digital games effectively in the classroom. Problems that arise include the studies being limited due to some form of distraction coming in the way of the test groups or simply a lack of competence both from the teacher and students. The most common issue in the studies definitely seem to be related to competence and understanding. While digital games could potentially have merit as CALL tools for developing oral proficiency they are still a fairly new technology that not everyone comprehends. This manifests itself in a few of the studies where both the participants and researchers underestimate the learning curve for a video game. Certain games like MMORPGs that are not designed with edutainment purposes in mind may easily overwhelm the player with information and visual input. It cannot be assumed that the teacher or students have a firm grasp on digital games the way it can be assumed for other types of media such as a book. A potential way of alleviating some of the learning curve and need for initial instruction could be the flipped classroom concept where the teacher may offer the students a tutorial video on how to play the game which they can then take part of before encountering the game in the classroom. This does assume the teacher knows how to play the game well enough themselves in order to create said tutorial which only further stresses the importance of teacher competence when using digital games in the classroom setting.

This being said digital games should not be completely disregarded simply because of the difficulty of their use or a current lack of empirical evidence. Digital games provide learning environments unique to the medium and their strongest aspect seem to be as tools for breaking down anxiety barriers and removing inhibitions since many students have reported feeling less nervous when it comes to speaking English. While this has more to do with motivation than developing oral proficiency, it is important to consider that with increased motivation you will also see students practicing (and thus developing) their oral proficiency more. However, even if you ignore this fact it has also been shown that the environments digital games offer allows for different kinds of interactions not seen elsewhere with other learning tools. Examples would be cooperation games where each student has one piece of the puzzle and must use their English to help their team-mates solve theirs like in Spaceteam ESL or communicating with each other in order to complete a quest in a game like Ever Quest 2. Furthermore, games in the MMORPG/MMO genre have the added feature of connecting students with players from all over the world leading to authentic communicative encounters with native speakers of English.

One more aspect shown in the studies are digital games and their use as sociocultural and interactionist tools. Looking back on the Swedish school curriculum (Skolverket, 2011) and sociocultural theories (Vygotsky, 1979) (Eun & Lim, 2009) digital games can definitely be argued to have a place in schools. As mentioned previously, digital games are a form of tool and media designed around player interactions. Many of them offer communication not just via text but also voice chats and often promote solving problems together by communicating with each other. Though the research gap is wide this does not mean that the potential they hold for the development of oral proficiency is not worth looking into, especially when their use in the classroom can be rationalized via both the curriculum, sociocultural and interactionist theories.

The research field of using digital games for developing oral proficiency and even the study of digital games for language learning in general is still fairly new. While studies have been conducted in the past it appears as if many of the problems when it comes to underestimating the learning curve primarily appear in the older studies. As time moves forward so does the basic understanding of the technology. While collecting research on oral proficiency and digital games for the review there was mostly a focus on MMORPGS and virtual worlds like Second Life with very little on edutainment games as well as digital games in other genres. Given that this is a research field which concerns technology and given how

young the digital game industry still is, there are still a lot of gaps to fill in with future research and the field is constantly expanding and developing.

Cooperative games stand out as the most beneficial for developing oral proficiency as they are designed around making talking with each other fun as well as sometimes challenging your ability to communicate. Again, this ties into Vygotsky's (1979) sociocultural theories regarding the process of learning and his ZPD as well as the concept of scaffolding. One student may help another understand the instructions of the game or they may pick up on how a word is properly pronounced while interacting with an international player. While a game like Spaceteam ESL or the Goofy Guide Game displayed shortcomings this does not necessarily mean that digital games in general share those shortcomings. As much as teachers must understand how to apply digital games to the classroom so must game designers understand how to create a game that is best suited for learning. This was clearly demonstrated in the case of the Goofy Guide Game where the teacher-researcher realized that their game had some shortcomings after testing it on students.

To conclude, digital games show potential for developing oral proficiency although there are many research gaps pertaining to actual empirical evidence and the kinds of games this involves as well as how they can be applied in the classroom. Further research and empirical evidence is needed on how digital games may or may not improve the development of oral proficiency and how they can most effectively be applied to the classroom setting without hindering the learning experience for students due to a sharp learning curve or a teacher that lacks the competence to make the best use out of them. Cooperative games seemingly have the most potential for developing oral proficiency but the research is lacking outside of MMORPGs compared to other genres of cooperative digital games. In the end it is still unknown as to how effective digital games may be as oral proficiency learning tools. While they show promise the empirical data still has a long way to go.

## Reference List

- Anderson, T. Reynolds, B. Yeh, X. & Huang, G. (2008). *Video games in the English as a foreign language classroom* (pp. 188 - 192). Retrieved from [https://www.researchgate.net/publication/224357841\\_Video\\_Games\\_in\\_the\\_English\\_as\\_a\\_Foreign\\_Language\\_Classroom](https://www.researchgate.net/publication/224357841_Video_Games_in_the_English_as_a_Foreign_Language_Classroom)
- Backlund, P. and Hendrix, M. (2013). Educational games - are they worth the effort? A literature survey of the effectiveness of serious games. *In games and virtual worlds for serious applications (VS-GAMES)* (pp. 1-8).  
[doi: 10.1109/VS-GAMES.2013.6624226](https://doi.org/10.1109/VS-GAMES.2013.6624226)
- Deutschmann, M., Panichi, L. & Molka-Danielsen, J. (2009). Designing oral participation in Second Life – a comparative study of two language proficiency courses. *ReCALL*, 21 (02) (pp. 206-226). Retrieved from:  
<https://pdfs.semanticscholar.org/fb02/6078e4ea184c8a2576fc3229ac539eeb5879.pdf>
- Enticknap-Seppänen, K. (2017). Goofy Guide Game: affordances and constraints for engagement and oral communication in English. In K. Borthwick, L. Bradley, & S. Thouësny (Eds.), *CALL in a climate of change: adapting to turbulent global conditions – short papers from EUROCALL 2017* (pp. 105-109). Southampton, United Kingdom: Research-publishing.net. Retrieved from <https://files.eric.ed.gov/fulltext/ED578277.pdf>
- Eun, B., Lim, H. (2009). A sociocultural view of language learning: the importance of meaning-based instruction. *TESL Canada Journal*, 27 (pp. 13-26).  
<https://doi.org/10.18806/tesl.v27i1.1031>
- Gooch, B. Gold, R. & Rankin, Y. (2018). *3D Role-playing games as language learning tools*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.151.8843&rep=rep1&type=pdf>

Gee, E. & Gee, J.P. (2017) Games as distributed teaching and learning systems. *Teachers College Record 119* (12) (pp. 1-22). Retrieved from <https://www.tcrecord.org/content.asp?contentid=22062>

Grimshaw, J., Cardoso, W. & Waddington, D. (2016). Can a 'shouting' digital game help learners develop oral fluency in a second language? In S. Papadima-Sophocleous, L. Bradley, & S. Thouëсны (Eds.), *CALL in a climate of change: adapting to turbulent global conditions – short papers from EUROCALL 2016* (pp. 172-177). Limassol, Cyprus: Research-publishing.net. Retrieved from <https://files.eric.ed.gov/fulltext/ED572172.pdf>

Klimova, B. and Kacet, J. (2017). Efficacy of computer games on language learning. *TOJET: The Turkish Online Journal of Educational Technology, 16* (04) (pp. 19-26). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1160637.pdf>

Newgarden, K.J. (2015) *Skilled linguistic action in English as a second language learners play of World of Warcraft (WoW): a distributed view*. Doctoral Dissertations. 915 Retrieved from <https://opencommons.uconn.edu/cgi/viewcontent.cgi?article=7142&context=dissertations>

Quintin, E., Sanz, C.V., & Zangara, A. (2016). The impact of role-playing games through Second Life on the oral practice of linguistic and discursive sub-competences in English. In W. W. Smari, & J. Natarian (Eds.), *2016 International Conference on Collaboration Technologies and Systems (CTS)* (pp. 148-155). Orlando, FL, USA: IEEE. Retrieved from <https://www.computer.org/csdl/proceedings/cts/2016/2300/00/07870980.pdf>

Reinders, H. & Wattana, S. (2015). Affect and willingness to communicate in digital gamebased learning. *ReCALL*, 27 (01) (pp. 38-57). <https://doi.org/10.1017/S0958344014000226>

Skolverket (2011) *Kursplaner i engelska för grundskolan*.

Säljö, R., Lundgren, U.P. & Liberg, C. (Red.), (2012). *Lärande skola bildning* (2<sup>nd</sup> ed.).  
Stockholm: Natur och kultur.

Vygotsky, L. (1979). *Mind in society*. Retrieved from:  
<http://ouleft.org/wp-content/uploads/Vygotsky-Mind-in-Society.pdf>