The influence of online gaming on the acquisition of a second language and how it influences the development of Dutch in adolescents

Bachelor education: Secondary-school education
Courses: Dutch – English
Year: 2017-2018

Bachelor thesis

Raven Van den Wyngaert
Mentor: Johannes De Breuker
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1. Preface

This bachelor thesis is the result of a research conducted by myself, with the intention of ultimately receiving my bachelor degree in teacher training.

I would like to thank my mentors Stephen Hargreaves and Johannes De Breuker for helping me set up the framework around which I have constructed my theoretical framework and practical research.

Furthermore I would like to thank everyone who participated to join this research, the students who participated, the school where I conducted my internship and the teacher that was willing to be interviewed.

Finally, I want to show my deepest of gratitude to my mother and girlfriend who supported me during the last three months, and who also proofread my work numerous times.
2. Abstract

Benson and Chik (2014) argue that L2 gaming can be viewed as “naturalistic computer-assisted language learning”: “computer-based activities that are carried out on the student’s initiative, outside school, and mainly for the purpose of pursuing some interest through a foreign language, rather than for the direct purpose of learning the language”. In this research the aim lies in determining how big the impact of online gaming is on English as a second language and on Dutch, which is the primary language of the students. Through a number of tests, observations and interviews, this research gives a representation of the influence of online gaming on the skills of the students, on how fluent they are and on their grades.
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4. Introduction

Online gaming is a relatively new phenomenon in society, it offers opportunities to conduct research on its impact on every aspect of life. This research will cover the influence of online gaming on the development of the linguistic skills of students of English as a Foreign Language (EFL) between the ages of 12 and 15. I have chosen this range of ages for my target audience because this is when most European children are offered English in school. At these ages they are offered to actively learn EFL. Most children however have been exposed to passive examples of EFL in their daily life through different media such as television, social media ... long before this moment albeit through online gaming or through watching television shows in English. In games, both online and offline, the main language that is used is English. Some children play online with friends, in which case they can choose to play in their first language, or they choose to play with strangers, in which case English can be employed. Since the fixed information that is offered in games is generally put in English, however they choose to play, they will be exposed to English.

The aim in this exploring research is to find out how this degree of active exposure to authentic communication starting from such a young age influences the acquisition of EFL and the development of Dutch as a primary language. To gather information, it is required to find participants who are willing to play a massive multiplayer online role playing game (MMORPG) for two hours per week minimum. In order to be able to attract a large enough number of participants, the choice of game was free, although there were some requirements. The pupils had to play online games and had to communicate with other players. The language in which they communicated was up to them. I gave them this choice in order to recreate a situation which resembles real life situations.

In order to make sure the gathered information would be representative, the students would be put through this online game with a minimal amount of intervention. This way the observed acquired knowledge would be obtained in the most authentic way. The downside of this approach would be the possible mistakes the students would pick up, but this is a possible result of playing in an online environment. The sentences and pieces of information that are offered coming from the game itself are correct and will be beneficial for the students regardless of their online interactions and possible acquisitions.
A number of tests were conducted to gain an overview of the level of proficiency of the students in both the English and Dutch language. This way we can observe potential growth through online gaming.

Together with the grades of the students, the questionnaires the teachers and the diaries the students have to fill in, this will provide an overview of the starting levels of the students, their levels after a semester of playing MMORPGs and how this compares to students who do not play games.
5. Corpus

As will be discussed further in this research, the audience of games is very diverse. This can partially be attributed to the broad offer of games that is out there. The most popular games are action, shooters, roleplaying games (RPGs), massive multiplayer online roleplaying games (MMORPGs), adventure and racing. In this explorative research, the focus will lie on teenagers and adolescents playing MMORPGs.
5.1. Problem definition

5.1.1. Practical problem

There are few online games that use Dutch as the main language and, even if there would be more, the majority of players still use English as the lingua franca, according to Chik (2014). When playing online games, students use the language in which the online game is played simultaneously with their mother tongue when chatting with friends they also know in real life. The students will use specific English words in Dutch sentences. The interesting aspect of this is that they use English words of which they know the Dutch equivalent but they choose not to use it. The question is if this early acquisition and exposure to a second language will have benefits or if it will cause a negative language growth in either the first or second language or both.

The students and children will experience the influence of online gaming on their language skills even though they probably do not realise it. The teachers on the other hand used to teach the children a language from scratch. Now the students already have some notion of the language and their perception of their own skill level might be skewed. It is the job of the teacher to then alter the possibly ingrained mistakes the students make due to their use of the language in the online world. This adds to the pressure on the teacher and only increases the heterogeneity of the level of English in a class.

Whether the interference online gaming on the second language will be positive or negative is what has to be determined. This particular research question will only look into the interference on the second language and on EFL.

5.1.2. Research questions:

- Do online games have a positive or negative effect on the grades of students
- Is there a positive or negative influence on the students’ skills that can be attributed to online gaming?
- Do online games have a positive or negative influence on the use of Dutch of the students.
5.1.3. Aim

In this research, the aim was to determine the impact, or lack thereof, of online games on the acquisition of foreign languages, and on the development of the first language. In this dissertation the focus will lie primarily on English being the foreign language and on Dutch being the primary language.

5.2. Literature study

5.2.1. Games on the market

Most games that are available on the market are in English, and for most gamers this is English as a Foreign Language (EFL). In a study conducted by Chik (2014), there is an increase in the supply of online games that are in Chinese. This is not enough however to sway the entire Chinese audience to completely reject the offer of English games that are on the market. The cause of this lack of rejection can lie with this possibly leading to a limit in the online interactivity because the game is mostly accessible only to Chinese speaking players. The result is that many gamers still play games using EFL to ensure an as wide as possible gaming experience (Chik, 2014).

As found in a research conducted by Sundqvist and Wikström (2015), it is stated that there is a significant difference between the linguistic benefits generated by MMORPGs when compared to single-player games. Gamers who play MMORPGs generally show to have acquired more positive linguistic benefits than players of single-player games. Sundqvist and Wikström (2015) believe this can be attributed to the increased level of active participation demanded of the students in MMORPGs. MMORPGs also offer, and often demand, social interactions. These interactions offer authentic situations wherein the students also acquire linguistic input that would otherwise be more difficult to attain authentically. Online situations also offer a different medium in which the linguistic input is offered. These types of situations offer a different source of motivation and different opportunities for the students to practice the target language. (Ranking, Y., et al., 2006)
In a study conducted by Ranking (2016) it is shown that there is more interaction between students and native speakers in online and virtual environments than in real life. Social interactions are paramount when playing online since there are often requirements to join a clan in order for a game character to progress (Liu & Peng, 2009). Enabling, or forcing, social interactions in virtual situations also provide access for a more diverse audience since it opens the door for both introverted and extroverted people. This further supports the idea that MMORPGs offer a productive learning environment for language students. This is also confirmed by Lenhart, et al. (2008).

5.2.2. Benefits of Extramural English

Sundqvist (2009) introduced the term *extramural English* (EE) for activities that involve the English language outside of the classroom. This can range from watching television to playing games, to reading books or listening to English music. Throughout the years an increase in the offer of English outside of the classroom has been observed (Sylvén & Sundqvist, 2012; Sylvén & Sundqvist, 2010). This increase in offer can be attributed to the increased accessibility of the internet and online communities, as confirmed by Coniam and Wong (2004). Also advertisements and tele-communicative media other than the internet are believed to be influential for percipients (Sundqvist, 2009). The aforementioned activities were not as widely available in the past and their influence on the linguistic developments has been researched by Coniam and Wong (2004). They researched the development of grammar in chat-rooms. Martinez & Schmitt (2010) have found a positive increase of the students’ level of vocabulary after being exposed to these types of EE. This research will further explore the influence of MMORPGs on the acquisition of EFL.

5.2.3. English as a second language rather than EFL

Sundqvist & Wikström (2015) have gathered information based on the work of Kachru (1985) that indicates that, because of the expanding influence and presence of English, English can no longer be seen as a foreign language but should rather be called a second language. They believe this to be true because of the omni-present, and, according to some, surplus, of English material in our environment. Even though the work of Kachru (1985) is outdated, it has recently
been confirmed in Sweden and Finland by Sundqvist (2015), in Norway by Simensen (2010) and in Belgium by Kuppens (2010). These researches further support the claim that in countries where there is uncensored and unlimited access to the internet, the people will adopt English as a second language due to the high level of exposure.

5.2.4. How different learning principles occur in games

5.2.4.1. What motivates people

The reasons why both young and old people keep playing games are numerous. Studies have found that a game must possess the following characteristics in order to be perceived as financially successful. For it to be successful financially, it must be bought a lot so therefore the assumption can be made that it will also be a popular game.

A game must offer:

- Freedom to explore an immersive, virtual environment that adapts to players’ skills.
- Clear goals and objectives that determine game progression.
- Resources that enable players to complete game tasks.
- Visually displayed feedback (such as the level of difficulty) that informs players’ decisions and outcomes (Ranking, Y., et al., 2006)

Studies have found that there are different factors that influence the motivation of students in general. When these factors are cross-referenced with the qualities and attraction games might have, a great deal of similarities can be found (Van Thienen, 2004). The table below, by Van Thienen (2004), shows the general factors that contribute to the pupils’ motivation.

<table>
<thead>
<tr>
<th>Internal factors</th>
<th>External factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of the activity for the student</td>
<td>Meaningful other parties</td>
</tr>
<tr>
<td>• Enticing curiosity</td>
<td>• Parents</td>
</tr>
<tr>
<td>• Ideal degree of challenge</td>
<td>• Teachers</td>
</tr>
<tr>
<td></td>
<td>• Peers</td>
</tr>
<tr>
<td>Perceived value of the activity</td>
<td>Nature of the interaction with meaningful third parties</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Personal relevance</td>
<td>Mediation for the learning experience</td>
</tr>
<tr>
<td>Anticipated worth of the results</td>
<td>Nature and quantity of feedback</td>
</tr>
<tr>
<td>Value of the activity for the pupils</td>
<td>Nature and quantity of appropriate praise</td>
</tr>
<tr>
<td></td>
<td>Punishments, sanctions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sense of impact</th>
<th>Learning environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who decides the consequences</td>
<td>Comfort</td>
</tr>
<tr>
<td>Who's got control over process and product.</td>
<td>Methods of aid</td>
</tr>
<tr>
<td></td>
<td>Time (hour, day, week, year)</td>
</tr>
<tr>
<td></td>
<td>Size of the class and the school</td>
</tr>
<tr>
<td></td>
<td>Class- and school culture</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Broader context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling of competence</td>
<td>Generalised family</td>
</tr>
<tr>
<td>Awareness of developing skills and a higher level of proficiency in a chosen field.</td>
<td>Local educational systems</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Conflicting interests</td>
</tr>
<tr>
<td></td>
<td>Cultural norms</td>
</tr>
<tr>
<td></td>
<td>Expectations and attitudes of society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept of self:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A realistic assessment of personal strengths and weaknesses in the required skills.</td>
<td></td>
</tr>
<tr>
<td>Personal definitions and judging success and failure</td>
<td></td>
</tr>
<tr>
<td>Self-esteem vs. taught helplessness</td>
<td></td>
</tr>
</tbody>
</table>
Dörnyei (2009) has developed a model to categorise the students based on their level of motivation. The L2 Motivational Self System consists of three categories in which the students can be divided. According to this model there are three subcategories of motivation; the ideal L2 Self, an Ought-to L2 Self and the L2 Learning Experience. In the table below all categories are shown and explained.

<table>
<thead>
<tr>
<th>L2 Motivational Self System</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ideal L2 Self</td>
</tr>
<tr>
<td>The Ought-to L2 Self</td>
</tr>
</tbody>
</table>
try to avoid failing a test because they know it will negatively influence their life.

<table>
<thead>
<tr>
<th>The L2 Learning Experience</th>
<th>This level of motivation deals with external actors that are tied together closely with the immediate learning environment (such as the classroom).</th>
</tr>
</thead>
</table>

(Dörnyei, 2009)

5.2.4.2. Social benefits

As shown in the study by Liu & Peng (2009) online players will need the social backbone and supportive network of a clan. In order to convey their messages clearly they will need to be able to communicate effectively. When looking at the three types of learners named by Dörnyei (2009) the students who play online games will probably operate from the motivational system that is connected to the ideal L2 self-learner or to the ought to L2 self.

It is generally agreed upon by researchers that input acquired with intrinsic motivation is retained better and leads to a better linguistic learning outcome. In the study conducted by Van Thienen (2004) it can be observed that games hold these sources of motivation at heart. This is further supported by the findings of Csikszentmihalyi (1990) where he introduces the concept of flow. People who experience flow are in a state where they are completely absorbed by an activity with no regards for other matters such as food, time, sleep and/or education. As confirmed by numerous games and researchers, gaming is an activity that can easily induce flow (Sundqvist, 2015). With all this information, it is reasonable to deduct that games offer a natural, social environment where students will interact in because of its high offer of intrinsic motivation. MMORPGs hold this appeal in particular because they rely on social interactions more than any other game.
5.2.4.3. Authentic environment

MMORPGs supply an authentic environment for learning. It offers an authentic virtual world where students have the opportunity to practice the four skills: listening, speaking, reading and writing (Ranking, Y., et al., 2006). The benefits of MMORPGs over single-player games are found in the social interactions that take place between players. These conversations and confrontations take place in a virtual world were every new player starts with the same starting situation.

As observed in a study by Yee (2006), gamers are often classified as one group. This does not hold into account the diverse composition of the group gamers. When looking at the different backgrounds of the people put into this group, it is important to acknowledge that students only comprise a small amount of the whole of the group. However, when put together in the game, the differences concerning background, race, age, academic levels, nationality, etc. are discarded in service for a game-oriented motivation (Yee, 2006). The players all contribute as much as they can to move forward in the game. This is closely built on the idea of social-constructivism, as explained in the following paragraph.

Social-constructivism is a theory of knowledge that sees learning as a social, active and creative process. According to this principle, language is obtained and acquired when people engage in meaningful interaction with each other. Allegedly, this type of communication makes language learning a concrete and authentic method. Newly acquired information gets linked up to knowledge that is already available. This way, the students acquire a broader and deeper vision on the world of which they’re a part of. Social constructivism bases its theory on the individual acquisition of information. This theory also states that more than one specific type of learner can benefit from this type of learning. For students who are more curious by nature, this type of individual learning will stimulate their motivation. They will actively seek out new information. For students who don’t have this type of intrinsic motivation, more guidance from the teacher will be necessary. In this specific example, the teacher will operate as a guide. These new theories of methods of teaching are important because of the information shown in the graph on the next page. It shows how much information students retain from different types of methods of teaching (Van Thienen, 2004).
5.2.4.4. Learning principles in games

Another study that, indirectly, advocates for games being methods through which students can retain information is the one conducted by Dochy, Heylen and Van de Mosselaar (2000). They have investigated which method of instruction yielded the best, with the highest level of retaining information, results. As is shown in the grid below, the ‘hands on’ and ‘teaching others’ methods are the ones with the highest yielding results. Games incorporate every type of instruction that was included in the research by Dochy, Heylen, and Van de Mosselaar, (2000). The types of instruction that games hold at their core such as teaching others, hands on and group discussions, are the ones that generate the best results in terms of effectiveness of learning.

<table>
<thead>
<tr>
<th>Type of instruction</th>
<th>% effective Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturing</td>
<td>4.5</td>
</tr>
<tr>
<td>Reading</td>
<td>11</td>
</tr>
<tr>
<td>Audiovisual media</td>
<td>22</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>32</td>
</tr>
<tr>
<td>Group discussions</td>
<td>56</td>
</tr>
<tr>
<td>Hands on</td>
<td>75</td>
</tr>
<tr>
<td>Teaching others</td>
<td>82</td>
</tr>
</tbody>
</table>

(Dochy; Heylen; Van de Mosselaar 2000)

Games have the unique position of being able to combine an interactive audio-visual medium with words, texts, dialogues, goals, symbols, etc. This enables the players to link up what they see with lexical content (Reinders, 2012). A good game extends the degree in which the player participates in the online community further than simply the game itself.

When interested in a game, players often look up extra information to further their progress in the game. Some go even further and start reading or writing fan fiction, so-called derivative literature. These are stories about the game that are written entirely by fans. Although the origin of these stories is difficult to ascertain, and their input might therefore lead to negative language input, the bodies of work go through a series of revisions. The internet offers the possibilities for instantaneous feedback (Pimenova, 2008). Some gamers also start making art
and engage in conversation outside of the game on online fora. These sources of related texts have been called “paratexts” (Chik, 2014).

Today, with the developments of Virtual Reality (Valve on the PC, Playstation VR, Xbox Kinect), the players are able to interact with the game using gestures, voice commands, and immersion (Godwin-Jones, 2014). This even further addresses the motivational aspects of full hands-on and interactivity in the games.

With the introduction of paratexts by Chik (2014), an extra source of input is created for the gamers. They are motivated to either read, write, listen to, or speak about the games they play. This extends the positive influence of games to beyond the game itself. On multiple fora on the internet, gamers have been observed by Chik (2014) to ask questions and receive immediate answers. The number of fora on the internet is invaluable for the gaming community where people can constantly interact with each other outside of, but about the games.

Chick (2014) noted that an example of interaction between two players in the game World of Warcraft, one American and one Ukrainian was observed. It can be observed that the two players befriended each other by expressing their love for the game, but later this sort of discourse evolved into them teaching the other both English and Russian phrases. It is also an excellent, goal-driven way of facilitating interaction between players (Chik, 2014). Examples like the aforementioned show that several types of instructions are present in games, although the games usually do not have the aim to improve the linguistic levels of the participants.

5.2.4.5. Specifically designed to learn

Most commercial off-the-shelf (COTS) games are designed to be purely entertaining and fun rather than to influence learning (Whitton, 2010). Regardless, studies have found that video games offer virtual worlds that stimulate language acquisition (Ranking, Y., et al, 2006). Acquiring vocabulary or grammatical knowledge through gaming can thus be called incidental L2 learning (Chik, 2014). In a focus group, observed by Chik (2014), participants stated that they would sometimes write down words they did not understand to look them up later. This would turn gaming into a form of intentional learning. They do state though that pleasure in gaming held the dominant position, so looking up words sometimes became secondary to the game because it would stop the flow of the game. Incidentally this becomes a form of vocabulary learning i.e. deriving meaning out of context (Chik, 2014). In another example in the focus group of Chik
(2014) there was a Chinese student who wanted to learn basketball jargon in English. Since there was no class for this form of authentic English, his friend suggested he played NBA 2K11, a basketball videogame. He approached the game and texts he found in the game as conventional L2 learning materials, often pausing the game to discuss new vocabulary and phrases with his gaming partner (Chik, 2014). This implies an intentional attitude towards learning EFL through gaming, although this is rather exceptional, it still shows that COTS games can be used to stimulate intentional learning.

5.2.5. Benefits of MMORPGs

5.2.5.1. Educational value on the second language

In a study conducted by Cobb and Horst (2011), it was found that students who were put through a computer game in a school setting gained an increase in their level of vocabulary. The speed with which they could access their lexical knowledge increased as well. It should be noted that they observed that longer exposure to games was necessary in order to consolidate the newly acquired input better. This observation confirmed the findings in a study conducted by Sundqvist (2009) who posits that of all the EE activities, Online gaming yields the highest results when it comes to vocabulary size. Reinhardt and Sykes (2012) found that students also learn EFL “in the wild” when they are playing online games. This further supports the claim that COTS games can lead to learning EFL in natural settings.

5.2.5.2. Social

In a study conducted by Liu & Peng (2009), it is found that engaging in social activities is a core element of MMORPGs. It is an exceptionally forgiving, diverse and safe environment for people to have social interactions (Lenhart et al., 2008). They found that the virtual world is particularly appealing for people with relatively low social skills. In a study conducted by Lenhart et al. (2008), 47% of teens play online together with people they know offline. This supports the claim that the students’ social lives do not in fact disappear but shift from the offline world to the online world. Lenhart et al. (2008) also state that the stereotype that people who play games are less social should be dismissed. Gamers are equally likely to communicate with their friends as people who do not play on a daily basis would (Lenhart et al., 2008). It is important to remain
critical to data from that time because nowadays, with the introduction of the iPad to the market, children make their appearance online sooner than back then.

As stated earlier in this research, becoming a player and using an online persona takes away the personal differences and backgrounds that people might have in function to further the progress of the game. This is further supported by Gee (2003), who found that players create an affinity space. Gee (2003) describes this space as a place where shared interests overcome interpersonal and inter-cultural barriers.

5.2.5.3. Educational value on the first language

In South-Korea game addictions have become a frequent and serious social problem. There are a number of games introduced in the educational field to resolve this problem, but studies have also been conducted to investigate what positive effect COTS-games might have on the education of students. In a conducted research, a group of 59 students was divided into one focus group who worked around a popular COTS-game, in South-Korean so their first language and another group who received classical education. The evolution of the speaking and writing abilities were tested in both groups. There were no differences in the baseline skills in neither speaking or writing. When it came to the speaking skill, the focus group showed significant improvement in terms of composition of the story, and in fluency. The same results applied for the writing ability. The focus group showed improvement in composition and expression when it came to writing. (Kim, et al., 2013).
5.2.6. Disadvantages of MMORPGs

5.2.6.1. Educational disadvantage on first language

As established earlier in this work, English is the most commonly used language in the online communities, and in games. People often fall back or reach for English to communicate in games, chat-rooms and other digital platforms. Because of some of the physical limitations some of these platforms present, such as character limits in text messages or tweets, changes were made to the language in forms of abbreviations, new words, collocations, etc. All these examples have been placed under the same nominator, digi-language, as introduced by Jacobs (2008). Digi-language can be defined as:

A written language variation that is mostly used by adolescents/teenagers in informal situations and by using new media. It is characterised by diversions from the norms of Standard Dutch on different linguistic levels such as spelling, lexicality, and punctuation. (Verheijen, 2016)

In Dutch, this type of language use is spreading to the extent that it is manifesting itself outside of the digital environments where they originally occurred. This evokes a lot of resistance in many people, who believe that new media will cause language degradation and language deterioration. These general sentiments are not empirically substantiated (Verheijen, 2016).

What is proven is that digi-language has been occurring in common speech more and more, and it is mostly used by young people. The reason for this is that it enjoys the covert prestige status among young people. Verheijen (2016) makes the connection between digi-language and urban youth language. Both are considered to be playful, informal, cool, and rebellious. They are also both used as ways of expressing social identities.

In a study conducted by De Decker (2013), it was found that examples of Dutch used in online situations such as chatrooms or online fora are usually abbreviated. It was also found that there is an inverse ratio between the age of the sender and the amount of abbreviations, acronyms or manipulations of spelling that are being used. De Decker (2013) posits that the higher rate of spelling manipulations that can be seen being used by young people, can be equated to a simple form of manipulating and developing language creatively. In this same research, it was also found that in at least one in eight posts online, there is at least one word that stems from the English language. These words are often examples of terminology that come from games, ICT,
songs ... Often there are no Dutch equivalents for these words, but rather than using different words, the students simply incorporate the English words in otherwise full Dutch sentences. De Decker (2013) also found that students consciously deviate from Standard Dutch spelling in one quarter of the online chatroom conversations. In these cases the chatters have the intent to simply transcribe spoken language in a written form. As of such, the online influence on language is clear, but it would appear that it is mostly a conscious choice rather than neglect or even deterioration of Dutch as a first language. This has also been observed by De Decker (2013), who found that, on average, only one in fifty words are unconsciously spelled wrongly.

5.2.6.2. Educational disadvantage on second language

As stated earlier in this research, the use of digi-language has been becoming more widespread (Jacobs, 2008). It is shown that digi-language leads to interference in the use of EFL. As observed by myself in the classroom, many students often make the mistake of writing words down phonetically on tests, or in informal settings. Students will, for example, write down you as a u.

5.2.6.3. Social disadvantages

One of the reasons why gaming is not yet as much applied in the educational field is because it is often viewed as addictive and non-educational (Chik, 2014). On a social level, Liu & Peng (2009) introduced in their research the new term “Preference for a virtual life” (PVL). This statement comprises the people who play online multiplayer games that will go so far to have a preference for a PVL. A recent example of PVL was portrayed in Spielberg’s film, Ready Player One, which was released in 2018. This shows that it is a very current topic. The term PVL applies to people who have a large dependency on MMORPGs. They believe their worth is higher in the online world and people do not appreciate them in the offline world. Furthermore they add that there is a relationship between a PVL and a negative perceived self-image (Liu & Peng, 2009).
5.3. Method

5.3.1. Materials

This is an exploratory research as it serves to further inquire into the effects of online gaming on linguistic developments of students.

The students who participated in the project agreed to keep a diary of the amount of hours they played and what games they played. This provides an insight in the different types of games they play and how often they do so.

An interview was conducted with a teacher who played online games with his pupils for the period of almost a schoolyear 2017-2018. The interview was conducted at the start of May so it can be regarded as a full schoolyear.

Observations of classroom behaviour and skills shown by the pupils in classroom situations are also taken into account. With these observations and the marks they obtained during the tests, it will be possible to give a clear representation of the students’ speaking and listening skills and of their willingness to speak English.

The students have done a creative writing assignment in class with access to dictionaries but nothing else, their assignment was to finish writing a horror story of at least eight sentences. The assignment was individual in order to make sure the students used their own skills and knowledge. The final product was analysed and the results are shown below.

To test the extent of the influence of online gaming on the students’ level of Dutch, a writing assignment has also been analysed.
5.3.2. Participants

The participants for this research will not be named but are comprised of students of four different classes divided over two different schools. A total amount of 58 students have participated in this project. In total 10 pupils have agreed to keep a diary to log how often they played which games and for how long. The results of the remaining 48 pupils will be used as a focus group. This focus group exists out of pupils who do not play online games at all. The minimum that was required for this research was two hours per week of online gaming more than they would normally do. This was to ensure that there was a difference with the test period and their daily lives.

What should be mentioned is that the participants in this research do not all have Dutch as their mother tongue. Therefore it is important to state that this research does not enquire in the influence of online gaming on Dutch as the mother tongue but simply on Dutch as a language.

An interview has also been conducted with a teacher who has observed a difference in the growth of English between two siblings in the same class who started the year with the same level and the sibling who gamed saw a rise in level of English.
5.4. Data analysis/Results

To determine whether or not there was an evolution of the students’ proficiency in English, their progress was measured by looking at the evolution of their grades over a period of two months. To ensure results that tackled the four skills and the students’ willingness to speak English, different types of tests have been used.

5.4.1. Writing assignment in English

After having analysed English texts the students have written, the following results came forward. The first thing that became clear was the difference in text length between the texts of the pupils. It should be stated that although 12 students participated in the project, only eight students wrote texts that were analysed.

On average, gamers write texts that have 200 words while the non-gamer group writes texts consisting of 160 words. This means that non-gamers generally write texts that are 20% shorter than the texts gamers write.
The graphs below show that on average, gamers use 33 nouns per text, while non-gamers use 29. On top of that there is also a difference in the number of different nouns that are used per group. While gamers, on average, use 20 different nouns, a non-gamer uses 14 different nouns per text.

The findings from above indicate a larger vocabulary with the gamers when compared to the non-gamers. Gamers actively use 30% more different nouns than their non-gaming peers. This is a finding that is supported by both Cobb and Horst (2011), and Sundqvist (2015).
The analysis of the text has indicated a difference in the amount of adjectives and adverbs pupils use, but also in the amount of different adjectives and adverbs. While gamers, on average, use 6.4 adjectives and 1.7 adverbs per text, a non-gamer will use 4.2 adjectives and 0.5 adverbs per text.

The research has also shown that the amount of words pupils write without making mistakes differs substantially between the two groups. Where the non-gamers make a mistake after every 22 words on average, the gamers only make mistakes after writing 41 words. This shows that gamers write 86% more words without mistakes than the non-gamers do.
The graph directly above shows that the students who play games are able to use the vocabulary they acquired more effectively by writing substantially less mistakes per word they write.

The results shown above indicate that gamers not only have a broader vocabulary, they also use a more diverse and rich language by including more parts of speech like adverbs, adjectives, more different nouns and more words in general in their creative writing assignments. The finding that there is an increase in the level of vocabulary of gamers is confirmed by Cobb and Horst (2011) and by Reinhardt and Sykes (2012).

The amount of occurrences of digi-language were negligible. There was only one such occurrence in the analysed texts, and it was made by a non-gamer. In informal settings however, as noted before, the students chose to purposely use digi-language. This indicates that the students are aware that that type of language is not usable in formal situations.

5.4.2. Writing assignment in Dutch

When analysing the results of the writing assignments of the students, there is no clear negative evolution of the results of the students. What did happen however, was that one student who gamed used nine English words in a text of five sentences. The reason why this student used
this many English words in a Dutch text is because the text was about a sport that the student liked. The only way the student ever came in contact with the sport was by watching it or by playing a game on Playstation. When asked about the use of English words in a Dutch text, the student replied that the Dutch equivalents were unknown because the media in which the language was observed was all in English.

5.4.3. Observation

The students who did play the games appeared to have more willingness to speak English. They had fewer inhibitions to at least try and speak English towards the end of the research. This could be because of the increased exposure to authentic language that they experienced. It could be so that the students find it easier to mimic authentic language that they observed often due to more exposure. It could also be because the students have spent more time actively using the language, making them more experienced than their peers who did not play online games.

During several presentations it was also obvious that a specific student tried very hard to adopt a British accent for some words. When looking at the games this student played the change in accents can be attributed to one of the games the student most recently played. The game in question is a COTS game, Kingdom Come Deliverance. This is a story driven game set in feudal Bohemia, where all dialogues, about 60 hours of them, are spoken in British-English. This shows that the game this student played had an impact on the pronunciation of the student. This further supports the notion of incidental L2 learning determined by Chik. (2014)

The rise in pronunciation was also confirmed by a teacher who observed a difference between two siblings in the same class, a brother and a sister. Where the brother played online games, sometimes with the teacher, the sister did not play games. The teacher in question noticed a considerable advance in the comprehensive and speaking skills in English.

On several occasions, students have used digi-language, as described by Jacobs (2008) during classroom assignments. Examples of the digi-language used by the students are occurrences where the students wrote words down phonetically. Although it was not tested whether or not the students used digi-language in their online discourses, it is safe to presume that this was the case. The reason for this assumption is the fact that the students who game online use digi-language more often, but as stated before, only in informal situations. When it comes to formal
situations or tests, the results indicate that there is no significance or direct relation between
digi-language and the mistakes the gamers do make. This implies that the students directly copy
digi-language in normal situations but will not use them in formal situations. This indicates that
they are aware that there are different registers in which they are allowed to use which form of
language.

5.4.4. Evolution of grades

5.4.4.1. General level of English versus studying

During the research period, all the students were graded on their skills for English and Dutch.
After looking at the average grades of both groups, it is interesting to observe that there are
only minor differences between the grades of the gamers and the non-gamers.

<table>
<thead>
<tr>
<th></th>
<th>Speaking</th>
<th>Listening</th>
<th>Test</th>
<th>Speaking</th>
<th>Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Non-gamers</td>
<td>11,5</td>
<td>6,7</td>
<td>12,3</td>
<td>2,2</td>
<td>7,4</td>
</tr>
<tr>
<td>Avg. Gamers</td>
<td>10,4</td>
<td>8,6</td>
<td>10,8</td>
<td>2,2</td>
<td>7,5</td>
</tr>
<tr>
<td>Total</td>
<td>/20</td>
<td>/13</td>
<td>/15</td>
<td>/3</td>
<td>/10</td>
</tr>
</tbody>
</table>

What was also interesting to observe was the difference between the results for which the
students could have studied versus the pop quizzes. For pop quizzes, the gamers scored better
than the students who did not play games. On the regular tests of which the students were
notified, the gamers scored less points. This could imply that gamers study less than the other
students. This could be attributed to the notion that gamers over-estimate their own level of
English, or that they do not regard schoolwork as equally important as playing games and that
their priorities could be skewed. This supports the findings of Chik (2014) who found that some
students prefer a PVL over their real life.
6. Conclusion

After the research, it can be stated that online gaming has a significant positive impact on the writing skills of students. Gamers write texts that are, on average, 20% longer, use 50% more adjectives and use over 300% more adverbs than non-gamers. This indicates that the gamers have a richer vocabulary and that they write more detailed and descriptive texts. All of this is only applicable in school-related situations. In informal situations, rough drafts the pupils made and in their discourses with each other, the students used a lot of forms of digital language.

The findings also show that gamers do not experience significant negative interference in Dutch. There was one instance where a student had only learned the English words that were directly related to a sport and the students therefore was not able to use the Dutch equivalents.

When analysing the marks the students received at school, it became apparent that gamers do not necessarily achieve higher marks on average. Gamers do score better though on pop-quizzes that test the speaking, listening and writing skills. When it came to tests that were announced in class, the gamers scored slightly lower marks.

To conclude, it appears that although students are exposed to incorrect examples of English online, there are no direct negative outcomes on their levels of English when they are observed in formal situations. This indicates that the students are well aware of what is correct English and of what is not and that they are able to recognise in which situations they can use which type of language.

It is of the utmost importance to stress that this research is simply of an exploratory nature. The time period of two months was too short to acquire a deep and broad enough insight in the capabilities and evolution of the linguistic skills of the students involved. While some results were attained, it seems like there are some things that must be held into account.

It is difficult to appoint a single attributor to the influence on the development of the linguistic skills. In this research I did not hold into account other possible educational influences from other extramural activities such as watching television, reading or studying. An example of how this is a flaw in the experiment is how the only instance where a mistake was made that stemmed from digi-language in the English writing assignment, was made by someone who did not play online video games at all.
In regards to the future it would be interesting to observe just to which extent the influence of online gaming on the willingness to speak English goes.

After looking at the difference between the marks when it comes to pop-quizzes and announced tests, it would be interesting to further inquire into the reasoning behind this.
7. References

- Benson, P., & Chik, A. (2013). Towards a more naturalistic CALL: Video gaming and language learning. In Explorations of Language Teaching and Learning with Computational Assistance (pp. 75-88). IGI Global


The influence of online gaming on the acquisition of English as a foreign language and on Dutch in adolescents

Raven Van den Wyngaert & Johannes De Breucker

6. Research plan
The students went through a test period of two months. They agreed to play at least two hours of online games per week more than they would normally do. On top of that, they were observed in class on various aspects such as willingness to speak English and their skills.

7. Expected results
The expected results for this research will show that there is a positive influence of online gaming on the acquisition of English as a foreign language. Simultaneously it will hopefully show that there is no significant decline in the quality of Dutch. Hopefully this research will also serve as a motivation to further enquire in the possible extent of the influence online gaming has on students. Further interesting research questions that can be asked after this research will be

8. References

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8.2. Listening tests used in class

**Name:**

**Date:**

Question 1: True or false (circle the correct answer) /2
The stories also celebrate friendship. True/False
Sherlock Holmes is an ordinary detective. True/False
They liked their heroes flawed in Sherlock Holmes' time. True/False
Sherlock Holmes is better than us but also relatable in a way. True/False

Question 2: In what countries do they tell us that we like our heroes flawed? Write it out in a full sentence. You can answer in Dutch. /2

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………………………………………………………………………………………………………

Question 3: Who is the speaker talking about when he talks about somebody who is peculiar in his movements, mood swings, habits, abilities, strengths and weaknesses? You can answer in Dutch. /1

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………………………………………………………………………………………………………

Question 4: The speaker describes two people as: one person who has seen military service, and another as someone who is like a cold reptilian. Connect the right word to the right character. /1

- Dr. Watson
- Sherlock Holmes
- Someone with military experience
- Cold reptilian like person

Question 5: What does the speaker mean with the final sentence ‘All the great detectives flow from Baker street.’? You can answer in Dutch. /2

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Question 6: What do you think of Sherlock Holmes? Write a short text of at least 5 sentences about why you **DO/DON’T** like him. Use proper arguments, based on the information from the clip. Answer in English.

**Spelling:** /1

**Grammar:** /1
8.3. Speaking test checklist

The students had to adapt a fairy tale to a story with a modern setting.

**General checklist**

Content:

- Your fairy tale was recognizable
- Your fairy tale had obvious modern elements
- You used the classical beginning and ending of a fairy tale
- You used the key words from the book
- You used at least three passive voiced sentences
- You used at least three active voiced sentences
- You both said at least ten sentences

Language:

- You spoke loud and clearly
- You used proper vocabulary from the book
- You spoke with expression
- You paid attention to your intonation

**Roleplay checklist:**

- You used no more than key-words
- You spoke with a lot of expression
- You brought props

**Video clip checklist:**
Your clip was clearly visible
You did not read from a cheat sheet
You submitted your clip on time

**Reading the story** checklist:

You spoke with a lot of expression
You paid attention to pronunciation
You spoke fluently without interruptions