# The Potential Influence of Video Games on Foreign Language Learning

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**Diplôme :** Master en langues et lettres modernes, orientation générale, à finalité didactique
**Année académique :** 2020-2021
**URI/URL :** http://hdl.handle.net/2268.2/13776

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Linguistique, Littérature et Traduction

# The Potential Influence of Video Games on Foreign Language Learning

Travail de fin d'études présenté par SPATARO Maximilien en vue de l'obtention du grade de Master en Langues et Lettres Modernes, orientation générale, à finalité didactique.

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Année académique 2020-2021

## Acknowledgments

First of all, I want to thank my supervisor, Professor Germain Simons, for accepting this subject, guiding me through the process of writing my dissertation and for his corrections. I also want to thank him for his words during my first traineeships, which greatly motivated me to pursue my ambition of becoming a teacher.

I also want to thank Professor Lieselotte Brems, my secondary supervisor, for supporting the thematic of this dissertation from the beginning and for accepting to supervise me.

Then, I want to thank the assistants of the ULiège didactics' team Alain Segatto, Julie Vanhoof and Florence Van Hoof, as well as PhD student Audrey Renson, who helped me with the questionnaires.

I must also thank Georgette Matthieu and Diana Gorenszach. They both helped me as much as they could to elaborate a good paper and proofread the latter.

My parents, without whom all of this adventure at university would not have been possible, deserve the most heartful gratitude.

I also want to thank my friends for their help and for the moments we have spent together. All these years would not have been as great as they were without them.

I also wish to give pride of place to my partner, Lydia, for her constant encouragement throughout my study period.

Last but not least, I would like to thank the Most High for His faithfulness and endless support.

# Table of contents

# LIST OF TABLES

List of figures

# List of Appendices

## Introduction

When I was four years old, I had the chance to hold a console for the first time. My first contact with my big brother's *Gameboy* made me realise that a whole new world had just opened up to me. From that moment, video games became an integral part of my childhood; they entertained me, they took me out of myself, they pacified me and dragged me into their universe. Back then, I did not realise that they also had another effect on me: they made me learn.

I was actually born in a family where two languages were predominant: French and Italian. Since I lived in Belgium, the language I used the most was obviously French. However, as a large part of my family resided in Italy, I also had to speak Italian in order to communicate with them. In July 2003, *Pokémon Ruby* was released and I was in Italy. My parents gave me this video game as a gift but it was in Italian and at the time, it was impossible to change the language of certain games. I was then obliged to play in another language than my mother tongue and the effort was quite important because many dialogues were present in the game. At that time, I did not realise that this gaming time in foreign language would have drastically improved my Italian level. It was only a year after, when I went back to Italy, that my family noticed that my vocabulary was far better than the previous years.

When years later, I shared this experience with friends and other students, many of them told me that they also noticed that playing video games in foreign language helped them to improve their foreign language level. From then on, I decided to understand why such a phenomenon was possible and if it was true that video games do influence foreign language learning.

The objective of this paper is threefold. First, I want to analyse how languages are learned according to theorists and how it can be transposed to video games. Then, I wish to discover if video games, when played at home, do influence second language acquisition. Finally, since I decided to devote myself to the teaching profession, I would like to determine if video games are exploitable within modern language classrooms in order to enhance the teaching of foreign languages.

The first chapter will be about discussing theories on the correlation between video games and learning. This will allow me to notice if video games can be considered a tool for learning besides being a medium for entertainment. Then, this chapter will focus on various

theories on foreign language learning. In this way, it will be possible to determine if video games enable foreign language acquisition according to some language theorists.

The second chapter will analyse the importance of video games in the official documents issued by the higher authorities in modern language teaching. It would be interesting to check if these papers mention and/or give advice on the use of video games within modern language classrooms.

The third chapter will present two questionnaires that were submitted to teachers and pupils of the Wallonia-Brussel Federation. The questionnaire aimed at knowing how the teachers and the pupils perceive video games and their potential influence on foreign language learning.

Before sharing my conclusions, the fourth and last chapter of this dissertation will try to suggest ways to implement video games in modern language classes and how to use them efficiently.

# 1. Theoretical framework

## 1.1.Some data and brief definition of video games

For many players all around the world, video games (now VGs) are a tool for entertainment, for relaxation, socialisation, etc. According to Statista (a website specialised in the provision of reliable business data), VGs sales have increased by 63% since the COVID-19 pandemic. Various factors can explain this sharp rise. First of all, the closing down of spaces such as cinemas, theatres or book shops have obliged people to find new ways to entertain themselves. Then, due to the various lockdowns, people had to stay at home and, as a result, have developed a home-loving way of life. It can also be added that it has been really easy to buy video games during the pandemic. A multitude of online shopping platforms such as Amazon, MediaMarkt or Fnac offered the possibility to buy and receive the game the following morning. Other services (Steam, PlayStation Store, Microsoft store among others) also allowed players to buy and play instantly on their computers or game consoles. Finally, the World Health Organization also promoted VGs consumption during the pandemic by launching the hashtag "#PlayApartTogether"[1]. In February 2021, there were more than three billion VG consumers worldwide (DFC Intelligence; Global VG Consumer Segmentation Report). The VG, used by more or less 40% of the world population, can be defined as "a game which we play thanks to an audio-visual apparatus and which can be based on a story" (Esposito 2005: 2).

For the purpose of this dissertation, it could be interesting to expand this definition by adding that

> the most essential distinguishing feature of VGs is that they are interactive; players cannot passively surrender to a game's storyline. Instead, VGs are designed for players to actively engage with their systems and for these systems to, in turn, react to players' agentive behaviours. (Granic et al. 2014: 66).

This definition of the VG implies that the player is *active* and that he/she is committed in the activity of playing. It also indicates that VGs are potentially capable to produce two types of interactivities for the player: interactivity between the player and the game and interactivity *between* players. This commitment to the game and the (inter)activity offered by the game could help to develop specific skills.

### 1.2. Typology of video games genres

Creating a typology of VGs is a difficult task. Many VGs theorists (Wolf 2002; Egenfeldt-Nielsen et al. 2008) have already tried to classify VGs according to various criteria. The gameplay[2] is for example a recurrent criterion in creating a taxonomy. On the one hand, designers such as Ernest Adams stand for the idea "that videogame genres are determined by gameplay only" (Căşvean, 2016: p. 60). On the other hand, according to Rauscher's paper, Egenfeldt-Nielsen et al. (2008) argue that the game's criteria for success (in other words, how the player can be successful in the game and finish it) are key elements to classify game genres. They created a "pragmatic" taxonomy based on these criteria and "reduce[d] VG genres to four types": action games, adventure games, strategy games and process-oriented games (Nielsen, Smith, Tosca 2008 quoted from Rauscher, 2012: 1-2). The structure, the plot or the theme of the game are also another basis used to sort the huge amount of games that are available. Tulia-Maria Căşvean (2006: 63) perfectly summarises this difficulty to univocally organise VG genres arguing that they

> are built on multiple perspectives that depend on the observer and his or her agenda. For the industry, genres are player-centric built focusing on mechanics and game design patterns that deliver particular play-experiences. For scholars, genres are tools that allow examining, deconstructing, and comparing games" (Căşvean 2016: 63).

Despite the absence of an official nomenclature, this dissertation needs a way to organise the multitude of genres available on the market. In order to simplify the further reading of this work, the following table shows and explains them. The table is inspired by a typology published in *Hermès*, a French periodical specialised in communication studies and some personal modifications and comments are added to it. The original text can be found in the annex. This taxonomy will also be used in a survey steered towards students attending secondary schools in the Fédération Wallonie-Bruxelles.

| | Definition | Subgenres and examples | Comments |
|---|---|---|---|
| Action games | **"**A game characterized by simple action and response gameplay. This is the broadest category of games […]. Under the | **Beat 'em up**: *God of War, Streets of rage…*<br><br>**Fighting**: *Mortal* | **Comments:** Some of these games do not always belong to one unique subgenre. Many of them cross borders between one genre and another. For example, |

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| | most basic definition the players onscreen character can run, jump, shoot or fly, but the defining characteristic is that enemies and obstacles are overcome by "physical" means, rather than involved intellectual problem solving." (West et al. 1996: 29) | *Kombat, Street Fighter…*<br><br>**Platform**: *Super Mario, Rayman…*<br><br>**Shoot them up**: *Ikaruga, Cuphead…*<br><br>**First Person Shooter**: *Call of Duty, Battlefield…*<br><br>**Third Person Shooter**: *Uncharted, The Last of us…*<br><br>**Tactical Shooter**: *Swat, Tom Clancy's Rainbow Six…*<br><br>**Battle Royale**: *Fortnite, Call of Duty: Warzone…*<br><br>**Rhythm:** *Just Dance, Guitar Hero…* | *Uncharted* here is characterised by the way the players can see the game on their screen. In the annex, a screenshot of the game is available in order to understand and visualise the difference between first- and third-person shooter view. *Uncharted* can also be regarded as an action-adventure game due to its gameplay. This specific example, like other games mentioned in the list above, shows the difficulty to create a conclusive typology. Indeed, good VGs often mix different (sub)genres. |
| Adventure games | "[Games that] are chiefly about exploration and puzzle-solving. They sometimes contain conceptual challenges as | **Graphic adventures:** *Professor Layton, Grim Fandango…* | Nowadays, adventure games are less popular than other genres. Their passivity, slow pace and outdated game mechanisms can be reasons to explain the |

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| | well. These may include a physical challenge but only rarely." (Rollings et al. 2003: 43) | **Interactive fiction:** *Ace Attorney, Choice of the Deathless…*<br><br>**Immersive sim:** *Deus Ex, Dishonored…*<br><br>**Visual novel:** *Nekopara, Sakura…* | unpopularity of this genre (Baümer, 2018). Commercial success such as *Deux Ex* or *Dishonored* skilfully combined adventure games features with techniques from other genres. As a matter of fact, some typologies place immersive sim within the action games. Again, it can be highlighted that the boundaries between genres are fuzzy and that a game can be classified in different pigeonholes at the same time. |
| Action-Adventure Games | "The action-adventure game is faster paced than a pure adventure game, and it includes physical as well as conceptual challenges. Exactly when a game stops being an adventure game and becomes an action game is a matter of interpretation." (Rollings et al. 2003: 446) | **GTA-like**: *Grand Theft Auto, Mafia…*<br><br>**Stealth**: *Metal Gear, Hitman…*<br><br>**Survival horror**: *Resident Evil, Silent Hill…* | This genre, according to its definition, manages to combine the two main characteristics of action games and adventure games. Action-adventure games alternate between exploration moments, fighting, investigation and finally problem solving. The ideal combination of these different quests is often synonymous with a good quality game. (*Hermès, La Revue* vol. 1 issue 62 2012: 15). Good instances of this mixing are the *Tomb Raider* games. As a matter of fact, the players discover Lara Croft's world with a third-person shooter view. They can make her swim, jump, shoot or |

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| | | | climb. During these moments of action and response between the players' and Lara's moves, several puzzles appear in the game. Players then have to solve the enigma in order to pursue their adventure. *Tomb Raider* games also combine features of different subgenres. Lara has to fight many enemies at the same time (Beat 'em up), to show discretion (Stealth), to evolve in an open-world and interact with her environment (GTA-like) and so on. These are typical games that are really difficult for theorists to classify due to the enormous possibilities offered by the game. |
| Role-playing games (RPGs) | "The main characteristics of [RPG] is that the player is free to move from place to place in the game environment, interact with other [non-player characters], solve puzzles, find and collect tools and weapons, keep track of numerous character statistics […], and (usually but not always) combat is decided by choosing battle options | **Action-RPG**: *The Witcher, Cyberpunk 2077…*<br><br>**MMORPG (Massively Multiplayer Online Role-Playing Game)**: *World of Warcraft, Albion Online...*<br>**Multi-user dungeon**: *Avendar, Ithir…* | Role-playing VGs are the numerical transposition of the traditional role-playing game, also called tabletop role-playing game (Rollings et al. 2003: 347). MMORPGs are games in which players can communicate with other players from all around the world. This interaction is definitely a way to use another language than their own native tongue. *World of Warcraft* has actually been used by teachers in order to make their pupils |

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| | from menu screens. Console RPGs. are heavily influenced by Japanese games […], tend to have a strong emphasis on story line and character interaction, while PC RPGs. […], more heavily favour statistical bookkeeping and tightly constructed puzzle solving. (West et al. 1996: 40) | **Rogue-like**: *Hades, The Binding of Isaac…*<br><br>**Tactical RPG**: *Fire Emblem, Valkyria Chronicles…* | improve their English at second language level. RPGs (especially action-RPGs) are also closely linked to action-adventure games. Indeed, RPGs often include infiltration phases, combats against a horde of enemies, first- or third- person shooter view phases, etc. |
| Puzzle VGs | "Games in which the primary conflict is not so much between the player-character and other characters, but rather the figuring out of a solution, which often involves solving enigmas, navigation, learning how to use different tools, and the manipulating or reconfiguring of objects." (Wolf 2002: 129) | **Maze game:** *Pacman, Bomberman…*<br><br>**Hidden objects game:** *Hidden Folks, Lost Lands: Ice Spell…*<br><br>**Puzzle game:** *Tetris, Candy Crush…* | Adventure games stand out from puzzle games by the fact that puzzle solving is not the primary activity of this genre of games. Puzzle games are closely linked to traditional mathematical games. The French translation of puzzle games (*Jeux de réflexion*) clearly implies that this genre mainly requires reflection from the players. |
| Simulation VGs | "Game which attempts to re-create, with as much detail and realism as possible, any "real" activity […]. The category has been stretched to | **Life simulation game:** *The Sims, Animal Crossing…*<br><br>**Pet-raising simulation:** | As can be seen above, this type of games covers a multitude of fields. The main purpose of the simulation game is above all to show the player the 'real' conditions of a certain activity. |

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| | include some kinds of strategy titles which attempt to re-create certain real-life resource management problems." (West et al. 1996: 41) | *Nintendogs, Tamagotchi…*<br><br>**Sports VG:** *FIFA, NBA2K…*<br><br>**Racing games:** *Gran Turismo, Forza…*<br><br>**Construction and management simulation:** *SimCity, Roller Coaster Tycoon…*<br><br>**God Game:** *Spore, Black and White…*<br><br>**Farming games:** *Farming Simulator, FarmVille…*<br><br>**Vehicle simulation:** *Microsoft Flight Simulator, Bus Driver…* | The player can, thus, feel the sensation of the practice without running the inherent risks of it. (*Hermès, La Revue* vol. 1 issue 62 2012: 16). For example, playing Microsoft Flight Simulator can offer the experience of controlling a plane without risking a (mortal) accident. From a didactic perspective, these games can be really interesting for management students, architecture students, student pilots or every other study area covered by a good quality simulation game. The border between the so-called 'serious games' (see 1.3.1) and simulation games is sometimes really thin and many simulation games can actually be regarded as serious games. |
| Strategy VGs | "Following the example of their original version, virtual strategy games rest upon similar objectives. Growing a territory, destroying the enemies or | **4x game (Explore, Expand, Exploit, Exterminate):** *Civilization, Total War…* | This genre is a really specific one. It is slightly similar to the other genres aforementioned. Like puzzle games, strategy games are also of little use for the purpose of this dissertation, |

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| | making an army prosper are generally the goals to achieve. Strategy games usually refer to traditional board wargames. They are based on the player reflection and his/her capacity to make the good choices in order to progress in the game." (*Hermès, La Revue* vol. 1 issue 62 2012: 15) | **Artillery game:** *Worms, Scorched…* **Real-time strategy:** *Age of Empires, Anno…* **Turn-based strategy:** *Advance Wars, UFO: Enemy Unknown…* | due to the fact that they mainly need the players' attention and reflection. Glass et al.'s (2013) study shows that strategy games could really be helpful for improving cognitive skills. For instance, taking quick decisions or teamworking could be enhanced by regular (and moderate) practice of the strategy game. |
| Other genres | Types that do not fit in other types but that can be useful for the purpose of this dissertation. Party and social deduction games incite players to communicate with other players. This communication, as will be explained in the next sections, can help to develop and improve language skills. | **Party VG:** *Mario Party, Raving Rabbids…* **Social deduction game:** *Town of Salem, Among Us….* | |

*Table 1: Typology of video games genres.*

The periodical also mentioned the 'serious game', a concept that will be defined in the next section as well as the concepts of serious gaming and gamification.

### 1.3. Serious game and serious gaming

#### 1.3.1. Serious game: definitions and examples

The concept of 'serious game' is relatively vague. Its origin is uncertain but some researchers in the field of games, like Djaouti and Manning, claim that this term (*serio ludere*) appeared in the XV$^{th}$ century, during the Renaissance, and refers to the fact of "using humour in

literature in order to convey serious notions" (Djaouti 2011: 18). According to Djaouti (2011) and Dörner et al. (2016), studies about digital serious games could have started in Clark Abt's book *Serious Game* published in 1970. However, this contradictory term, combining learning and entertainment, could have been popularised in 2002 by Ben Sawyer and David Rejeski with their book *Serious Game: Improving Public Policy through Game Based. Learning and Simulations*. From then on, various theorists have proposed a definition of this oxymoron and some of them are listed below. It could be interesting to analyse them and to highlight the main and recurrent ideas proposed by the theorists.

> [Serious games] have an explicit and carefully thought-out *educational purpose* and are not intended to be played primarily for *amusement.* This does not mean that serious games are not, or should not be, *entertaining.* (Abt 1970: 9; highlights mine)

> A serious game is a game in which *education* (in its various forms) *is the primary goal*, rather than *entertainment.* (Michael 2006: 17; highlights mine)

> The "Serious Game" is an object mixing *two dimensions*: a "serious dimension", referring to any kind of *utilitarian purpose*, and a "*playful dimension*", corresponding to a game materialized on any type of medium.[3] (Djaouti 2011: 22; highlights mine)

> A serious game is a digital game created with the intention to *entertain* and to *achieve at least one additional goal* (e.g., learning or health). These additional goals are named characterizing goals. (Dörner et al. 2016: 3; highlights mine)

From these definitions, it can be deduced that the serious game is a tool in which the idea of playing is somehow related to an educational or utilitarian purpose. The dimensions of learning (the primary goal) and entertainment (the secondary goal) are closely linked in these games. Even if these two dimensions are (or can) be present, the initial intention of the developers is definitely to create a game reserved for learning goals.

Hereinbelow are some serious games released between 2017 and 2020:

*Culture Overlord*[4] is a VG developed by Lucas Vially and produced by Jennifer Ann's Group. This game aims to "encourage players, especially young people, to consider what impact movies, books, songs, games, websites [have] on them. More specifically, what attitudes and beliefs are they acquiring from these various forms of media." (Vially 2020)

Another purpose of the game is to "prevent teen dating violence." This game offers the player the possibility to choose different cultural items. Their choices will then have an impact on Dan's – the protagonist of the game – life and behaviour.

*The Chronicles of Utsuuq*[5] is an interactive web-story created by the UCLouvain. The game deals with the European elections and is meant to help people understand how the European Union works. The player embodies Jill and has to find a solution to stop a fictional crisis.

*Mène ton enquête*[6] is a mobile serious game developed by the Association Prévention Routière and Allianz. This virtual reality game aims to raise awareness among drivers of the dangers of blind spots while driving in the city. The player has to experience two typical accidents involving this blind spot factor and then try to explain and avoid them.

On paper, these games appear to be a real revolution in learning and one can easily think that a regular practice of them could complement schools and teachers. In fact, modern serious games (i.e. since 2002) cover different fields, f.i. Ecology, Health and Advertisement as shown in the aforementioned examples. The *Fédération Wallonie-Bruxelles* draws up the report that "some areas such as media education, citizenship education... are more invested than others" in the development of these digital games and are more disposed to offer "products suitable for teenagers"[7]. Moreover, according to Djaouti's study, only 25,7% of the games that have been released since 2002 are designed for educational goals (see annex). The website Serious Game Classification[8] has had the ambition to list the majority of serious games available on the Internet and has made an inventory of more or less 3,400 serious games. After a personal investigation on this page, I have found that between 2015 and 2020, none of the games indexed on the website were created with the objective to improve foreign language acquisition (except one, called *Reconnaître les déterminants*[9] that, as the name suggests, is used to identify the correct determiner).

This absence of serious games aiming at the development or acquisition of a second language can be explained by various factors such as the "lack of economic success and critical acclaims" (Gilson et al. 2019: 7). As a matter of fact, Gilson et al. point out that designing a VG is a long-winded and costly affair. Institutions interested in the creation of a serious game are often unaware of the difficulty of the task. Consequently, the low budget unblocked by the institutions is too weak to compete with commercial games that are suitable for all. The development of serious games often leads to bad games, incapable of rivalling with an average VG released in stores. Also, the minuscule number of serious games developed for second language learning indicates that this category of game cannot on its own

help with language acquisition. However, players and teachers can divert the primary purpose of these serious games in order to make them useful for another specific goal (e.g., improving English language skills). For instance, one could use *Culture Overlord* in an English second language class in order to teach words and concepts related to the topic of the game. This deviation from the original purpose is called 'serious gaming' by the theorists. This notion will be clarified in the following section.

### 1.3.2. Serious gaming: definition

Djaouti (2011: 25) defines serious gaming as the use of

> a VG or educational software in a way that was not necessarily intended by its designer. This is a "misappropriation of use", which allows, for example, to use with serious purposes a VG originally designed for entertainment. These two approaches, original design and misappropriation of use, define "Serious Gaming."[10]

Thus, according to this definition, serious gaming is a *process* and the result of a *diverted use* of a VG or educational software[11]. In other words, serious gaming occurs when, for instance, a teacher uses any VG whose primary purpose is to entertain and adapts it in order to teach something. The teacher assigns 'learning objectives' to a game and then invites his/her pupils/students to play this game in order "to reach a specific language objective" (Schmoll 2017: 8).

A relevant example to illustrate serious gaming is given by Laurence Schmoll in *Penser l'intégration du jeu vidéo en classe de langue*, 2017. She suggests using the life simulation VG *The Sims* and then making students create and describe their own apartment using the targeted language. The added value of this (basic) activity through the medium of the VG is that interactivity is possible between students. One can, for example, ask his/her partner to change the room, move an object, change the colour of the wall etc. All these questions, suggestions or comments, formulated in the foreign language, are rich in terms of semantic fields (furniture, electrical appliances, colours, etc.) and on the level of the functions of language (giving orders, describing, situating, locating, etc.).

With such an activity, it is clear that the concept of serious gaming offers the possibility to integrate videogames into a sequence of classes. Of course, it also involves an active participation of the teacher in the process of "adapting" the primary purpose of the VG in order to make the game efficient in the learning process. Moreover, a certain affinity with a

game or the VG in general is needed. It is also possible to push serious gaming to its limits by 'modding' an existing VG. Nathaniel Poor (2014: 1250) explains that

> modding, from modifying, is the act of changing a game, usually through computer programming, with software tools that are not part of the game. This can mean fixing bugs, modifying content to improve it, or adding content. But modding is not an activity taken on by those at game companies […] Modding is instead done by players and fans of the game. [These additions or modifications are called 'mods'].

A teacher could, therefore, modify the content of a game and add learning objectives to it. This, of course, implies not only a taste for gaming but also great skills in program writing. Nevertheless, it is interesting to point out that some researchers have created a number of tools that enable inexperienced people without any knowledge of programming to create their own educative games (Djaouti 2011: 41). It is then possible to imagine that such tools exist to help create 'mods'.

### 1.4.Synthesis of relations between VGs, serious games and serious gaming

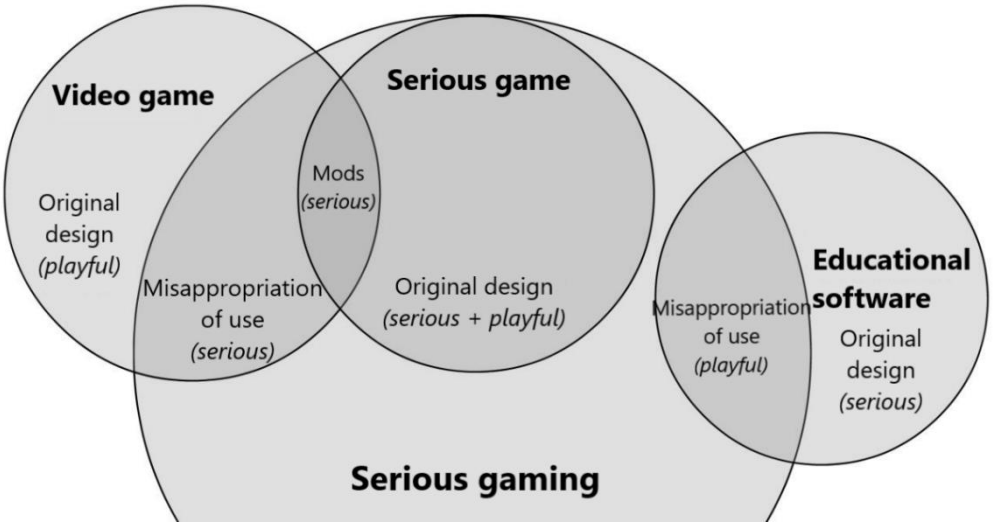



*Figure 1: Relations between serious game, serious gaming, VG and education software (Djaouti 2011: 26, the original in French can be found in Appendix 1)*

This figure gives an overview of the concepts explained above and how they interact. VGs, whose primary purpose is to entertain, can be modified to respond to more serious expectations. The diverted use of the VG is called serious gaming. It is possible to transform a VG to a serious game by adding mods to it. Of course, adding a 'serious' mod is a manner to divert the primary purpose of the game. This addition can also be regarded as a step towards serious gaming. Educational software, whose primary purpose is to educate, can also be modified. The misappropriation of use here aims to make the educational software fun. This change is also called serious gaming. Finally, the serious game, designed to educate while

entertaining, is the essence of serious gaming and does not need a misappropriation of use (due to its hybrid nature) to be part of serious gaming.

This part of the theoretical framework intended to explain what a VG is and to index different genres of digital games. It also aimed to demonstrate that the VG cannot be a pedagogical tool on its own. The serious game, originally presented as a revolution in learning, is not a "miraculous" tool. The lack of investment in its development and its unpopularity among the designers are obstacles that prevent a breakthrough of the serious game and, consequently, a regular practice of VGs designed to be used in the classroom. The notion of serious gaming, then, gives hope to a potential use of VGs as a medium in the classroom. Before studying their potential usage at school, the next section will discuss whether the VG played at home has the power to make people learn.

## 1.5.Brief outline of language acquisition and how languages are learned

### 1.5.1. Introduction

The purpose of this chapter is not to deeply study the complex question of how languages are learned. It is only meant to provide a framework that will help me discuss the potential influence of VGs on the learning of English as a foreign language.

### 1.5.2. Brief summary of different theories in second language acquisition

To check the efficiency of VGs in second language learning, it seems interesting to discuss how languages are actually learned. For many years, theorists have adopted various perspectives to explain language acquisition. Four of them have particularly been studied and have influenced teaching and learning methods: the behaviourist, the innatist, the cognitive and the sociocultural perspectives.

The behaviourist perspective "had a powerful influence on second and foreign language teaching […] from the 1940s to the 1970's" (Lightbown & Spada 2013: 103). Its theorists advance that learning is about "imitation, practice, reinforcement […], and habit formation" (Lightbown & Spada 2013: 103). Mimicry and memorisation take an important part in the behaviourist perspective. This type of teaching is ultra-circumscribed and, therefore, cannot be linked with videogames, which are practised in total autonomy. These theories can hardly demonstrate that VGs have any influence on second language learning. In reaction to behaviourism, innatist theorists (Chomsky, Krashen, White…) suggest new explanations for second language acquisition.

Noam Chomsky, pioneer of the innatist perspective, suggests that “innate knowledge of the principles of Universal Grammar [(UG)] permits all children to acquire the language of their environment during a critical period of their development” (Lightbown & Spada 2013: 104). It can be added that “UG views language use as based on an innate, abstract linguistic system that is unconscious” and that “[language] acquisition occurs […] when the unconscious linguistic system receives input […].” (Loewen 2015: 8). Although this theory specifically refers to first language learning during childhood, other innatist linguists refined Chomsky’s theory and applied it to second language learning. Loewen (2015) and many others theorists, researchers and experts in SLA agree on the fact that “one the most well-known [innatist] critics of the effectiveness of explicit L2 instruction is Stephen Krashen” (Loewen 2015:12). Between the 1970s and the 1980s, he developed five hypotheses about second language acquisition (Monitor Theory). His hypotheses will definitely be relevant to illustrate how VGs could be useful in second language acquisition. The part 1.5.4. will exclusively be dedicated to Krashen’s theory, also called ‘Monitor Model’, and its relation to VGs.

After the innatist theorists come the cognitivist researchers in the 1990s. They refuse the theory of the ‘Universal Grammar’ proposed by Chomsky and compare “language acquisition to the capacities of computers for storing, integrating, and retrieving information” (Lightbown & Spada 2013: 108). Therefore, they focus on three main approaches to explain the process of second language acquisition: ‘information processing’, ‘connectionism’ and ‘the competition model’. The ‘information processing’ theorists “see second language acquisition as the building up of knowledge that can eventually be called on automatically for speaking and understanding” (Lightbown & Spada 2013: 108). For some cognitive psychologists, learners must pay attention to any aspects of the language they want to learn. Nevertheless, human beings have a limit and cannot focus on all aspects. With the creation of automatisms by practising and exercising, they will be able to focus more on new structures they want to learn and free their attention from others already known. ‘Connectionism’ or ‘usage-based learning’ supporters attach importance to the environment and to “the frequency with which learners encounter specific linguistic features in the input” (Lightbown & Spada 2013: 110-111). Language can thus be acquired through repeated expositions to the foreign language that will enable to create connections between all the linguistic elements heard or read. Regarding the ‘competition model’, “speakers of a particular language come to understand how to use the 'cues' that signal specific functions through exposure to thousands of examples of language associated with particular meanings” (Lightbown & Spada 2013:

111). Here, language is learned unconsciously through, once more, a repeated exposition to an input. These three axes developed by the cognitivists inspired various theories that can be useful to explain how VGs could influence second language learning. One of them is 'the interaction hypothesis', developed by Michael Long and others. The Interaction Approach "argues that encountering and negotiating language forms during the course of meaningful interaction allows learner to notice the language forms […] and incorporate these forms in their interlanguage[12] system." (Loewen 2015: 13). The part 1.5.6. will expand on this approach and explain how it can be related to VGs.

Last but not least, the sociocultural perspective, whose most influential representative is Lev Vygotsky, expands the cognitive perspective. As a matter of fact, the Russian psychologist "assumes that cognitive development, including language development, arises as a result of social interactions" (Lightbown & Spada 2013: 118). The individual can therefore acquire a language when he/she "interacts with an interlocutor within his or her zone of proximal development (ZPD) […] in a situation in which the learner can perform at a higher level because of the support (scaffolding) offered by an interlocutor" (Lightbown & Spada 2013: 118). Vygotsky's theory has often been compared to Krashen's or interactionists' ones but this comparison gave rise to heated debates.

### 1.5.3. Inputs and outputs in VGs

When discussing VGs, I will argue that they offer the possibility for the learners/players to be exposed to two sources of input: input from the game itself and input from the other speakers' speech. Regarding input from the game, it can be assumed that it works in the same way than input from TV shows, films or other authentic video materials. Geòrgia Pujadas Jorba (2019) wrote her doctoral dissertation on the benefits of these authentic inputs. She argues that

> unlike artificial material designed specifically for language learning purposes, television, movies and other authentic video materials (e.g., Youtube videos, [VGs]) provide language learners with a source of naturalistic oral language input that resembles real life, as the images and contextual clues make it possible to 'view' the message as well as listen to it. (Jorba 2019: 5)

She also puts forward that "language learning can be enhanced through multimedia learning", a concept developed by Richard Mayer (2005). For him, "multimedia learning occurs when people build mental representations from words (such as spoken text or printed text) and pictures (such as illustrations, photos, animation, or video)" (Mayer 2005: 2) and learn from

these representations. Jorba finally specifies that these inputs are efficient only if learners are extensively exposed to them. In the study she realised in her dissertation, the participants had watched 8 hours and 35 minutes of audio-visual input (Jorba 2019: 94). Simultaneously, it can be suggested that VGs, if played in English, are able to provide inputs capable to support second language acquisition. They are a source of naturalistic oral language input and provide visual and verbal stimuli that set off 'multimedia learning'. Furthermore, the fact that learners/players have to be extensively exposed to inputs may not be a problem. Indeed, as the reader will discover in chapter 2, students sometimes stay several hours a day in front of games.

The other source of input is provided by the other players. As the reader will discover in chapter 2, online players are almost always led to discuss with others. Krashen's theory and interactionist hypotheses will help to discover if players' exchanges in-game can support second language acquisition. In addition to these in-game conversations, players also participate in VGs communities (wikis, social networks, forums…). In these, they can read texts or listen to videos written or produced by (non-)native speakers, which provide great sources of good-quality inputs.

These gaming communities definitely are part of the 'gamer's life and activity' (see chapter 2). In addition to the inputs, learners/players can also produce an output on it by writing a comment/text or publishing a 'podcast'. Language production is also possible during a game. This aspect gives an advantage in comparison to watching TV series. As a matter of fact, watching is an important source of input but does not give the opportunity to produce language unlike multiplayer VGs that combine exposure to input and production of output. Section 1.5.5. will discuss whether or not output is efficient for second language acquisition.

### 1.5.4. Stephen Krashen's 'Monitor Model' and its application to VGs

I will first summarise Krashen's Monitor Model and check how his ideas could be applied to SLA influenced by VGs. As written before, Krashen's 'Monitor Model' consists of five hypotheses about SLA.

#### 1.5.4.1.The Acquisition/Learning comparison

The American linguist first discusses the distinction between *acquisition* and *learning*. According to him, "adults have two distinct and independent ways of developing competence in a second language" (Krashen 1982: 10). On the one hand, language *acquisition* is similar to the way children develop their first language. The process is unconscious, the learner does not

pay attention to the language, its form and its structure. This way of *acquiring* a language can be related to "implicit learning, informal learning or natural learning" (Krashen 1982: 10). On the other hand, Krashen uses the word *learning* when the process is conscious. In other words, the learner is aware that he/she is developing a second language, he/she knows the rules of this language. *Learning* a language is linked to "explicit learning or formal knowledge of a language" (Krashen 1982: 10). This distinction demonstrates that a second language can be developed both at home and at school. Learners do not necessarily have to study and be guided by a teacher to improve their skills in a second language. Following this theory, it is possible to imagine that practising the VG at home (or any activity related to it) in a foreign language could be beneficial for the learner and that he/she could develop competence in a second language unconsciously, without knowing the rules of it.

#### 1.5.4.2.The Monitor hypothesis

The second hypothesis comes to expand the theory discussed hereinabove and explains the relationship between *acquisition* and *learning*. Krashen argues that *acquisition* "initiates […] utterances in a second language and is responsible for […] fluency" and that *learning* has the function of "Monitor" and "comes into play only to make changes in the form of [the] utterance, after it has been 'produced' by the acquired system" (Krashen 1982: 15). 'Monitoring' is used to 'polish' and "alter the [spontaneous] output" (Krashen 1982: 16). In a more practical view, it can be said that the rules learned in the classroom (the Monitor) can help to improve the learner's outputs but fluency can only be 'worked' through an unconscious use of the language. 'Monitoring' only occurs when three conditions are met: "the speaker/writer has plenty of time [to think about and use conscious rules effectively (Krashen 1982: 16)], is concerned about producing correct language, and has learned the relevant rules" (Lightbown & Spada 2013: 106). The 'monitoring' requirements do not seem to match with the outputs produced when playing. A normal conversation usually does not allow enough time to think about rules and be concerned about producing correct language, it can thus be easily imagined that sentences exchanged during a game will allow even less time to take rules and correctness into consideration. As a result, the language spoken between players is spontaneous, and often does not 'respect' the grammatical norm of this language. From a school point of view, chatting while playing could be useful for the creation of automatisms, spontaneity and fluency but cannot help for accuracy. Nevertheless, in Krashen's eyes, "acquisition is central and learning more peripheral", and as result "the goal of our pedagogy should be to encourage acquisition" (Krashen 1982: 20).

1.5.4.3.The Natural Order hypothesis

As this theory is not relevant to the topic of this dissertation, I will not linger over it. Briefly, 'the natural order hypothesis' is "based on the finding that, as in first language acquisition, second language acquisition unfolds in predictable sequences" (Lightbown & Spada 2013: 106). The easiest rules are not necessarily the first to be mastered.

1.5.4.4.The Input hypothesis

For the fourth hypothesis, Krashen explains that it attempts to answer the crucial question of how language is acquired. For Krashen, a learner acquires "only when [he/she] understand[s] language that contains structure 'a little beyond' where [he/she] is now." This "structure 'a little beyond'" is called "comprehensible input" or "*i + 1",* where *i* represents the current competence and *i + 1* represents the next level, the competence yet not acquired (Krashen 1982: 20-21). It is possible to understand this unknown competence "with the help of context or extra-linguistic information" (Krashen 1982: 21). This '*i + 1*' is automatically provided if the input contains enough of it. Moreover, the best input is not necessarily the one "[which] deliberately aims at '*i + 1*'" (Krashen 1982: 21). Next, this comprehensible input may be the only way to "teach speaking". In other words, the most efficient way to make speaking emerge is to expose the acquirer to a series of understandable inputs. These inputs can be of three sorts: the foreigner-talk, the input modified by a native to make acquirers understand; the teacher-talk, the input given in class; the interlanguage talk, the input given by another language acquirer (Krashen 1982: 24). Playing VGs at home can offer two of these inputs, the foreigner-talk and the interlanguage talk. Indeed, when playing online, players/acquirers can meet native English speakers for example and exchange a few words with them. These words (read or heard) can serve as a comprehensible input, the native speaker will normally adapt his/her language to make his/her message understandable by the acquirer. The interlanguage talk also intervenes when two English second language acquirers meet. One of them can produce an output if he/she wants to ask for something, advise, give an order or his/her opinion... He/she will do everything in order to make himself/herself understood. This output will then become a comprehensible input for the second acquirer. These inputs in the 'here and now' "provides extra-linguistic support that helps [the acquirer] understand the utterances containing *i + 1*" (Krashen 1982: 23). Moreover, these inputs encounter 'in the field' are called "roughly-tuned inputs", they cover the acquirer's *i +1* but do not focus on it, conversely to the "finely-tuned inputs" that directly aims to *i + 1*. In other words, the roughly-tuned input is related to "the natural, communicative […] and

comprehensible input" whereas the finely-tuned input is related to "classroom exercises that aim to teach the structure of the day" (Krashen 1982: 25). In Krashen's opinion, the 'roughly-tuned input' has "some real advantages over finely-tuned input" (Krashen 1982: 25-26):

> (1) All students may not be at the same stage. The "structure of the day" may not be *i + 1* for many of the students. With natural communicative input, on the other hand, some *i + 1* or other will be provided for everyone.
>
> (2) With a grammatical syllabus, each structure is presented only once. If a student misses it, is absent, is not paying attention, or if there simply has not been enough practice (input), the student may have to wait until next year, when all structures are reviewed! On the other hand, roughly-tuned comprehensible input allows for natural review.
>
> (3) […]
>
> (4) Finally, a grammatical syllabus, and the resulting grammatical focus, places serious constraints on what can be discussed. Too often, it is difficult, if not impossible, to discuss or read anything of real interest if our underlying motive is to practice a particular structure. In other words, a grammatical focus will usually prevent real communication using the second language.

These advantages consequently imply that the roughly-tuned inputs provided by VGs could really be efficient to make acquirers improve their competence in the second language. On the contrary, the limits and the pressure of a systematic teaching of grammar in the classroom can 'block' students/pupils' progression. Nevertheless, classrooms stay an excellent place for second language acquisition "up to intermediate level" (Krashen 1982:30) as long as they provide comprehensible input for students with a similar level. Krashen finally adds that "for beginners, the classroom can be much better than the outside world, since the outside usually provides the beginner with very little comprehensible input" (Krashen 1982: 30). Therefore, according to Krashen's theory, it is really important to take into account that VGs can help only if the acquirer has already a (good) basis in the foreign language and that the input is one level ahead of the current level (*i + 1*). If these conditions are not gathered, the progression in the second language will be non-existent. Similarly, a beginner with low basis will encounter many difficulties to find a comprehensible input in-game (or on a platform dedicated to VGs). However, as the reader will discover in chapter 4, VGs can still be efficient for beginners if the teachers use them in class as a source of inputs. The teacher can 'configure' a VG to change it into a reachable challenge, full of comprehensible inputs.

#### 1.5.4.5.The Affective Filter hypothesis

The last theory suggested by Stephen Krashen "states how affective factors relate to the second language acquisition process" (Krashen 1982: 30). High motivation, self-confidence and low anxiety are powerful variables related to success in second language acquisition. Acquirers with these optimal attitudes will tend to "seek and obtain more input [that will strike deeper and] have a lower filter" (Krashen 1982:31). In other words, a situation that encourages the acquirer to find more input will really be beneficial in the process of second language acquisition. Applying this hypothesis to VGs, it can be agreed that players tend to be less anxious about hearing and producing a message in second language during their game rather than in the classroom. Also, it may be more motivating for a player to communicate with another player to achieve a goal in-game than communicate in the classroom only because he/she is asked to do so. Finally, self-confidence could also play a part when playing. For example, a pupil with a weak world knowledge may not feel at ease when studying some cultural topics in the classroom. This lack of knowledge may then lead to a questioning and could decrease the student's self-confidence and his/her involvement in the classroom. However, this same student could really feel comfortable with VGs and their universe. His/her knowledge may encourage the acquirer to express himself/herself during a game or on a forum related to a particular game. It can also be imagined that adding VGs in a sequence of lessons could help certain pupils to be more motivated, have more confidence and less anxiety in class. These factors could then lower their affective filter and encourage them to improve their second language.

### 1.5.5. Brief outline of output hypotheses and their relationships to VGs

I will dedicate a brief part to the role of output in second language before discussing interaction hypotheses. This part will discuss whether or not oral and written production in foreign language plays a role in second language acquisition. Regarding VGs as a tool that enables language production, it can be assumed that they 'push' learners to speak with a foreigner during a game or to write on a forum, for instance, to express their opinion. According to Rodd Ellis (1994), output hypotheses lead to quite divergent ideas. In Krashen's eyes, the opportunity to talk and produce language "has no direct effect on acquisition" while for other researchers, "learner output [contributes] to interlanguage development" (Ellis 1994: 280). Ellis divides output hypotheses into two forms: 'output plus correction' and 'comprehensible output'.

#### 1.5.5.1.Krashen's 'output plus correction'

As mentioned before, Krashen argues that "output has a contribution to make to language acquisition, but it is not a direct one" (Krashen 1985: 60). For him, output is "merely the byproduct of acquisition" (Loewen 2015: 42). Producing language is efficient only because the more a learner talks, the more people will talk to him/her and, thus, the more he/she will receive inputs. Moreover, outputs are also efficient when the learners-producers receive corrections or feedbacks from other speakers. These corrections can be given in the classroom by the teacher but are rarer (even inexistent) when speaking with someone. According to this theory, the outputs produced at home while playing could lead acquirers to improve their language only because they receive an input produced by other players. The fact of producing an output seems to be insufficient to help them in their second language acquisition, since it is likely that they will not receive feedback by other players that will enable them to correct their production.

#### 1.5.5.2.Swain's 'comprehensible output'

Merrill Swain (1995) "argues that output is an important part of the L2 acquisition process (Loewen 2015: 43). For her, learning occurs when learners notice a gap in their linguistic knowledge and then try to modify their output. By modifying it, they can learn something new about the language. In other words, when learners communicate, they see the limits of their second language ability and then find better ways to express themselves. The comprehensible output they have to produce 'push' learners ahead in their development (Lightbown & Spada 2013: 115). Assuming that players produce language during their game, it can be imagined that they will try everything to be understood. They will, thus, modify their language using various strategies and therefore, according to Swain, improve it. It can also be imagined that two acquirers play together and have to communicate. The comprehensible output produced by one can then become a comprehensible input for the other and vice versa. Consequently, a conversation begins between the players. The interactivity that stems from their exchange can be, as will be discussed below, a powerful driving force for second language acquisition.

### 1.5.6. Interaction in VGs

Before examining interaction hypotheses, I will first precise which kind of interaction[13] will be targeted in the following parts. As Caroux et al. (2015) explain, "the study of player–VG interactions remains difficult because they are hard to define" (Caroux et

al. 2015: 367). However, they assert that "the one characteristic common to all VGs is the ability of the player to interact with a virtual environment" (Caroux et al. 2015: 367). It may also be remembered that multiplayer VGs offer the possibility to interact between players. In other words, VGs present two types of interaction: interaction between the game and the player and interaction between players. The following theories on second language acquisition will especially focus on the latter, taking the position that language is the principal mean for interaction between players.

### 1.5.7. The interaction hypothesis

Various researchers such as Michael Long (1983) and Teresa Pica (1989) have supported the idea that "oral interactions in which second language (L2) learners participate provide one of the main sources of data for L2 acquisition" (Ellis 1991: 3). More recently, Shawn Loewen argues that "the goal of the Interaction Approach is for learners to develop implicit knowledge of linguistic forms that will enable them to engage in meaningful communication." (Loewen 2015: 40). Rodd Ellis wrote a paper in 1991 in which he evaluated this hypothesis resting on Long's and Pica's studies. He then tried to improve it and make it more 'functional'. His revised version of the hypothesis rests on three points:

(1) Comprehensible input facilitates L2 acquisition but is neither necessary nor sufficient.
(2) Modifications to input, especially those which take place in the process of negotiating a communication problem, make acquisition possible providing that the learners:
    a. comprehend the input
    b. notice new features in it and compare what is noticed with their own output.
(3) Interaction that requires learners to modify their initial output facilitates the process of integration. (Ellis 1991: 36)

From these three points, it can be claimed that the interaction hypothesis is directly linked to input and output hypotheses. Loewen confirms it and asserts that "the Interaction Approach attempts to account for acquisition by examining the input that learners receive, the interaction that they engage in, and the output they produce" (Loewen 2015: 40). As Ellis suggests, 'modifications' are necessary for L2 acquisition. In his eyes, comprehensible input is not a necessary condition to make acquire, it only helps to learn more easily. As discussed before, comprehensible input can result from a modification done by a speaker to make his/her output understandable for his/her interlocutor. This modified input can be efficient only if the learner understands the input, discovers new elements in the input and then

modifies his/her own output. This implies that an important effort that has to be done by the learner and the speaker. They have "to work together to reach mutual comprehension" (Lightbown & Spada 2013: 114). In order to communicate and work together, learners can be involved in "communicative activities referred to as tasks, which have the following features: (a) it resembles a real-word activity, (b) it has a primary focus meaning, (c) it has a non-linguistic outcome, and (d) learners are expected to use their own linguistic resources" (Loewen 2015: 44). Two types of tasks exist: convergent and divergent ones. The type of task depends on the outcome of it: "convergent tasks require learners to agree on a specific outcome" and "divergent tasks require learners only to express their own opinions" (Loewen 2015: 44). The convergent one is "better for bringing about more interaction and negotiation of meaning" (Loewen 2015: 45). In other words, it can be argued that the learners need a cooperative task in which they can have better opportunities to interact. As a result, cooperation in interacting will be a key element in order to improve their L2. Multiplayer VGs can offer this cooperative climate but not always, it depends on the game and the game mode. To illustrate this assertion, here are some situations that can happen in one of the most popular VGs; *Call of Duty*. Statista has recently revealed that over 100 million of people play this game[14], it can thus be imagined that many students all around the world play it. I will take as an example the latest edition of the famous FPS game: *Call of Duty: Cold War*.

(1) A player can start a 'Free-for-all'[15]. In this game mode, the player will not be in contact with the others. Here, a competitive climate overlooks, interaction does not occur and language cannot improve.

(2) A player can start a 'Team Deathmatch'[16]. In this game mode, the player can be in contact with people of his/her team but it is not necessary. Moreover, the gameplay is quite 'nervous' and the player has to be concentrated on the game. Cooperative climate exists but the competitive one overtakes it. Language can improve but it is not 'optimal', what is at stake is too important, the player will only focus on the game and not on cooperation.

(3) A player can start a 'zombie game mode[17]'. Here, cooperation is the key for success. Players have to communicate in order to achieve the final objective. In this case, cooperative and competitive climates stand together. It is possible that players will meet others from other countries online. The communication between them will probably be held in English (assuming that no one knows the others' language). In this case, the interaction hypothesis may explain how language can

be acquired through VGs. The output produced by one will be modified in order to make the others understand. As a result, this modified output will become a comprehensible input for the others. Imagining that one of the players has a better level of English, the 'lowest' player may notice new language elements in the input he/she received and then may apply them to his/her own output.

Following the interactionalist theories, these few examples demonstrate that players will not necessarily acquire language only because they play VGs. A cooperative game (or game mode) will enable second language acquisition while a game (mode) in which competition is central will not. According to these hypotheses then, some games are not useful at all because they do not permit efficient interactions, while others could be beneficial because players have the time and the necessity to be attentive to their language in order to communicate efficiently. *Call of Duty: Cold War* is a nervous war-game where communication is possible but not always. Moreover, the game is quite competitive and players might tend to focus more on the game rather than communication. This game, even if it has been demonstrated before that efficient interaction is possible, is not the type of game that can be used as a tool in the classroom to encourage communication between students. Nevertheless, a large number of local/online multiplayer games offer interesting possibilities to promote interactions within the classroom. I will not expand too much on this point in this part, which is primarily dedicated to discuss how second language acquisition theories can be applied to VGs. I only meant to bring to light that efficient interaction is possible in VGs but not always.

Now that some instances of SLA theories relevant with the topic of this dissertation have been mentioned and illustrated by some examples, I will summarise this part on SLA with a figure in the next point. In another point, I will then highlight some issues related to these theories and to the potential limits of the VGs in SLA.

### 1.6. Summary of second language acquisition theories and their relations with VGs

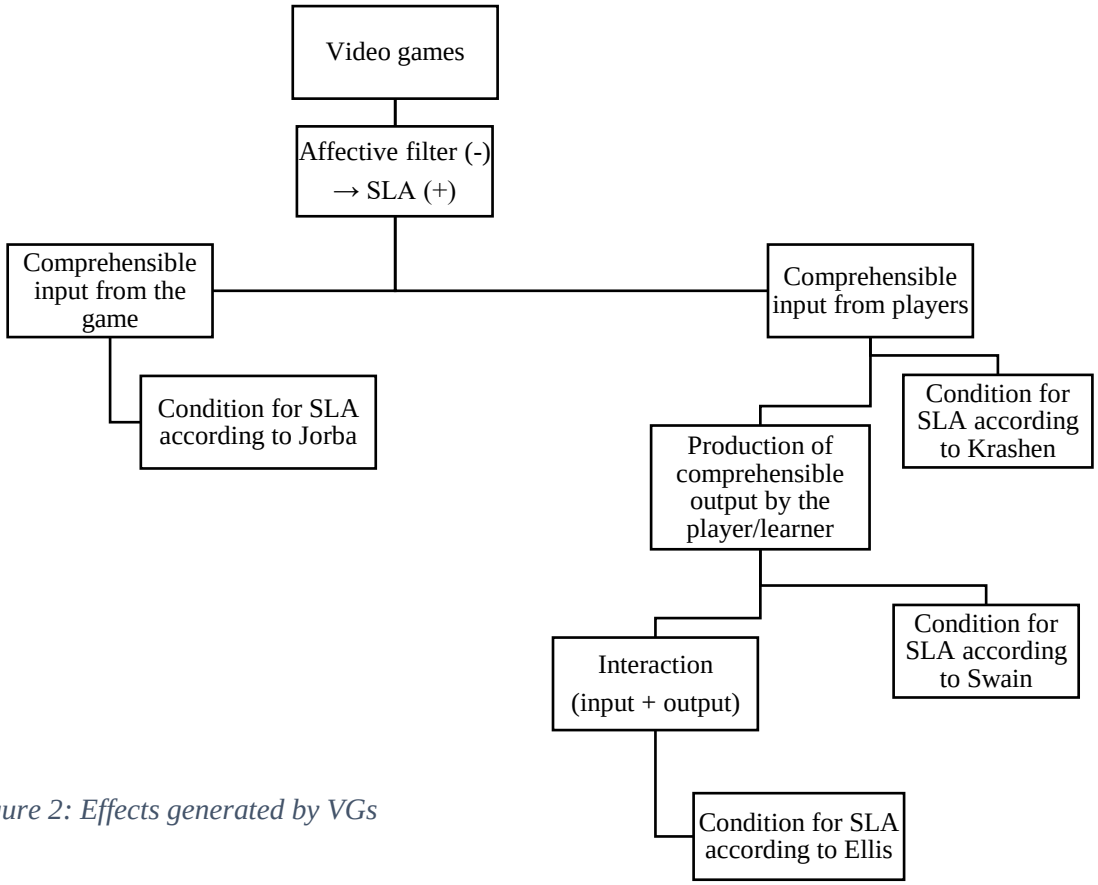



*Figure 2: Effects generated by VGs*

The figure hereabove summarises the effects related to SLA that may be generated by VGs. Krashen's affective filter hypothesis demonstrates that low anxiety, high motivation and self-confidence are variables that encourage the learner to seek and obtain more input. VGs provide such a climate favourable to reception and production of L2 when played at home, in the players' 'cocoon'. Moreover, VGs offer two sources of input: from the game itself and from other players. For Jorba, this comprehensible input coming from an audio-visual material can really be efficient to enhance SLA when watchers/players are extensively exposed to it. As for comprehensible input from other players, two types can emerge from VGs: foreigner-talk and interlanguage talk. In Krashen's eyes, the modified input that stems from these conversations is a necessary (nay sufficient) condition to support SLA. While conversing, players are exposed to input and are also invited to produce output. The

production of output, according to Krashen, is beneficial only if feedback is given. For Swain, output improves SLA only if the speaker sees the limits of his/her second language ability and then modifies the output. A comprehensible output is then produced and can become a comprehensible input for someone else. According to Ellis, this interaction produced in a collaborative spirit can then provide one of the main sources of data for L2 acquisition. The modified input and output are necessary conditions to make learners' L2 improve. It is however important to precise that VGs could be efficient only if they are played in a certain way, namely in a cooperative climate in which interactions are encouraged.

### 1.7.Conclusion and issues

Many genres of VGs exist. Each genre presents specific characteristics and a unique gameplay. Some are created to divert, others to teach and some try to combine both. Serious games can be regarded as clever mixtures of entertainment and learning but they suffer with a lack of investment from programmers. As a result of their unpopularity, it is difficult to study whether or not they have an influence on SLA. Until now, there have been too few serious games dedicated to language learning to assert that this genre of game will ever be a useful tool in L2 classrooms. It is however possible to modify a game by adding learning objectives to it. This process, called serious gaming, offers the possibility to use VGs as a tool in the classroom. The future of their integration into classrooms depends then on teachers.

Leisure can also be a vehicle for learning. SLA theories demonstrate that learning is not exclusive to classrooms. A learner can acquire language only by watching, reading or listening. Producing language, interacting with people or objects can also help to enhance SLA. However, several conditions are necessary to make this learning optimal:

(1) Players have to be exposed to the games for several hours. Such an exposure enables SLA but might have other negative effects on the player. Various recent studies (Majumdar 2020, Twenge 2018) explain that too much screen time can cause obesity, sleep problems or anxiety. Therefore, the exposure must be controlled and sensible in order to maximise the positive effects on SLA.

(2) Moreover, inputs (from the game or from players) are efficient only if they follow Krashen's 'rule' *i+1*. It cannot be proved that players always receive such inputs in-game. The input from the game may be too easy (*i-1*) or too difficult (*i+3*). In the first case, the input will be understood but will not be a challenge for the learner. As a result, he/she will not improve his/her language. In the second case, the gap will be

too important and the player will not learn either. Thus, VGs benefit for SLA is true only if they expose players to comprehensible inputs.

(3) Output hypotheses highlight that producing output is not sufficient to boost SLA. Krashen claims that a correction must be given after the output production. In everyday conversations, feedbacks are hardly ever given. Chatting during a game does not offer this possibility either. Swain argues that the producer must become aware of his/her linguistic limits and then must modify the output. This implies that the player knows strategies to rephrase what he/she wants to say without abandoning the conversation. VGs, even cooperatives ones, often obliged players to take fast decisions, leaving little time to modify the output. In the same way, interactionist hypotheses encounter the same difficulties because online gaming may not leave enough time to think about language production.

These issues point out that learning language through VGs is not systematic because several conditions intervene. Variables depending on the game, the genre, the gameplay, how the player interacts with the game and other players… influence SLA. It can thus be concluded that VGs played at home do offer the possibility to acquire language, to develop skills in L2 and to practice but only under specific conditions. It can be argued that if teachers gather these conditions while integrating serious gaming into the classroom, the result could be interesting. Chapter 4 will study how VGs could be use in that way in the classrooms of the Wallonia Brussels Federation (WBF). Before that, in the next chapter, I will display the results of surveys directed to teachers and students from the WBF and analyse them in light of the hereabove mentioned hypotheses.

## 2. The importance of VGs in the official documents

### 2.1.Introduction

The teachers who work in the WBF have to follow the recommendations and requirements published in various documents designed to instruct the teachers what to teach and recommend ways to teach. On the one hand, the reference papers of the WBF are called *référentiels* in French and are common to all schools within the WBF. They provide indications on what has to be taught at each level of education. They apply to all networks. On the other hand, curricula are other documents that give methodological guidelines in order to follow the requirements provided by the reference papers. They are published by the different networks and only apply to schools that are part of these networks.

It could be interesting to determine if VGs are present in the official documents before analysing the results of the questionnaire addressed to teachers in order to understand if the place granted to VGs in the reference papers influences teachers' opinion on them.

Before analysing these documents, I will first observe the *Common European Framework of Reference for Languages* (*CEFR*). As it is the common framework for language learning in Europe, all the papers published by the WBF and the curricula of each network should follow this document. Therefore, it can be interesting to see what the *CEFR* says on the importance of VGs in ML classrooms.

### 2.2.The importance of VGs in the CEFR (Common European Framework of Reference for Languages)

Before discussing some examples of VGs to use within classrooms, I will first analyse the place of VGs in this official document. While searching, I noticed that the word 'VG' is not present at all in this document. However, the word 'multi-media' is present twice in it. The first occurrence of 'multi-media' is right at the beginning, in the part dedicated to "The aims and objectives of Council of Europe language policy." On page 2, three fundamental principles of the CEFR are mentioned. In order to pursue these principles, member governments are invited

> To promote the national and international collaboration of governmental and non-governmental institutions engaged in the development of methods of teaching and evaluation in the field of modern language learning and in the production and use of materials, including institutions engaged in the production and use of *multi-media materials*. (*CEFR* 2001: 2, highlight mine)

The first occurrence related to our topic is that the *CEFR* commits to support the production and use of multi-media materials. From the beginning, the document announces that the development of multi-media materials (in which it is possible to include VGs) is an integral part of the development of the knowledge of modern languages in Europe.

The second occurrence of the word 'multi-media' is in Chapter 4, "which is a fairly detailed scheme of categories for the description of language use and the language user" (*CEFR* 2001: 43). In the part dedicated to communicative language activities and strategies, new technologies (including multi-media materials) can be used in order to exercise "*audio-visual reception*" (*CEFR* 2001: 71). As a result, it can be argued that the *CEFR* considers that new technologies can be useful to exercise receptive competences.

Chapter 6, entitled "Language learning and teaching", was designed to determine how the learners become able "to carry out the tasks, activities and processes and build up the competences necessary for communication", how teachers can facilitate this process with their various support services and how authorities create curricula for modern languages (*CEFR* 2001: 131). In this chapter, a part is dedicated to "some methodological options for modern language learning and teaching" (*CEFR* 2001: 142). Within this part, a section precisely focuses on particular approaches for FLL and the use of instructional media such as computers. The *CEFR* advises to use them for whole-class demonstrations, repetitions, etc; in a language/video/computer laboratory mode; in an individual self-instructional mode; as a basis for group work; in international computer networking of schools, classes and individual students (*CEFR* 2001: 145). As a result, it can be observed that the document provides several examples of practical applications for computers and media related to them in order to teach modern languages.

Now that the occurrences related to the computer aspect of VGs have been discussed, it could also be interesting to check what the *CEFR* mentions on the role of games in learning. In Chapter 4, there is a whole section dedicated to "Ludic uses of language" in which several examples of ludic activities for FLL are displayed (*CEFR* 2001: 55).

In Chapter 6, in the section that focuses on FLL and the use of instructional media such as computers, the *CEFR* advises to use co-operative and competitive games as a basis for group work.

The *CEFR companion volume*[18] is meant to enhance the first published *CEFR* (2001) by "highlighting certain innovative areas of the CEFR for which no descriptor scales had been provided in the set of descriptors published in 2001, but which have become increasingly relevant over the past 20 years" (*CEFR companion volume* 2020: 22). In the 2020 edition, the

word ‘VGs’ clearly appears in Chapter 3, which also focuses on communicative language activities and strategies. In the section dedicated to the “Understanding [of] audio (or signed) media and recordings”, the *CEFR* clarifies that pupils with an A2 level can be able to “understand the most important information contained in short commercials concerning goods and services of interest (e.g., CDs, *VGs*, travel).” (*CEFR companion volume* 2020: 52, highlight mine). VGs in this case are not used for what they are, they are only meant to appear in commercials. As we can see, no information on how using VGs in the classroom are given in this updated version of the *CEFR*.

As it was shown, the *CEFR* does not give a lot of indications on how to use VGs within classrooms. To find clues on their potential use, we have to focus on words somehow related to them such as ‘multi-media’ or ‘games’. The recent update of the CEFR does not bring about major changes except for the presence of VGs in commercials addressed to A2 learners. Therefore, supposing that the *CEFR* influences WBF reference papers, it will be unlikely to find elements related to VGs in these documents.

### 2.3.The importance of VGs in the reference papers and curricula of the WBF

#### 2.3.1. Documents common to all networks: reference papers

I will now focus on the reference papers of the WBF. They are common to all networks and give indications in terms of what learners have to learn at each level. As mentioned before, since Belgium is a European country, people in charge of writing these documents probably take the principal guidelines of the *CEFR* in order to design them. As a result, we could expect that VGs will be little dealt with in the reference documents.

##### 2.3.1.1.*Socles de compétences* (2016)

The document “Socles de compétences*”* is meant to define the skills that pupils are supposed to achieve during their first two years of secondary school. In the introduction, a part is dedicated to the digital dimension:

> Dans le monde d’aujourd’hui, la dimension numérique est incontournable. Celle-ci est présente dans les différentes UAA où le recours à des outils numériques est fortement encouragé, tant via les champs thématiques et les supports proposés que dans les productions attendues (médias en ligne, outils de présentation, outils de référence…). (*Socles de compétences* 2016: 12)

Even if the digital dimension seems promoted in the document, the word ‘VGs’ cannot be found in it. Besides, games are not mentioned either. The only part that is somehow related to

our topic regards the thematic fields. One of them concerns the thematic field 'hobbies', in which we can find a section 'Technologies de l'information et de la communication, médias' (*Socles de compétences* 2016: 98). In it, the reference document mentioned that some nouns of digital tools can be approached with pupils in their first two years of secondary school.

#### 2.3.1.2. *Compétences terminales et savoirs requis à l'issue des humanités générales et technologiques. Langues modernes.* (2017)

The document "Compétences terminales et savoirs requis à l'issue des humanités générales et technologiques. Langues modernes." was designed to describe the skills that pupils from the general and technological types of secondary education are supposed to attain at the second and third levels of their secondary education. In the same way as the document "Socles de compétences", this document seems to attach importance to the digital dimension. Actually, the same verbatim comment can be found in the introduction. Again, there are no traces of VGs or games in the document but only thematic fields related to them. They are the same fields as in the document discussed above; namely hobbies and media related words.

#### 2.3.1.3. Qualification and training profiles

The qualification and training profiles are designed for the different sections of vocational and technical types of education. These documents are also part of the reference papers published by the WBF. Two profiles were most likely to include words related to the field of VGs: CGI[19] technician and multimedia technician. Both specialisations are organised in secondary schools in the qualifying technical education. They are available for 7th grade pupils. The documents point out that both qualification and training profiles for CGI technicians can lead to job openings in the field of VGs: "Les principaux débouchés sont : l'audiovisuel (cinéma, TV), le graphisme, *les jeux vidéo*, le multimédia, […]" (*PF/PQ-Technicien/Technicienne en image de synthèse* 2004: 2, higlight mine). Therefore, it can be assumed that pupils studying this specialisation are likely to use/create VGs within the classroom.

The documents linked with multimedia technician profiles are less explicit regarding the importance of VGs. The latter are never mentioned in them, this specialisation particularly focuses on "the creation of websites, interactive kiosks, CD and DVD, etc." (*PF/PQ – Technicien/Technicienne en multimedia* 2004: 2). Therefore, it is difficult to guess if VGs are used or not within these classrooms but it can be imagined that they probably are somehow approached/mentioned during the course.

Be that as it may, even if VGs make part of both training courses, it is never mentioned that they are used for FLL. However, these profiles stay particularly interesting for

the topic of this dissertation because they show that VGs are not only regarded as a hobby; they are studied topics and lead to job openings.

### 2.3.2. Curricula

Now that I have analysed the papers common to all networks in the WBF, I will concentrate on the curricula, which are issued by the three networks of public schools in the French-speaking region of Belgium. Considering the fact that these documents directly stem from the reference papers analysed earlier, it is again unlikely that we will find any elements related to the use of VGs within classrooms. I will still conduct the analysis to verify if VGs are approached or mentioned in the curricula for the WBF network and for the free subsidised one.

#### 2.3.2.1.For the Wallonia-Brussels federation network

The term 'jeu(x) vidéo' appears in three of the four curricula I analysed from the WBF network. In the curricula issued for the pupils in *Technicien/ne en multimedia,* the word 'jeu vidéo' is absent. However, it is present in the curricula for the pupils in *Technicien/ne en image de synthèse,* in the part dedicated to the job openings. The word also appears in the appendices of the two curricula for modern languages[43] [44]. In the part "exemples d'exercices de remédiation*",* the pupils are asked to talk about the "activités du soir : *jeux vidéo*, vélo". The complete pages can be found in the appendices.

Even if the word 'jeu(x) vidéo' is present, nothing is clarified on how to use VGs within classrooms. As a result, I tried to find words related to multimedia. After the analysis, it is possible to find indications on how to use sound and audio-visual media within classrooms in the two curricula issued for modern languages: they can be found on page 119 of this document[20] and on page 132 of this paper[21].

I also sought information on the importance of games in the two previously mentioned curricula. In both documents, in the part "Méthodologie", a section on page 53 is about learning with games: "Quel que soit le type d'exercices proposés, ceux-ci peuvent être rendus plus attrayants et plus efficaces s'ils sont présentés sous forme de jeux ou de concours." Thus, we can find a place for multimedia and games in these curricula issued by the WBF.

#### 2.3.2.2.For the free subsidised network (denominational)

Out of the three curricula that were analysed, none of them mentions the word 'jeu(x) vidéo'. Multimedia tools are only approached in the same way as in the reference papers: they are

part of the lexical field ‘Hobbies’. The parts dedicated to examples of audio-visual media also totally ignore VGs. The dimension of games is also absent from these curricula.

### 2.4.Conclusion

As expected, the word ‘VG(s)’ hardly ever appears in the official documents that the teachers of the WBF are supposed to follow. When it is mentioned, it is often within lexical fields related to hobbies. They are never directly approached as a tool for learning and teachers have to turn to the recommended uses of audio-visual media or games if they want to find content related to VGs.

However, this absence does not mean that teachers/VGs-lovers have given up on the integration of VGs within classrooms and that the situation cannot change in the future. Actually, a group of teachers released in 2019 a textbook called *Jeu vidéo et éducation: Ateliers de pédagogie vidéoludique*. In this book, teachers in French, mathematics, sciences and media literacy give practical recommendations in order to use VGs within classrooms. Unfortunately, none of these examples of practical applications targeted FLL. Therefore, I will personally suggest and imagine some examples of practical applications of VGs in the last chapter of this dissertation.

Now that the importance of VGs in the official documents has been determined, I will analyse in the next chapter teachers’ and pupils' personal opinion on VGs.

# 3. Surveys on the use of video games, their potential benefits and their pedagogical utilisation

## 3.1. Introduction

I decided to design two different questionnaires to collect declarative data from teachers and pupils of the WBF. The first questionnaire was meant to check teachers' opinion on VGs. I wanted to know if they thought that VGs were a powerful driving force for SLA and if they thought about integrating them into the classroom. The second one targeted pupils' habits and opinions in relation to VGs. I wanted to discover which genres of VGs were the most widespread among the pupils. I also tried to determine if they used to play in another language than their mother tongue and, if it was the case, if they estimated that their language improved thanks to their practice. In both questionnaires, it is important to keep in mind that what the respondents answered might not completely reflect the reality. Thus, it will not be possible to draw unequivocal conclusions based on the collected answers. I will still consider the results of the surveys as good indicators of what teachers and pupils think of VGs and their influence on L2.

## 3.2.Methods

The questionnaires were created online because it was more convenient than paper versions for both the respondents and the person analysing the data. Moreover, it was easier to get in contact with pupils via the Internet and social media rather than via paper questionnaires. The questionnaires were conceived following the advice of Prof. Simons and Audrey Renson, a PhD student who is writing a doctoral dissertation about the text of the debate, and who taught me how to design a questionnaire, get people to answer it, and analyse the data. The method used to design and send both questionnaires is not significantly different from one another. Some differences were notable, yet. I will first explain the method for the questionnaire addressed to teachers and then switch to the one designed for pupils. Following Prof. Simons' advice, the questionnaire addressed to teachers was sent to respondents as part of a large questionnaire that brought together six different questionnaires from students writing their dissertation in the field of didactics. This was decided in order not to let the respondents get the impression that they had a lot of different questionnaires to answer. By doing so, we hoped to increase the response rate. Moreover, some questions from other questionnaires could actually have given us access to data that I had not thought about myself. For example, I had not thought about asking the teachers in what type of education they practise (e.g., general, transitional technical education, qualifying technical education, etc.).

Each one of us first built a questionnaire by ourselves before sending it to Prof. Simons for feedback. After revising it based on his comments, we put our six different questionnaires together and agreed on the questions that we would keep for the first part, which was common to all of us: the "respondent's profile". This part of the questionnaire was meant to allow us to associate answers with specific profiles and make it possible to determine if there were any tendencies within groups of people who shared some characteristics. After we put our common questionnaire together, we sent it to Prof. Simons for another round of feedback, which helped us to further improve our document.

We then wrote a joint introduction to the questionnaire. This introduction was meant to give information about what the questionnaire was about, who was supposed to answer it, how long it would take and why it had been built. Each of us wrote a short summary of their individual questionnaire because respondents had the choice to answer all six parts, or only choose some of them. To follow the General Data Protection Regulation, we also used that space to inform respondents that this questionnaire was anonymous, that the information they would give would stay confidential and would only be used for our theses.

We then chose the platform we would use to publish our common questionnaire. We decided to use the application Google Forms for its intuitive aspect and the various possibilities of utilisation it offered. It allowed to create an unlimited number of questions and it was possible to create a different section for each questionnaire. It is also convenient for data analysis because the platform automatically provides graphs and an Excel document with all the results.

When the questionnaires were ready and available online, we proceeded to a pre-test phase. For this pre-test, we could rely on the help of Audrey Renson and of the three assistants of the didactics team in the Department of Modern Languages at the University of Liège (Alain Segatto, Julie Vanhoof and Florence Van Hoof), as well as on the help of ten more people (including some of our former secondary school teachers and supervising teachers from our internships).

The final step was to send our questionnaire out to our future respondents. We were able to rely on the help of the didactics team, who sent it to all the supervising teachers they were collaborating with. It must be noted, however, that these teachers might not reflect the average teacher because, due to their being supervising teachers, they might be slightly more informed and experienced in terms of the recent recommendations given by the research.

As it was mentioned before, the method used for designing the questionnaire for the pupils was slightly different. This time, I worked alone with Prof. Simons. Like the previous

questionnaire, I first built it and then sent it to Prof. Simons for feedback. We repeated this step twice. The platform Google Forms was still used and the questionnaire also presented an introduction and a space informing that all the data collected would stay anonymous. It was then also pre-tested, but this time by the pupils. I could reach them thanks to the teachers that had supervised me during my internships and also because I still knew people attending secondary school. After some changes, I was able to make the questionnaire available online. Several people helped me to reach the pupils personally by mail or Facebook and some teachers also invited their pupils to answer the questionnaire during lessons.

### 3.2.1. Questionnaire design

I am now going to explain how I prepared my various questionnaires. Both were built following the funnel method, going from general questions to more specific ones. Each question was designed to find out information about one specific element, so as to avoid unclear answers and misinterpretations. I also tried to avoid open questions because they are more complex to analyse.

I will start explaining the design of the questionnaire addressed to teachers. The first part presented four questions of two different types. There were questions based on the four-level Likert scale. The four answers were the following: 'Pas du tout d'accord' (strongly disagree), 'Pas d'accord' (disagree), 'D'accord' (agree), 'Tout à fait d'accord' (strongly agree). I decided to choose four-level scale because people have a tendency to give neutral answers with a five-level one. Indeed, neutral answers do not give significant information and, thus, it is preferable to avoid them. After these questions, there was a "yes or no" question. In accordance with their answers, the respondents were directed to different parts. The participants who answered negatively to more than two questions were directed to a part exclusively composed of four-level Likert scale questions. The other respondents with less than two negative answers were steered to other parts with other types of questions. The various parts mixed 'yes or no' questions and four-level Likert scale questions. There were also multiple choices questions, which were sometimes followed by open questions asking respondents to explain or justify their choices. At the end of my questionnaire, I also left some space for people to make comments about VGs in general and about their use in the classroom, but this was optional.

I will now explain the questionnaire designed for the pupils. The questionnaire started with dichotomous questions (gender / yes or no) and then moved to multiple choices questions. In accordance to their answers, the respondents had access to some open questions with short answers in which they were asked to justify or precise their choices. Like the

previous questionnaire, I left some space at the end for the pupils to make comments about using VGs in the classroom, but this was optional.

#### 3.2.2. The core of the questionnaires

I am now going to present the different parts of the questionnaire and explain the questions each part contained.

The questionnaire addressed to teachers contained forty questions and six distinct parts. The respondents who responded more negatively more than twice in the first part of the questionnaire were directly steered to the sixth part. They only had to answer twenty questions. The first part were general questions about the teachers' perceptions of VGs and their integration into the classroom. The second part was about the teachers' practices and their position regarding the use of games (video or not) in the classroom. The third and the fourth parts dealt with the impact of VGs on learning. The fifth part was meant to have an idea of the teachers' personal experiences with VGs in the classroom. The last part was meant to discover the reluctance concerning the use of VGs at home and in the classroom.

The questionnaire addressed to pupils contained twenty-six questions. The pupils who answered that they did not play online only had nineteen questions to answer. The others who responded that they were not active in VGs communities only had twenty questions. If the pupils answered negatively to both online gaming and participation in communities, they only had to answer thirteen questions. The questionnaire was divided into four parts. The first one was composed of general questions on gender, favourite VGs and habits of the respondents. The second part dealt with online gaming and presented questions on habits and communication among the players. The questions of the third part analysed the pupils' participation in communities. Finally, the last part consisted to ask the pupils if they thought that their practice influenced the level of their FL and if it had improved their marks at school.

### 3.3.The questionnaire addressed to teachers

#### 3.3.1. Choosing the questions

In this section, I will explain why I chose to ask each question and what their goal was. In order to do so, I will clearly introduce the questions. I will start first with the questionnaire addressed to teachers. Since the questionnaire was in French and this dissertation is in English, I will translate the questions for the sake of uniformity. For this questionnaire, I will only present the questions from my part of it and not those about the respondent's profile. The reader will find a copy of the original version of the questionnaire in Appendix 2.

Part one: Introduction

The purpose of this part was to know the respondents' opinion on VGs and their effects on foreign language (FL) and information on the respondent him/herself. In accordance to their answers (more or less than two negative answers), respondents only had to answer certain parts of the survey.

1. VGs played at home in FL have positive effects on FL learning (FLL).
    - Strongly disagree / disagree / agree / strongly agree
2. VGs can absolutely be included at school in FL classes.
    - Strongly disagree / disagree / agree / strongly agree
3. If I was proved that VGs were efficient for learners, I would consider their use in the classroom for FLL.
    - Strongly disagree / disagree / agree / strongly agree
4. I am myself a VGs-lover.
    - Strongly disagree / disagree / agree / strongly agree

These first four questions were meant to determine the teachers' view on VGs and if they were ready to use them in the classroom. The last question aimed to have an idea on the respondents' profile and their affinities with VGs.

Part two: using the game, IN GENERAL, video or not.

The goal of this second part was to examine the teachers' habits in the classroom regarding games. The capital letters were used in the questionnaire to emphasise important words in the sentence. This part (as well as the third, the fourth and the fifth ones) was available only for the respondents who answered positively to more than two questions in the first part.

1. Games present many pedagogical advantages.
    - Strongly disagree / disagree / agree / strongly agree
2. If the answer is positive (agree / strongly agree), could you cite one (or more) advantage(s) of using games in the classroom? (Open-ended question)
3. Games should not be included in secondary schools.
    - Strongly disagree / disagree / agree / strongly agree
4. Games should be limited to nursery schools.
    - Strongly disagree / disagree / agree / strongly agree
5. Games should be limited to primary schools.
    - Strongly disagree / disagree / agree / strongly agree

These five questions were meant to determine if the teachers were working with games in the classroom and, if it was the case, why they were using them. I also wanted to see if games were perceived as a childish activity that should be stopped at some stage of the educational system or, on the contrary, as efficient tools for learning at any educational level.

Part three: the impact of VGs on learning, in general

The objective of this part was to ascertain the teachers' opinion about the impact of VGs on general learning (in other words, not only on FLL but on every type of learning).

1. Pupils devote less time to homework when they play VGs.
    - Strongly disagree / disagree / agree / strongly agree
2. Pupils who play VGs generally have poorer marks than the others who do not play.
    - Strongly disagree / disagree / agree / strongly agree

With these two questions, I tried to discover if the teachers think (or notice) that their gamer-pupils are less involved in school life than other pupils. I also wanted to know if the teachers estimate that VGs are responsible for bad school marks.

Part four: The impact of online VGs on FLL

This part aimed to determine the teachers' position about a potential relation between VGs and FLL. It was also meant to 'assess' the quality of this potential learning.

1. Communication produced in FL during online games is positive for language learning (listening comprehension and oral interaction).
    - Strongly disagree / disagree / agree / strongly agree
2. Communication with other players in their personal cocoon encourages players to speak more easily in FL. This disinhibition is a favourable factor for FLL.
    - Strongly disagree / disagree / agree / strongly agree
3. The language produced during online games has genuine characteristics that school environment cannot offer.
    - Strongly disagree / disagree / agree / strongly agree
4. The language produced during online games is a 'teen slang'. This particular language is relevant in FLL in school context.
    - Strongly disagree / disagree / agree / strongly agree

These four questions were meant to get to the heart of the matter. I wanted to discover if the teachers estimate that playing VGs enhance FLL. I also wanted to verify the teachers'

perception on the language produced during online gaming and if they think that school can add value to this particular language.

Part five: personal experience

Part five was designed to ask the teachers if they had ever thought about integrating VGs in the classroom or if they had already used it. Some questions also tried to determine how many pupils play VGs per class according to the teachers.

1. Have you ever thought about integrating VGs in the classroom?
    - Yes / No
2. Have you already used VGs in the classroom?
    - Yes / No
3. If you have already used it, what do you think of the motivational impact produced on the pupils with this activity?
    - Low impact (pupils not involved) / moderate impact / high impact / very high impact (pupils totally involved in the activity)
4. If you have already used it, what do you think of the pupils' acquisition of the lesson thanks to this activity?
    - Lesson non-acquired / lesson partially acquired / lesson totally acquired
5. If you have already used it, which competence did you exercise? (Rank it in order of use. 1=the competence the most exercised)
    - Listening / Reading / Speaking with interaction / Speaking without interaction / Writing
6. If you have already used it, could you say more about this experience? (Open-ended question)
7. According to you, in your classes of ML1 (modern language one), how many percent of pupils play VGs?
    - $4^{th}$ grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - $5^{th}$ grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - $6^{th}$ grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %

8. According to you, in your classes of ML2, how many percent of pupils play VGs?
    - 4th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - 5th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - 6th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
9. According to you, in your classes of ML3 how many percent of pupils play VGs?
    - 4th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - 5th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %
    - 6th grade class(es): 0-10% / 10-20% / 20-30% / 30-40% / 40-50% / 50-60% / 60-70% / 70-80% / 80-90% / 90-100 %

These questions had two different objectives. The first was to discover if some teachers have already thought/tried the experience of using VGs in the classroom and then examine the fruit of this activity. The second was to have an estimation of the number of pupils who actually play VGs in the classrooms of the WBF.

Part six: Reluctance regarding VGs

This final part was available for all respondents. It aimed to learn more about potential reluctance regarding VGs and their use in the classroom. This section also gave the respondents the opportunity to give their own opinion on VGs (in the classroom or not). It also enabled them to comment on the thematic of my dissertation.

1. The current infrastructure of my school does not enable the use of VGs in classrooms because it does not have enough computer hardware.
    - Strongly disagree / disagree / agree / strongly agree
2. The current infrastructure of my school does not enable the use of VGs in classrooms because it does not have an internet connection to enable the pupils to play online.
    - Strongly disagree / disagree / agree / strongly agree
3. I do not use VGs in the classroom because its pedagogical exploitation is not broached in official document(s) (reference documents and programmes).
    - Strongly disagree / disagree / agree / strongly agree

4. I do not use VGs in the classroom because its pedagogical exploitation has not been broached during my formal education at university.
    - Strongly disagree / disagree / agree / strongly agree
5. I do not use VGs because what they are playing for would overtake the objective of FLL.
    - Strongly disagree / disagree / agree / strongly agree
6. I am not at ease with these new tools.
    - Strongly disagree / disagree / agree / strongly agree
7. I am not at ease with the pedagogical exploitation of the video in the classroom.
    - Strongly disagree / disagree / agree / strongly agree
8. I do not have enough time to implement plans that enable the exploitation of VGs in the classroom.
    - Strongly disagree / disagree / agree / strongly agree
9. My classes have always born fruit without VGs, therefore, there are no reason to modify my teaching method.
    - Strongly disagree / disagree / agree / strongly agree
10. The mission of school is not to get used to societal changes like the development of online VGs.
    - Strongly disagree / disagree / agree / strongly agree
11. The mission of school is not to get used to societal changes like the development of online VGs, but rather stand firm against them.
    - Strongly disagree / disagree / agree / strongly agree
12. VGs are counterproductive, the pupils who play spend more time on their games than on their lessons.
    - Strongly disagree / disagree / agree / strongly agree
13. The language used during online games is lexically poor.
    - Strongly disagree / disagree / agree / strongly agree
14. The language used during online games is often grammatically incorrect.
    - Strongly disagree / disagree / agree / strongly agree
15. VGs make people violent.
    - Strongly disagree / disagree / agree / strongly agree
16. VGs ‘kill off people’s brain cells’.
    - Strongly disagree / disagree / agree / strongly agree

17. Other possible reason(s) explaining reluctance regarding the use of VGs in school context. (Open-ended question).
18. Other possible comment(s) on the thematic of online VGs and their potential benefits for FLL (in school context). (Open-ended question).
    - Strongly disagree / disagree / agree / strongly agree

The goal of these questions was to understand what the teachers think about VGs and their effects on pupils and learning. Some questions focused on the teachers' personal position regarding VGs. I wanted to determine if they were at ease with this medium. Besides, I also desired to learn if the schools of the WBF were sufficiently equipped to implement VGs within classrooms. Other questions were meant to observe if the teachers estimate that playing VGs would have (positive / negative) effects on FLL. Finally, I wished to leave some space for the teachers to express their personal ideas on the topic of my dissertation.

### 3.3.2. The respondents

The choice of the target audience was obvious from the start and has been repeated various times above. This questionnaire targeted the teachers, especially the teachers of English as a foreign language (EFL) who teach within the WBF. Because we decided to regroup six questionnaires, the actual public turned out to be broader and any FL teacher in the WBF could answer the questionnaire. Between 15th February and 25th July 2021, 56 teachers completed the respondent's profile part of our questionnaire. What follows is a summary of the 56 people who answered the respondent's profile. We designed eight questions in order to have a really precise idea of what type of teachers the respondents were.

The panel of teachers who answered our questionnaire was quite diverse. The number of years respondents have been teaching varies from 2 to more than 31 years. As the figure below displays, the distribution is quite homogeneous between the six categories (except for the intern who has been teaching for two years). The most represented respondents are the teachers who have been teaching for 11 to 20 years.

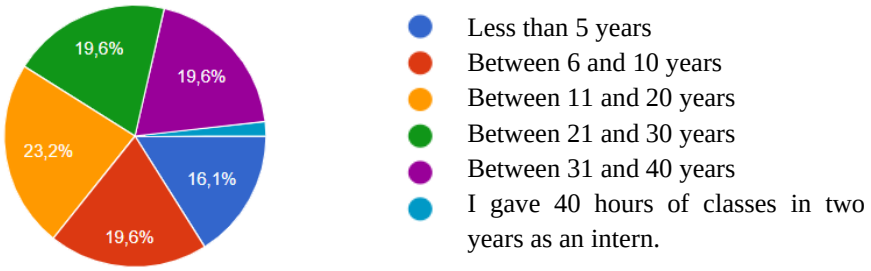



*Figure 3: Question 1 (Respondent's profile) - How long have you been a teacher? – Results*

We then wanted to know in which network(s) the respondents taught. In Belgium, there are three networks: the official WBF network, the subsidised public-school network and the free subsidised school network (denominational or not). For the latter, we decided to design two different answers, one entry for denominational and another for non-denominational. We also chose to add an answer 'free non-subsidised school' (but none of the respondents taught in this category). The respondents were able to choose more than one answer because some teachers actually teach in two different networks. As can be seen on Figure 4, most of the teachers who answered the survey work for the free subsidised network, in denominational schools (43 respondents) and for the official WBF network (17 respondents). Five of the respondents work for the subsidised public-school network and only one respondent works for the free subsidised network, in a denominational school.

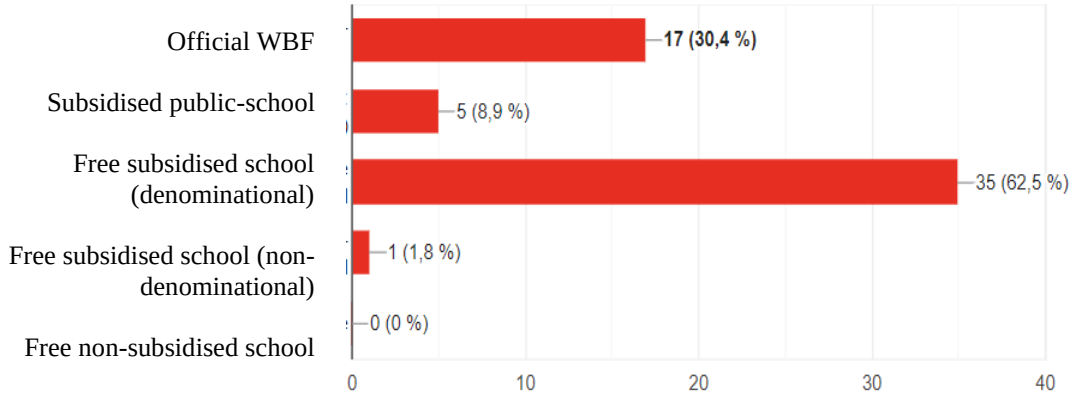



*Figure 4: Question 2 (RP) – In which network(s) do you teach? – Results*

For the third question of the RP, we agreed to ask respondents at which level(s) of education they teach. We designed seven different answers: primary school, lower secondary level, upper secondary level, social advancement[22], higher education, university and companies. Again, the teachers were allowed to choose between various answers. For this reason, there are more answers than the number of respondents. As it can been seen on Figure 5, the majority of respondents (42) teach at the upper secondary school, while fifteen teachers teach at the lower secondary level. Three people teach social advancement, two others in primary schools, another two in higher education and only one person teaches in companies. None of the respondents teach at university.

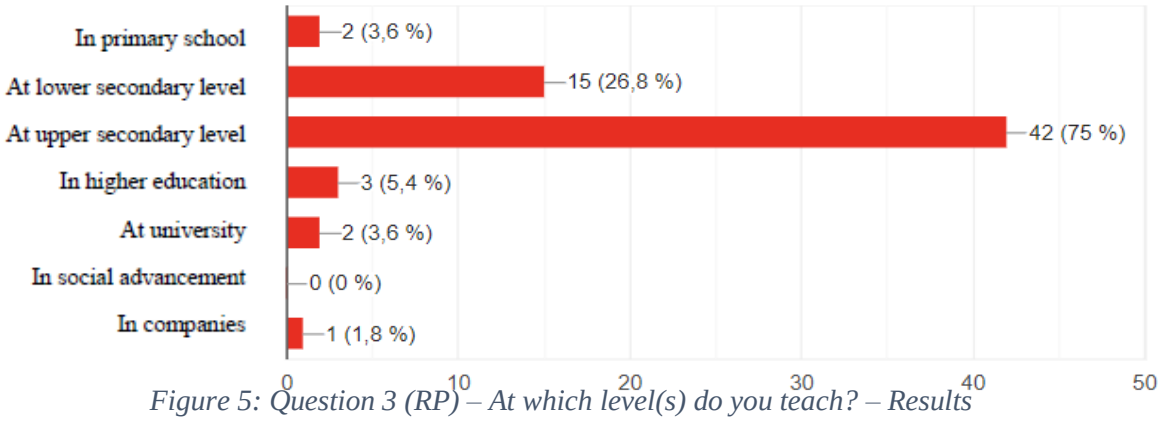



*Figure 5: Question 3 (RP) – At which level(s) do you teach? – Results*

The fourth question of the RP aimed to determine in which type(s) of education the respondents teach. Again, the respondents were allowed to choose several answers. The next figure shows that more than 80% of the teachers work in the general secondary education (45 people). Fifteen respondents declare to teach in the qualifying technical education and nine others in the transitional technical education. The vocational education[23] is the fourth most represented type of education of the questionnaire (7 people). Only three people teach social advancement. Each of the following types of education has been chosen only once: transitional art education, qualifying art education, reception and education arrangements for immigrant students[24], primary school, block release training centre[25], marketing schools, teachers training school and adults in companies training school.

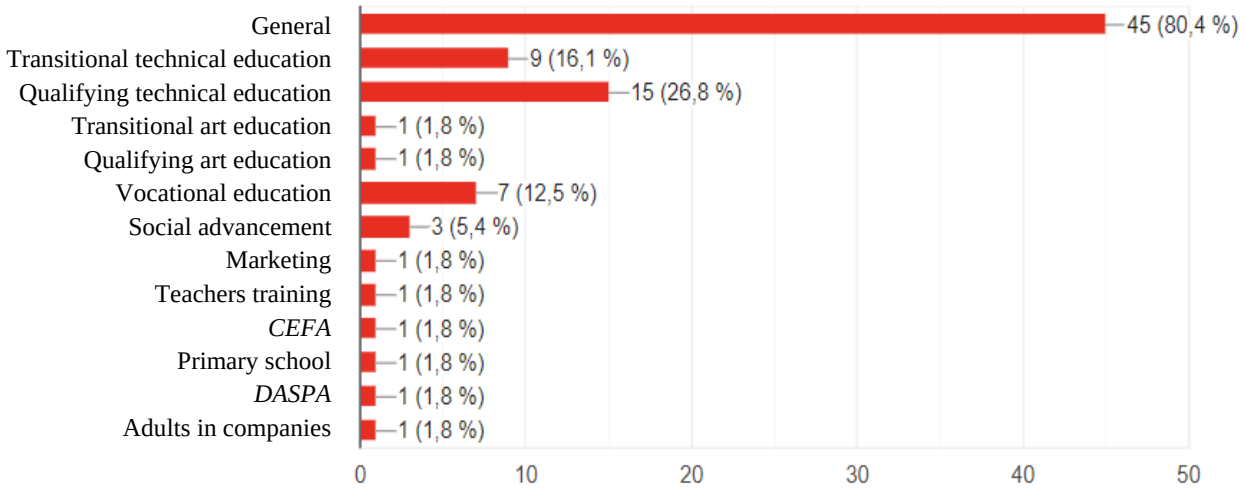



*Figure 6: Question 4 (RP) – In which type(s) of education do you teach? – Results*

We then decided to ask the respondents which languages they teach. It was again possible to choose various answers. English and Dutch teachers are abundant: 43 for English and 37 for Dutch. Then come seven Spanish teachers and five German teachers. Only one is an Italian teacher and another one is a French as a foreign language teacher. These results are given below on Figure 7.

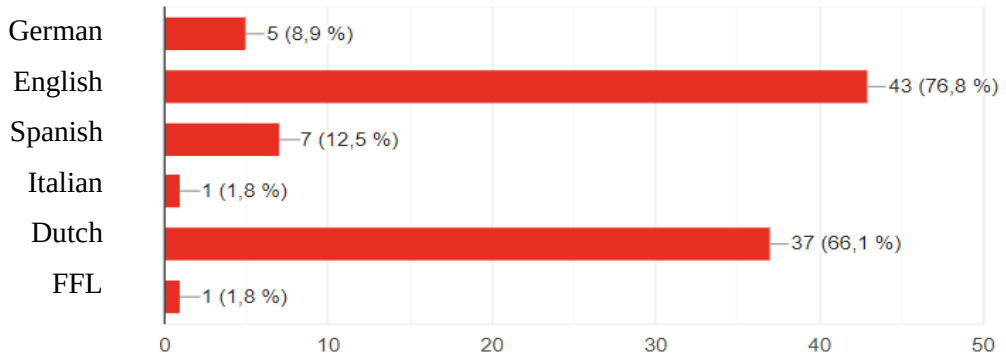



*Figure 7: Question 5 (RP) – Which language(s) do you teach? – Results*

The last three questions of the RP will not be scrutinised because the analysis of the results would be quite long. Therefore, I will only use this data if I consider it essential to explain some of the answers. One of the questions consisted in the teachers selecting the classes in which they were teaching this year, (e.g., sixth year, English ML1 / fourth year, Dutch LM2). Another focused on the respondents who work in higher education and the last one targeted social advancement teachers.

### 3.3.3. The results

#### 3.3.3.1. Overview of the results

In total, fifty-six respondents out of fifty-nine answered my personal questionnaire which focused on VGs. I will first analyse the data collected with this part of the questionnaire and try to interpret them before drawing conclusions in the last part dedicated to the questionnaire addressed to teachers. In this final part, I will also try to link the obtained results with the theory studied in Chapter 1.

As mentioned before, the purpose of the four questions of the first part was to know the teacher's general opinion on VGs and their use at home or at school. This part was also used to steer the respondents to one part or another of the questionnaire. I first wanted to know if the teachers actually think that VGs played at home can have positive effects on FLL. I was quite surprised when I discovered that the majority of teachers agree with this hypothesis. Actually, 53,6% (30 respondents) agree and 19,6% (11 respondents) totally agree with the fact that VGs have a positive influence on FLL. 11 respondents do not agree and 4 others totally disagree, though. However, even if most of the respondents feel that VGs have an impact on FL, 85,7% (50% / 28 people disagree, 35,7% / 20 people totally disagree) think that they should not be included in FL classrooms. Seven teachers agree with the fact that they should be included in FL classrooms and only one teacher totally agrees with it. These two first results already demonstrate that VGs provoke mixed results. As a matter of fact, even if the respondents mostly feel that they are beneficial for FLL, the teachers consider that VGs

should stay at home and do not belong to the classroom. These results are displayed on Figures 8 and 9.

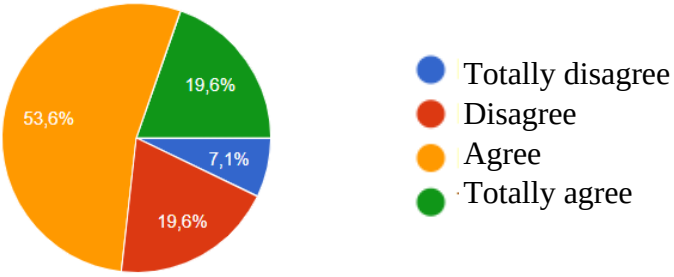



*Figure 8: Question 1 (1) - VGs played at home in FL have positive effects on FLL. - Results*

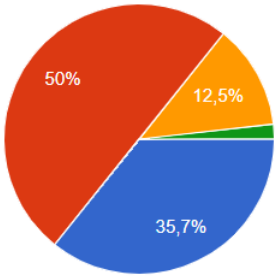



*Figure 9: Question 2 (1) - VGs can absolutely be included in FL classrooms. - Results*

I then decided to ask the teachers if they would change their mind about including VGs in classrooms if it was proved that VGs are indeed efficient for learners. The answers are quite torn again. On the one hand, 29 teachers stand their ground: 11 of them totally disagree with the proposal and 18 of them disagree. On the other hand, 22 teachers agree with the proposal and another 5 totally agree with it. These split results can be seen on Figure 10.

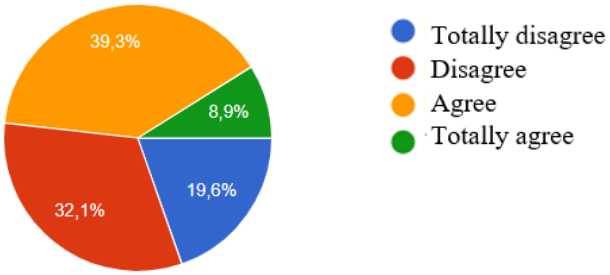



*Figure 10: Question 3 (1) - If I was proved that VGs were efficient for learners, I would consider their use in the classroom for FLL. - Results*

The last question of the first part could be regarded as an extension of the RP questionnaire. I wanted to check how many of the teachers who answered the questionnaire actually enjoy playing VGs. This question could help me to spot one of the reasons the teachers would be reluctant to consider VGs as a tool for FLL. A low affinity with this medium could indeed explain why the teachers would reject the idea of using it. As I expected, only 9 teachers out of 56 are VGs-lovers. Even if 56 answers do not represent the majority of the teachers working for the WBF, it can be assumed that Figure 11 is quite representative of the rate of teachers-gamers in the WBF. With such a low rate of teachers-gamers, it can be difficult to imagine that a lot of teachers would integrate VGs into their classrooms. They could not feel comfortable with a medium that they do not use/know. However, these results do not mean that VGs could not have a future in classrooms.

According to a recent American study[26], people from 18 to 34 years old are those who play the most. Therefore, it cannot be excluded that the majority of teachers-gamers are quite young. Unfortunately, the questionnaire gives no information about the respondents' ages but the first question of the RP revealed that only 35,7% of the respondents have been teaching for less than 10 years. According to this data, it can be imagined that most of the respondents are more than 30 years old and that they consequently do not represent the average gamer. That could explain why so few respondents do love VGs. Resting on these assumptions, it can be supposed that these results are not 'frozen'. As a result, they could change in the coming years, paving the way for the integration of VGs in WBF classrooms because the rate of teachers-gamers will perhaps be more important. The graph showing the data mentioned above can be seen below on Figure 11.

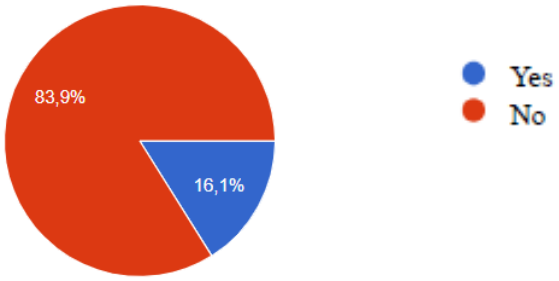


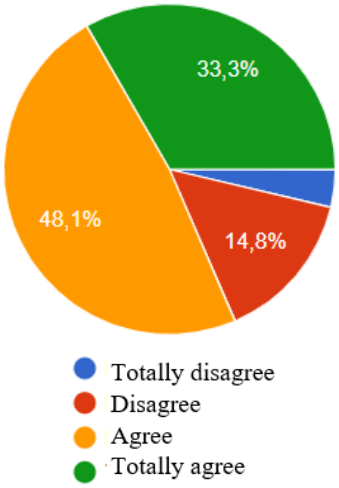

*Figure 11: Question 4 (1) – I am myself a VGs-lover. – Results*

These four questions were designed to 'create' two groups of respondents: the sceptics and the believers regarding the use/benefits of VGs. As mentioned before, the answers to this first part determined if the second, the third, the fourth and the fifth ones were available for the respondents. Only 27 respondents out of 56 answered positively to two or more questions. Consequently, the next parts will only have 27 answers to each question.

The second part was designed to determine if the teachers who see VGs as a possible tool for FLL already use games (video or not) in their classrooms. If yes, I wanted to know why they use them and which positive effects stem from the lessons in which games are incorporated. Finally, I also tried to learn if the teachers consider that games belong to limited levels of education.

The first question focused on the teachers' view on the pedagogical advantages of games. According to their answers, the respondents had the possibility to justify their choice. I will first show the numerical results and then expose the teachers' justifications. The original statement of the question was 'games present many pedagogical advantages.' On the one hand, 13 people agree with this assertion, 9 totally agree with it. On the other hand, 4 disagree and only 1 person totally disagrees with the statement. As it can be seen, a majority of

teachers actually think that games present some pedagogical advantages. 19 of them agree to justify their choice by exposing some advantages they notice when using VGs in their classrooms. Figure 12 gathers these advantages and also displays the numerical results.




| | |
|---|---|
| Development of team spirit / Cooperation | Source of competitive spirit → active involvement |
| Promotion of the pupils | Variation of the activities |
| Communication in FL less stressful for the pupils | Genuine use of FL through interaction with other pupils |
| Motivation / Enthusiasm | Concentration / Attention |
| Little groups → pupils at ease + best tendency for learning | Repetition of a specific vocabulary → best acquisition |
| Entertaining lessons/learning | Relaxation |
| Language immersion | 'Working without working' |

*Figure 12: Questions 1 & 2 (2) – Results*

The last three questions of the second part aimed to verify at which levels of education the teachers think that games should be used. The main purpose was to check if games were commonly accepted in secondary schools. In general, the teachers consider that games can definitely be included in the classrooms of secondary schools. Moreover, they do not see them as childish activities that belong to lower levels of education. The table that follows is a summary of the results from these three questions.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q2 (2): Games should not be included in secondary schools. | 48,1% | 40,7% | 11,1% | 0% |
| Q3 (2): Games should be limited to nursery schools. | 66,7% | 29,6% | 3,7% | 0% |
| Q4 (2): Games should be limited to primary schools. | 59,3% | 37% | 3,7% | 0% |

*Table 2: Questions 2 to 4 (2) – Summary of the results*

To conclude this second part of the questionnaire, it can be argued that almost all teachers definitely think that games offer several advantages for FLL. They also judge that the classrooms of the secondary schools are appropriate environments to use games as tools for FLL. Therefore, it can be imagined that, if they are included and used in a similar way, VGs could offer the same kind of advantages. I will develop this assertion later in the dissertation.

The two questions of the third part aimed to know if the teachers notice that VGs played at home have harmful effects on the pupils' learning. The first question asked the teachers if they think that pupils devote less time to their homework because they play VGs. As it can be seen on Figure 13, the respondents mostly agree with this, 15 agree and 9 totally agree. However, 2 people disagree and another 1 totally disagrees; they think that playing VGs has no impact on the pupils' work at home.

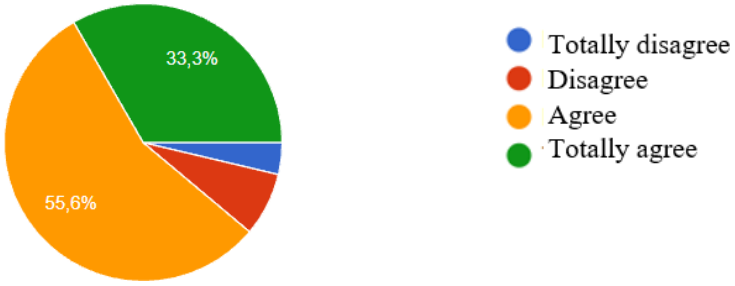



*Figure 13: Question 1 (3) – Pupils devote less time to homework when they play VGs. – Results*

Surprisingly, the answers to the second question seem to be in contradiction with the previous ones. The teachers were asked if they esteem that pupils-gamers have poorer marks than other pupils who do not play. A majority of them disagree with this statement (15 people disagree and another 1 totally disagree). Only 2 people agree and another 1 totally agrees; they notice that pupils who play have poorer marks than those who do not.

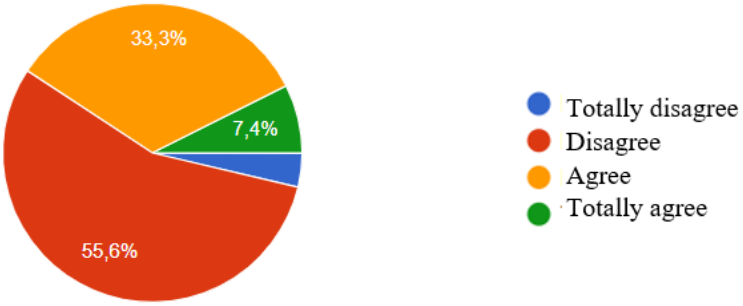



*Figure 14: Question 2 (3) – Pupils who play VGs generally have poorer marks than the others who do not play. – Results*

These two questions and the collected answers raise an interesting point: doing one's homework does not seem related to good or poor marks. Indeed, even if a majority of teachers notice that pupils-gamers spend less time on their homework, they recognise that their marks are similar to their classmates'. This observation can lead to several readings:

(1) Homework has no significant impact on marks.

(2) The pupils who do not play do not spend a lot of time on their homework either and, consequently, have the same marks.

(3) The pupils who do not play do spend a lot of time on their homework. The pupils who play devote more time to VGs but this devoted time is beneficial for FLL (supposing that good marks are related to efficient FLL).

The third reading could demonstrate that VGs played at home actually have an impact on FLL. It will be interesting to link this hypothesis to the data that will be collected and analysed later on with the questionnaire addressed to pupils.

The four questions of the fourth part of the questionnaire focused on the impact of online VGs on FLL. The main purpose of this part was to check if the teachers think (or notice) that pupils actually enhance their FL by playing and communicating with other players. I also wanted to determine if the teachers esteem that the language produced during these game sessions is rich and/or relevant in FLL in school context.

I first wanted to know if the teachers believe that the communication produced in FL during online gaming is positive for FLL. The exchanges imply that the pupils work on two aspects of the language: listening comprehension (they have to understand the other) and oral interaction (they have to speak with the other). Almost all the respondents agree and think that communicating during online gaming is beneficial for FLL (17 agree, 9 totally agree). Only 1 respondent judges that it is not positive. In this case, VGs are thought highly of. Of course, the desired positive effect only occurs when players interact with others and it will be interesting to check in the next questionnaire if a majority of pupils-gamers indeed communicate with others. In the same vein, question 2 was designed to determine if the teachers think that playing VGs, at home, in the pupil's cocoon, encourages him/her to speak more easily in FL. As a result, that disinhibition due to the comfortable context could also be a powerful factor that boosts FLL. This time again, VGs win unanimous support: all the respondents answered positively, 14 agree and 13 totally agree. These results, displayed on Figures 15 and 16, demonstrate that the teachers assume that the interactions between players produced at home have definitely a favourable impact on FL. According to this data, it can be asserted that VGs, when they enable communication, are considered efficient tools for FLL.

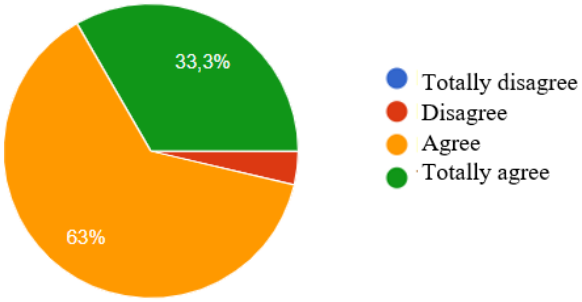



*Figure 15: Question 1 (4) – Communication produced in FL during online games is positive for language learning (listening comprehension and oral interaction). – Results*

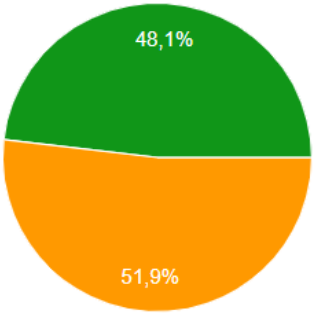



*Figure 16: Question 2 (4) - Communication with other players in their personal cocoon encourages players to speak more easily in FL. This disinhibition is a favourable factor for FLL. - Results*

The last two questions of the fourth part apply to the quality of the language produced during these sessions of online gaming. The first goal was to learn if this language produced in the heat of the moment has a genuine aspect that FL classrooms cannot offer. The second objective was to determine if this particular language (which seems like 'teen slang'), can be relevant in FL classrooms. The teachers' answers, although predominantly positive, are slightly more mixed than the answers from the two previous questions. As it can be observed on Figure 17, 16 teachers agree with the fact that the language produced at home while playing is more genuine than the one produced in the classroom and 7 others totally agree with it. 4 teachers disagree and think that school environment can offer the same language as VGs provide. Regarding the relevance of this particular language in the classroom, Figure 18 shows that 21 teachers consider it compatible with FLL in school context (14 agree, 5 totally agree). It also displays that 8 teachers do not find it pertinent, though (7 disagree, 1 totally disagrees).

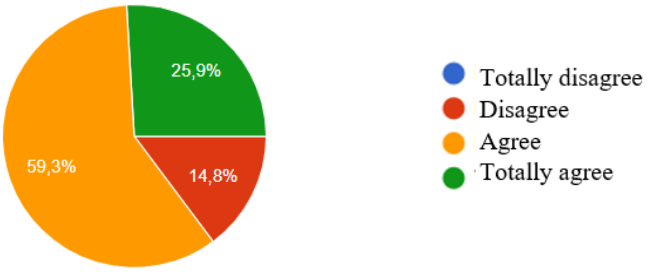



*Figure 17: Question 3 (4): The language produced during online games has genuine characteristics that school environment cannot offer. – Results*

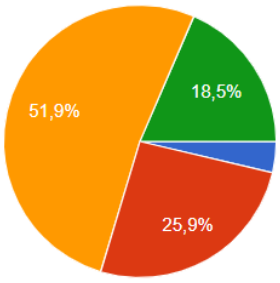



*Figure 18: Question 4 (4): The language produced during online games is a 'teen slang'. This particular language is relevant in FLL in school context. – Results*

The results draw attention to the fact that, according to some teachers, online VGs present multiple advantages regarding FLL that school cannot provide:

(1) Online VGs offer the possibility to communicate and make the pupils train their skills *at home*, especially in listening comprehension and oral interaction. As a result, they can train limitless as long as they play and interact with other players. Often, the pupils only have four hours per week of ML lessons and do not always have the possibility to speak during these.
(2) Online VGs encourage the pupils to speak since they feel comfortable while playing. They find a purpose to speak; they want to be understood by the other player. These factors increase considerably the motivation to speak in FL. In the classroom, the pupils may feel uncomfortable when they have to speak for several reasons: shyness, low self-esteem, purposeless activity…
(3) The language produced during sessions of online gaming is genuine. Contrary to exercises done in the classroom, the pupils are led to speak spontaneously while they are playing.
(4) The pupils may discover a new language not necessarily approached in FL classrooms. Even if for some teachers this 'teen slang' is not relevant in school context, online VGs can anyway teach something new to these pupils-gamers.

The fifth part of the questionnaire focused on the teachers' personal experiences. The goal of the first questions was to discover if some teachers have already thought of using VGs in their classrooms or if they have already used them. In accordance with their answer, they were asked to explain the impact produced by the game on the pupils and on the lesson. I also wanted to know which competence(s) they trained with this activity. The respondents were then free to explain how they included them within the classroom, which type of game they used, their impressions, etc. The last questions of the fifth part were designed as a survey in which the teachers were asked to reckon the number of pupils-gamers in their classrooms.

For the first two questions of the fifth part, I was not expecting many positive answers. The first question asked the respondents if they had already thought of integrating VGs in the classroom and the second aimed at discovering if they had already used them in the classroom. As intended, few teachers answered positively: only 4 declared to have thought about it and 2 have used them. The table below summarises the results.

| | Yes | No |
|---|---|---|
| Q1 (5): Have you ever thought about integrating VGs in the classroom? | 14,8% | 85,2% |
| Q2 (5): Have you already used VGs in the classroom? | 7,4% | 92,6% |

*Table 3: Questions 1 & 2 (5) – Summary of the results*

Part six will give some clue to explain why so many teachers answered negatively to these two questions. Therefore, I will not analyse these negative results immediately.

Since the two following questions were directly linked with the positive responses obtained from the previous questions, I collected only two answers. First, the teachers were asked to evaluate the motivational impact produced by the activities in which VGs were integrated. As shown by Figure 19, one teacher feels that this activity had a high impact on motivation and the other judges it moderate. Afterward, the respondents had to evaluate the pupils' acquisition of the lesson in the wake of this particular activity. Figure 20 displays that they both agree on this point, they assume that the lesson was partially acquired.

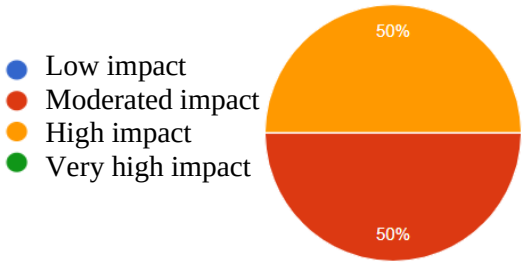



*Figure 20: Question 3 (5): If you …, what do you think of the motivational impact produced on the pupils with this activity? – Results*

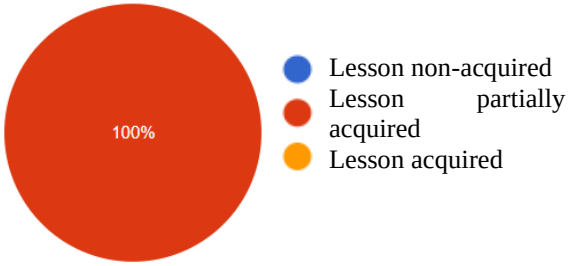



*Figure 19: Question 4 (5): If you …, what do you think of the pupils' acquisition of the lesson thanks to this activity? – Results*

These results represent a too small sample to draw global conclusions on the impact of these activities on the pupils. Still, this data shows that including VGs in the classroom is neither a disastrous idea nor the discovery of a miraculous tool for learning. The pupils are motivated, they are involved in the lesson but none of the teachers notices that they were very highly motivated. The same applies to the lessons, they seem partially acquired. The fruit of this activity is not catastrophic but is neither incredible.

These two teachers were then invited to choose which competences were trained with this activity. They had to order them with a five-level scale: 1 was the most trained competence and 5 was the least. Both respondents feel that listening comprehension was the most trained competence. One teacher adds that reading comprehension was also the most trained competence for him/her. It can thus be assumed that listening and reading comprehensions were targeted at the same level with the activity. For the other teacher,

reading comprehension was the second most trained competence. Then, one mentioned that oral expression with interaction was the third most trained competence. For the other teacher, this same competence was the least trained. Then comes oral expression without interaction; one teacher ranked it fourth, the other fifth. Both also agree that written expression was the least trained competence. These results can be examined on Figure 21.[27]

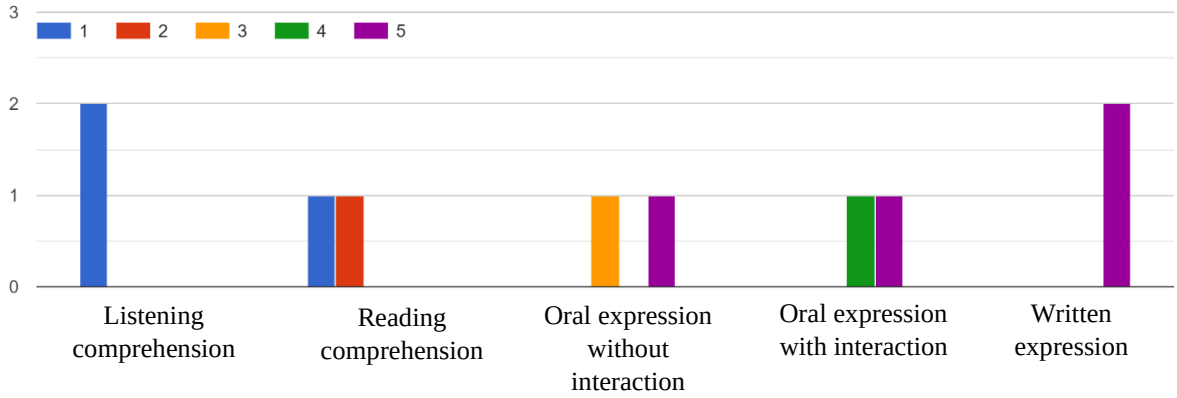



*Figure 21: Question 5 (5): If you …, which competence did you exercise? (Rank it in order of use. 1=the competence the most exercised) – Results*

Finally, these two teachers were asked to say more about this particular experience. I tried to discover how they implemented the activity and what their feeling regarding it was. They were free to add any details they found relevant since the question was open-ended. The responses were the following:

- In primary school, I use Learningapps[28] or escape games designed on Genially[29].
- I use interactive snakes and ladders[30] on Dutch culture and language. I also use vocabulary games in Dutch.

These games can be classified within the category 'serious games' because they are primarily designed for learning and then for entertainment.

The last three questions of Part five were designed to have an estimation of the number of pupils-gamers in the classrooms of the WBF. For these questions, we meet the 27 previous respondents again. Each of the three questions presented three entries: 4th grade pupils, 5th grade pupils and 6th grade pupils. Respondents then had to reckon the percentage of pupils-gamer per classes. Each question targeted FL learning level: question 6 aimed ML1 classes, question 7 was for ML2 and question 8 for ML3.

I will start displaying the data collected for ML1 classes. Within 4th grade classes, two teachers mention that only 10-20% of the pupils play VGs. Two others declare that 30-40% of the pupils play. In three other classes, the number raise to 40-50%. Four other teachers claim

that 50-60% of the pupils use VGs. Then two other classes are composed of 60-70% of pupils-gamers. Only one class comprises 70-80% of gamers. Finally, two classes are almost totally full of players (80-90% of them actually play). In classes of 5th grade pupils, the numbers are quite the same than in classes of 4th grade pupils: two classes with 10-20% of pupils-gamers, two others with 30-40% and three with 40-50%. The main difference is within the category 50-60%. Seven classes actually have such a rate of pupils-gamers. Then three others are composed of 70-80% of players and other three of 80-90%. 5th grade students represent, according to the teachers, the highest number of players in classes of ML1 overall grades. Finally, here are the statistics for classes of 6th grade pupils. Once again, the graph shows that there are two classes in which 10-20% of the pupils play. Then, there is one class with 20-30% and another with 30-40%. Five classes are composed of 40-50% of players and other five classes of 50-60%. One class has 60-70% of gamers, two others 70-80% and finally, three classes have a rate of 80-90% of students who play VGs. Figure 22 summarises these results.

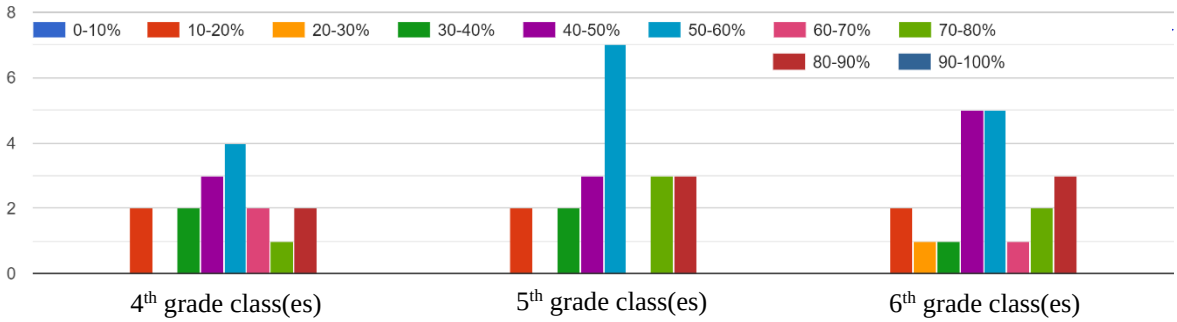



*Figure 22: Question 6 (5): According to you, in your classes of ML1, how many percent of pupils play VGs? – Results*

Now, I will display the same data but for another group: ML2 classes. Within classes of 4th pupils, two teachers mentioned that 10-20% of their pupils play. Another one estimated that 30-40% play. Three classes are composed of 40-50% of gamers and other three of 50-60%. In one class, 70-80% of the pupils are gamers. Two other teachers declared that 80-90% play, and one teacher estimates that all students are players.

Regarding 5th grade pupils, the analysis is similar to the aforementioned one: they play more than the others. Once again, two teachers estimated that 10-20% play, two others wrote 30-40% and two more 40-50%. Three classes are composed of 50-60% of gamers. One class has a rate of 70-80% of players and finally, four teachers declared that 80-90% of their pupils use VGs. The survey finally shows quite regular and balanced data for 6th grade pupils; two classes with 10-20%, two with 20-30%, two with 50-60% and two others with 70-80%. One

class has an average of 30-40%, four classes are composed of 40-50% of players and finally three others have 80-90% of students-gamers. An overview of these results can be found on Figure 23.

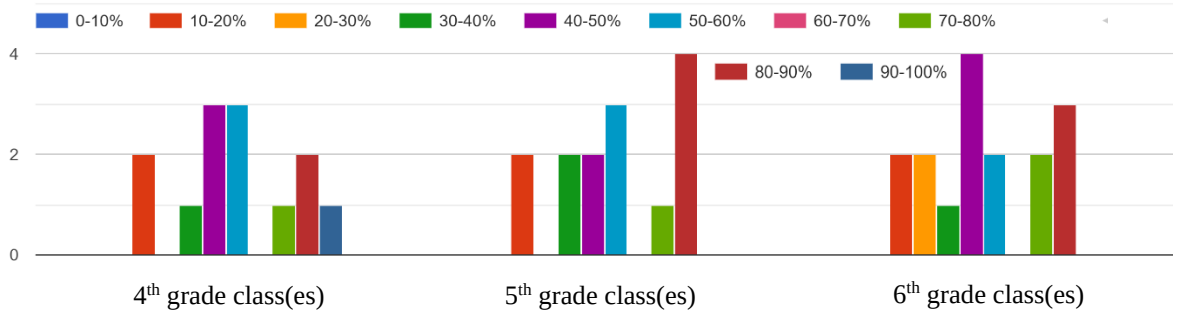



*Figure 23: Question 7 (5): According to you, in your classes of ML2, how many percent of pupils play VGs? – Results*

The last group (ML3) has similar data than the one previously analysed. The amount of 4th grade pupils-gamers is quite balanced: two classes of 30-40% and two others with 40-50%. Then, one teacher mentioned that his/her class has a rate of 50-60% of players, another declared 80-90% and a last one estimated that the totality of his/her pupils use VGs.

Once more, it is possible to find the most sizable number of gamers within 5th grade classes. One teacher estimated that 20-30% of the pupils play and another 30-40%. Two teachers wrote that 40-50% are gamers. Another class is composed of 50-60% and finally, three classes are peopled by 80-90% of players.

Here are the last data for the 6th grade students. It is also quite balanced: one class of 10-20%, another with 30-40%, two others 40-50%, one with a rate of 50-60%, another with 70-80% and finally, two classes with 80-90%. Figure 24 displays this data.

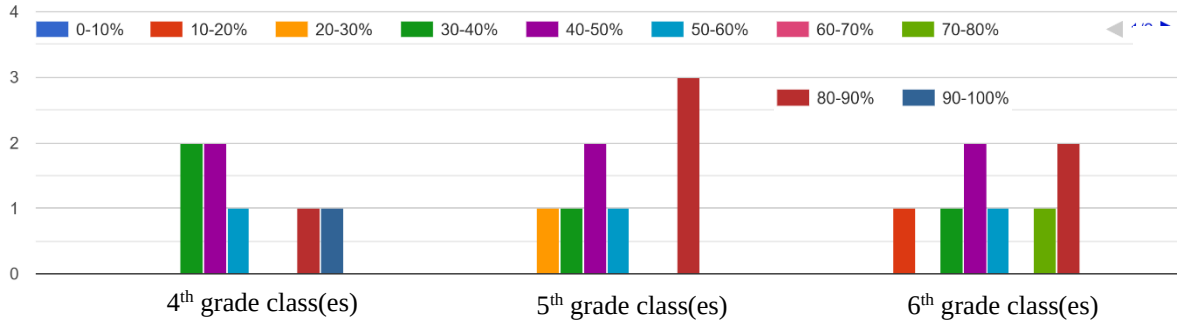



*Figure 24: Question 8 (5): According to you, in your classes of ML3, how many percent of pupils play VGs? – Results*

All these results demonstrate that pupils who play VGs are abundant in WBF classrooms. This shows that VGs are definitely a popular hobby among them. Subsequently, if benefits of VGs on FL really do exist, many pupils could then take advantages of their hobby and develop their FL playing VGs.

The final part of the questionnaire was available for all the respondents. In this sixth section, I wanted to discover the teachers' reluctance regarding VGs and their use at home or in the classroom. Eighteen questions were designed for this part; sixteen of them are four-level scale questions and two others are open-ended. They were divided into several 'categories' of reluctance:

- Issues related to schools' facilities;
- The place of VGs in official documents and within teachers' initial formation;
- The risks of VGs within the classroom;
- Personal ease towards VGs;
- Personal vision of teaching and school;
- Effects on pupils;
- Quality of the language used in VGs;
- Other reasons in the form of open-ended questions.

I will start by displaying the results of the first category. The teachers were asked if their reluctance comes from a lack of computer equipment. As it can be seen on the table below, a majority of respondents claim that there is not enough computer hardware in their school. Nevertheless, more than 50% declare that their school has an internet connection.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q1 (6): The current infrastructure of my school does not enable the use of VGs in classrooms because it does not have enough computer hardware. | 12,5% | 21,4% | 21,4% | 44,6% |
| Q2 (6): The current infrastructure does not […] because it does not have an internet connection to enable the pupils to play online. | 21,8% | 38,2% | 20% | 20% |

*Table 4: Questions 1 & 2 (6) – Summary of the results*

These results show that often, schools do not offer the possibility to make use of VGs because of a lack of facilities regarding computer hardware. This shortage could be a reason for the absence of VGs within schools. Indeed, the teachers will not try to test something new if their establishment does not offer the possibility to do it. Nevertheless, a majority of schools do have an access to internet, so this is not an impediment for the integration of VGs in schools.

The two next questions were designed to determine if the teachers were unwilling to use VGs in classrooms because they are neither mentioned in official document(s) nor studied during their initial training. As it can be seen on Table 5, the teachers' opinion on official

document(s) is quite balanced. On the one hand, 26 teachers do not use VGs because they are not mentioned in official documents. On the other hand, 30 respondents judge that the absence of VGs in the reference papers do not influence the teachers' choice. Regarding the question on the teachers' initial training, the answers are less mixed; 42 teachers out of 56 esteem that the absence of VGs in their formal education explains why they do not use them in their classrooms. Still, 14 teachers claim that it is not a factor that prevents them from using VGs in their lessons. Below is a table summarising this data.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q3 (6): I do not use VGs in the classroom because its pedagogical exploitation is not broached in official document(s) (reference documents and programmes) | 12,5% | 41,1% | 28,6% | 17,9% |
| Q4 (6): I do not use VGs in the classroom because its pedagogical exploitation has not been broached during my formal education at high school or university. | 5,4% | 19,6% | 37,5% | 37,5% |

*Table 5: Summary of questions 3 & 4 (6) – Results*

These results indicate that the influence of official documents upon the respondents' teaching method is quite mixed. Some will avoid using VGs because of these documents while others are not influenced by them. There are two ways to read the answers of this last group of teachers:

(1) They do not use VGs because of a personal choice.

(2) They could use them regardless of their absence/presence in official documents.

The fourth question focusing on the teachers' formal education is less qualified. This means that initial training has an important influence upon a majority of teachers; it is unlikely that they will modify their teaching method with new material that was not approached during their formal education.

Question 5 dealt with the potential negative effects that VGs could have on the pupils. The teachers were asked if they think that the game itself and the desire to win could overtake the initial purpose of the activity; namely FLL. 34 teachers feel that it is indeed a risk whereas 20 others do not consider that the use of VGs will divert the main purpose of the activity. Figure 25 displays these results.

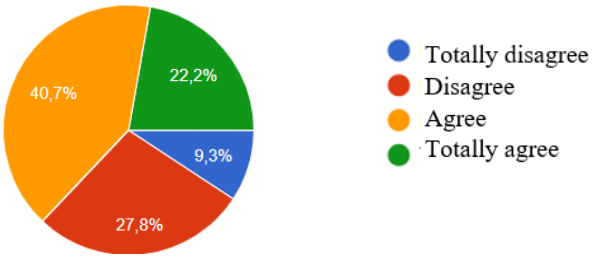



*Figure 25: Question 5 (6) – I do not use VGs because what they're playing for would overtake the objective of FLL. – Results*

It can be argued that this argument is also valid for all types of games used in classrooms.

The category 'personal ease towards VGs' gathers two questions (6 and 7). The first one asked the respondents how they feel regarding these new video tools. The second focused more on the teachers' ease concerning the pedagogical exploitation of video in the classroom. A majority of teachers (35) admit to having some difficulties to cope with these new video tools whereas 26 respondents feel at ease with these tools. The assessment is slightly different regarding the use of audio-visual material within the classroom. In this question, 30 respondents signal that they feel rather confident with video material in the classroom while 24 others do not feel at ease with it. The table on Table 6 summarises this data.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q6 (6): I am not at ease with these new tools. | 17,9% | 19,6% | 30,4% | 32,1% |
| Q7 (6): I am not at ease with the pedagogical exploitation of the video in the classroom. | 18,2% | 36,4% | 18,2% | 27,3% |

*Table 6: Questions 6 & 7 (6) – Summary of the results*

These results are quite balanced, so it is difficult to draw definitive conclusions from them. On the whole, they reveal that all teachers are not equals regarding new tools and audio-visual material and that a majority of them has difficulties to comprehend them. This may be explained in this questionnaire by the fact that it was mostly answered by experienced teachers who have been teaching for more than ten years. Therefore, it can be imagined that their formal education did not systematically include these tools. Moreover, they could not feel at ease with them because they are not part of their daily lives. These difficulties to manage these devices could then, as it was already mentioned before, change over time. With the continual technological advances in society, future generations of teachers will perhaps be (or have to be) more at ease with new tools for learning such as VGs. Audio-visual materials seem to pose less problems than new teaching tools, though.

Four questions on the teachers' personal vision of school and learning were then designed. I first asked them if time was a brake for the integration of VGs within their classrooms. A large majority of teachers agree with this statement; 24 agree and 16 totally agree. Still, 15 respondents do not regard time as an obstacle for the use of VGs. Figure 26 takes another look at these results.

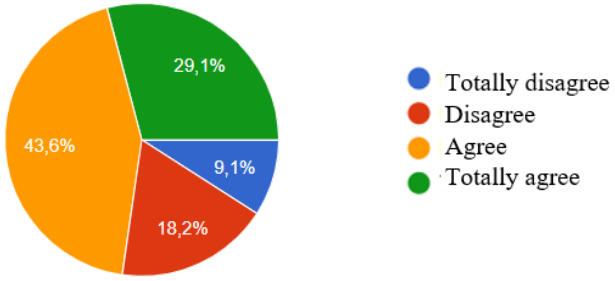



*Figure 26: Questions 8 (6) – I do not have enough time to implement plans that enable the exploitation of VGs in the classroom. – Results*

As it can be seen, time is definitely a factor that prevents the teachers from implementing new plans in their teaching method. Indeed, there are many deadlines throughout the year, periods are short and demand a strict and meticulous planning in order to teach all the required and recommended learnings.

The following question targeted the respondents' will to modify their teaching method. The entire statement was: 'my classes have always born fruit without VGs, therefore, there are no reason to modify my teaching method.' A minority of teachers agree with the assertion; 15 agree and 7 totally agree. 34 teachers esteem on the other hand that even if their teaching methods bear fruits, there is no reason to 'freeze' it. Figure 27 displays this data.

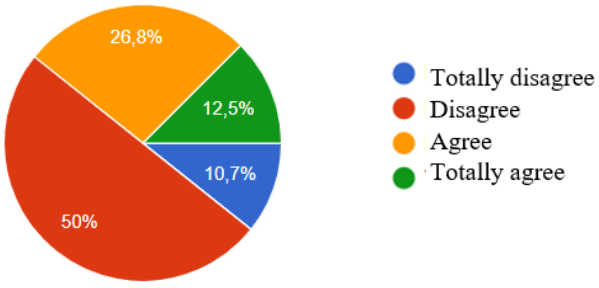



*Figure 27: Questions 9 (6) – My classes have always born fruit without VGs, therefore, there are no reason to modify my teaching method. – Results*

These results show that a majority of teachers are not reluctant to modify their teaching method if new efficient teaching tools appear. This data is rather positive because it demonstrates that many teachers have a desire to constantly reshape their lessons and do not wish to stay focused on only one way of teaching.

I will now analyse the two questions dealing with the missions of school according to the teachers. In the first one, the respondents were asked if they think that school should not get used to societal changes like the development of online VGs. A large majority disagree with the statement (39 respondents) while only 16 teachers do agree. The second question was exactly the same except that I decided to add that school should stand firm against these societal changes. Once again, most teachers disagree with that (43 respondents). Still 12 teachers judge that school should not get used to these changes and should also stand firm against them. The table present on Table 7 summarises these results.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q9 (6): The mission of school is not to get used to societal changes like the development of online VGs. | 20% | 50,9% | 20% | 9,1% |
| Q10 (6): The mission of school is not to get used to societal changes like the development of online VGs, but rather stand firm against them. | 32,7% | 45,5% | 14,5% | 7,3% |

*Table 7: Questions 9 & 10 (6) – Summary of the results*

This Figure displays that few teachers regard school as an enclosed institution that should not accept external influences. Many teachers seem favourable to make these societal changes incorporate the school establishments. They also do not consider the institution as a rock that should stand firm against those innovations. These results show that the teachers are determined to make school suitable for all pupils. They do not want to create a gap too important between them and their outside world and are ready to apprehend it.

For the analysis of the category ‘effects on pupils’, I need to disrupt the order of the questionnaire. Therefore, this paragraph will focus on Questions 12, 15 and 16 of the sixth part of the survey. These questions dealt with potential negative effects that VGs can have on the pupils. Question 12 asked teachers if they feel that the pupils who play tend to spend more time on their VGs rather than on their homework. 32 teachers agree (24 agree, 8 totally agree) and judge that VGs are indeed counterproductive. 21 teachers disagree and do not see a correlation between time spent on VGs and time spent on homework. I then wanted to check if the common saying ‘VGs make youth violent’ was widespread among teachers. The answers collected indicate that 18 teachers regard VGs as a conveyor of violence among people. 34 others esteem that there is no link between VGs and violence. The last question of

this category was meant to determine if the respondents consider that VGs make their users stupid. 25 teachers agree with the latter and 29 do not. Table 8 summarises all these results.

| | **Strongly disagree** | **Disagree** | **Agree** | **Strongly agree** |
|---|---|---|---|---|
| Q12 (6): VGs are counterproductive, the pupils who play spend more time on his/her games than on his/her lessons. | 3,8% | 35,8% | 45,3% | 15,1% |
| Q15 (6): VGs make people violent. | 15,4% | 50% | 34,6% | 0% |
| Q16 (6): VGs 'kill off people's brain cells.' | 9,3% | 44,4% | 42,6% | 3,7% |

*Table 8: Questions 12, 15 & 16 (6) – Summary of the results*

The teachers' opinion on the effects of VGs is fairly mixed. Overall, there are as many positive answers as negative ones. The results of Question 11 tip the scales in favour of a negative perception of the effects of VGs upon pupils regarding school performance. On the one hand, more than half of the teachers considers VGs harmful for the pupils' involvement in the work for school. On the other hand, the rest of them does not see any lack of investment from the pupils due to VGs. Question 15 shows that a potential link between the use of VGs and the increase of violence is now less widespread, even if it is still present among a handful of teachers. The results of Question 16 create the most important division among the respondents. Only a bit more than a half esteems that VGs do not make their users stupid. This data gives rise to relevant observations within the scope of this dissertation. Actually, according to some teachers, not only VGs do not offer the possibility to improve FL but also, they make their users stupid and consequently slow the pupils' learning. For some respondents, VGs seem to be in total contradiction with intellectual improvement. As a result, in these teachers' eyes, VGs could not be used as a tool for learning, either in classrooms or at home.

I will now analyse the results of the category 'quality of the language used in VGs.' The purpose of Questions 13 and 14 was to determine the teachers' perception of the language read, heard and used by the pupils when they play online. The first question of this category focused on the breadth of this specific language. The results show that 36 teachers judge it poor whereas 18 others do not. The second question of the category dealt with the grammatical correctness of the language used during online games. Again, a majority of teachers (40) consider that often, the language is not grammatically correct while 13 others judge it correct.

| | Strongly disagree | Disagree | Agree | Strongly agree |
|---|---|---|---|---|
| Q13 (6): The language used during online games is lexically poor. | 1.9% | 31,5% | 55,6% | 11,1% |
| Q14 (6): The language used during online games is often grammatically incorrect. | 0% | 24,5% | 62,3% | 13,2% |

*Table 9: Questions 13 & 14 (6) – Summary of the results*

This table displays that the language used between players is perceived rather negatively by the teachers. Most of the respondents claim that it is a poor and ungrammatical language. What could be interesting with this data is to check if this poor quality is proper to language produced during gaming or if it also applies to every type of informal conversation.

The last two questions of this sixth part are open-ended. They are also the last questions of the entire questionnaire. In the first one, respondents were asked if they had other reluctance regarding the use of VGs in school context. 21 teachers answered this part and a summary of their answers can be found on Table 10.

| | | |
|---|---|---|
| School should stay a place for learning without the game. | I do not play and I do not know this field consequently I do not have any idea how to insert VGs within classrooms. | There are many genres of VGs. Some are interesting for learning, others are not. |
| Pupils already play intensely and without moderation at home. This hobby is often the only one they have. | Many pupils are addicted to VGs. | I am against 'screens' at school and at home until a certain age. I prefer activities that require optimal focus from the pupils. |
| I teach Dutch and VGs are more usable in English. | Pupils are too much exposed to screens nowadays. | Boys could be interested in the use of VGs at school but not girls. |
| Games belong to the private sphere. | The poor-quality language. | VGs and screens cause a loss of social contacts. |

*Table 10: Questions 17 (6) – Other possible reason(s) explaining reluctance regarding the use of VGs in school context. (Open-ended question). – Summary of the results*

These comments add other reasons for the teachers to avoid using VGs in the classroom. Some respondents also point out that even when it is played at home, the harmful effects linked with the practice of VGs (addiction, loss of social contacts, exposure to screens too important) overtake the potential benefits of this hobby.

The second and last question was designed to offer the respondents the possibility to give their personal opinion about the thematic of the dissertation. 13 teachers answered this

part and some of their responses can be observed in the table on Figure 34. Some answers are quite long and not always relevant for this dissertation. Others repeat what was said on Table 10. Therefore, I will only summarise some of them in the following table. The other answers can be found in Appendix 3.

| | |
|---|---|
| Teachers have to open the pupils' mind to things that they do not know. The real problem is the understanding of the instructions and, consequently, the mastery of language and metalanguage. Thus, I think that adding image and focus not on the language but rather on the game is not relevant. | There are a lot of other activities than VGs and our time is limited. VGs do not make part of my priorities. Moreover, they provoke resistance among teachers and parents. |
| I think that keeping contact with true speakers and with a varied and correct language is essential in school context. I am not fond of the virtual world and I have to convey things to my students through other means than VGs. This could stay in the private sphere, when they are alone at home. | VGs probably have advantages but they also have limits. Their use must not be excessive. Regarding their use within classrooms, it would take a lot of time to implement them and teachers need to get accustomed to them. I am not sure they will bring many benefits to the classrooms. The communication stemming from the game is very poor (repetitive, simple), too. It is still a good training, though. |

*Table 11: Questions 18 (6) – Other possible comment(s) on the thematic of online VGs and their potential benefits for FLL (in school context). (Open-ended question). – Summary of the results*

Overall, all the comments left by the teachers were quite negative. For them, VGs should definitely stay at home, nay be totally banned. Still some teachers judge that benefits for FLL could ensue from VGs, but they are limited.

The analysis and interpretation of the answers of the questionnaire addressed to teachers is now finished. In part 2.3.3.2., I will conclude and roughly summarise the answers. I will also try to link some of the obtained responses with the theoretical framework of this dissertation.

3.3.3.2.Conclusion of the questionnaire addressed to teachers

The survey demonstrates that the teachers' opinion on VGs is quite mixed. Some of them do think that VGs can impact positively FL. Several responses can be linked with the theory studied in Chapter 1 to support the teachers' feelings about the benefits of VGs on FL.

(1) Some teachers highlighted that the communication produced during online gaming is beneficial even if the language produced is of poor-quality. That assertion can be linked to Krashen's input hypothesis. Actually, the pupil-gamer will be exposed to a series of input during the exchange. This input, according to Krashen, will be efficient under specific condition. The teachers' view can also be associated with the various output hypothesis. Actually, these theories also proved that producing language is also beneficial for FLL under specific conditions.

(2) Some teachers mentioned the fact that producing language at home, in one's personal cocoon, enhances FLL. This statement is directly linked with Krashen's affective filter hypothesis.

(3) Two teachers mentioned that they have already used serious games within their classrooms. Their answers demonstrate that, if integrated correctly and logically in a sequence of lessons, serious games can be useful for learning.

However, other teachers also feel that the effects of VGs on FL are quite limited and can sometimes be harmful. Some of the arguments proposed by the respondents can be discussed:

(1) According to some teachers, pupils spend a lot of time in front of screens. Even if they consider this exposure negative, it can be argued that, according to Pujadas Jorba's experiment, the more pupils stay in front of virtual inputs, the more they will acquire language. It is important to remember that it has been proved that too much screen time has negative effects, though.

After the scouring of the results of the survey, I have to admit that I am pleasantly surprised. I expected more virulence and reluctance towards the topic of VGs. Of course, often a majority of teachers have a negative perception of this medium. Indeed, less than half of the 57 initial respondents got access to the other parts of the questionnaire and answers were frequently negative regarding the efficiency of VGs and their integration into classrooms. Still, these sceptical teachers sometimes admitted that VGs are good tools for communication outside the classrooms and that their pupils-gamers often have a better delivery than others.

In conclusion, a majority of teachers think that VGs are interesting for FLL, even if their interest is quite limited. They almost all agree with the fact that VGs should definitely stay a private hobby. However, if these virtual games were studied during the formal education of teachers, perhaps they would consider their use within their classrooms. It can also be added that (unfounded?) prejudices on VGs are still present among teachers. A comment left by one of the respondents is quite revealing and supports this assertion: "VGs

are the very example of the 'counterculture', many adults denigrate players while they themselves binge-watch series (and also play a lot via their phones)." This medium stays unknown for a lot of them and the current opinion is likely to change in the coming years.

The next part will analyse and interpret the data obtained from the questionnaire addressed to pupils. It will be interesting to compare the pupils' and the teachers' answers regarding this topic.

### 3.4.The questionnaire addressed to pupils

#### 3.4.1. Choosing the questions

For this questionnaire, I will use the same *modus operandi* as for the one addressed to teachers. As a result, I will explain why I chose to ask each question and what their goal was. I will again clearly introduce the questions. This questionnaire was also in French, I will naturally translate the questions for the sake of uniformity. Also, the reader will find a copy of the original version of the questionnaire in Appendix 4.

The questionnaire contained twenty-six questions and was divided into four sections:

Part one: The respondent's profile

The first ten questions focused on the RP and were available for everyone. I first wanted to know the gender of the respondent. Regarding school information, they were asked to precise their grade and the language(s) they study at school. Then, seven questions dealt with their gaming habits.

1. Are you a boy or a girl?
    - Boy / Girl
2. Which grade are you in?
    - $1^{st}$ / $2^{nd}$ / $3^{rd}$ / $4^{th}$ / $5^{th}$ / $6^{th}$ / $7^{th}$
    - General / Technical education / Vocational education
3. Which language(s) do you study?
    - German ML1-2-3 / English ML1-2-3 / Spanish ML1-2-3 / Italian ML1-2-3 / Dutch ML1-2-3 / Other(s) ML1-2-3
4. What genre(s) of games do you play? (Rank it in frequency of use. 1=the genre the most played, you are not obliged to tick every box)
    - Fighting (*Mortal Kombat, Dragon Ball Fighterz…*)
      Platform (*Rayman, Super Mario…*)
      First-Person Shooter (FPS) (*Call of Duty, Battlefied…*)
      Third-Person Shooter (*Uncharted, The Last of Us…*)
      GTA-Like (*Grand Theft Auto, Mafia…*)
      Stealth (*Hitman, Metal Gear…*)

Survival Horror (*Resident Evil, Silent Hill…*)
Action Role playing game (*Assassin's Creed, Dark Soul's…*)
Massive Multiplayer Online Role-Playing Game (MMORPG) (*Final Fantasy XIV, World of Warcraft…*)
Simulation VGs (*Sims, Microsoft Flight Simulator…*)
Sport (*FIFA, PES, NBA 2K…*)
MMO Party Game (*Fall Guys, Among Us…*)
Battle Royale (*Fortnite, Apex Legends, Warzone…*)
Other genres of games

5. If you play other genre(s) than those mentioned above, can you precise which one(s)? (Open-ended question)
6. How often do you play single-player VGs (offline and non-multiplayer)?
    - Never / Once or twice a week / Three or four times a week / Five or six times a week / Every day
7. If you play, how many hours per week do you think you play on average (single player games)? (Open-ended question)
8. Do you sometimes play in FL?
    - Yes / No
9. If yes, which FL? (Open-ended question)
10. Do you play online?
    - Yes / No

The objective of these questions on the RP part was multiple. I first wanted to know the gender because I wanted to determine if the common saying 'boys are fonder of VGs than girls' was true. I then wanted to check what the age bracket of the respondents was and which language was predominantly studied among them. Then, knowing the genre of games play would have been interesting to determine if they rather play cooperative or competitive (or a mix of both) games. Also, it helps to discover if these games enable interactions with other players. Then, the question focusing on time was designed to observe if the pupils really spend a lot of time on their games. The two questions on FL were central for the purpose of this dissertation. It is indeed important to be sure whether the pupils play only in French or sometimes play in FL. Finally, the question regarding online gaming was meant to steer respondents towards Part two or directly towards Part three.

Part two: Online gaming

The seven questions of the second part targeted online gaming. They were available only for the pupils who responded 'yes' to Question 10 in the first part of the questionnaire. Questions

mainly focus on the pupils' habits of communication during online gaming and their impressions on these exchanges. Finally, I asked them to evaluate the benefits for school stemming from this online chat.

1. Do you communicate with other players when you play online?
    - Yes / No
2. Which language(s) do you use when you play online? (Open-ended question)
3. If you communicate in another language than French when you play, do you think that your other language improves thanks to your game sessions?
    - Yes / No
4. Why? (Open-ended question)
5. Do you feel that you learn more by playing rather than by attending language classes?
    - Yes / No
6. Do you feel that you learn other things that you cannot learn in language classes? (ex. specialised vocabulary, teen slang…)
    - Yes / No
7. Do you feel that you improve in these competences thanks to VGs? (Rank it by order of improvement. 1=the most improved competence thanks to VGs)
    - Listening comprehension / Reading comprehension / Written expression / Speaking with someone in FL, like in a dialogue or a role play / Speaking alone in FL, like in a presentation

These questions were primarily designed to check if the pupils tend to interact with other players when they play online. Then, I wanted to check if they were sometimes brought to speak in another language than French. If it was the case, it was interesting to verify if they feel that their FL improved or that they learn something new thanks to their exchanges.

Part three: Online communities

This part was again available for every respondent. The questions were meant to determine if the pupils tend to participate in gaming communities and, if it is the case, which kind of communities. Again, a question focused on their feeling of FL improvement subsequent to their contribution to communities. This part also contains seven questions.

1. Do you spend time on VGs communities? (Forum, Discord groups, Twitch, Wikis, blogs…)
    - Yes / No
2. Which kind(s) of communities? Several answers possible.

    - Forum / Discord groups / Wikis dedicated to some VGs / Blogs / Twitch channels / Reddit groups / YouTube / Others (precise): …
3. Do you spend time on VGs communities that communicate in another language than French?
    - Yes / No
4. If yes, which one(s)? (Open-ended question)
5. Do you participate in them?
    - Yes / No
6. If yes, which language do you use? (Open-ended question)
7. Do you feel that you improve in these competences thanks to your participation in communities? (Rank it by order of improvement. 1=the most improved competence thanks to your participation in communities)
    - Listening comprehension / Reading comprehension / Written expression / Speaking with someone in FL, like in a dialogue or a role play / Speaking alone in FL, like in a presentation

This third part was designed to know if gaming communities – and which kind(s) of them – were popular among the pupils-gamers. Then, the objective was the same than for the second part of the survey: determine if the pupils interact with others in FL and if they esteem that their participation enhances FLL.

Part four: Respondents' views on VGs and their potential influence on FLL

The last part consisted of six questions. The respondents were asked to give their opinion on VGs (their impact on FLL and on the pupils' marks, their integration within classrooms…). In this part was also left a space for the respondents to add any comments or advice on the topic of the dissertation.

1. Did you notice that your marks in FL classes improved thanks to VGs?
    - Yes / No
2. In which competence(s)? (Rank it by order of improvement. 1=the most improved competence)
    - Listening comprehension / Reading comprehension / Written expression / Speaking with someone in FL, like in a dialogue or a role play / Speaking alone in FL, like in a presentation
3. Do you think that VGs should be integrated into FL classes?
    - Yes / No

4. Why? (Open-ended question)
5. How could they be integrated? (Open-ended question)
6. Do you have any other comments related to the topic? (Open-ended question)

This last part dealt with the relationship between VGs and schools. First the pupils were brought to assess if the knowledge acquired with VGs was efficient in the classroom. I then wanted to know their opinion on a potential integration of VGs within schools. Finally, I asked them if they perhaps had an idea regarding the way they could be used/integrated at school.

### 3.4.2. The respondents

The choice of the target audience was obvious from the start and has been repeated various times above. This questionnaire targeted the pupils who study within the WBF. Between 20th March and 23rd August 2021, 165 pupils completed the questionnaire. Since some teachers asked their whole class to answer it without distinguishing players from non-players, I went through each question one by one and deleted all the answers from non-players in order to avoid any biased responses. The analysis of the results of the first part of the questionnaire will refine the various profiles of the pupils. As the reader will discover, the panel of pupils who participated in the survey was quite broad.

### 3.4.3. The results

#### 3.4.3.1. Overview of the results

As I did with the analysis of the previous questionnaire, I will first analyse the data collected with the questionnaire addressed to the pupils and try to interpret them. I will also compare the teachers' and the pupils' answers before drawing conclusions in the last part dedicated to this questionnaire. In this final part, I will also try to link the obtained results with the theory studied in Chapter 1.

The first part of the questionnaire was meant to have more information about the respondents. Question 1 focused on the respondents' gender and was meant to discover if the common cliché arguing that VGs are a hobby shared mainly by boys was true or not. The results show that boys are indeed keener on VGs, but the difference is not as important as it would be expected. 100 respondents are male, 64 are female and one respondent abstains. The scheme on Figure 28 displays this data.

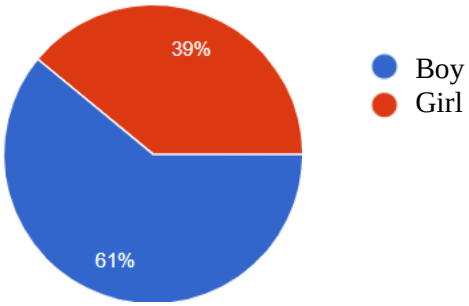



*Figure 28: Question 1 (1) – Are you a boy or a girl? – Results*

The discrepancy is not as important as some teachers suggested. As a matter of fact, some teachers mentioned that VGs within the classroom would perhaps be interesting for boys but not for girls. These results show that VGs concern both sexes and that they are not a hobby exclusively reserved for males.

The second question of the RP asked the respondents to precise their grade as well as the type of education they study in. A minority of pupils belongs to the lower secondary level: 5 pupils are 1st grade in general education, 3 are 2nd grade in general education, other 3 are 3rd grade in general education and 2 are 3rd grade in technical education. The majority of respondents come from the upper secondary level. 41 pupils are 4th grade in general education, 4 other 4th grades are in technical education. 22 are 5th grade in general education and 18 5th grades are in technical education. 70 pupils are 6th grade: 41 of them in general education, 28 others in technical education and another one in vocational education. Finally, only one pupil is 7th grade in technical education. Figure 29 shows the graph with all these results.

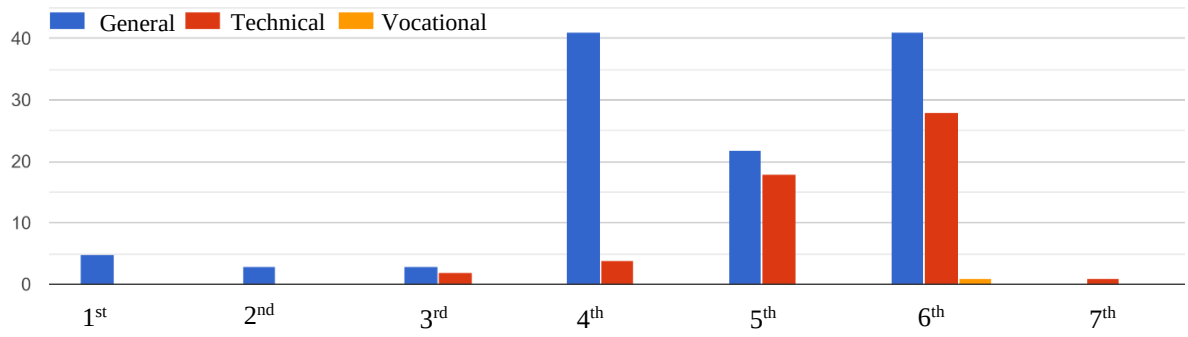



*Figure 29: Question 2 (1)– Which grade are you in? – Results*

The enormous gap between the number of respondents from the lower and the higher levels of secondary school can simply be clarified by the fact that the questionnaire primarily circulated among teachers who supervised my university colleagues and I during our internships. These results are quite in contradiction with the same type of data collected with the teachers. The

latter thought that the majority of pupils-gamers were 5th grade (*c.f.* Figures 22, 23 & 24) but it can be seen that the reverse occurred in the survey addressed to pupils. Two hypotheses can explain this difference:

(1) The survey mainly circulated in 4th and 6th grade classes.

(2) The teachers who answered the questionnaire designed for teachers did not have access to the questionnaire designed for pupils or did not administer it to them.

(3) The teachers' initial appraisals regarding the amount of pupils-gamers in their classrooms could have been wrong.

Regardless of which hypothesis is correct, the results show that a bit more than 40% of the pupils who answered the questionnaire are 6th grade. 4th and 5th grades together represent a bit more than 50% of the respondents and 1st, 2nd and 3rd grade pupils count for less than 10%.

The third question was designed to determine which language(s) was(were) studied by the respondents. German is the less studied language, only 6 pupils attend German classes; 2 study it as ML1, 2 as ML2 and other 2 as ML3. Without surprise, English is the most studied language, 126 respondents chose it as ML1 and 25 others as ML3. 31 pupils study Spanish; 24 as ML2 and 7 as ML3. Italian ML2 is studied by 25 pupils. As for Dutch, it is the second most studied language among the respondents of this survey: 86 pupils chose it. Among them, 27 study it as ML1, 55 as ML2 and 4 others as ML3. 2 pupils mentioned that they study another ML1 than those proposed in the question. Figure 30 summarises this data.

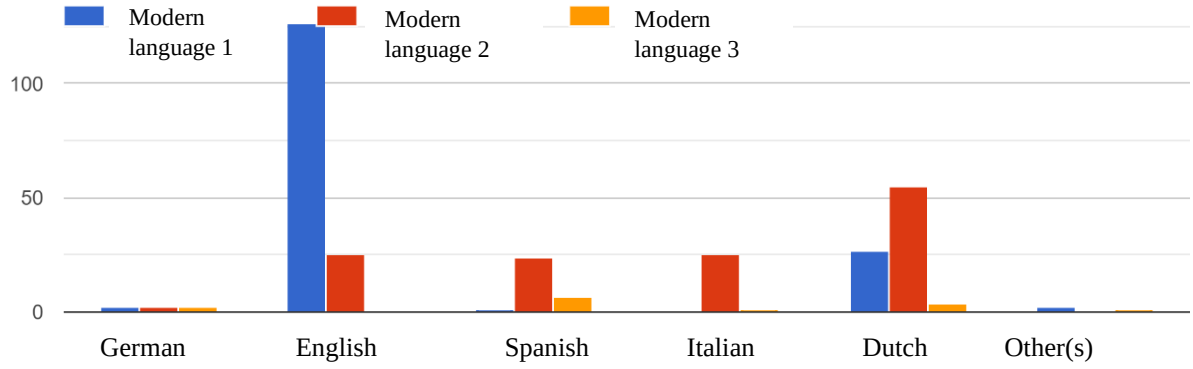



*Figure 30: Question 3 (1) – Which language(s) do you study? – Results*

These results were the expected ones. As a matter of fact, in WBF, English-Dutch is the most widespread combination of ML. The fact that English is the most represented language is interesting for this dissertation because it mainly focuses on EFL acquisition. As a result of this predominance, it can be imagined that a majority of pupils will use English in order to communicate with foreigners when they play.

I will now analyse Question 4, which dealt with the most played genres. For this question, I decided not to insert all the genres studied in Chapter 1 for the sake of length. I only chose thirteen of them, those I thought to be the most popular among pupils of this age bracket. An entry 'Other(s)' was available for the respondents, though. They were free to tick this box and then precise which genre(s)/game(s) they use to play in Question 5. As the graph generated by Google Form is quite long, I will only discuss the most popular genres chosen by the pupils. The complete graph can of course be found in Appendix 5.

The graph shows that four genres stand out: FPS, Sport, Battle Royale and GTA-Like. They are the most played genres among the pupils of WBF. They are followed by Platform and MMO Party games. The other genres also gathered several students but less significantly. These results are quite positive for this dissertation. Actually, most of the genres chosen by the pupils enable online gaming and interactivity with other players. The examples of game modes and interactivity from *Call of Duty* displayed in Chapter 1 already showed how FPS games could be useful for FFL. Sport games can also be useful for FLL if players have to cooperate in the same team. Taking the example of the game *Rocket League*[31], it is possible to play with players who speak another language within the same team. From then on, communication will be very important in order to win the match. However, this scenario is not regular as clockwork and it is consequently difficult to assess that FLL is always enhanced with this genre. Battle Royale games are mostly FPS/TPS games in which players are thrown into a huge playground. They can play alone or in teams and they have to be the last survivor(s). Again, various scenarios are possible but the one involving teams made up of players who speak different tongues is the most interesting for this dissertation. GTA-Like games like *Grand Theft Auto V* also offered online features in which players are led to communicate. In this game, it is likely that players meet other foreign players in order to accomplish specific missions. In this case, cooperation takes priority over competition. Since then, FLL could be greatly improved thanks to these sessions of gaming. Platform games are mainly solo games. They do not offer a large quantity of input, either from other players or the game itself. As a result, this genre is not relevant for the research subject. As for MMO Party games, they can also be regarded as good vehicles for FLL. The game *Among Us* is an example of them and will be discussed later in Chapter 4. It can also be remembered that VGs can be rich sources of input themselves without being multiplayers. Actually, many VGs contain cutscenes[32] that provide interesting sources of authentic auditive or written input.

The box 'Other(s)' has been ticked by several pupils. They were invited to mention which genres/games they use to play. Table 12 summarises the 53 answers I received. I will

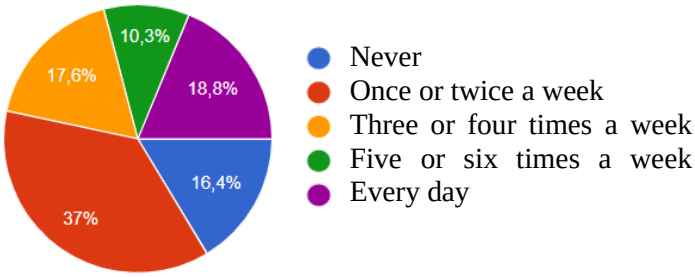
only write the (sub)genre of the games mentioned, the complete table can be found in Appendix 5. Before displaying the results, I would like to point out that various pupils cited games that belong to genres suggested in Question 4. These already-mentioned genres will be written in bold in the table.

| | | |
|---|---|---|
| Strategy VGs | Racing Games | Sandboxes[33] |
| **MMORPG** | **GTA-Like** | Farming games |
| Construction and management simulation | **Sport games** | **Platform games** |
| Survival games[34] | Rhythm games | (Life) **Simulation** |
| **(Action-)RPG** | Puzzle VGs | Rogue-like |

*Table 12: Question 5 (1) – If you play other genre(s) than those mentioned above, can you precise which one(s)? (Open-ended question) – Results*

The table displays that the pupils play a large variety of different genres. Some of those mentioned on Table 12 (strategy, racing, sandboxes, survival, puzzle, rogue-like, rhythm games…) are hardly relevant for FLL because they are not important sources of inputs/outputs.

Questions 6 and 7 were designed to discover how many times a week the pupils play VGs at home. These questions specially focused on solo/offline VGs. This choice can be explained by the fact that I only wanted to focus on the amount of authentic input received from the game and not on the input received from other players. Moreover, specific questions targeting online gaming were saved for the second part of the questionnaire. I will first analyse Question 6, which dealt with how often the pupils play solo VGs. 27 respondents claim to not play solo VGs; they only play online. A majority of pupils (61) esteem that they play alone once or twice a week. 29 others tick the box ‘three or four times a week’. 17 declare that they play five or six times a week. Finally, 31 pupils are in front of solo VGs every day. This data can be refined with the responses of Question 7. In the latter, the pupils were invited to give an estimation of the number of hours they spend on their games. 133 of them answered this question. Figure 31 summarises these results in the table and also displays the graph linked with Question 6.




| I play … per week | Number of answers |
|---|---|
| <1 hour | 11 |
| 1 → 5 hours | 38 |
| 5 → 10 hours | 14 |
| 10 → 15 hours | 5 |
| 15 → 20 hours | 3 |
| 20 → 30 hours | 4 |
| >30 hours | 16 |

*Figure 31: Questions 6 & 7 – Summary of the results*

The table shows that most pupils (38) play alone between one and five hours a week. This result is quite in opposition to the teachers' opinion. They indeed think that pupils spend a lot of time on their games but this graph shows that it is not always the case. As a matter of fact, only 23 pupils out of 133 claimed that they spend more than 15 hours per week on their games. This data is also interesting to estimate the hours spent in front of potential authentic input outside classrooms, especially if the game is played in FL. Question 8 will demonstrate that it is not rare that pupils play VGs in FL.

As mentioned before, Question 8 was designed to determine if the pupils sometimes played VGs in FL. I was quite sceptical with this question, I thought that most pupils-players only play in their mother tongue. I was then positively surprised when I discovered that 118 pupils sometimes play VGs in FL and that only 47 never play in another language. Figure 32 summarises this data.

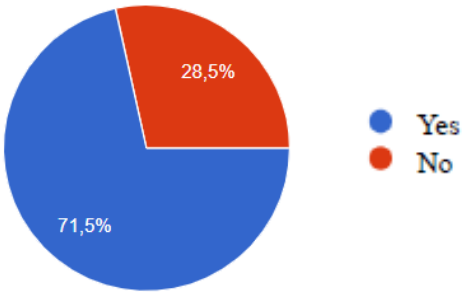



*Figure 32: Question 8 (1) – Do you sometimes play in FL? – Results*

This data shows that many pupils-gamers are exposed to input in FL. Moreover, it can be asserted that this input is really efficient because the pupils are motivated to understand it (*c.f.* Krashen's affective filter hypothesis). Also, they deliberately choose to be exposed to this input, no one obliges them.

Question 9 is an extension of Question 8. In this question, the pupils were asked to precise in which language(s) they play when the game is in FL. Almost all pupils who answered 'Yes' to Question 8 claimed that they play in English. 7 pupils wrote that they sometimes play in Italian, 6 occasionally play in Japanese, 5 others play from time to time in Spanish. Then, 1 student plays in Turkish, another 1 in (Brazilian) Portuguese and finally 1 pupil plays VGs in German. For the sake of length, I will not insert a table resuming these results in this part of the dissertation. The complete data can be found in Appendix 5. These results show that English input is definitely present at home for all these pupils. The next questions will deal with online gaming and, consequently, production of output. It will be interesting to check if the pupils, besides receiving input in FL, also produce output in FL.

Question 10 closes the RP part and introduces the second one. This question also determines if respondents will have access to the second part of the questionnaire or if they will be steered towards another one. It dealt with online gaming, the pupils were asked if they used to play online or not. 136 pupils out of 165 answered 'Yes', only 29 are limited to solo VGs. The graph on Figure 33 displays this data.

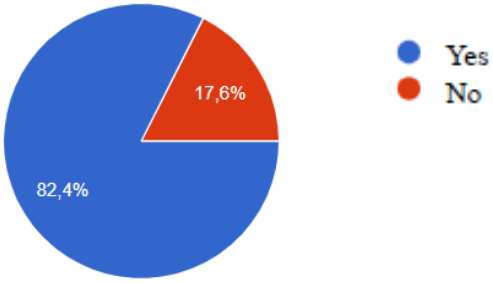



*Figure 33: Question 9 (1) – Do you play online? – Results*

The fact that so many pupils play online is quite positive because it suggests that they are in contact with other players who might speak another language. If interaction occurs, the pupils will have to find strategies to communicate efficiently in FL if need be.

This first part of the questionnaire was mainly designed to have a clear idea of the public who participated in this survey. To sum up, I discovered that the questionnaire has been answered by a majority of pupils from the higher level of secondary school. They play a vast assortment of genres of VGs, which can sometimes be useful for FLL depending on the way they are played. I also learned that the pupils do not play as much as the teachers think they do; overall, they play less than 10 hours a week. I observed that it is not rare that the respondents play in FL, too. Finally, the last question of the RP part demonstrated that almost all pupils play online.

The second part of the questionnaire concerning online gaming was available only for 136 respondents. It was meant to have information on the pupils' habits when they play online and what their feeling regarding their level of FL are if they use it during their sessions of gaming. The first question of this part focused on communication between players. Respondents were asked if they sometimes speak with other people when they play. Nearly 92% of the respondents (125) answered that they do communicate when they play online whereas an infinitesimal number (11 pupils) does not.

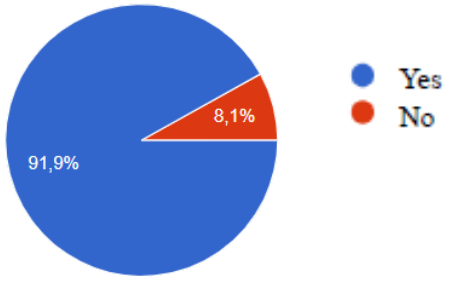



*Figure 34: Question 2 (2) – Do you communicate with other players when you play online? – Results*

This data is promising because it proves that VGs are definitely a vehicle for communication and, consequently, for production of output. Next question will check if interaction occurs only in French or if it sometimes happens in FL.

As mentioned before, Question 2 was designed to discover if the pupils only interact with other players in French or if they are required to speak in English (or in another FL). The results are quite mixed but still encouraging. For the analysis of this question, I will divide Table 13 in four lines: the pupils who only speak in French, the pupils who only speak in English, the pupils who use both and the pupils who use other languages. I will not write the detailed analysis; all the data will be gathered in the table.

| I communicate … when I play online | Number of pupils |
|---|---|
| Exclusively in French | 40 |
| Exclusively in English | 32 |
| In English and/or in French | 56 |
| In other languages (Spanish, Dutch, Turkish, Italian, Arabic)[35] | 11 |

*Table 13: Question 2 (2) – Which language(s) do you use when you play online? (Open-ended question) – Results*

The table shows that the gap between the pupils who exclusively use French and the others who exclusively speak in English is quite slight. The majority of respondents use both languages. According to the collected answers, the frequency of use of both languages

depends on two main factors: the game (some pupils claimed that some games are mainly played by non-French speakers) and the players met during the game (some pupils mentioned that communication is exclusively in English when they met non-French speakers). This data reveals that VGs encourage the production of output in English depending on the context. What is interesting to highlight is that online gaming enables the pupils to be in contact with English outside classrooms. They are also led to use it in authentic situations. Nevertheless, the efficiency of these exchanges in FL still needs to be proved. Therefore, it will be interesting to determine if the pupils feel that their level of FL has improved thanks to their chats during their sessions of online gaming.

Question 3 was consequently designed to determine if the pupils have the impression that their FL enhances thanks to their exchanges during online gaming. The results show that 104 pupils feel that their FL improved thanks to their online conversations whereas 21 do not. The respondents were then invited to justify their answer in Question 4. This question was not compulsory, only 99 pupils out of 125 answered it. Figure 35 summarises the data collected from both questions. For Question 4, the pupils' answers are gathered and summarised in the table below.

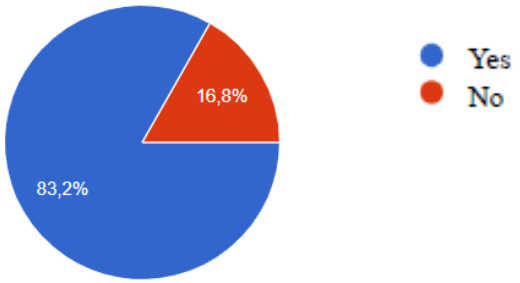



*Figure 35: Question 3 (2) – If you communicate in another language than French when you play, do you think that your other language improves thanks to your game sessions? - Results*

As it can be seen, various factors explain why the pupils feel that they improve their FL. The fact of speaking regularly was the most repeated justification among the pupils. Another argument that was frequently brought up concerned motivation. The pupils claimed that they were motivated to speak and be understood in order to succeed in their games. The fact that, in their eyes, the conversation pursues a real purpose is also stimulating. Surprisingly, several of them also declared that foreign players take the time to correct their pronunciation/grammar. According to them, this feedback is positive for both receptive and productive skills; they learn to recognise words when they hear them and then learn to use them correctly. Some pupils also mentioned that thanks to online gaming, they can have genuine conversations and put what they study at school into practice. Even if positive effects on FL are confirmed by some, other pupils feel that online VGs are not helpful for FLL. For

them, the language produced/heard during their games is too basic. Moreover, since this language is specific to gaming, they feel that it is not helpful in everyday life conversations. Some pupils also mentioned that they cannot communicate because their level of FL is too weak. Other justifications depend on factors related to the game in itself. A first reason is that the pupils are too concentrated on the game and, as a consequence, communication is neglected/abandoned. Another reason is linked to the fact that they do not always (nay never) meet foreign players. These results show again that advantages do exist but only under specific conditions, learning will not be systematic.

| I feel that my FL improved because… | I do not feel that my FL improved because… |
|---|---|
| I (regularly) practised it. | When I play, I do not speak a lot. |
| I learn more easily. | I am more focused on the game rather than on the language. |
| People correct me (pronunciation, vocabulary, structure). | I use basic/common language. |
| I speak with native speakers. | I do not speak English/Dutch very well, I have a lot of difficulties to communicate. |
| I am motivated to speak. | I rarely play with foreigners. |
| I learn new words (technical words related to gaming, daily life words…). | What I learn in-game is not relevant for everyday life. |
| I hear how words should be pronounced. | |
| The conversation is more authentic than at school. | |
| I am obliged to communicate with other players. | |
| I learn to improvise. | |
| I can use what I study at school. | |
| I try to be understood so I need to find ways to express myself. | |
| I discover new accents and I consequently improve my listening comprehension. | |
| I learn how to hold a conversation. | |
| I want to be the best at VGs and communication is an important step to improve. | |

*Table 14: Question 4 – Why (open-ended question) – Results*

Questions 5 and 6 dealt with the content of learning. In other words, I asked the pupils if they think that when they play, they learn more or discover other things in FL than at school. The data of Question 5 is quite balanced, 70 pupils feel that they actually learn more thanks to VGs and 55 others judge that they do not. Question 6 is far less qualified, 113 pupils out of 125 assert that they learn other things (specialised vocabulary, teen slang) when they play. Both results can be observed in the following table.

| | Yes | No |
|---|---|---|
| Q5 (2): Do you feel that you learn more by playing rather than by attending language classes? | 56% | 44% |
| Q6 (2): Do you feel that you learn other things that you cannot learn in language classes? (ex. specialised vocabulary, teen slang…) | 90,4% | 9,6% |

*Table 15: Question 5 & 6 (2) – Summary of the results*

On the one hand, the results of Question 5 show an important division among the pupils. A slight majority of the pupils feel that they learn more when they play and interact with other players than at school. Still, 44% judge that games are not a better way for learning than ML classes. On the other hand, almost all respondents agree on the fact that games 'teach' other things than teachers. The pupils feel that they learn words, structures or varieties of FL that are not taught within ML classrooms.

The last question of the second part of the questionnaire was designed to determine if the pupils noticed that they improve certain competences thanks to VGs. They had to rank the competences by order of improvement. Since answers were not compulsory for this question, each competence has a different number of responses. Also, some pupils did not answer this question at all, maybe because they feel that no competences improved with online gaming. Since the graph generated by Google Forms is quite long and unclear, I will not display it below. Instead, I will go through the answers for each competence in order to analyse this data. Of course, the graph can be found in Appendix 5.

- Listening comprehension: 113 pupils feel that they improve this competence with online gaming. 47 pupils chose it as the most improved competence, 40 others as the second, 11 as the third, 7 as the fourth and 8 as the least improved competence.
- Reading comprehension: 108 pupils consider that online gaming helps to improve this competence. 45 chose it as the most improved competence, 24 as the second, 26 as the third, 7 as the fourth and 6 as the least improved competence.
- Written expression: 102 pupils think that this specific competence improved with VGs. This competence gathered the lowest number of answers. 26 chose it as the most improved competence, 12 as the second, 34 as the third, 13 as the fourth and 17 as the least improved one.
- Oral expression with interaction: 119 pupils claim that they improve this competence thanks to VGs. This entry collected the highest number of answers. 49 pupils chose it as the most improved competence, 36 as the second, 17 as the third, 12 as the fourth and 5 as the least improved competence.

- Oral expression without interaction: 104 pupils judge that online gaming helps to improve this competence. 21 chose it as the most improved competence, 20 as the second, 30 as the third, 20 as the fourth and 12 as the least improved competence.

As displayed by the results, listening comprehension and oral expression with interaction are the most improved competences with VGs according to the pupils. As for the least improved competences, the data points out that VGs faintly sharpen written expression and oral expression without interaction. These answers seem quite obvious; the pupils' ability to hear and interact are more trained with online gaming than their faculty to write and speak alone. A curious data is collected for reading comprehension. Actually, many pupils chose it as their most improved competence but then few of them chose it for the second or third most improved competence. It is possible that an important group of players exclusively interact with others through a chat room with written messages. Since then, it can be understood why these pupils mostly get better in reading comprehension.

This second part about online gaming enables to have some clues on the potential benefits of VGs for FLL. According to the pupils, online VGs are a powerful medium for interaction in FL. A large number of respondents claims that they often always use English (or another FL) when they have an exchange with other players. This FL improves for several reasons; motivation, regular practice, will to get better, opportunity to use what is learned at school, feedbacks from other players… The pupils-gamers also notice that even if they do not always learn more with online gaming than at school, they do learn other things that are not approached at school. They also generally feel that their skills in listening comprehension and oral expression with interaction significantly improved with their practice. In some ways, skills in reading comprehension are also sharpened by VGs. These positive results are not systematic, though. Some pupils-players feel that their hobby is not a vehicle for FLL. The absence of conversations in FL or the will to win are reasons amongst others that explain why the pupils do not get better in FL with their hobby. Still, the analysed data gives a glimpse of interesting prospects on the benefits of VGs for FLL. Next part will still deal with online means to interact with other players but will not concentrate only on VGs. It will broaden the scope of the analysis to VGs communities.

VGs communities (or gaming communities) are websites related to VGs and their practice. There are several types of communities: VGs communities supplied by professionals in the field of VGs (IGN[36], Jeuxvideo.com[37]…)[38], communities supplied by fans (Wikis, Reddit Gaming[39]…), communities exclusively dedicated to communication (Discord…). As

mentioned before, these websites offer good-quality content in FL, in audio(-visual) or written format. They also allow players to publish opinions, communicate, ask questions… The third part of the questionnaire focused on these communities and their potential benefits for FLL. All the respondents had access to this part but the questions only targeted the pupils who participate in these communities. Therefore, all the pupils who answered 'No' to Question 1 were invited to skip the questions linked with gaming communities. Actually, Question 1 was designed to determine if the pupils used to spend time on these websites. The results reveal that 103 respondents out of 165 visit VGs communities. This data can be seen on Figure 36.

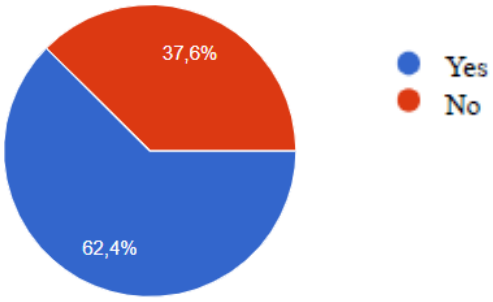



*Figure 36: Question 1 (3) – Do you spend time on VGs communities? (Forum, Discord groups, Twitch, Wikis, blogs…) – Results*

On the basis of this data, it is possible to assume that the following questions related to gaming communities will be answered by 103 pupils out of 165. This number is quite interesting because it shows that VGs are not limited to sessions of gaming for a large proportion of players. They keep looking for information or discussions on their favourite VGs. Next question focuses on the type of communities the pupils spend time on.

Question 2 was meant to determine which kind of communities the pupils visit. This question was multiple choice and respondents were also allowed to add any other communities not mentioned in the original entries. This question collected 103 answers and originally presented seven entries. The respondents added seven other kinds of communities. Since some communities were repeated various times in the list, I will not display the graph generated by the platform. I will summarise the answers on Table 16 and leave the Google graph in Appendix 5.

| Communities | Number of answers |
|---|---|
| Forum | 15 (14,6%) |
| Discord groups | 80 (77,7%) |
| Wikis dedicated to certain VGs | 13 (12,6%) |
| Blogs | 7 (6,8%) |
| Twitch channels[40] | 66 (64,1%) |
| Reddit groups | 12 (11,7%) |
| YouTube channels | 9 (9,7%) |
| TeamSpeak[41] | 3 (2,9%) |
| 33e (*Arma III*)[42] | 2 (1,9%) |
| *Minecraft* servers[43] | 1 (<1%) |
| *Fortnite* communities | 1 (<1%) |
| Twitter | 1 (<1%) |
| Facebook groups | 1 (<1%) |

*Table 16: Question 2 (3) – Which kind(s) of communities? Several answers possible – Summary of the results*

This table shows that two communities stand out from the others: Discord groups and Twitch channels. The first is exclusively reserved for communication between players and the second, as mentioned on Endnote 36, offers various possibilities; watching/broadcasting streams or chatting with other users. Therefore, both platforms allow the pupils-players to produce written and oral output, either by interacting with others through a chat room or by broadcasting. Twitch can also be considered a considerable source of audio-visual input since it offers the possibility to watch videos. Forum, Wikis, blogs and Reddit groups are less used by the pupils but together, they still represent a bit more than 45% of the communities attended by them. These platforms can be regarded as good sources for written input. These communities also allow their users to post comments/opinions/reviews and can consequently become good opportunities to produce written output. What could be interesting with this data is to determine if the pupils tend to spend time on these platforms in another language than French and if they sometimes participate in them.

Question 3 was precisely meant to discover if the pupils sometimes spend time on FL gaming communities. Among 103 pupils, 69 claimed that they do attend FL communities. They were also asked to precise which language(s) were used on these platforms in Question 4. Almost all respondents indicated that English was the predominant language used within these communities. Others also mentioned Spanish, Italian, Dutch, German, Arabic, Czech or

Japanese communities. Figure 37 displays the results of Question 3. The data related to Question 4 can be found in the form of a table in Appendix 5.

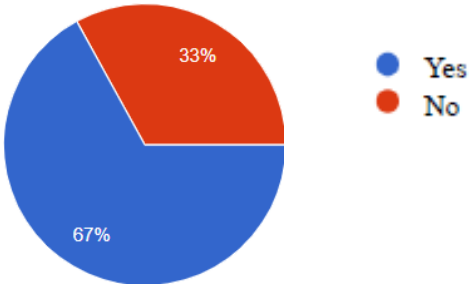
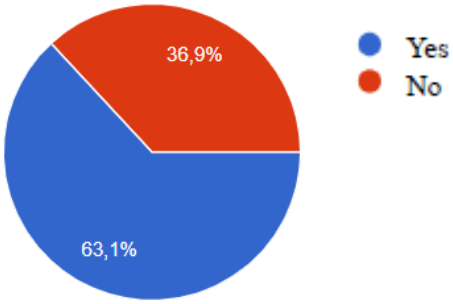



*Figure 37: Question 3 (3) – Do you spend time on VGs communities that communicate in another language than French? – Results*

On the basis of this data, it can be presumed that these FL communities provide genuine input for the pupils. They probably watch streams in FL and consequently receive audio(-visual) input from native speakers. In the same way, they surely receive authentic written input when they read posts/reviews written in FL by native speakers. The two next questions will help to determine if communities are also used by the pupils to produce output (in French or in FL).

Question 5 aimed to know if the pupils tend to participate in gaming communities. As it can be seen on figure 38, more than half of the respondents answered positively; 65 respondents indeed post comments, reviews, ask questions… Question 6 then targeted the language used by the pupils when they participate. 45 of them participate in English, 24 in French and a few others in Italian, Spanish, Czech or German.




| When I participate, I use … | Number of answers |
|---|---|
| English | 34 |
| French | 10 |
| French and/or English | 10 |
| English/French and another language | 6 |

*Figure 38: Question 5 & 6 (3) – Summary of the results*

These results demonstrate that, besides being interesting sources of input, gaming communities turn out to be places that enable the production of output in FL. It can be concluded from these observations that gaming communities are definitely a vehicle enhancing FLL: as VGs, they offer the possibility for the pupils-gamers to be exposed to authentic (written and audio-visual) input in FL and also encourage them to post and consequently produce output in FL.

The last question of this part linked with gaming communities was meant to check if the pupils noticed an improvement in the five competences usually trained at school thanks to their participation on these platforms. As this question was designed in the same way that Question 6 from Part two, the pupils still had to rank the competences by order of improvement. Again, answers were not compulsory for this question and, as result, each competence has a different number of responses. Once more, all pupils did not answer this question at all, maybe because they feel that no competences improved with online communities. I will also analyse the data similarly. Thus, I will not display the graph generated by Google Forms below for the sake of length and clarity. I will just state each competence and the answers collected.

- Listening comprehension: 80 pupils feel that they improve this competence with gaming communities. 27 pupils chose it as the most improved competence, 18 others as the second, 16 as the third, 5 as the fourth and 14 as the least improved competence.
- Reading comprehension: 83 pupils consider that gaming communities help to improve this competence. This entry collected the highest number of answers. 40 chose it as the most improved competence, 18 as the second, 17 as the third, 2 as the fourth and 6 as the least improved competence.
- Written expression: 81 pupils think that this specific competence improved with their participation in gaming communities. 21 chose it as the most improved competence, 22 as the second, 20 as the third, 6 as the fourth and 12 as the least improved one.
- Oral expression with interaction: 82 pupils claim that they improve this competence thanks to gaming communities. 30 pupils chose it as the most improved competence, 22 as the second, 18 as the third, 5 as the fourth and 7 as the least improved competence.
- Oral expression without interaction: 74 pupils judge that communities help to improve this competence. This competence gathered the lowest number of answers. 13 chose it as the most improved competence, 16 as the second, 23 as the third, 9 as the fourth and 13 as the least improved competence.

Reading comprehension and oral expression with interaction are the most trained competences according to the pupils. This can be explained by the great number of pupils who are part of Discord groups. They mainly communicate via a chat room in which they write or speak. This can also explain why written expression and listening comprehension are

the second most trained competences: they have to write the answers and also listen to their comrades'. From then on, it can be concluded that gaming communities are versatile vehicles for FLL; they exercise productive as well as receptive competences.

Now that the impact of online gaming and gaming communities on FL has been discussed, it may be interesting to discover if this learning can be useful and usable at school. The last part of this questionnaire is precisely about the efficiency of this learning in school context. It was answered by all the respondents, that being 165. The first question of this fourth part aimed to know if the pupils noticed that their marks improved thanks to their practice of VGs. As showed by Figure 39, the result is perfectly balanced: 83 feel that their marks did not improve, 82 noticed that they do.

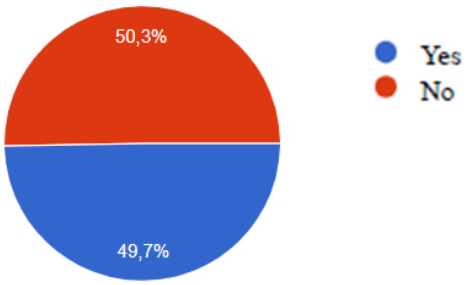



*Figure 39: Question 1 (4) – Did you notice that your marks in FL classes improved thanks to VGs? – Results*

This data is quite interesting for several reasons. First, it can be noticed that the learning that stems from the practice of VGs does not impact all pupils the same way. There is a great disparity, therefore, it is complicated to assert that VGs impact or not marks. Then, this result also gives rise to a thought on school assessments. Indeed, nearly 80% of the pupils feel that their level in FL improves with their practice but Figure 49 shows that their progress does not seem to affect their marks. From then on, it can be presupposed that school does not really assess the pupils' level of FL but rather evaluate their level of mastery of the discipline. It is also possible to presume that the pupils are not clear-headed on their real level of FL.

Question 2 was then addressed to the pupils who see an improvement in their marks. It was once again designed in the same way that both Questions 7 from Parts 2 and 3. Therefore, I will analyse it the same way.

- Listening comprehension: 75 pupils feel that their marks improve in this competence with gaming. 34 pupils chose it as the most improved competence, 21 others as the second, 6 as the third, 7 as the fourth and 7 as the least improved competence.

- Reading comprehension: 76 pupils consider that their practice helps to improve their marks in this competence. This entry collected the highest number of answers. 34 chose it as the most improved competence, 26 as the second, 9 as the third, 4 as the fourth and 3 as the least improved competence.
- Written expression: 70 pupils see that their marks in this specific competence improved with their hobby. 16 chose it as the most improved competence, 13 as the second, 22 as the third, 6 as the fourth and 13 as the least improved one.
- Oral expression with interaction: 71 pupils claim that they improve their marks in this competence thanks to gaming. 26 pupils chose it as the most improved competence, 25 as the second, 12 as the third, 7 as the fourth and 1 as the least improved competence.
- Oral expression without interaction: 65 pupils see that VGs help to improve this competence. This competence gathered the lowest number of answers. 14 chose it as the most improved competence, 17 as the second, 12 as the third, 13 as the fourth and 9 as the least improved competence.

These results are well-matched with the others previously analysed. The competences in which the pupils personally feel an improvement are also the competences in which they enhance their marks. Therefore, contrary to what was said before, the pupils seem realistic about their performance in FL.

The next three questions targeted the potential integration of VGs into classrooms. I first wanted to know the pupils' opinion on their use at school. According to 105 of them, VGs could definitely be used within classrooms. 60 others are averse to the idea of integrating them at school, though.

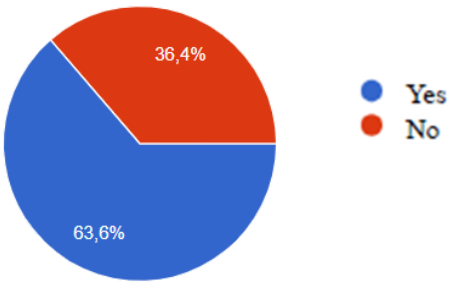



*Figure 40: Question 3 (4) – Do you think that VGs should be integrated into FL classes? – Results*

I then asked them to justify their answer. I collected a total of 127 answers for this fourth question. I will summarise them in the table below. The complete answers can be found in Appendix 5.

| VGs can be used at school because… | VGs should not be used at school because… |
|---|---|
| It is motivating. Pupils could be more involved in classes.[44] | They are not compatible with school. Schools are not equipped for this medium. |
| It is better/quicker to learn when we have fun.[40] | They are not a tool for learning at school. |
| It is more modern. | It is not the same to watch a teacher playing rather than play myself. |
| It is my hobby so it will not bother me to learn languages with this medium. | Schools are not ready for such a modernity. |
| When the content is in English, it helps me to understand. | They are not as efficient as traditional teaching. |
| It is proved that they help to learn. | Screens distract us. |
| I improved my competences in FL with them, so I think it could help others, too. | We will be more focus on the game rather than on the lesson. |
| They could help us to focus more on the English language because we have a goal to achieve with VGs. | It could unsettle non-gamers pupils. |
| They enhance communication. | The vocabulary used in them is totally different. |
| They help to develop strategies to understand English. | |
| They could be interesting course materials. | |

*Table 17: Question 4 (4) –Why do you think that VGs should (not) be integrated into FL classes? – Summary of the results*

As Table 17 displays, the pupils gave many reasons to justify their choice. Often, motivation and fun were the more recurrent justifications in favour of a potential integration. Several pupils also mentioned that VGs help them a lot in FL and, as a result, could assist them during lessons, too. Still, a large number of pupils seem to be reluctant towards the integration of VGs within classrooms. For them, VGs should stay a hobby practised at home. They also wrote several times that gaming belongs to a certain community, it is difficult for non-gamers to appreciate VGs. Others are also mixed and consider that some games could definitely be useful but others not at all. Therefore, according to them, it depends on how the teacher will manage to use them.

As a final question, they were asked to think about such an integration. I felt that it was interesting to add this question in order to see how they would like to experiment with the use of this medium at school. I collected 88 answers but several of them were responses such as “I don’t know”. In spite of that, I found that many other answers were relevant and quite interesting. Therefore, I will display some of them on Table 18. All their answers can be found in Appendix 5.

VGs could be integrated by…

| | | |
|---|---|---|
| Creating Discord groups for each class and then making us play together in English. | Raising awareness among pupils on the benefits of VGs on FL. | Playing solo VGs in English for immersion. |
| Adding a session of gaming once or twice a week at the end of the class. | Using them as examples for exercises or listening/reading comprehensions. | Creating a competition interschool in FL. |
| Coming to an agreement on a game with the teacher and then play it in FL. | Asking pupils to write anecdotes on their sessions of VGs as a homework. | Using a game that revises all the elements studied in class. |
| Studying the history of VGs in FL. | Creating lessons based on VGs. | Using it as an introduction for a new unit. |
| Using it one hour per week for vocabulary and functions of language. | Playing a real-life simulation game on a student who has to learn a FL. | Using a game related to the thematic studied. For example, playing *Battlefield* when we study a sequence on History. |
| Playing with foreigners during classes. | Using it one hour per week as a listening comprehension. | Creating a VG in FL. |

*Table 18: Question 5 (4) – How could they be integrated? (Open-ended question) – Summary of the results*

As it can be seen, the pupils have many ideas in order to integrate VGs into classrooms. Some of them require certain facilities that are not available in many schools but others seem feasible. For instance, it could be difficult to create a competition inter- or intraschool due to the budget and the facility it would necessitate but it could be achievable to use a game as an introduction for a new unit. All these answers deserve to be taken into account if one wants to use VGs in one's classroom.

To conclude the questionnaire, the pupils were invited to leave a comment related with the thematic. Since many responses are repetitions of what was said before, I will only display the answers in Appendix 5.

The analysis and interpretation of the answers of the questionnaire addressed to pupils is now finished. In part 2.4.3.2., I will conclude and roughly summarise the answers. I will also try to link some of the obtained responses with the theoretical framework of this dissertation.

3.4.3.2.Conclusion of the questionnaire addressed to pupils

Overall, the pupils feel that VGs and what surrounds them have a positive impact on FL. A majority of pupils play VGs in FL and also spend time on FL communities. According to them, English is largely diffused in the milieu of VGs. As a result, their listening, written and oral competences in English improved with their practice. Even if they do not always see their improvement in their marks, they personally feel that they get better at English. They also

notice that the enhancement depends on the game they play and does not regard every aspect of the language. On the one hand, some of them noticed that an FPS game such as *Call of Duty* will highlight the competitive aspect of VGs and will not be efficient for FL. This game could only help to memorise some recurrent words or structures. On the other hand, several pupils mentioned that certain games in which collaboration is the key are quite efficient for learning. They speak with others, have to understand and be understood. With such interactions, they sense that they learn complete structures and develop strategies to make themselves understood. They also claimed that they are sometimes corrected by native speakers when they play. In addition to pure gaming, the time spent on FL communities and the pupils' participation in them provide opportunities to be exposed to input and also to produce output. The pupils also repeated that they are motivated to understand the game/the foreign players because they have to achieve goals. From then on, they will try everything to comprehend the input. Finally, when they were asked to imagine VGs within classrooms, some of them thought of "creating VGs for learning" or using 'normal' VGs and giving them learning purposes. Some pupils were reluctant to this and preferred to keep their hobby at home, though.

Some respondents also feel the reverse and do not see an improvement in FL with their practice. Many of them simply do not play in FL or do not communicate with other players. Other pupils tried but gave up because the gap between their current level and the level of FL of the game or the other players was too important. It was also repeated that some games require too much concentration and, consequently, leave little space for communication in FL.

All the elements mentioned before by the respondents can be linked with the theory analysed in Chapter 1:

- Some feel that they improve their language because they interact with others. Moreover, some of them assert that they receive feedback from other players. Therefore, the output produced by the pupils seem to be corrected by other players. From then on, according to Krashen's output plus correction theory, learning can occur.
- They want to be understood when they play or when they post something on communities and, as a result, they modify their output until they manage to convey a message. This can be matched with Swain's comprehensible output theory.
- They are constantly exposed to input during several hours. When this input is comprehensible for them, Krashen asserts that it is beneficial for SLA. Otherwise,

when the gap is too important (e.g., *i+3*), SLA does simply not occur. This specific problem was noticed by some pupils.

- They are exposed several hours to this authentic input. Therefore, Pujadas Jorba's theory on SLA through multimedia learning can be applied. Again, it is important to control the time spent in front screens. Indeed, the benefits of games can disappear if gaming time is superior to the recommended limit.
- They are motivated to understand and seek input. As mentioned before with Krashen's affective filter theory, high motivation, self-confidence and low anxiety are powerful variables related to success in SLA. This theory can definitely explain why the pupils feel that their FL improved with their hobby.
- Interactive hypotheses underline the importance of collaboration in the process of communication. The pupils seem clear-headed about it and also realise that they can enhance their level in FL when they play collaborative games. They also admit that competitive games make the improvement far more complicated, nay inexistant.
- The pupils mentioned games designed for learning or games with added learning goals in the questionnaire. They clearly make reference to serious games and serious gaming. In their view, this way of playing could be interesting if well integrated into classrooms.

### 3.5.Conclusion of Chapter 3

This chapter dedicated to the analysis of the two questionnaires addressed to teachers and pupils comes to an end. On the basis of the collected data, VGs seem to be an interesting tool for FLL but should stay a personal hobby practiced at home. Actually, both teachers and pupils notice an improvement in FL with gaming and/or participation in gaming communities. Regarding VGs at school, the teachers are quite reluctant concerning their presence within classrooms. The pupils are for the most part favourable to their presence but still 40% of them feel that they cannot be an efficient medium for learning at school.

Next chapter will briefly discuss the place of VGs in classrooms anyway. It will also imagine examples of practical application.

# 4. Some examples of practical applications of video games within EFL classrooms

## 4.1.Introduction

This last chapter will discuss some examples of practical applications of VGs within EFL classrooms. I will first list some prerequisites and advice in order to choose efficient VGs to be used in classrooms. Then, I will choose some VGs and discuss the impact they can have on several aspects of the language: enhancement in receptive competences, vocabulary acquisition and oral practice. Before starting, I wish to precise that what will follow below are only suggestions and thoughts on VGs that come from my imagination. I do not claim to have the miraculous recipe on how to integrate them into ML classrooms, these are only proposals based on my humble opinion.

## 4.2.Some suggestions to select VGs for EFL classrooms

Before integrating a VG into EFL classrooms, some factors deserve to be taken into account:

1) The material. It seems obvious that before thinking about the VG in the classroom, the teacher has to be certain that his/her school has sufficient facilities to use it. From then on, an interactive board, a projector or a television are essential items. An internet connection is not necessarily compulsory but is still a rather sizeable asset. Regarding the support, a modern console (Playstation 4/5 or Xbox One/Series) seems to be the best option because it allows many players to control a gamepad on the same support and it is easier to transport than a gaming computer. A computer could still be interesting if the chosen VG is not too demanding in terms of setup and can run on the devices provided by the school.
2) The ease with the medium. It could be difficult to teach with a material that we do not know/understand. From then on, it is important to practice the chosen VG before using it in front of pupils or at least be informed of its functioning. The teacher implements the game and the lesson; therefore, he/she should make sure the activity runs smoothly, leaving nothing to chance.
3) The learning objectives. It is important to precisely determine which point has to be exercised with the game. In the same way that classic lessons, a class animated with a pedagogical use of a VG should be meticulously prepared beforehand. The learning objectives have to be clearly defined before going to class; in that way, it will be easier and quicker to explain to the pupils what the purpose of the activity is. The latter will consequently be more efficient because, as soon as the VG and the activity will start, the pupils will know which grammatical or vocabulary point they have to focus on. A

good preparation could also help to avoid potential deviations from the initial goal(s) of the learning activity.

4) The selection criteria. The chosen VG should, obviously, be exploitable in school context. From then on, it should present usable features for learning. A first selection criterion could be the breadth of the VG. A game rich in authentic and quality input can present as many advantages as a video or a text if it is well exploited (see 4.2.1.). A second criterion could be the possibilities offered by the VG in order to exercise a specific vocabulary or grammatical point. As shown in section 4.2.2., some VGs have a gameplay easily workable to teach some specific points. We could cite as a third criterion what was mentioned before: the difference between a competitive and cooperative game. We already discussed that a competitive game in which what is at stake takes precedence over the rest has little interest within a ML classroom. However, a cooperative game can be useful in EFL teaching because it can incite the pupils to speak in order to achieve in-game goals (see 4.2.3.).

### 4.3.Examples of practical application

Now that some personal criteria have been brought to light, it could be interesting to present three games that respond to these criteria and that could consequently be used within classrooms. In order to do so, I have chosen to imagine the exploitation of the following games: *Batman: The Telltale Series*, *The Sims 4* and *Among us*.

#### 4.3.1. Batman: The Telltale Series

*Batman: The Telltale Series* is an adventure game that belongs to the subgenre 'graphic adventure'. In it, the players have to interact with the game and have to choose between several lines of dialogue in order to progress. Each choice has consequences on the plot and, consequently, influences the rest of the story. This VG, besides giving players written input, also offers a lot of cinematics in which the characters speak and react to the players' choices, thereby providing a genuine source of audio-visual input. Even if the choices have to be made by one player, the designers of the game developed a collaborative feature that allows other people to watch the game and participate in the decision-making process. In a classroom, we could imagine to use this VG as a listening and/or reading comprehension. Actually, the teacher could be the player who holds the gamepad but the pupils would be those who vote for the best dialogue option. After a scene or two, they would have to answer questions related to what they have just seen, what would have happened if they had chosen the other dialogue option or simply summarise what occurred. Various exploitations are possible with

this genre of game. We could also imagine, in a more advanced level, to give the pupils the possibility to present their arguments in favour of a line of dialogue rather than another. The teacher would then choose the arguments of the group of pupils who argued the best. From then on, besides working on receptive competences, this activity could help to exercise oral production.

#### 4.3.2. The Sims 4

Already discussed in Chapter 1, *The Sims 4* is a real-life simulation game in which players have to entirely create a character (their physical aspect, their psyche…) and manage their entire life from birth to death. Every aspect of human beings' life is present in-game: going to school/university, going to work and managing a career, building houses, cooking, travelling, doing sport… With definite learning objectives, the game could become a rich source of vocabulary when used as a (basic) exercise. I already displayed an example of practical application on building houses in Chapter 1. We can also imagine to use this VG to teach, learn and exercise vocabulary on physical description. Since the Sim editor is particularly complete and is easy to handle, we could imagine that a pupil would have the possibility to create a Sim from head to toes (morphology, skin colour, hairiness, clothes…) and then entirely describe it in English to his/her classmates. The teacher could also be the craftsperson and the pupils would have to give indications on how the Sim should be created and dressed. The editor also enables advanced physical modifications; as a result, the player can modify every single detail such as enlarging body parts, readjusting personal traits, etc. With such possibilities, it can be imagined that the pupils could work on vocabulary but also on functions of language such as 'comparatives/superlatives', for instance. Possible exploitations are numerous and depend on the teachers' imagination.

#### 4.3.3. Among us

*Among us* is an online multiplayer social deduction game[45] about a team in which a player is an imposter who plans to eliminate all the other players. In order to win, players have to complete tasks and discover the imposter. Collaboration is the key in order to triumph. With this type of game within classrooms, the pupils would have to actively communicate and produce output in order to succeed in unmasking the traitor of the team. We could imagine to insert this game once a week, at the end of the lesson, and impose an 'English only' rule. From then on, the pupils could have fun and exercise their English at the same time.

## Conclusion

Learning a language is all but systematic. Many theories have tried to explain how this process occurs and how it can be stimulated and enhanced. At school or at home, many ways are available to learn a language and adaptable to each type of learner. Even if associating VGs and learning remains a taboo subject, I maintain that VGs can be one of these particular manners to discover, exercise and improve a foreign language.

In this dissertation, I have tried to discover if VGs were powerful media promoting FLL. After some research, I realised that they could be useful but only under specific conditions. Actually, VGs played at home present numerous features enabling the (unconscious) improvement of a FL but the latter depends on the way the game is played. From then on, the theory analysed does not give the possibility to affirm that VGs played in FL systematically impact FLL but does not allow to assure that they do not influence FLL either.

The scouring of the data collected from the questionnaire addressed to pupils supports this analysis. It indeed demonstrates that many pupils-players studying in the WBF noticed that their level of FL improved (drastically or not) with their hobby but that this was true only with certain VGs and under specific conditions.

Regarding the place of VGs at school, the official documents are quite clear: VGs are not (yet) considered tools to be used within ML classrooms. Several teachers are in agreement with the reference papers and do not contemplate integrating VGs into their classrooms. Some pupils are more enthusiastic at the idea of using video games for FLL in ML classrooms but others are still reluctant to this prospect.

For this reason, I personally tried to imagine how VGs could be integrated into a classroom and how they could be exploited efficiently in order to exercise English. Obviously, this part needs testing ‘in the field’ to discover if VGs can change/improve FL teaching and would need another entire dissertation to be discussed and analysed.

Compared to other media already used in schools, the VG is a rather new material. Nevertheless, since Game Studies have been booming for the last fifteen years, it would not be surprising that the importance of VGs in schools will change in the years to come.

## Endnotes

[1] A promotional campaign that encourages healthy physical distancing by bringing special events, exclusives, activities, rewards, and inspiration to some of the most popular games in the world. https://venturebeat.com/2020/03/28/who-and-game-companies-launch-playaparttogether-to-promote-physical-distancing/
[2] The features of a computer game, such as its story or the way it is played, rather than the images or sounds it uses. "Oxford Advanced Learner's Dictionary"
[3] Le « Serious Game » est un objet mélangeant deux dimensions : une « dimension sérieuse », renvoyant à tout type de finalité utilitaire, et une « dimension ludique », correspondant à un jeu matérialisé sur tout type de support.
[4] https://cultureoverlord.com/
[5] https://chronicles-utsuuq.app.simlearn.eu/
[6] http://serious.gameclassification.com/EN/games/46400-Mene-ton-enquete/index.html
[7] http://www.enseignement.be/index.php?page=26432&navi=3177
[8] http://serious.gameclassification.com/EN/index.html
[9] http://www.lumni.fr/jeu/reconnaitre-les-determinants
[10] Un jeu vidéo ou une application utilitaire d'une façon qui n'a pas été forcément prévue par son concepteur. Il s'agit alors d'un « détournement d'usage », qui permet par exemple d'utiliser à des fins sérieuses un jeu vidéo à la base conçu pour le divertissement. Ces deux approches, conception originale et détournement d'usage, définissent le « Serious Gaming ».
[11] Educational software can simply be defined as computer software used for education. The primary and only function of the software is to teach, the program is not meant to be recreational. However, some of these programs offer the possibility to create something. *Celestia*[11] is an example of such a program. With this spatial simulation, the user can explore the universe, the galaxies… and create his/her own fictional world, constellation... One can regard this possibility of creation as a game. This is a subjective estimation and Djaouti advises to always "consider the original intention of the designer" (Djaouti 2011: 25) to know if these types of software can be judged as serious games or not.
[12] A learner's developing second language knowledge. It may have characteristics of the learner's first language, characteristics of the second language, and some characteristics that seem to be very general and tend to occur in all or most interlanguage systems. (Lightbown & Spada 2013: 220)
[13] Interaction in this dissertation refers to "a situation where two or more people or things *communicate* with each other or react to each another" (Cambridge Dictionary, my emphasis).
[14] https://www.statista.com/statistics/1110000/call-of-duty-warzone-players/
[15] Multiplayer game type, which puts every player against each other.
[16] The aim of this multiplayer game mode is to kill everyone on the opposing team, and the winner is the team that reaches a point limit, or if time runs out, has the most points.
[17] Players face zombies controlled by the computer. In general, this mode is multiplayer.
[18] "The CEFR Companion Volume broadens the scope of language education, reflecting academic and societal developments since the CEFR publication in 2001. It presents the key aspects of the CEFR for teaching and learning in a user-friendly form and contains the complete set of extended CEFR descriptors, replacing the 2001 set." (https://www.coe.int/en/web/common-european-framework-reference-languages)
[19] Acronym for computer-generated imagery.
[20] *Programme d'études – Langues Modernes – Enseignement secondaire ordinaire 1er degré commun* (2020).
[21] *Programme d'études – Langues Modernes – Enseignement secondaire ordinaire Humanités professionnelles et techniques 2e et 3e degrés* (2020).
[22] Translation of *Promotion Sociale*.
[23] Translation of *éducation professionnelle*.
[24] Translation of DASPA (*dispositif d'accueil et de scolarisation des élèves primo-arrivants*).
[25] Translation of CEFA (*centre d'éducation et de formation en alternance).*
[26] https://www.statista.com/statistics/189582/age-of-us-video-game-players-since-2010/

[27] It seems that the graph of this question presents issues/mistakes. Perhaps the question was misunderstood or the instruction was unclear. Actually, I noticed that one respondent has chosen twice the option 1 (the most trained competence) and also three times option 5 (the least trained competence). Therefore, I will assume that this teacher wanted to highlight that he/she focused a lot on the two most trained competences (listening and reading comprehensions) during the activity and that he/she did not target at all the three other competences (oral expression with/without interaction and written expression).

[28] https://learningapps.org/ is a collaborative platform where users can create several types of interactive exercises, whatever the discipline is.

[29] https://genial.ly/en is a website where users can create quizzes, escape games or other types of games from various free templates offered by the platform.

[30] Equivalent of "jeu de l'oie".

[31] A game that mixes football and cars. Two teams meet and players have to score goals using cars instead of human beings.

[32] "A short narrative sequence that provides a transition between periods of active gameplay" (Collins English Dictionary: https://www.collinsdictionary.com/dictionary/english/cutscene)

[33] "A VG in which the player is not constrained to achieving specific goals and has a large degree of freedom to explore, interact with, or modify the game environment." (Merriam-Webster dictionary: https://www.merriam-webster.com/dictionary/sandbox)

[34] "Survival games are a sub-genre of action VGs, usually set in hostile, intense, open-world environments. Players generally begin with minimal equipment and are required to survive as long as possible by crafting tools, weapons, shelters, and collecting resources." (Wikipedia Encyclopedia: https://en.wikipedia.org/wiki/Survival_game)

[35] These languages are always combined with French or English. None of the pupils exclusively used on this language.

[36] https://ign.com/

[37] https://www.jeuxvideo.com/

[38] In general, these communities offer Forums in which players can interact and exchange information.

[39] https://www.reddit.com/r/gaming/

[40] https://www.twitch.tv/: Twitch is a platform of streaming (especially focused on VGs). Players can follow other players' stream, interact with them or create their own stream.

[41]https://www.teamspeak.com/: TeamSpeak is an application for audio communication that mostly targets VGs users.

[42] Community exclusively dedicated to the tactical shooter game *Arma III*.

[43] *Minecraft* is a sandbox VG that gathered around 140 million users per month in March 2021. (https://www.statista.com/statistics/680139/minecraft-active-players-worldwide/)

[44] These justifications come up around 30 times.

[45] A social deduction game is a collaborative game in which players have to hide their identity and/or discover the other player's one.

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