Fostering Foreign Language Learning Through Gameplay

A Thesis Presented for the
Master of Arts
Degree
The University of Tennessee, Knoxville

Rachel Marie Floyd
May 2016

Copyright © 2016 by Rachel Floyd
All rights reserved.

Acknowledgements

I would like to express my deep gratitude to Dr. Dubreil and Professor Staples, my research supervisors, for their patient guidance, enthusiastic encouragement, and useful critiques of this research work. I would also like to thank Brooke Tybush, my research partner. Without Brooke's devotion to this project, it would not have been possible. Finally, I wish to thank my friends and family for their support and encouragement throughout my study, with special thanks my father, for his help in data analysis.

Abstract

The purpose of this study is to investigate the effectiveness of pedagogical video games in positively affecting students' knowledge of a foreign language and culture as well as their students' perspectives on the learning process in such a learning-through-gaming environment. The theories that support such an endeavor are explored. This study looked at the process of making a French pedagogical video game that focuses on presenting French culture, history, language as well as fostering lexico-grammatical, interpersonal communication, and interpretational skills. It focuses specifically on learning through gameplay and provides evidence on the positive effect of the game on elementary level French students' lexico-grammatical knowledge, improvements that could be made for the game, and further areas of research for foreign language pedagogical video games.

Table of Contents

Chapter 1 Introduction and General Information 1
Introduction 1
Statement of Problem and Rationale 2
Research Questions 3
Delimitations 3
Assumptions 3
Chapter 2 Literature Review 4
Foreign Language Pedagogy 4
Pedagogy via Video Games 7
Foreign Language Pedagogy Through Gaming 13
Chapter 3 Materials and Methods 21
Designing the Game 21
Testing the Game 35
Chapter 4 Results and Discussion 37
Quantitative Data 37
Qualitative Data 44
Improvements for Bonne Chance based on Data 52
Chapter 5 Conclusions and Recommendations 57
Conclusions 57
Suggestions for Future Research 58
List of References 61
Appendices 63
Appendix A 64
Game 1 64
Game 2 64
Game 3 65
Game 4 65
Game 5 66
Game 6 66
Game 7 67
Game 8 67
Game 9 68
Game 10 68
Appendix B 69
Vita 119

List of Tables

Table 1. Descriptions of the Levels and Texts of Bonne Chance 27
Table 2 Description of Bonne Chance Levels 34
Table 3. Average Scores for French 111 and 112 37
Table 4. Average Pre- and Post-Test Scores 38

List of Figures

Figure 1 May 1968 Poster 28
Figure 2 Improvement by Mini-Game 40
Figure 3 Average % Improvement and Average Pre-test Score Relationship 41
Figure 4 Distribution of the Probability of Student Improvement 42

Chapter 1

Introduction and General Information

Introduction

Using technology in pedagogical practice is not a new concept, not even in foreign language (L2) learning. From Rosetta Stone to Duolingo, people have been attempting to teach and learn languages using technology for quite some time. However, what these projects do not take into account in meaningful ways the culturally situated nature of language learning, that is to say that languages differ in part because there are different human life experiences, different cultures, and different symbolic representations.

Duolingo for example, uses the same art for *homme* as for *mann* (*man* in French and German respectively) without regard for cultural differences. The thought (or reference) elicited by the symbols of *homme* or *mann* is different based on the language used. That is to say if you say *homme* to a French person, they might first think of a younger man versus if you said *mann* to a German, they might first think of an older man. Even within a language, the same symbol can elicit different references. The symbol of *hombre* in Spanish, for example, might elicit the reference of a man of color from a Mexican versus the reference of a white man from a Spaniard (Semantic triangle). The dominance found in these language learning applications of one overarching reference for every language's symbols damages the learner's progress because they cannot immerse themselves in a particular culture's popular thought.

Platforms such as Duolingo and Rosetta Stone also lack in situating the language

in its proper broader cultural contexts. Most of these applications teach vocabulary by rote memorization which, though it has its benefits, is not suitable for situated use. For example, if one is learning numbers below one hundred in French, it is possible to learn them via rote memorization. But because French telephone numbers are presented as five groups of numbers under one hundred (ex: 01 43 12 22 22), numbers could be taught in tandem with this point of cultural significance. In this way, the language learning technology could give context to the numbers and to the learning of the language itself.

While some of these applications do have a gameplay aspect to them, there is little to nothing to compel the user to continue using the application other than the inherent value of learning a language. They are mini-games that focus almost exclusively on lexico-grammatical skills, levels, and points, all of which mimic regular video gameplay, but no playable story. A playable story is one way in which broader cultural contexts and culturally relevant symbols are incorporated to encourage language learning and foster discourse competence.

Statement of Problem and Rationale

In light of these considerations, the question becomes whether a true L2 learning game can be made that would both help college students learn a L2 and culture and be interesting to them as well. The goal is to enhance French language and culture learning through gaming, or, more specifically, game-play. This project is worthwhile because it is an effort to interest students in the actual material of the class and to help them learn more than they would otherwise.

Research Questions

The purpose of this study is to investigate the following research questions:

1. RQ1: Do the students' understanding of the French language improve by playing *Bonne Chance*?
2. RQ2: What are students' perspectives on the experience of playing the game?

Delimitations

This study is best described as an exploratory study. The following delimitations to the investigation are noted:

1. Although students enrolled in French 111 (first-semester French course at the University of Tennessee) played the initial version of the game (alpha version), only those students enrolled in French 112 (the second semester introductory French course at the University of Tennessee) participated in this project.
2. Only the game made specifically for this project will be examined, no other L2 pedagogical video games.

Assumptions

1. Students in French 112 have the L2 linguistic abilities to play a game made entirely in French, including directions.
2. Students in French 112 have the basic technological understanding and ability to play a video game.

Chapter 2

Literature Review

Video games can provide students with a way to learn a L2 that is both engaging and effective. While this study addresses a particular aspect of L2 learning with video games, other researchers have also more generally examined both language pedagogy and game-based pedagogy as well. This section will explore these studies and theories and how they relate to *Bonne Chance*. We will begin with the broad subject of L2 pedagogy as it relates to the project at hand, then progress to pedagogy via various forms of video games, and finish with L2 pedagogy through mobile gaming.

Foreign Language Pedagogy

Because of the exponentially expanding body of information and types of communication now available, linguistic and cultural diversity has expanded as well, and so has the frequency of use of these culturally situated language forms. Cultivating the skills to navigate this new linguistic ecology necessitates new – and multiple – forms of literacy, what has been termed multiliteracies by the New London Group (1996). The authors suggested both broadening the idea of literacy to account for a more culturally and linguistically diverse world as well as incorporating a wider variety of text forms. The latter has traditionally included texts like books and articles, whereas the authors then proposed defining texts more broadly, adding videos or video games for example, in addition to other uses of language online. Two goals in teaching literacy were suggested: creating access to the new information and communication styles and fostering critical engagement with the two to aid learners in reaching their own goals.

To achieve these newly defined literacy goals the New London Group proposed the concept of Designs, "in which we are both inheritors of patterns and conventions of meaning and at the same time active designers of meaning… [and thus] of social futures (5)." The article explored these new modes of meaning (or texts) including Linguistic, Visual, Audio, Gestural, Spatial, and Multimodal Designs, the last of which outlined how the other five relate to each other. Linguistic Meanings are already, to some extent, the focus in current pedagogy but must now to take into consideration not only vocabulary and grammar, but aspects such as delivery, transitivity (e.g. metaphors or word choice), and nominalization of processes (how words relate to one another; e.g. assess can become assessment). Other types of meanings include Visual Meanings (e.g., art or photos, or how a page is organized), Audio Meanings (e.g., music), Gestural Meaning (i.e., body language), Spatial Meanings (e.g., how environments like buildings are organized), and Multimodal Meanings (i.e., how these meanings interact). For example, a webpage (Visual) could have written words (Linguistic) and music (Audio), and these designs affect each other.

In order to actively Design as the New London Group suggested, these six modes of meaning making combine to form the first step in creating meaning: Available Designs, that is what people bring to the activity of designing meaning. Designers look at the available designs to consider the order of discourse (the rules that guide designing a particular social space); for example, a student writing a sonnet would first need to evaluate other available sonnets to understand what a sonnet is (fourteen lines with a specific rhyme scheme and structure). The next step is to actually Design, the step in

which the designer produces a Design based on the Available Designs but in which the interaction with the text is examined, interpreted, or modeled. They can follow the order of discourse or might choose to manipulate that order or abandon it to make a critique. An example of Design would be the process of a student writing their own sonnet. The product of the Design process is the Redesigned, which is a transformed meaning, neither a complete reproduction, nor a completely original work. An example of this would be an actual sonnet a student produced. The Redesigned texts, in turn, become new Available Designs.

Finally, the New London Group presented their theory of pedagogy in four components – or pedagogical acts – based on the modes of meaning and Design process. These components *can* be used in the order they are presented, but they do not need to be because of the complex ways in which they are related. The first component is Situated Practice which is "immersion in meaningful practices within a community of learners who are capable of playing multiple and different roles based on their backgrounds and experiences (21)." The second component is Overt Instruction. While this may include more traditional lecturing, it also encompasses all interactions between the learner and the instructor or expert that scaffold learning. Critical Framing, the third pedagogical act, means having learners look critically at what they are studying by interpreting the contexts (be it historical, cultural, etc.) of the Available Designs, which allows them to eventually innovate by themselves. Transformed Practice, the last pedagogical act, means the students take advantage of what they have learned by using it in the context of their own life-worlds.

These two main aspects of the New London Group's notion of multiple literacies have been taken into consideration when designing the *Bonne Chance* project. Indeed, the game provides students with different types of literacies, including linguistic (through classic grammar games, game vernacular, and conversations), visual (how the game is designed, what Paris and its landmarks look like), and audio (what the language sounds like). In the future, it might also encourage a design process whereby students can further develop the game (either by designing new scenarios or expanding existing ones), using what they learned in class and through gameplay. Thus, they would take an available design, design a new one themselves, which would in turn become a redesigned model for future use.

Because this is not only a standalone game, but can be used in conjunction with regular class time, it can follow the New London Group's theory of pedagogy. The player is a member of a group of classmates all engaged in the process of playing the game. Each student brings different skills to their shared experience (Situated Practice). Some may have advanced linguistic skills while others might have better gaming skills. The language structures present in the game are commensurate with what would be traditionally found in an elementary-level curriculum (Overt Instruction), and game material can be critically examined (Critical Framing) or used in class lessons in relation to students (Transformed Practice).

Pedagogy via Video Games

Games – and video games in particular – are effective learning tools because one of the necessary elements of their success is that they must be good at teaching players to

play the game (Gee, 2005). Gee (2005) outlined thirteen principles that make good video games effective learning tools. He suggested that these principles "could and should be applied to school learning tomorrow, though this is unlikely…" (6). The principles have directly influenced the *Bonne Chance* project as well as other research into how it could affect language learning and teaching, as we will discuss later. They were divided into three traits which they encourage: Empowered Learners, Problem Solving, and Understanding, three aspects of an educational experience that seem desirable.

Under the trait of Empowered Learners, Gee listed the principles of co-design, customization, identity, and manipulation. The principle of co-design means giving the learners agency, where they feel as though they can actively change the learning process, rather than making them feel like passive recipients, as many classes can. Customization can be a part of co-design because it lets the learner adapt the material to suit their wants and needs; since each student has a different learning style, they should be able adopt a learning style suited to their needs. While customization lets learners appropriate the material to fit their current identity, the principle of identity entails that learning should be an invitation to students to develop a new identity based on what they learn. The principle of manipulation describes the use of tools by learners to co-design, customize, and form an identity, and which allow them "much more power over the world being investigated" than they would have without those tools (Gee, 2005, p. 9). In gaming environments, gamers are able to co-design the game by playing it, customize their character and how they reach their goal of winning the game, develop a new identity through the character, and use the character and in-game objects as tools to achieve their

goal.

In future versions, *Bonne Chance* will empower learners in various ways. In the conversation sections, players will be able to choose between several correct and/or incorrect answers. For example, when thanked for their service by a Non-Player Character (NPC) they could choose between four correct forms of "You're welcome" in French, some of which are used in more formal or more informal situations or, in the case of the last one given, is used most often in French Canada. By choosing their responses based on who they want to be in-game, they will co-design and customize the game, while forming a game identity at the same time. The skills they learn in class will become tools they can use to manipulate in-game material which can help them succeed both in-game and in the class.

There are seven principles that foster Problem Solving. None of them stand alone; they all interact with and support each other. Let's examine how they function through a video game as an example: Pikmin. In it, the main character crash lands on an unknown planet and must locate the thirty parts missing from his spaceship in thirty days with the help of creatures he discovers and calls Pikmin. The game opens on an area where the red type of Pikmin and one spaceship part is accessible. The player learns how to control the Pikmin and have them move the part back to the ship. Later, the player can access more areas and discovers more colors of Pikmin. This first area is a *fish tank*, a simplified system of learning, where the player is given a simple system with one or two variables to manipulate so they can understand those before more are added. If the player wants to get more practice without the threat of losing Pikmin or time in the main game, they can

access Challenge Mode from the main screen. Challenge Mode is an example of a *sandbox*, an area or situation that players are exposed to that mimics the real thing minus the risks or consequences associated with it.

In a later area, after the player has discovered the yellow and blue Pikmin, they discover a part that is only accessible using bombs (which only the yellow Pikmin can carry) and by traversing water (which only the blue Pikmin can do). This is an example of both a *well-ordered problem* and a *pleasantly frustrating* one. The problem that needs to be solved (how to get a part to the ship) has become more difficult (how to do it through water), but the players can find a possible solution to that problem (the blue Pikmin). *Well-ordered problems* mean guided problem solving, neither a completely structured problem-solving environment nor a completely unstructured one. It is also a *pleasantly frustrating problem* because it feels difficult but solvable, given the player's capabilities. The principle of *skills as strategies* is at work here as well because rather than mindless repetition of using yellow Pikmin to throw bombs at a gate that opens to nothing, players are able to practice the skill of using yellow Pikmin and bombs as a strategy to accomplish their goal of getting the parts back to the ship.

How the player defeats the enemies is an example of *cycles of expertise*. The smaller enemies are often defeated in a similar manner to the larger ones who drop ship parts. The player can defeat many small enemies for practice, and then be prepared for when they try to defeat the larger ones. In new areas come new kinds of enemies and new kinds of Pikmin to defeat them. When learners are exposed to cycles of expertise they are given information, then "extended practice, tests of mastery of that practice, then a new

challenge" that incorporates what they have already learned with new information (11). As the player drops more and more enemies, they get a higher number of Pikmin. The first time the number of Pikmin in the field would exceed 100, the player is presented with a text saying that the main character has discovered that they cannot have more than 100 Pikmin in the field at one time. This is an example of *information "just in time,"* because the information is not given at the beginning of the game, but when the player actually needs it. There is no example of *information "on demand"* in Pikmin, but this would be if the player was able to look up information in-game when they want to know it. This is contrary to the idea of reading the entire game manual before the game.

The principles that foster Understanding are system thinking and meaning as action image. The principle of system thinking means encouraging students to view what they are learning as part of a bigger system, not as independent and meaningless facts. Meaning as action image means encouraging learners to not only imaging what they learn as part of a s system, but to actually experience what they learn in that system. Good games create a system that the gamer is able to imagine and experience. Hopefully, in *Bonne Chance* and in class, students are able to see what they are learning as part of the system of the actual world. While they are playing in a game that is relatively independent of reality, it still reflects what is in the world. Students can learn that there are people in the history of Paris that have formed the French cultural identity and landmarks that are a part of that as well. Though it is virtual, this game makes Paris come alive in the minds of students as a part of a greater francophone cultural system.

Squire (2011) draws heavily on Gee's work. While he discussed most aspects of

gaming, pedagogy, and participatory culture, here we will consider three main ideas: what makes a good educational game, teaching with games and learning by playing them, and using games in classrooms. Similarly to Gee, Squire posits that good pedagogical games adapt academic knowledge as tools the player must use to reach their goals, immerse learners in a system, and engage players in a critical conversation about the subject matter, and like the New London Group, he believes these games should urge players to change from users to producers. In addition to these ideas, he adds that they should use sophisticated game design techniques, offer multiple ways to reach the same goal, interest the players, encourage social interaction, and inspire creativity. Squire also examined how to put games into a classroom, that is, how to teach with games. The three aspects of good game-based learning environments that Squire outlined are a "deep commitment to interest-driven learning;" having "teachers as coaches, advisors, and producers rather than content dispensers;" and a "dedication to *design* (59)." In his discussion of what kind of learning occurred in an implementation of this idea and the best way to incorporate games into the classroom, Squire calls attention to the fact (1) that many low-achieving students are engaged by learning through video games, but that others were not, and (2) that that which is learned comes from both to the game and the teaching practices used.

Squire then suggested some teaching strategies that can be used to incorporate games. First, the teacher must know the game. This is understandable because teachers should be familiar with the teaching material they use, including games. Next, gameplay motivates students to learn based on what they need for the game and lectures can be

given “just in time.” These two confirm Gee’s principle of “on demand” and “just in time.” Then, Squire discussed the importance of gaming communities. Participating in such a community aids students in understanding “the underlying game model” which means that they were able to become experts on how to play the game and the game material. Finally, the best teaching activities focus on critically examining the game system, like Gee’s principle of system thinking.

In sum, applying principles of gaming to education could transform education and make learning fun at the same time, and this is what we have tried to do with *Bonne Chance*. Games teach players how to play them in a way that is exciting and stimulating; why can any given school subject not be the same? The problem, Gee believed, is that the world of pedagogy would need to consider teaching from a new theoretical perspective to adapt to these principles, and perhaps *Bonne Chance* can be relevant to that.

Foreign Language Pedagogy Through Gaming

Sykes and Reinhardt (2012) outlined five central concepts that parallel digital game design theory and second language acquisition (SLA) research: goal, interaction, feedback, context, and motivation. They began by distinguishing between game-enhanced second and foreign language teaching and learning (L2TL) and game-based L2TL. The former is based on games not created expressly to educate; the latter are games designed intentionally for L2TL which we will be focusing on in this discussion. Game-based L2TL is not superior to game-enhanced L2TL. They simply have different focuses, and neither can cover all material.

The first concept to be discussed is goals. When discussing goal orientation, the

distinction was made between instructor-driven tasks (where the teacher's goal is stressed) and learner- or player-driven tasks (where the learner's goal is stressed). While the former can often ignore learner agency, the latter can lack direction or motivation. Sykes and Reinhardt suggested a balance between these types of tasks. Learning is simply "less effective in implementation if the learners have no agency" (p.24). In a game such as *Bonne Chance* players, while given the ultimate goal of beating the game by the instructor (instructor-driven task), are given the agency to reach that goal by their own means, whether that be in the virtual space, time, or manner (player-driven task). Games that strike the right balance motivate players to continue playing and to do well.

The authors then discussed interaction, specifically gaming interactions and designing interactive games. One gaming interaction they focused on is ideation interactions with games, whereby the students learn by interacting with the linguistic and cultural content of the game. This learning can also be bolstered by explicit classroom activities that focus on content from the game. Both of these ideas will be used in later versions of *Bonne Chance*, through NPCs and direct game interaction and through classroom material and activities.

Sykes and Reinhardt also discussed types of gaming interactivity that can inform L2TL pedagogy: cognitive, functional, explicit, and cultural interactivity. We will discuss the first three here since they occur the most often in *Bonne Chance*. Cognitive interactivity happens in the mind of the player when they see or hear the game; functional interactivity happens when the player interacts physically with the game (e.g. buttons). Explicit interactivity is the back-and-forth between the game and the player. The game

offers choices to the player who reacts accordingly, either by offering more choices, doing nothing, or reverting back to previous choices. The first two types of interactivity are applicable to L2TL because they organize information and appeal to multiple types of learners; the latter is applicable because it develops the learners' agency.

Sykes and Reinhardt addressed feedback, that is, what challenges L2TL faces for feedback, what kind of feedback games offer, and how that could affect L2TL. Some of the challenges to L2TL they discussed are the negative impact on learner motivation that assessments can have, a lack of scaffolding and feedback personalized for each student in a traditional-style classroom, and a lack of reinforcement after feedback. They explored how these challenges could be addressed using game theory. In games, between the beginning tutorials and a final boss battle, there are low-stakes feedback loops where when the player makes a mistake, they are provided with feedback and encouraged to try again. Their failures along the way allow them to learn how to do better in the game. All of this can be directly translated to L2 development where between instruction and assessments, students need to have low-stakes feedback loops.

Good games give individualized feedback to the players exactly when they have need of it: immediately after they make a mistake. "Feedback delivered in this way is meaningful to the player because it is immediately relevant to the task at hand, and the skills learned are critical for moving forward and ultimately reaching the endgame point (60)." This particular type of feedback is practically impossible in a classic classroom because of the number of mistakes made and the ratio of students to instructor(s), which means other forms of instruction are needed if this type of feedback is to be employed. In

addition, as discussed in their chapter on interaction, the learning that occurs in game can be reinforced by class activities.

One of the strengths of games is that they provide a robust context in which gameplay is deployed. As regards language learning, context can have different meanings. For some theorists, context is a byproduct of grammar, meaning that a phrase is only understood through the underlying grammatical rules. For others, the situation and or culture in which a phrase is used gives the phrase context. Contextualizing any L2 learning is necessary but difficult. "A narrative-informed approach has been proposed as an effective way to contextualize L2 learning (77)" whereby students learn about language context through a story. As the players progress through *Bonne Chance*, they play through a narrative that contextualizes the language used.

The context is the element that enables the development of the game narrative. Indeed, games are narratives, through both the narrative in the game (like the story *Bonne Chance* players can work through) and the narratives gamers create in playing the game (the conversational sections). The former is immersive and the latter creates agency, two significant aspects of language learning. Then, discussing how L2TL can be influenced by gaming, they say, "As game-enhanced pedagogical framework, a literacy-focused, narrative approach that recognizes games as both texts and practices is useful" (81), as well as the development of a personal narrative outside of the game, either through reflection or interaction.

Kramsch (1993) discussed narratives and authentic texts as important elements more generally in L2 learning. She first discussed stories and discourses and how

particular meanings are evoked through the six dimensions of particularity as defined by Becker: medial (the medium, which is written language), structural (grammar), interpersonal (the relationship between writer and reader, e.g. personal vs. impersonal), referential (evoking prior text forms; similar to the design process of the New London Group), generic (evoking prior language forms), and silential (what is left unsaid). Through these dimensions, Kramsch invited the reader to discover both the author's voice and the voice of the culture from which the author comes. She said that readers must in response be "ready to engage their own particular response to the text" (129). She also discussed how teachers can help students do just that in class and what learning benefits derive from these tasks: "Students are given access to a world of attitudes and values, collective imaginings and historical frames of reference that constitute the memory of a people or speech community. Thus literature and culture are inseparable" (175). Since students might be unaware of their own culturally acquired attitudes and values, teachers can demonstrate this link by varying some of the dimensions of the texts that are presented to the students including medium, point of view, sequencing of events, audience, referential world of the story, and the voices in the text so that students can discover different aspects of the target culture and critically examine their own responses to them.

Kramsch (1993) also explored authentic texts and contexts. This included discussing the difficulties in defining an authentic text; she discovered four four issues: cultural authenticity (how representative is the text of the target culture?), cultural competence (does authenticity mean always adhering to social conventions?), critical

understanding (should these texts be looked at without critically thinking about the target culture?), and authentic language learning (shouldn't we concern ourselves with authentic language *learning* behavior rather than texts with authentic language?). Because of this last issue, she explored two alternative approaches to authentic language teaching. The first was the communicative proficiency approach which "exposes learners as much as possible to spoken or written texts not written for pedagogical purposes" in the hopes that learners will better understand the target culture and language use (185). The second was the discourse analysis approach in which one approaches a text by looking not only at what the text says but also at how and why the text chooses to say what it does. Kramsch gave the example that French television doesn't show how the French live, but how French television chooses to portray them living. The discourse analysis approach would mean looking critically at how the French portray themselves. In the development of *Bonne Chance,* we selected a wider variety of texts from multiple genres and various historical contexts. The objective was to vary dimensions and enable authentic language learning behaviors. Hopefully in future versions of the game, these texts can be explored in the classroom using the communicative proficiency and discourse analysis approaches to authentic language learning.

The combination of narrative gameplay and mini-games is a way to foster students' motivation, an elusive concept which is the last concept Sykes and Reinhardt discussed. L2 learning motivation can come from a desire to integrate oneself into the target culture and/or from a desire to use the language as a means to another goal. Learners can be motivated intrinsically, extrinsically, or both, and often their motivation

can change over time. Sometimes motivation comes before learning, other times as the result of an activity. There are two aspects of games that Reinhardt and Sykes discussed that encourage motivation in players: engagement (i.e., maintaining the player's attention) and flow (i.e., maintaining the high focus and enjoyment of the player). The combination of both of these aspects, Sykes and Reinhardt suggest, is a way to achieve ideal language learning. Indeed, "learning is optimized when learners have sufficient challenge, clear goals, meaningful feedback, and a sense of agency in a learning activity," and all of these features can be enhanced through gaming (Sykes & Reinhardt, 2012, p. 98). By working with designers versed in game theory, we have tried to incorporate engagement and flow into the user experience of *Bonne Chance*.

One landmark example for L2 pedagogy through mobile gaming is the Holden and Sykes (2013) *Mentira* project. Because this area of research is nascent, this research is simply one example of a language-learning game. Launched in 2009, *Mentira* "is the first mobile, place-based, augmented reality game explicitly oriented towards the development of language skills in Spanish (mentira.org)." Students must play to prove they did not commit a murder and do so by interacting with NPCs and other players and by traveling to a local Hispanic neighborhood to speak with local citizens.

In their paper discussing *Mentira*, Holden and Sykes explored previous work in mobile technologies. While there is some theory on augmented reality and video game pedagogy, the truth is that *Mentira* is the first to truly adapt pedagogical goals in language learning to video games. As discussed in the introduction, many video games and mobile applications focus almost exclusively on the lexico-grammatical competences

of the learner, and are therefore examples of adapting video games to fit existing pedagogy instead of exploring what new pedagogical perspectives games can offer to language learning.

This interpersonal interaction is the most important feature of *Mentira*. The level of interaction afforded by including it in a video game is practically unreachable in a classic classroom. Those citizens with whom students interacted had a vested interest in the history and preservation of the explored neighborhood and in the students' learning as well. Co-creating an experience with real people who are affected by and affect their surroundings by using language is an experience that is both motivating and, as one student put it, "empowering" (Holden & Sykes, 2013, p. 16).

It is also important to acknowledge what *Mentira* does not do. The game was made for fourth semester Spanish classes, and while *Mentira* players did not have to speak solely in Spanish to play the game, communication in Spanish was a necessary aspect of the game. Such an enterprise would be difficult to adapt for beginner level language classrooms since beginners have very limited speaking abilities. One must keep in mind that much like *Bonne Chance*, *Mentira* is in ongoing development. The authors stated that students had ideas about how to improve the game both as a game and as a language learning tool, and that they have taken that into account as they progress from iteration to iteration.

Chapter 3

Materials and Methods

A team of two graduate students in French, a student of math and computer science, and several undergraduate design students was assembled with the help of Dr. Dubreil and Professor Staples to create this game, eventually entitled *Bonne Chance* (French for "Good Luck"). The design students and computer science student were to create user experience, art, graphic design, game development, and code writing, while the French students were to create content and develop the game. This was a two-part project: first the game needed to be created while keeping these goals in mind, then the students needed to be give the game to ascertain if these goals had been reached.

Designing the Game

The *Bonne Chance* project seeks to integrate both the French language and French culture together into one engaging video game for elementary-level French classes. While some parts of this game do concentrates heavily on grammar and vocabulary, the focus has always been on incorporating all aspects of L2 learning. With this goal in mind, we foresaw four key aspects to include in the game: a compelling storyline to include French culture and history, authentic texts to model situated language use, focused practice with vocabulary and grammar concepts covered in class, and conversations in which players are able to choose their responses. Each of the ten levels of the game are situated within the storyline and incorporate at least one conversation, one mini-game, and one text. These are the subjects we will be discussing in this section. While the manifestation of

these aspects changed over time, the core goals remained the same.

The storyline and texts were connected in every step of the project's development. The storyline, evolved, sometimes quite drastically, over the course of the development of the game. We considered basing the game narrative on a French fairy tale which proved too problematic to integrate into they syllabus and too difficult to code. We also considered a storyline in which the player chases an art thief, but this too was changed due to difficulties finding texts and a refined storyline. A variant of this storyline was used in Version 1.0, the one used in this study. Unfortunately, it was impossible to include all aspects of the game as envisioned in time to release it by spring semester of 2016. Since there was so much difficulty finding acceptable texts, no game-related texts were used in- or out-of-game for Version 1.0.

In trying to find a storyline that truly supported the aspects of culture and history, authentic texts, and language learning rather than being independent of them, the development team reached a consensus and elected to include time-travel as a major element of the story. The futuristic technology resolved several difficult plot points; the time travel lends itself to learning about French history and texts. The player is a time policewoman from the year 3015 sent by the DGSE (French version of the CIA) to investigate time anomalies. A text from the Medieval era has been found in 3015, and the player must return the text to the proper time and search for any further texts out of time. Each text focuses on a different time period that the player visits and can be used to teach students about a grammar, vocabulary, and culture. The player must have conversations with historical NPCs (e.g., Gustave Eiffel, Georges Clemenceau, Quasimodo) in each

level in order to find the text and in which they choose between a few correct and incorrect responses. These conversations both use what is being learned in class at the time and incorporate language not used in class with the expectation that exposure to unknown language in a motivating environment will encourage students to learn.

A description of this process is necessary to demonstrate the natural progression of design. Each version has problems, which the subsequent version addresses. Therefore, this time-travel version and any that may follow might result in better scores for all research questions from this study when tested, especially how enjoyable the game is perceived to be. For example, although it would have been ideal to have players produce ad hoc language in conversations with NPCs such as when prompted with a question (e.g. *Quel âge as-tu? – J'ai vingt ans*.), the development process, skills, and budget associated with a completely immersive game is simply unfeasible given our circumstances. Consequently, the option we retained resembles a "choose-your-own-story" book. Ultimately, many of the mini-games in Version 1.0 focus on vocabulary and grammar while the more complex narrative-based part of the game is still under development.

There are ten mini-games in the game, five for French 111, the first semester elementary French course, and five for French 112, the second semester elementary French course, some of which have difficulty levels (SEE Appendix A for screenshots). Though some of them use the same game design, they all use different vocabulary. Many of the mini-games are simple to play. In the first mini-game, students must simply sort French nouns between feminine or masculine. Because this is the very beginning of their

experience learning French, a simple but new concept is used to build confidence. In the third mini-game, they are given the time written out (e.g. *Il est une heure vingt*) and must pick the same time from among four analog clock faces. In the sixth mini-game, they are given increasingly more complex numbers written out, and they must enter the Arabic numerals of the number (e.g. *mille deux cent trois* and *1203*, respectively).

The second, fifth, and tenth mini-games are sentence or phrase structure games in which the student must form a sentence or phrase using the available words, some of which would be incorrect to use given the other words. For example, they are given the words *le, les, marqueur, rose,* and *roses* (singular *the,* plural *the, marker,* singular *pink,* and plural *pink*, respectively). They are given three spaces for words and they must choose the singular *the* and *pink* because *marqueur* is singular. This gives them practice in word placement, subject/verb agreement, and noun/adjective agreement. In the tenth mini-game, another dimension is added where the player creates a dialogue with the sentences and gives them greater practice with direct object pronouns. For example, the first sentence they would create from the given words could be *Tu vends les cerises?* (Do you sell cherries?) followed by another sentence they have to form: *Oui, je les vends* (Yes, I sell them). Students functionally interact with the game when they click on the words to form a sentence or phrase. When students hear and see a sentence that they built, the correct sentence will hopefully be reinforced in their mind through cognitive interactivity.

Our developers were also able to create a few more complex mini-games. Chapters 5 and 6, the material of which is taught at the end of French 112, have a lot of

food related vocabulary, and the eighth mini-game gives students practice with it. They are shown a word (e.g. *citron*) while images of different foods or food related objects (e.g. an image of a lemon) fall down the screen. The object of the game is to catch the image in a grocery cart that correctly matches the word displayed. In the fourth game, they are given a subject pronoun (e.g. *Je*) on the left side of the screen and all the different conjugations of the verb (e.g. *suis, es, est, sommes, êtes, sont*) scroll across the screen towards the subject pronoun. The player must tap the incorrect conjugations to delete them until the correct conjugation (e.g. *suis*) reaches the subject pronoun.

The seventh and ninth mini-games have the same coding but with different content. The students practice forming the passé compose first with *avoir* then *être*. The game is based on Battleship where instead of letters and numbers, the players are given subject pronouns (e.g. *Nous*), an auxiliary verb (e.g. *être* or *avoir*) and verbs (e.g. *manger*). When they pick a spot to attack, they must choose the correctly conjugated auxiliary verb and the correct past participle of the verb (e.g. *mangé*) based on the subject pronoun given. If they choose correctly, then they are able to launch an attack and possibly get a hit. Once they get enough hits, they win the game. The ninth mini-game is slightly more complicated because they must choose a past participle that agrees in gender and number with the subject pronoun.

Throughout the design of the mini-games, efforts were made to align the game mechanics to the language mechanics. For example, when conjugating in the passé composé in French, there are two meaning-bearing elements to take into account: the auxiliary verb and the past participle; thus in the passé composé games, we opted for

game mechanics (battleship) in which the player would have to pay attention to two distinct elements: the X axis (auxiliary) and the Y axis (past participle) to form a grammatically correct phrase and try to hit the opponent's (in this case the game) fleet.

The increasing complexity of the material in the mini-games is reflected in the choice of texts. In order to include French history, culture, and texts, we both focused on important historical eras and places in French and Parisian history and the texts that were products of those times and places and examined how the lexical forms practiced in the mini-games could be applied to the texts. These are summarized in Table 1.

The texts chosen are historically important and simple enough linguistically for students to understand, to a certain extent. *Le ditié de Jeanne d'Arc*, *La malade imaginaire*, the flyer from the 1889 World's Fair, the poster from May '68, the newspaper article, and the poster for the Moulin Rouge are all simple enough for beginner students to understand and can be used in class in order to examine the grammar or vocabulary. For example, the poster from May '68 in Figure 1 is used in level 6; at the beginning of French 112, the students are learning the imperative. The text on the poster reads *Ne soyez pas les moutons* (Don't be sheep) which features the negative imperative of an irregular verb. Other texts like *Le ditié de Jeanne d'Arc* which are longer can be looked at more holistically while still focusing on a particular passage that the students can understand with appropriate scaffolding. These texts can also be used to explore important aspects of French culture in addition to their grammatical features. The poster from the Moulin Rouge not only highlights la Belle Époque, but also the works of Toulouse-Lautrec the famous painter, and the Moulin Rouge itself.

Table 1. Descriptions of the Levels and Texts of Bonne Chance

Level	Year	Place	Item Found	Description of Text or What Happens Next
1	3015	Time Police headquarters	*Le ditié de Jeanne d'Arc*	A text written by a wealthy Italian-French widow in praise of Joan of Arc who had turned the tide of the Hundred Years War
2	1415	Notre Dame cathedral	*La malade imaginaire*	A play written by Molière who critiques 17th century French society through the eyes of a hypochondriac who tries to manage familial relationships, money, and doctors
3	Early 1600's	Gardens of Luxembourg	The Napoleonic Code	A code of laws published in 1804 under Napoleon that unified French law and became the basis for other legal systems
4	Early 1800's	Père Lachaise cemetery	A flyer	A flyer from the 1889 World's Fair that offers a reduction on train ticket prices
5	1889	Eiffel Tower	Imperial Diamond	The player finds that the person moving the texts was a thief after the Imperial Diamond. The thief is sent to time jail, but the time machine malfunctions. The player is knocked out in a jail cell and they do not know where.
6	May 1968	French jail	Flyer from May 1968	A poster protesting the asserted effects of the French capitalist economy of the time
			Treaty of Versailles	The treaty signed by Germany and the Allied Powers that officially ended the First World War
7	June 28th, 1919	Hall of Mirrors at Versailles	A newspaper article	A newspaper article about the building of the Louvre pyramids in 1980
8	1980	The Louvre	Toulouse-Lautrec poster	A poster done by Toulouse-Lautrec advertising La Goulue at the Moulin Rouge
9	1920	Moulin Rouge	WWII diary	A diary written by a French soldier during World War II
10	WWII era	Notre Dame cathedral	N/A	The player finds out that another time agent had been leaving texts out of time so the main character could follow them home.

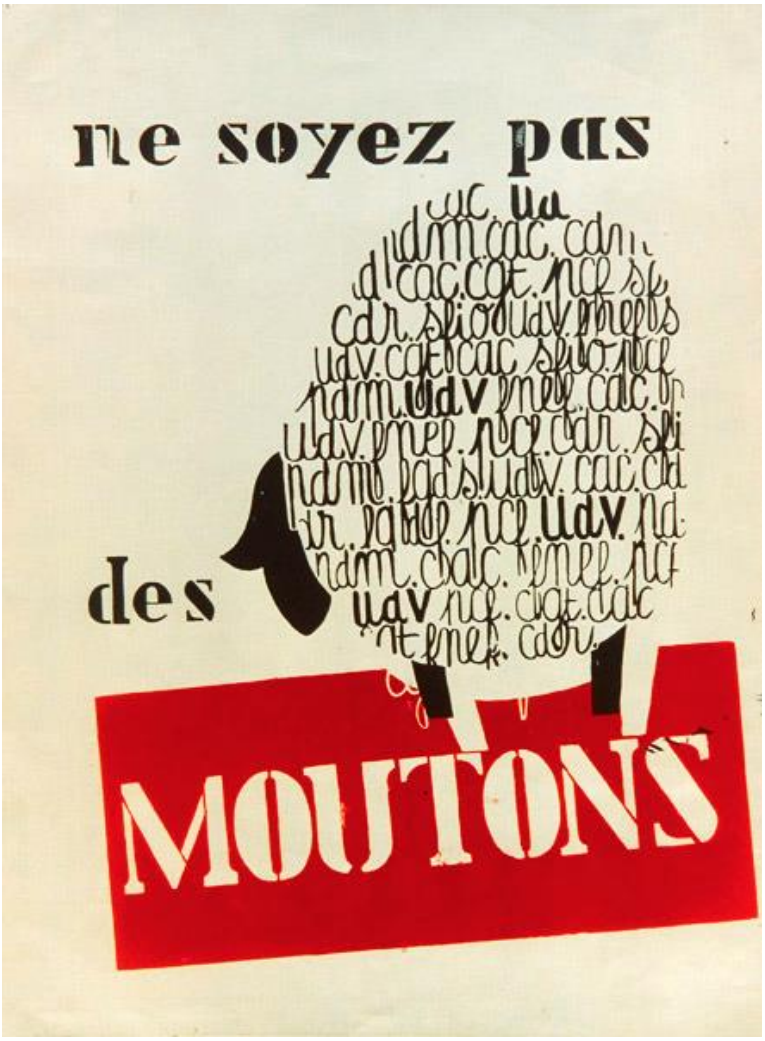


Figure 1 May 1968 Poster

The other texts are historically important more than anything else. The Napoleonic Code, the Treaty of Versailles, and the WWII journal are key documents in French history, and those periods of history – the Napoleonic Era, the end of World War I, and World War II – as well as the importance of France and the French language during those time periods can be topics explored in class. For example, the Treaty of Versailles was written in French because that was the Western diplomatic language since

the 1700's and was a key document in the end of World War I. These texts would be difficult to explore from a lexical point of view in an introductory class. That is not to say that it could not be done, only that it is just as important to focus on their reflection of history and culture.

There are also conversations which exhibit explicit interactivity that are a part of each level and characters with whom these conversations take place. We chose a female for a main character because, in addition to the dearth of video game female main characters, when the students learn French past tense, the conversations can highlight the fact that past participles must agree in gender in some cases. We were also able to include many people of color to showcase Paris's racial diversity over time, and several historical characters like van Gogh to highlight France's cultural importance.

To begin with, the main character, Élodie, speaks with Sébastien, the head of the DGSE in order to receive her mission to put the texts back in place and find out who is responsible for moving them. On her way through time, she speaks with a priest and Quasimodo at Notre Dame; Marie de Medici and Jacques Boyceau the garden designer at the Gardens of Luxembourg; a historian and a groundskeeper at Père Lachaise Cemetery; Vincent van Gogh, Gustave Eiffel, and the thief at the Eiffel Tower; a rioter in jail in May '68; Georges Clemenceau at Versailles; an art critic at the Louvre the second time; Mistinguett the famous dancer at the Moulin Rouge; and a member of the Résistance and a fellow agent during World War II at the Notre Dame cathedral. Hopefully, this list shows the range of characters and significant figures in French history included in the game. For the full text of player-NPC interactions in French and English, see Appendix

B.

The discussions with each character vary in specifics, but in most of them, the goal is to get the character to tell you where a text is. The discussion with Sébastien at the start of the game gives the player general information about the game: you are hired as a time policewoman, and you must find texts and the criminal who has moved them. Each response (out of four) that the player chooses prompts the characters' responses. There are two or three answers each time that further the conversation and one or two answers that result in a conversation loop. In a conversation loop, the character will reply to the answer with another response, but the player is presented with the same four choices as before. This is not to say that the player's responses that prompt a conversation loop are incorrect. For example, when the character is speaking with Jacques Boyceau, the player chooses between:

1. Bref, avez-vous vu un livre?	Anyway, have you seen a book?
2. Avez-vous trouvé quelque chose d'anormal?	Have you found anything abnormal?
3. Je cherche un objet d'une autre époque.	I'm looking for an object from a different time.
4. Quel jour sommes-nous?	What day is it?

The letters A-D here are for reference in the paper; the player does not see them. If they choose D, Boyceau responds "*Nous sommes samedi* (It's Saturday)," and then the player is given the same responses A-D. Choices A-C could follow either Boyceau's previous text or "*Nous sommes samedi*," and if the player chooses one of them, Boyceau tells them that he has a book with him and the conversation continues. The conversation loop here is not pointless because it gives the player practice with the language that they are learning in class at the time and is not necessarily out of place in the conversation because it

expands the setting.

Many of the conversation loop responses follow the progression of vocabulary in the syllabus because students should be able to recognize the vocabulary at that point and do one of two things. In some instances, they should be able to choose that response because they understand what it means, like in the example above, which helps reinforce the vocabulary. They should also be able to rule it out as a response because they might be able to recognize that it will not lead to the goal of finding the text. For example, when asked by Mistinguett where she found a poster, the main character can respond with three regular responses or *Dans un homard* (In a lobster). If the player recognizes the word *homard*, they can eliminate that as a response because it obviously does not help them find the text and choose the response that will advance the conversation (positive reinforcement). If they do not recognize *homard* and choose that response, the conversation does not continue and they will understand at least that the response does not make sense and will hopefully research the word *homard* to avoid misusing the word again (positive punishment). The vocabulary and grammar they learn in class was maximized in all of the conversations, but were easiest to include in conversation loops.

These conversations are also instances where the player can encounter linguistic challenges they might not encounter often in class. When talking with Mistinguett for example, the player is given four choices, three of which are formal, one of which is informal.

A. C'est vous sur cette affiche?	Is this you on this poster? (formal)
B. Je vous rends cette affiche, c'est un dessein de vous?	I'm giving you back this poster, is it a drawing of you? (formal)
C. C'est toi sur cette affiche?	Is this you on this poster? (informal)

D. Savez-vous comment je vais retourner chez moi?	Do you know how I can return home? (formal)

The choice that will continue the conversation is C, the informal one, but if the player chooses A, B, or D, Mistinguett will ask them to be informal (*Oh, ma chérie, tu peux me tutoyer!*). One exchange later, the player is given the following choices:

A. Je vois. As-tu attiré quelque chose d'étrange?	I see. Have you attracted anything odd? (informal)
B. Ouah ! Tu as vu un livre curieuse où une chose semblable?	Wow! Hey have you seen a weird book or flyer or anything? (informal)
C. Oh. Est-ce que vous avez noté quelque chose de bizarre?	Oh. Is there anything odd you've noticed? (formal)
D. Ah, depuis quand?	Oh, since when? (neither)

This is a good example of multiple responses from the NPC and of the player learning about a particular aspect of French language. While A-C are not technically incorrect from a grammatical point of view, in the context of the conversation, C is a poor choice, because the player has already started to be informal with Mistinguett. The player should know not to choose that response, but if they do, Mistinguett repeats her wish to be informal (*Tutoie-moi, ma chérie!*). This hopefully reinforces the difference between using *vous* and *tu (*you formal and informal, respectively), and introduces the use of *tutoyer* (to use *tu*). If the player chooses D, Mistinguett will tell them how long she has been dancing which gives the player more information, but not the information they need. Responses of C and D will prompt the same four choices; only A or B will continue the conversation.

As shown, the conversations, texts, characters, places, and mini-games are all inextricably connected in all of the levels of *Bonne Chance* and focus on the French history, language, and culture, though they have yet to be fully integrated into the actual game. The years, places, texts, mini-games, and characters for all the levels are listed in

Table 2. Many of the theories discussed in Chapter 2 were applied when the plan of how these aspects should be created and integrated was made.

For example, the principles of Gee that help students develop the skill of problem solving have greatly impacted this project. Earlier parts of the mini-games build up to later parts through well-ordered problems. They are pleasantly frustrating, because while a challenge might be achievable, there is still a possibility of failure. By the same token, the consequences of failure are mild and consequently encourage risk taking. Also, in the event of this failure, the player receives immediate positive or negative feedback from the game and can also receive feedback later in class as to why they failed as well as the opportunity to get extended practice. This draws upon the idea of cycles of expertise because the player practices a skill in class and then uses that skill in-game. Learners do receive all the information at the beginning of the class in the form of a textbook, but do not usually access it until they need it in the course of their studies or for their homework. In the same way, players do not receive all the information at the beginning of a game except possibly as a game guide which they do not use until they need it. Both of these principles are at work in *Bonne Chance*; students receive lessons on the information in the textbook as they need it in game. Though there are instructions for each part, there is not an established fish tank area in *Bonne Chance*, which might be an area for improvement. Players are able to go back to other levels without suffering consequences to practice (a sandbox). All these methods to develop skills and areas in which to practice are ways to foster problem solving in players.

Table 2 Description of Bonne Chance Levels

Level	Year	Place	Item(s) Found	Mini-game	Characters
1	3015	Time Police headquarters	*Le ditié de Jeanne d'Arc*	Gendered nouns	Head of the DGSE
2	1415	Notre Dame cathedral	*La malade imaginaire*	Sentence structure (conjugation)	A priest Quasimodo
3	Early 1600's	Gardens of Luxembourg	The Napoleonic Code	Clocks	Marie de Medici Jacques Boyceau
4	Early 1800's	Père Lachaise cemetery	A flyer to the World Fair	Conjugation	Groundskeeper
5	1889	Eiffel Tower	Imperial Diamond	Phrase structure (adjective/noun agreement)	Gustave Eiffel Vincent van Gogh The thief
6	May 1968	French jail	Flyer from May 1968 Treaty of Versailles	Numbers	May '68 protester
7	June 28th, 1919	Hall of Mirrors at Versailles	A newspaper article	Passé composé (*avoir*)	Clemenceau
8	1980	The Louvre	Toulouse-Lautrec poster	Food	Art critic
9	1920	Moulin Rouge	WWII diary	Passé composé (*être*)	Mistinguett
10	WWII era	Notre Dame cathedral	N/A	Sentence structure (direct object pronouns)	Résistance member

In order to better foster agency, the theories of Sykes and Reinhardt and others about feedback were also applied to the project. There is no final assessment in-game in order to avoid negatively impacting learner motivation. The player is also exposed to personalized, low-stakes feedback loops in different areas of *Bonne Chance* which foster agency. In the conversational sections, players are able to choose a response and if they provide an erroneous answer, they are looped back to the original question. In the mini-games, which will be described in greater detail in Chapter 3, if players choose the wrong answer, they receive a red X and must try again until they get it right. Both of these are low-stakes feedback loops which occur immediately after the mistake is made.

It is hopefully evident from this section how the theories discussed previously were always involved in the process of making this project and how all aspects of the project focus on improving both student enjoyment and knowledge of language and culture.

Testing the Game

The next step was to conduct usability testing to assess how well Version 1.0 addressed the research questions and provide data to further guide the future, always iterative development of *Bonne Chance*. To achieve this goal, a test was made to serve as a pre- and post-test. These tests were directly based on game content to better test how well the students learned the material. Seven students from the French 112 classes elected to participate. Five students were sophomores, one was a freshman, and one was a senior. Their majors varied widely. Three students were on the University Exploratory track, meaning they did not have a declared major; other majors included in Business

Administration, Chemistry, English, and Biological Sciences. They were given the pre-test to gauge how much they already knew about the material. The students were then asked to play all 10 mini-games while recording a screen capture video, thereby engaging in a think-aloud protocol designed to provide game developers feedback on game content and user experience. The videos showed the actions on screen and the students' faces and recorded their voices as well. The post-test was then administered to examine whether or not playing the game had affected their ability to perform the given tasks. The tests were graded, and finally, they responded to a survey of four questions:

1. Did you enjoy playing *Bonne Chance*? Why or why not?
2. What was your favorite game and why?
3. What was your least favorite game and why?
4. This game is part of a larger project that includes a story where you as a player would be chasing a villain who stole cultural artefacts and misplaced them in various time periods in Paris. With the help of a time travel device fueled by French grammar (what you have just played), you will get to visit some of the major landmarks of Paris and meet some of her most famous historical figures and interact with them. To what extent is this a way you would enjoy learning French? Briefly explain.

Chapter 4

Results and Discussion

Quantitative Data

In this section, it is shown that *Bonne Chance* was beneficial to students' knowledge because the students performed better on the post-test than pre-test and no instruction (like class time or homework exercises) was given other than gameplay. In order to assess the effectiveness of gameplay to foster L2 learning, a paired sample t-test was conducted. Students scored significantly higher on the post-test than they did on the pre-test ($p = .006$). This means that playing the game significantly improved students' overall knowledge of the lexico-grammatical features presented in the ten mini-games of *Bonne Chance* that they played.

The per-course results of the pre- and post-tests are shown below in Table 3. The pre- and post-test scores of students were averaged for each class and the difference between post- and pre-scores calculated to show the amount of improvement for each class. From the data, it is apparent that in aggregate, the mini-games are effective at improving students' linguistic and grammatical competencies. The average pre- and post-test scores for mini-games involving material from French 112 were lower than those involving material from French 111.

Table 3. Average Scores for French 111 and 112

	Average Pre-Test Score	Average Post-Test Score
French 111	78.6	90.6
French 112	68.3	81.0

Bonne Chance was played at a specific point in the students' learning process, and these results can therefore be examined from the perspective of how much the students had learned at that point in time. The material covered in mini-games 1-6 and 8 had already been covered in class either in French 111 or French 112. The passé composé, the grammar concept covered in mini-game 7, had only been covered in one class period, so the students were familiar with it when they played the game, but had not had extended practice with it. The material in mini-games 9 and 10 had not been covered in class or in the homework.

It is unsurprising that students scored better overall on the pre- and post-test sections dealing with French 111 material because they had already learned much of that information, while they were largely unfamiliar how to do of three of the exercises with material from French 112. It is also unsurprising that they improved marginally more with the material from French 112. The less one knows, the more one can learn.

Table 4. Average Pre- and Post-Test Scores

		Average Pre-Test Score (%)	Average Post-Test Score (%)	Average % Δ	Average % Improvement
French 111	Mini-game 1	87.14	92.86	107	6.6
	Mini-game 2	75.75	85.71	113	13.2
	Mini-game 3	87.14	92.86	107	6.6
	Mini-game 4	85.71	93.88	110	9.5
	Mini-game 5	57.14	87.50	153	53.1
French 112	Mini-game 6	90.48	98.81	109	9.2
	Mini-game 7	80.00	88.57	111	10.7
	Mini-game 8	97.96	93.88	96	-4.2
	Mini-game 9	61.22	83.67	137	36.7
	Mini-game 10	11.69	40.26	344	244.4

Also of interest is the performance of each mini-game because it may be that aspects of the mini-games lead to greater or lesser improvement. To help provide insight into individual mini-game performance, the average pre- and post-test scores, average percent change, and average percent improvements for each mini-game were calculated and shown above in Table 4. The data show that there is a fairly broad range of improvement across the different games. One was as low as -4.2%, one yielded over 244% improvement and those in the middle seem to be grouped into a couple of clusters. To better visualize the groupings, the Average % Improvements were sorted and graphed in Figure 2, below.

Then a scatter graph with a line of best fit was created to show the relationship between the students' scores from their pre-tests and their percent improvement. Figure 3 shows this data below. The relationship between the pre-test scores and percent improvement was negative. Finally, a histogram of the improvements was generated to reveal the different categories of improvements. This data is shown below in Figure 4. Among other things, it shows that 60% of the mini-games lead to improvements of up to 35%.

Of particular interest are the games that showed a decrease and extreme increase in improvement. As shown in Figure 2 above, the most significant improvement, of almost 250%, occurred after playing mini-game ten. This game covered material with which the students were the least familiar. It was a sentence structure game involving direct object pronouns. Most likely because the placement in a sentence of these are different in English than in French, many students made mistakes on the pre-test even

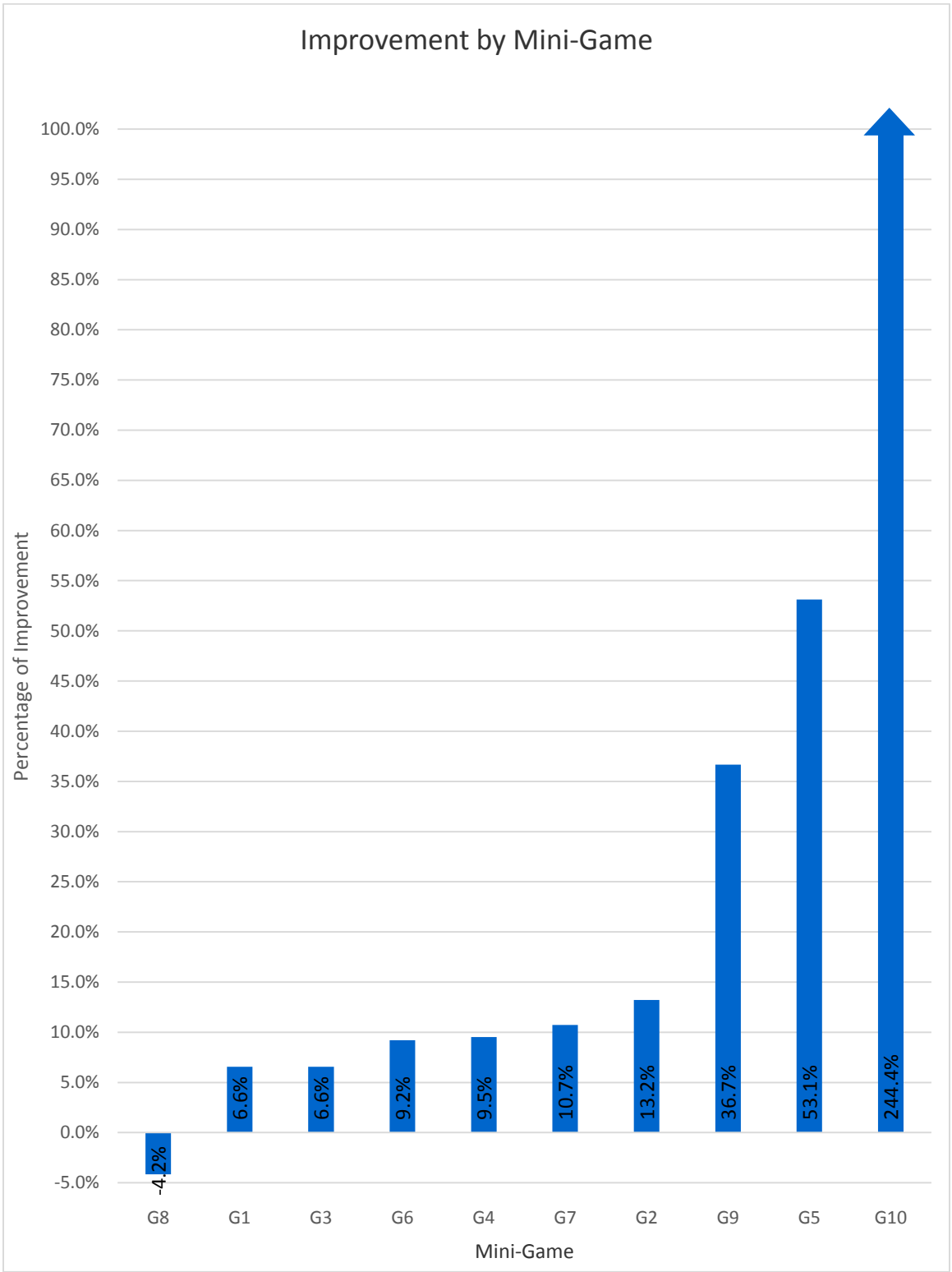


Figure 2 Improvement by Mini-Game

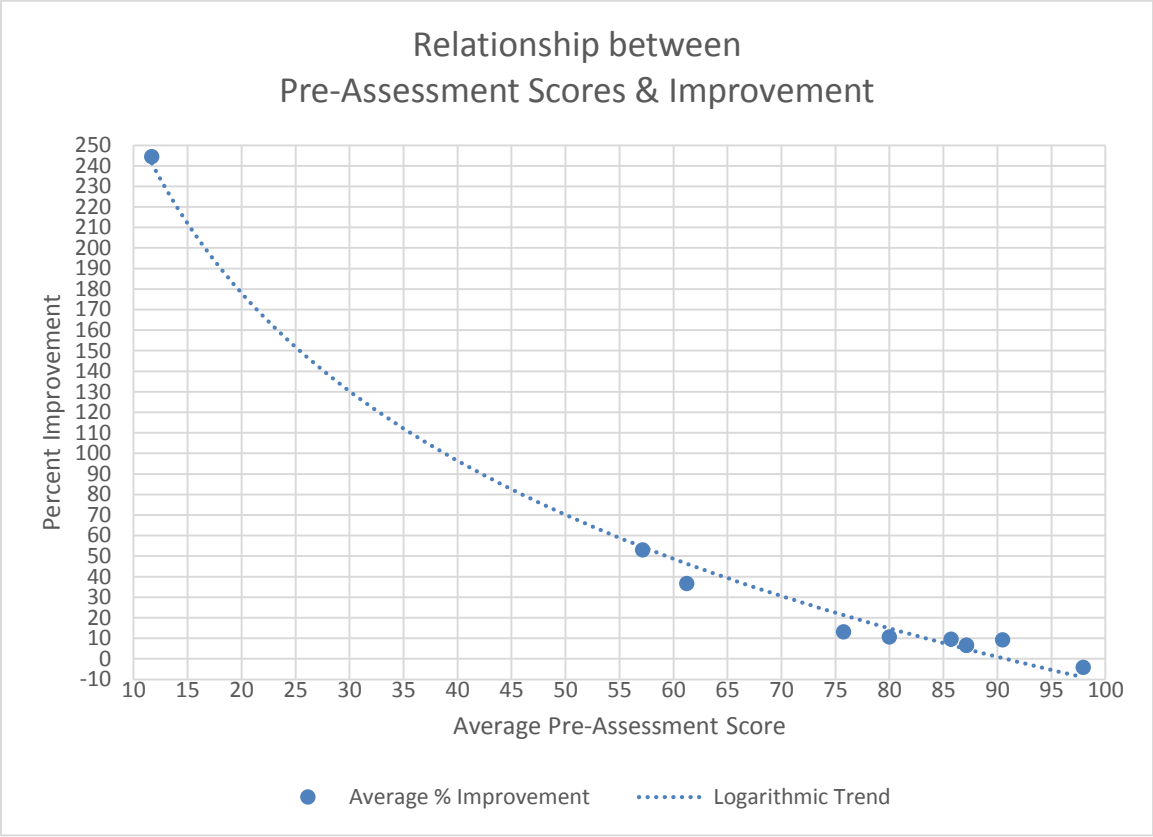


Figure 3 Average % Improvement and Average Pre-test Score Relationship

with two-word sentences. The most common correct sentences for mini-game ten on the post-test were two- to four-word sentences. No student was able to form sentences with direct object pronouns with more than seven words on the pre- or post-tests.

More material was put on the tests than were in some of the mini-games. For example, mini-game ten only had the students create three sentences, while on the tests, they were given eleven sentences to create. Four of the seven students correctly formed zero or one sentence(s) on their pre-test, but correctly formed five to six sentences on their post-test. The fact that students were able to form more sentences on the section of the post-test for the mini-game than were in it may show that students were not only able

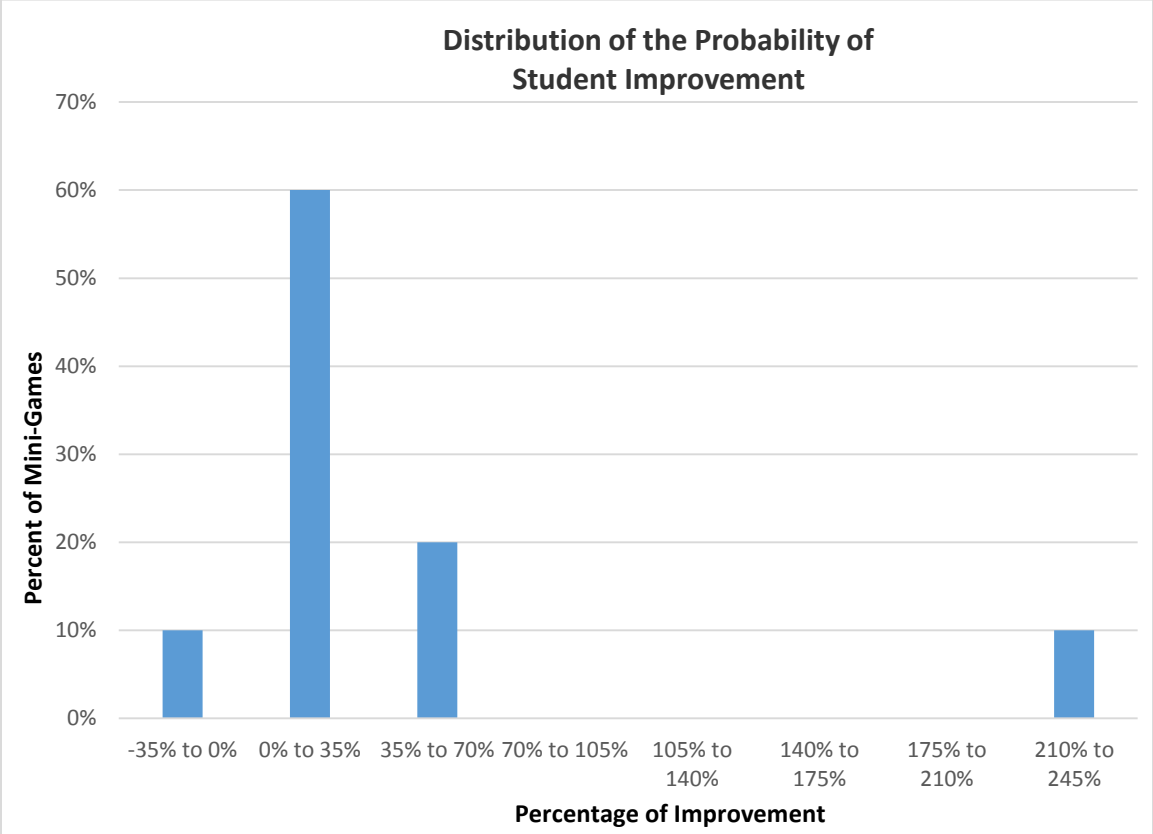


Figure 4 Distribution of the Probability of Student Improvement

to learn directly from the game, but also extrapolate what they learned and apply it to other examples. Similar games might be able to be used as an introductory activity to the material, where the students could learn from the activity, then come to class to discuss and practice what they have learned

The next most significant increase was for mini-game five, the phrase structure game involving adjectives, which showed about a 50% increase. The mistakes made in the pre-test were both misplacing the adjectives or picking the incorrect form of the adjective to agree with the noun. Mini-game nine showed a roughly 37% increase. This

shows that mini-games seven and nine adequately incorporated the principles of the fish tank and cycles of expertise. Because the material in mini-game nine was very similar to that of mini-game seven and students were already familiar with the *avoir* form of the passé composé, they only needed to make small assumptions (and be given feedback on those) to learn about how to form the passé composé using *être*. Mini-game seven was a fish tank where students were given extended practice with one form of the passé composé, then a new aspect was introduced in mini-game nine and they were given extended practice with that.

In all but one case, each mini-game improved students' competencies. In this exception, that of mini-game 8, average competency did decrease. Five of the seven students maintained their previous competency after playing mini-game eight, while two missed one question more on the post-test than on the pre-test. It is interesting to note that mini-games ten and five showed the lowest pre-test scores, 11.69% and 57.14% respectively, while students scored the highest on the pre-test for mini-game 8 (97.96%). Overall, the worse students scored on the pre-test, the higher their percent improvement was.

Figure 4 shows the distribution of the probability of student improvement, meaning that the percentages of improvement were grouped into ranges. Although more research would be required, this shows that this approach leads to moderate improvements (in the range from about 7% to 13%) 60% of the time and to significant improvements (in the range from <35% to 70%) 20% of the time. This means that as a whole the mini-games are moderately effective at improving students' linguistic and

grammatical competencies.

The idea that the less one knows, the more one can learn is also true when applied to the differences between the mini-games, as seen in Figures 3 and 4. This especially the case with the material from mini-game five, nine, and to an even greater extent, ten. Because students were unfamiliar with the material in mini-game five and had not been introduced to the material in mini-games nine and ten before they played, they were able to learn an appreciable amount through gameplay. Likewise, it's possible that students will experience negative returns with this game based on the date from mini-game eight. That is, because they already had such high knowledge of food vocabulary, perhaps more practice only caused them to lose a small percentage of what they knew.

Qualitative Data

Qualitative data was also drawn from the students' reaction videos and a short survey completed after the post-test. The videos captured the students' explicit interactivity with the game. It is this interactivity through which the mini-games were able to develop learner agency. Other methods to do this that we discussed were the principle of co-design, learner-driven tasks, and narratives that gamers create or co-create. These were developed by way of other materials of *Bonne Chance* that were not included in the version used for this study.

Some videos contained little reactions; others were very detailed. Students reacted to both the design and content of the mini-games. Many students also commented on how they learned through playing. For example, one student said of the first mini-game,

Okay, so that's pretty cool that it speaks the word so that you're not only learning

> the gender, but you're learning how to say it and how to spell it. So that's a good way to practice this. It's a really easy concept to follow. There's nothing confusing or difficult about this game which is good, especially for the first one.

They not only interpreted how the game helps the player learn various aspects of this particular linguistic form, but also comments on how the how the complexity of the mini-game suits its place in the overall game. Another student commented on mini-game 2 after correctly entering the sentence and seeing and hearing the correct sentence "Oh, that's pretty cool too! Because it also tells you the sentence…The voice at the end of the sentence is really, really nice; helps you with pronunciation for sure." In these instances, students actively noticed the pedagogical choices that were elements of the game, and acknowledged their efficacy.

In other instances, they played the mini-games by trial-and-error. In mini-game 3, one student mistook *deux heures et demie* (2:30) for 10:30. When they saw that there was not an option given for 10:30, they realized it was 2:30 and said that they "get ten and two mixed up." When *dix-huit heures et demie* (6:30 in the evening) showed up, they correctly identified *dix* as ten, but clicked on 11:00. They realized and said, "Whoops, that is 11:00 not 10:30." They then looked back at the text, realized, "Oh, it's 18, so that would actually be 6:30," and clicked on the correct clock face. Another student playing the sixth mini-game was given given *quatre* (4) and entered fourteen. When they realized they had gotten it wrong, they said, "No, wait, is that four?" and correctly entered four. Later they were given *quarante* (40) and made the same mistake, first entering fourteen, then forty. The next number was *quatorze* (14), which the student immediately

recognized and entered as fourteen. Both students believed an incorrect answer to be correct and realized that it was incorrect by entering it and receiving negative feedback. They then determined the correct answer, entered it, and received positive feedback. No students showed signs of being upset by or quit a mini-game because of the feedback (the consequences of failure), like the red X's.

Low stakes feedback was one of the main aspects of the mini-games stressed during development. When the students made a mistake, they were provided with mild negative feedback and presented with the same problem to solve. Their failures along the way allowed them to learn what the correct answer was and better play the game. Players liked or at the very least did not overtly dislike that the consequences when they failed were mild, and they were able to get more practice and learn more as a result. This feedback is also a part of cycles of expertise within and between the mini-games.

Many of the students experienced difficulty with mini-game four because of how difficult it was to both remember the correct conjugation and click on the incorrect ones in time. As one student said, "I'm just clicking things. I don't- I didn't even look at them, I'm just- I'm so worried about clicking on them that I'm not even looking at them." Then the student slowly improved and began clicking the wrong answers in time. They ware reluctant to play difficulty level two, making a face and saying, "Uhh, difficulty 2. Uhh, like, ahhhh, I'm willing to do it for *five* minutes." In the middle of playing through difficulty level two, they said, "I will not do difficulty three; I'm so sorry," but improved soon afterwards, saying with a smile "I'm starting to figure it out." They even decided to play difficulty three, though eventually realized that it had glitches and quit.

Glitches appeared often and in many instances were mentioned aloud by the students. The student mentioned above playing mini-game four noticed the glitch in difficulty three because they knew that *es* was the correct conjugation for the subject pronoun *tu* and the verb *être*. When *es* passed by *tu* but was not shown to be a correct on the screen, the student correctly identified it as a glitch and not as negative feedback. In another example, At the end of mini-game five, a glitch caused the word *musicien* to appear as five different options instead of once paired with two forms of an article and two forms of an adjective. Students were unable to win in this state since they could not enter the correct phrase. One student solved this problem aloud, saying, "Okay, this is all the same word. I don't know what it wants... Umm, *musicien*, they're all spelled the same. Can't really form a phrase out of this. So maybe this is a glitch or a mess up." Though in the second example it is fairly clear that there is a problem with the game, interestingly, the students often able to tell when they had made a mistake and were getting negative feedback versus when there was a problem with the mini-game. Even so, instructional technology is most effective when it does not hinder learning (e.g., because of glitches) but rather seamlessly and invisibly enhances the learning process. When this is not the case, learning is inhibited.

All students, even those that gave little feedback overall, gave suggestions for improvements to the game. Many students commented that mini-game four would be easier with a mouse or a touch screen. Others suggested making mini-games seven and nine clearer. While they understood how to play, some failed to understand they were playing a version of Battleship. Even the student that spoke the least proposed a skip

button for mini-games two and five.

After playing the game and taking the tests, students finally took the four-question survey. All students reported enjoying playing the game. As one student stated

> I liked it so much because you had to be actually engaged in the game to do well, and the game was encouraging as well because it allowed you to have many retries. In addition, the format of each was different as well, increasing the variety; hence, it increased my attention and focus on each of the games. And I also learned a lot as well. I think *Bonne Chance* is really great tool to help students learn the French language in the format of a game that isn't intimidating.

One student did caution that making such a game enjoyable would "hinge on interesting script." The only complaints they gave were about how many glitches there were, as well as one student who found taking videos and playing at the same time to be difficult, though they understood the importance of it.

To the second question of the survey, five students responded that playing mini-game eight was particularly enjoyable, one saying, "This felt more like playing a game than some of the other mini-games, and it helped me learn the foods and kept me engaged," which was a sentiment the others echoed. It is interesting to note that mini-game eight (that caused negative to no improvement) was the most common favorite. This is more likely due to the style of the mini-game; because a couple of students said that it felt like more of a game than the others, they were able to enjoy it more. It remains to be seen if there is a causal relation between the enjoyability of this mini-game and its effectiveness. A couple students reported liking mini-game six as well "because it was

easy." Particularly encouraging was one student's response to a sentence structure game (it is unclear which). They described it saying "My favorite [mini-]game to play was constructing the sentences because it was basically like an online worksheet except it was enjoyable and helpful…" Mini-game three was one student's favorite because telling time in French is one of their weaker points and allowed them to practice and better understand it.

The theory and design of the mini-games is also one of the reasons behind how much particular mini-games were liked or disliked. The example in Chapter 4 of the student from mini-game four shows that this mini-game was pleasantly frustrating; while the student did experience difficulties, they still decided to continue playing the game. This game, as well as mini-game eight which was the most popular, employed skills as strategies as well. The students were not simply practicing their verb conjugation or vocabulary knowledge in these mini-games, they were using this knowledge in order to play the mini-games. Another reason the students particularly liked some mini-games over others was how different they were from book exercises which tend to foster skills as skills, not skills as strategies.

Many students said in the survey that they liked a particular mini-game because it was fun, or as quoted before "you had to be actually engaged in the game to do well." Perhaps two of the concepts in the most enjoyed mini-games are flow and engagement, which lead to player motivation just as Sykes and Reinhardt discussed. The students had a desire to use the language as a means to another goal, that of winning a mini-game, and it is from this desire that their learning motivation came. One even liked the mini-games

due to its pedagogical purpose. This is most likely due to an intrinsic motivation to learn, but it is important to note that the mini-game executed its pedagogical purpose. If it had not helped the student learn, he would not have enjoyed it.

The mini-games the students listed as being their least favorite varied widely. It is intriguing to note that while many students preferred mini-game eight, one student reported it as their least favorite because of difficulties with the interface. Mini-game three was two students' least favorite because as one stated, though "it was a good game and it helped us visualize the times but towards the end of [difficulty] three, there were way too many questions and they were even repeating." Based on this, it seems that difficulty level three of mini-game three was not completely refined. Two students reported mini-games six and nine as their least favorite. Both students reported disliking them because the gameplay was unclear. However, one student reported not liking it because it was "really hard," while the other said "I didn't like these games because they were really easy once you understood it. All of the answers were in the same order so you didn't really have to think about what you were doing..." Another student did not like playing mini-game four because they were "clicking on the incorrect conjugations and it wasn't working" because it had glitches. One student listed game ten as their least favorite, not because they did not like it, but because they "wished it would've been longer."

The main reason students disliked many of the mini-games was due to poor game design. Because *Bonne Chance* is supposed to be fully integrated into a syllabus, it should be incorporated into circles of expertise, taking the role of extended practice. The

third difficulty level of mini-game three as well as all of mini-game ten did not give enough extended practice with the material. Mini-games seven and nine both had feedback that was unclear to students. Another reason behind why students disliked some games was because of too many glitches; these distract students from playing because it causes the game to be unpleasantly frustrating. They were often able to perceive the difference between a mistake and a glitch either due to visual cues or because they were familiar enough with the material already to be confident in the distinction they made.

As Sykes and Reinhardt said, "learning is optimized when learners have sufficient challenge, clear goals, meaningful feedback, and a sense of agency in a learning activity." In addition to how well they learned, students tended to like or dislike a game based on how well it adhered to these. Mini-game seven for example was not a sufficient challenge because the answers were always in the same order, had unclear goals because the point of the game (Battleship) was not explicitly stated, and gave ambiguous feedback, all of which lead to a lack of a sense of agency in the activity. This mini-game was also not pleasantly frustrating because the students reported that it was either too easy or too hard to play. Other mini-games had similar complications and can therefore be improved to better follow these theories; these improvements are discussed later in this chapter.

All students responded positively as to whether they would enjoy playing a version of *Bonne Chance* with a storyline, landmarks, and historical characters, and many of them did so enthusiastically. As one student stated,

> Overall, I enjoyed playing *Bonne Chance* as it was, so adding a story line and more aspects to it would the make the game even more interesting. That sounds

> like a really good way to learn French, rather than just answering questions from a book. It also is a great way to learn about France with its landmarks and historical figures. That would be a deeper learning of France and its language than the normal class.

This student and others intuitively understood what makes *Bonne Chance* stand out from other language learning applications and how that can better help them learn French and enjoy doing so.

Based on the qualitative data from this study, students enjoyed playing *Bonne Chance* and would enjoy an extended version including the conversations, places, and storyline. It is already known that students' knowledge largely improved, but by acknowledging the pedagogical choices that were key aspects of the mini-games and by going through the games with trial-and-error, the students' learning process becomes discernible. Not only did they learn, but they were aware of what they were learning due to the theory and design behind the mini-games.

Improvements for Bonne Chance based on Data

Based on these data and looking ahead for this project, it is clear that new and iterative versions of *Bonne Chance* should be created. As it is now, *Bonne Chance* is the rough equivalent of Duolingo. The version of *Bonne Chance* used in this study, despite the best of intentions, is imperfect from linguistic, cultural, game design, visual design, user experience (UX) and coding standpoints, as shown in part by the qualitative feedback from both the videos and the survey. When these improvements are made, student feedback from the videos and survey as well as glitches encountered during

gameplay should be examined in greater detail because they can pinpoint the greatest shortcomings. Not all of the suggestions were feasible either from a coding or pedagogical standpoint, however. Implementing the suggestion of a skip button for example would allow students to skip sentences and phrases they are ignorant of how to form and they would be thus less likely to learn how to do so.

For instance, in the sentence structure game, one of the sentences had been entered incorrectly, which is noticeable when playing the game. We had corrected it for when the mini-game entered the information (that is, they entered all the right parts of speech in the correct order to create a sentence), but overlooked changing the full sentence written out that shows up after they correctly enter it and the audio that pops up afterwards. From a cultural standpoint, this version is definitely not well rounded enough. Obviously, the material for it was prepared to be included, but it was not. This means that in future iterations, including more cultural material will not be difficult since the plan and material to do so is already in place.

One example of an area of improvement in the UX is the transition between games. In this version, when the game is launched, the player sees a welcome screen, then a map of Paris with icons of major landmarks like the Louvre. Underneath these icons is written Game 1, Game 2, and so on. Once the player clicks on one of these icons, they are lead directly to the game with instructions but no other information about the landmark. This means the mini-games seem more like standalone games than part of a larger and more cohesive game. This is also a problem from a cultural standpoint; the landmarks are definitely a part of Parisian culture that we wanted to include. Not even

the names of the landmarks are included in this version, which should be an easy fix in the next generation. Looking deeper into students' reactions to the game also might help improve the game to better suit the demographic of students actually playing it. For the visual design of the game, the assets (images, written words, backgrounds, sprites, characters, etc.) do look good as they are but could be improved so that they all have the same aesthetic feel. Many of the improvements that need to be made to the mini-game designs were mentioned by the students either in the reaction videos or in the survey. Mini-games seven and nine, for example, should be upgraded to include more explicit directions and student feedback.

From a coding standpoint, there are some glitches that occur when playing the mini-games. In some mini-games, when a green check mark or red X shows up as feedback for the student (correct or incorrect, respectively), sometimes it does not go away even when the student moves on to the next problem, though new feedback checks or X's show up overlaid the other. In the tenth game, there is also a problem where the sentence they are given (the text that the other "person" sent them) does not go away. When the player enters the correct sentence and receives a new one, the new one is displayed over the old sentence that did not go away; it is therefore practically impossible to read and does not situate the language in a conversation. This is not only a coding problem, but also a linguistic one because the students miss out on situating the language in one proper context. Future teams could also streamline the amount of gameplay and progression. For gameplay, some mini-games take longer to play than others because of the amount of content. In making the mini0games, we made a best-guess estimate on

how much content should be included in each game to give students enough, but not too much, practice. With the current data, a better estimate can be made of how much content to include in each mini-game. For progression, the problem in the current game is that all the content is available as soon as you open the application. It would be better if, as the students played the game, more content became available. For example, on the main map of Paris, the player can click on any landmark, which gives them access to any mini-game. In future games, only the first landmark/mini-game should be accessible at first, and as the player plays through the mini-games and conversations, the landmarks should become accessible one by one.

There is also the disparity between what we foresaw for the project and what our final project was. The texts, conversations, and storyline are all missing from Version 1.0, which are the main reasons why it stands apart from other language learning applications and software. The next step for *Bonne Chance* should be to include all of these aspects as soon as possible. Future design teams will have to integrate these aspects and still raise the bar for linguistic, cultural, design, UX, and coding quality as suggested. We also wanted this to be a phone application, so students could play when and where they want to. Unfortunately, as previously stated, we only ended up with a version available for download on Apple computers. The other issue is that we imagined a game integrated with the French 111 and 112 syllabi instead of being played all at one time like they did for this study. Each level (meaning one mini-game, at least one conversation, and one text) focused at least in part on linguistic aspects that followed the syllabi. If integrated correctly, all the students would play the level that corresponded to the class

material of the time. For instance, the last grammar section of 112 goes over direct object pronouns, which the tenth mini-game also deals with. Ideally, students would have played all the other mini-games by this point in the semester and play the tenth mini-game while they are learning about direct object pronouns in class.

Overall, student feedback should be the first area future developers look for improvements. Clearly there are many areas of development for *Bonne Chance*, but this is to be expected because of the iterative nature of game design. The version used for this study was an examination of what we as developers had prepared at that point in time.

Chapter 5

Conclusions and Recommendations

Conclusions

This study examined the concept of game-based L2 learning and has identified to what extent such a style of learning can be beneficial to students. Additionally, the extent to which students enjoyed playing such a game was explored. The general theoretical literature on this subject is nascent, and while some studies have been done on this subject, questions still remain about different ways to develop such games and the extent to which they can help and be enjoyed by students. This study sought to answer these questions:

1. Do the students' understanding of the French language improve by playing *Bonne Chance*?
2. What are students' perspectives on the experience of playing the game?

The first question was answered by analyzing the quantitative data and the second question was addressed by examining the qualitative data. Because the students improved between the pre- and post-tests for all but one game, and considerably improved for three, it is evident that they were able to learn a substantial amount through gameplay. Moreover, they extrapolated what they learned and applied it to other instances of language use. Thus, not only did students' knowledge of the French language improve by playing *Bonne Chance*, their ability to apply that knowledge (their understanding) also improved. In the instances when it did not improve or only improved a small amount, analysis of video & survey data provided insight into the reasons why.

The survey also revealed that, overall, the students enjoyed the game. The students particularly enjoyed a mini-game when it was well designed (using the theories discussed in Chapter 2) and well executed. When they did not, it was not because the theory was unsound, but because either the theory was poorly applied or the mini-game's execution was lacking (i.e., glitches). While there has been work done that supports the idea that a game can be used to improve students' understanding of an L2 in a way that is enjoyable, it is still a nascent area of research, and *Bonne Chance* has approached it in a new way. For example, while there is overlap between how other games and applications aid L2 learning, they each have their own specific characteristics that differentiate them. Duolingo is a standalone game, while *Mentira* relies on real-life interactions. On the other hand, Duolingo lacks cultural depth, and *Mentira* uses interpersonal interactions as a way to incorporate that. *Bonne Chance* however, as a fully developed game, could be standalone while still incorporating interaction and cultural depth. This project offers an alternative method to enrich students' learning experience.

Suggestions for Future Research

Having such a game could mean much for L2 learning in the future. Such a game could be used to augment or potentially supplant existing online homework. This type of homework already takes advantage of technology in order to precipitate homework completion and feedback, but projects like this one would add more enjoyable elements to achieve the same end. Integrating a similar project into a syllabus would mean fostering understanding, both through system thinking and meaning as action image. All aspects of the class (e.g. texts, material, the game, in-class activities, etc.) would interact

with each other in multiple ways to show students that they are not learning simple facts, but that their facts are part of a larger system. This system is not only the system of the class, but of the world, which they can experience in the game through virtually visiting places and times. They can also experience what they learn in those systems because they are a part of them.

This game and others like it could also serve as an introduction to L2 learning for learners outside of a university setting. Because it is a standalone game, it could conceivably be played anywhere by anyone. Although this particular game gives some directions in English, it would be easily adaptable for any language since the majority of the game is in French. In addition, other games might be made primarily for native speakers of a language other than English. The implementation of either of these ideas would make it possible for these projects to reach a wider audience. Using such a game as an introduction outside of a university is also an exciting prospect because learners may have no knowledge at all of a particular language. It is already shown in this study how much students can learn through gameplay when they do not have much knowledge on a given aspect of a language, and if the players of these games know nothing, they have everything to learn. *Bonne Chance* would offer these learners something other than what is currently available to them through applications like Duolingo.

Other projects similar to *Bonne Chance* can learn from the successes and weaknesses of the project. A similar process of design should be applied to other foreign languages and in new ways to the French language in order to further explore its effectiveness. There are three main areas of for future research to consider. It has been

learned that games are enjoyable and can aid students in L2 learning if they are correctly designed using contemporary pedagogical theory, but can be unsuccessful if the latter is not used effectively. Thus, future projects must effectively incorporate the theories addressed in Chapter 2.

With a broader corpus of L2 pedagogical video games should also come more rigorous and broader testing of those games. This project was small-scale; future research could show even more encouraging results. It might also broaden to include how such projects can teach students about the L2's culture and history or how much it improves their interpersonal communication skills.

They should also consider the major constraint encountered with this project: a lack of time. This entire project from conception to implementation was completed in less than a year and a half mostly by students. The students that coded learned how to do so in less than a year, and all the students, graduate and undergraduate, as well as the professors overseeing the project had other time commitments. In sum, though it could not have been known at the outset, this type of project is better suited to a doctoral dissertation or professional project in order to allow more time for iterative development.

List of References

Gee, J. P. (2005). Learning by Design: Good video games as learning machines. *Elea E-Learning, 2*(1), 5.

Holden, C. L., & Sykes, J. M. (2011). Leveraging Mobile Games for Place-Based Language Learning. *International Journal of Game-Based Learning (IJGBL), 1*(2), 1-18. doi:10.4018/ijgbl.2011040101

Holden, C., & Sykes, J. (2011). Overview. Retrieved from http://www.mentira.org/

Kramsch, C. J. (1993). *Context and culture in language teaching*. Oxford: Oxford University Press.

New London Group (1996). A Pedagogy of Multiliteracies: Designing Social Futures. *Harvard Educational Review, 66*(1), 60-93.

Ogden, C. K., & Richards, I. A. (1923). *The meaning of meaning: A study of the influence of language upon thought and of the science of symbolism*. New York: Harcourt, Brace, & World.

Sykes, J. M., & Reinhardt, J. (2012). *Language at play: Digital games in second and foreign language teaching and learning*. Prentice Hall.

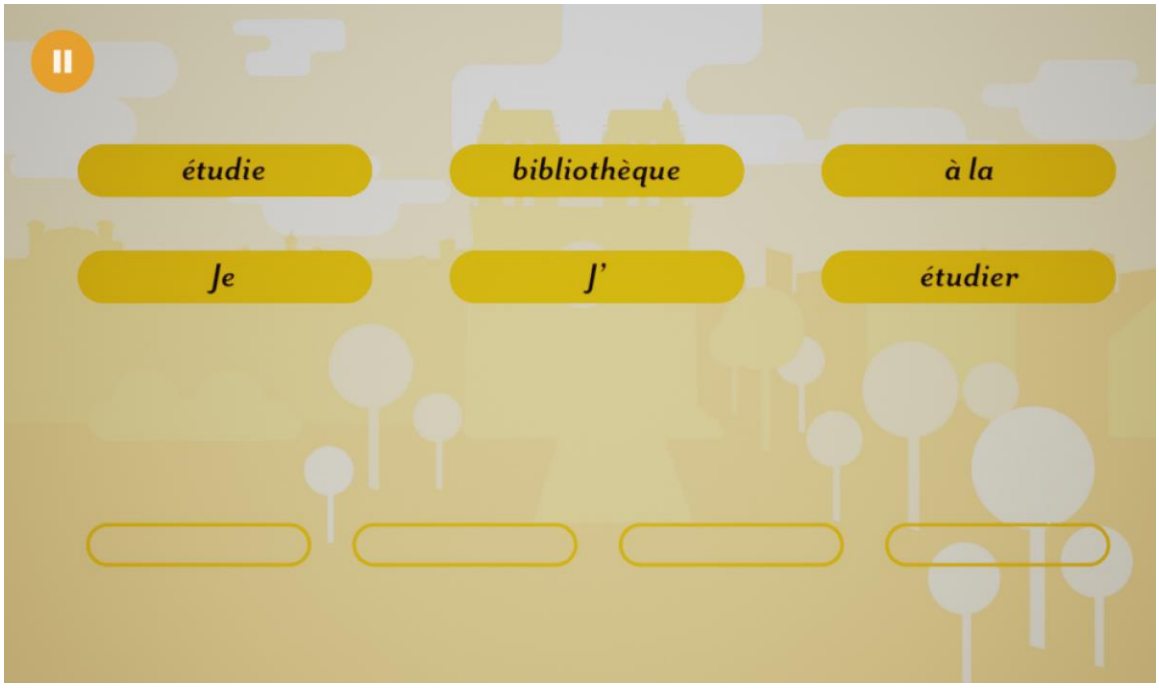
Appendices

Appendix A

Game 1



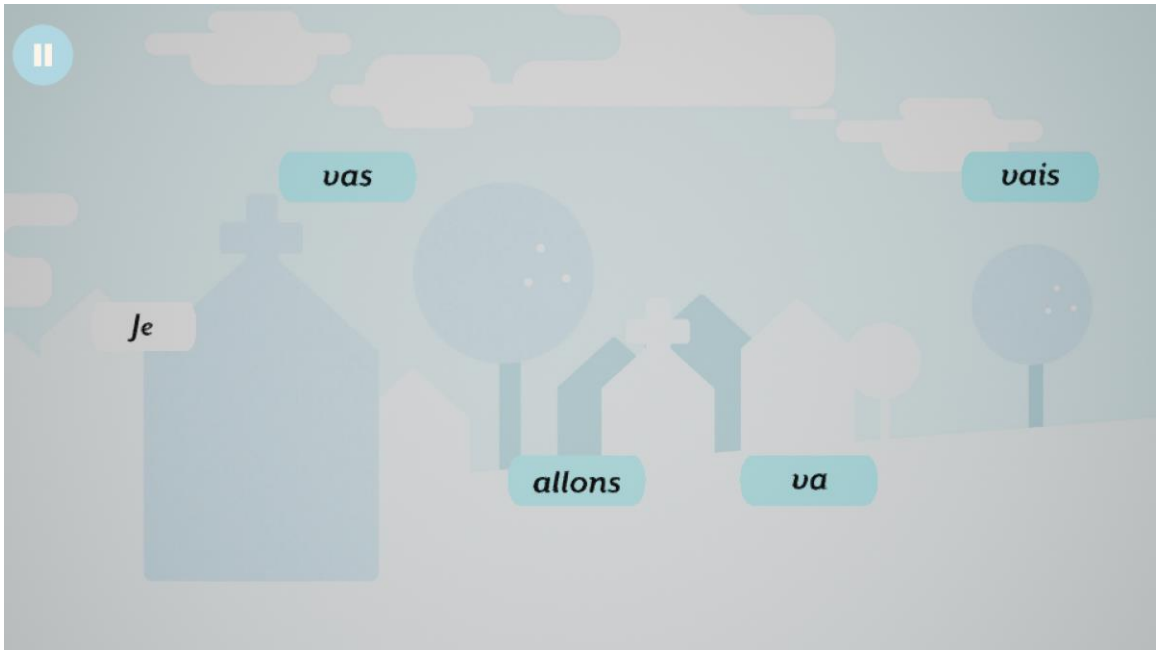
Game 2



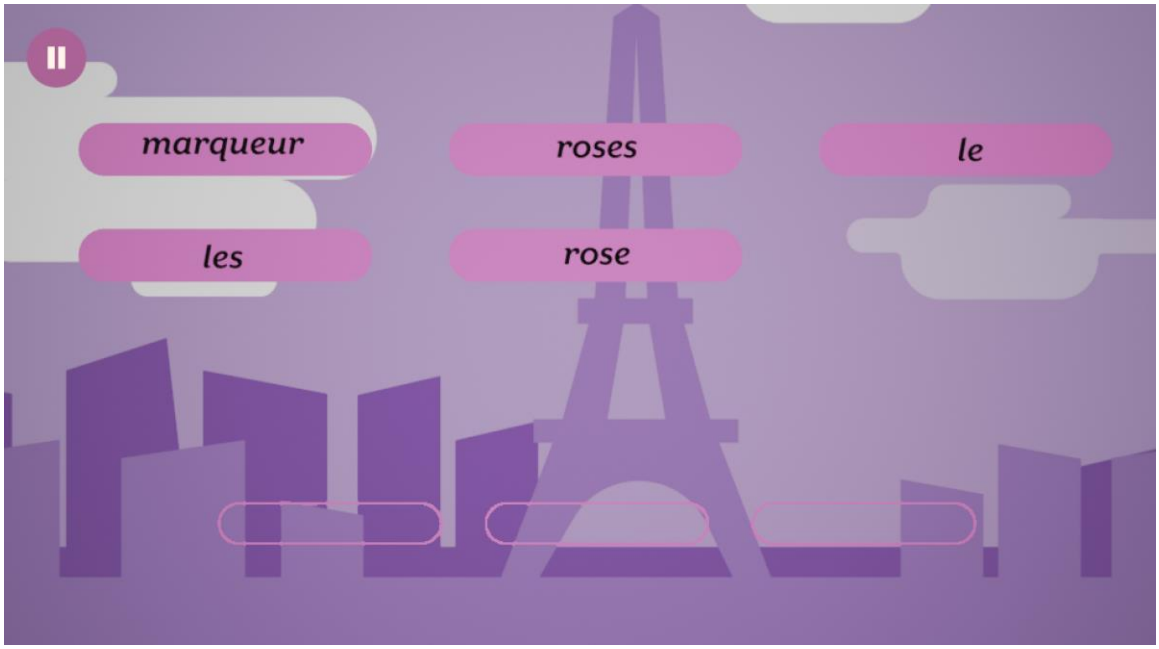
Game 3



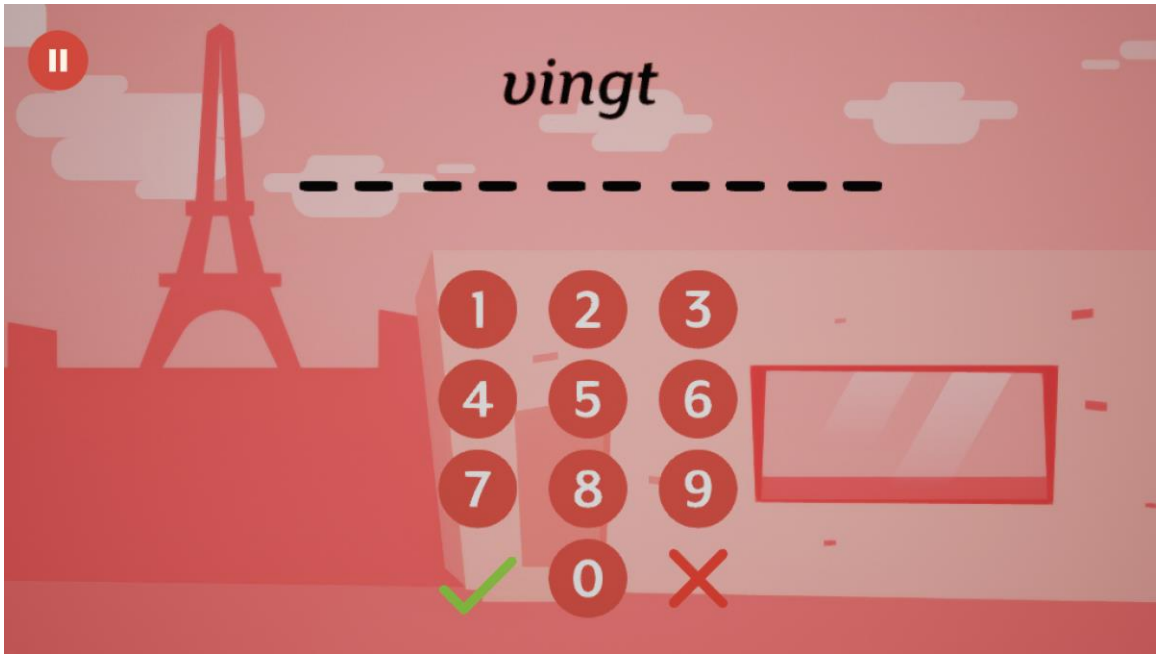
Game 4



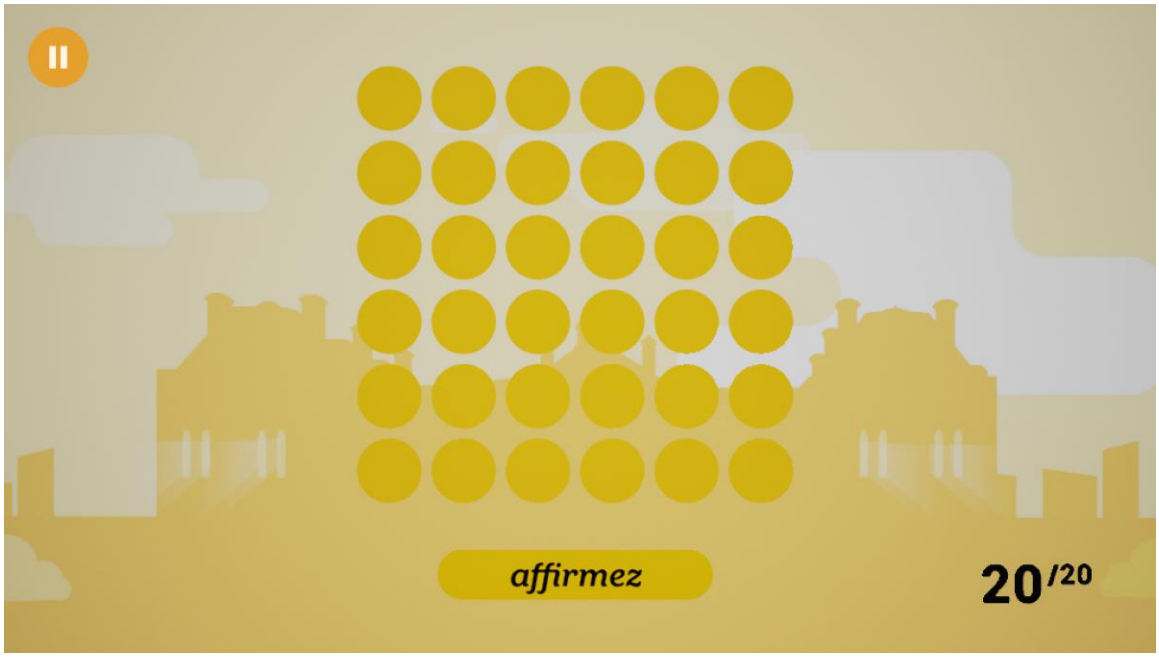
Game 5



Game 6



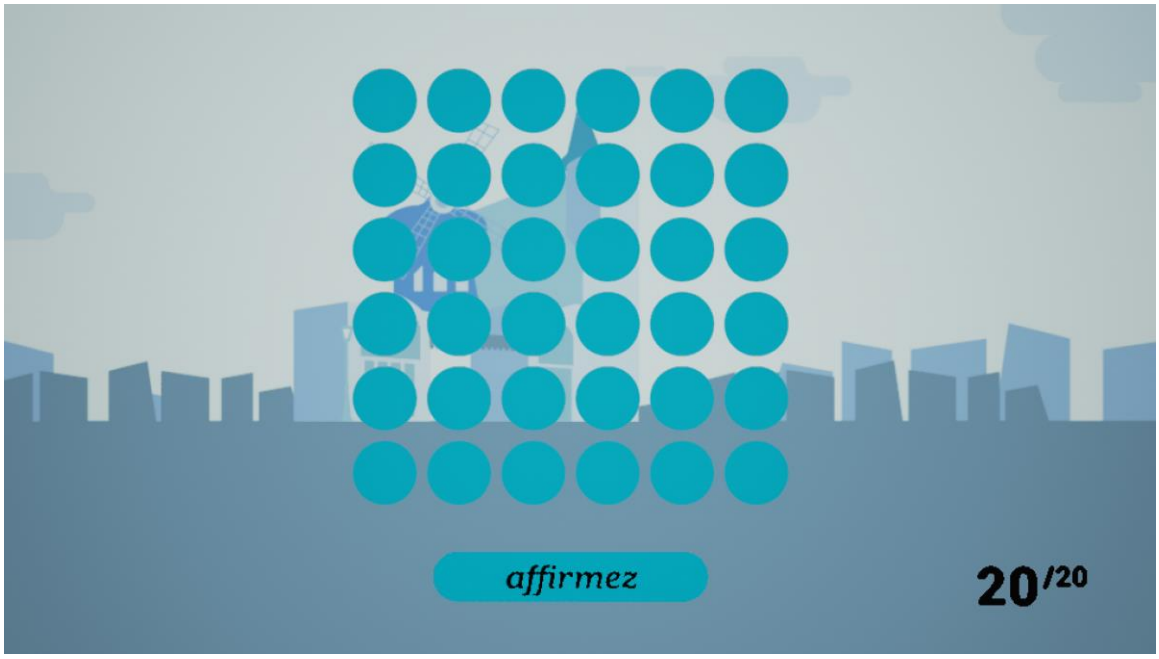
Game 7



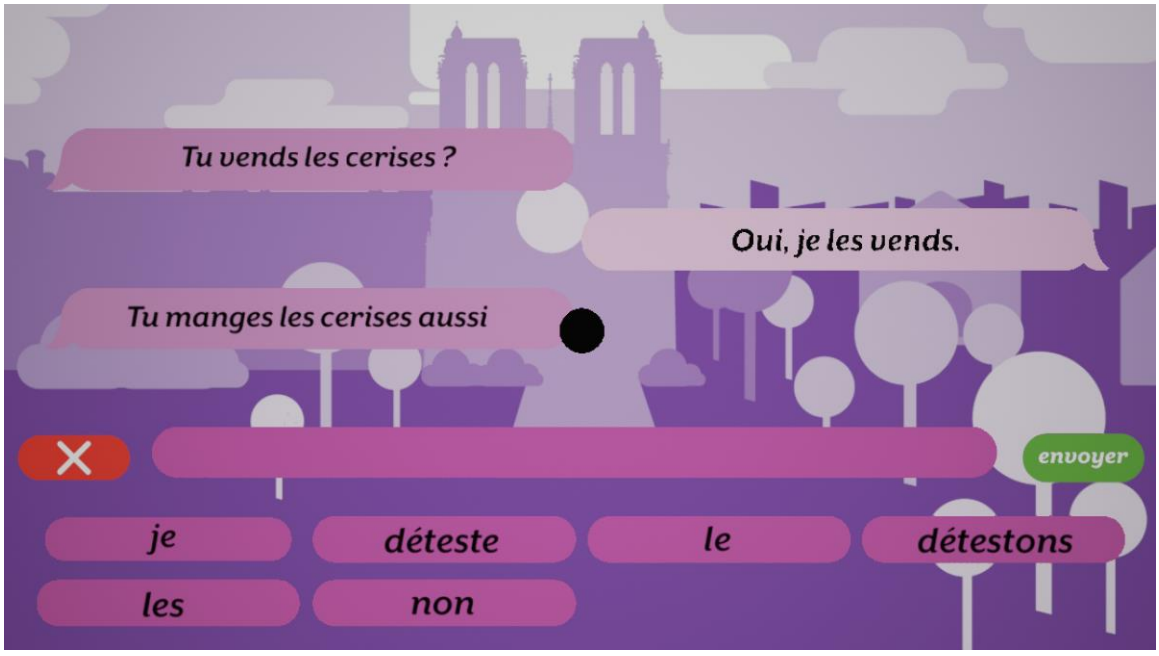
Game 8



Game 9



Game 10



Appendix B

	Displayed Text (if in French, see translated column E)	Translated Text (English)		
	Setting is 3015, France, probably whatever awesome scifi city is where paris was. We'll say "Superparis, 3015"			
	Report to Sebastian for new assignments			
	Player Enter's Seb's Office: Trigger Convo 1.01-1.08			
	File of Agent pops up		Fiche d'identié	
A		Hello Sir.		J'habite dans un seau.
B		May I come in?		Salut, Monsieur.
C		You wanted to See me?		Est-ce que vous voulez me voir?
D		I live in a bucket.		Bonjour, Monsieur.
A B C	Yes, Agent, I have your new assignments. We're assigning you to time police.		Bonjour, Agente Élodie, voilà votre nouveau poste. Vous êtes policière du temps.	
D	That's great and all, but I need for you to be serious.		Comment? Il faut être sérieuse.	

A		Time police? But I'm no doctor...		We need to get rid of this because it's too advanced.
B		Time Police! Do I get a Delorean?		
C		Time Police... is Arnold alright?		
D		Time Police. Do you like the rain?"		
A B C	That's very funny even though that reference is over a millennium old. But we need you to focus right now.		We need to get rid of this because it's too advanced.	
D	Yes, but I don't like Pina Coladas. What's more important is that you now work for the time police		We need to get rid of this because it's too advanced.	
A		Yes, of course. What are my duties?		Qu'est-ce que je dois faire?
B		Sorry. What will I be doing?		Voilà des sandwiches.
C		My apologies. What is my first mission?		Quelle est ma première mission?
D		Apples. I like to eat apples.		Que ferai-je?
A B C	Your first mission is to go back to the Notre Dame Cathedral in 1465, and return an		Voilà votre mission: Allez à l'année 1465 à la Cathédrale de Notre Dame et retournez l'objet historique que	

	artifact that was found.		nous avons trouvé.	
D	That's great. I need you to focus now.		Il faut se concentrer maintenant.	
A		I see. What's the artifact?		D'accord, c'est quoi l'objet historique?
B		What do you mean by artifact?		Qu'entendez-vous par objet historique?
C		Notre Dame? What got lost?		Notre Dame? Comme l'équipe de sport?
D		Notre Dame? Like the sports team?		Notre Dame? La cathédrale? Qu'est-ce qui est perdu?
A B C	The artifact is a text, ditié de Jeanne d'arc. We suspect someone is meddling with the past.		L'objet historique est un texte intitulé le ditié de Jeanne D'arc. Une criminielle l'a caché.	
D	I didn't realize you followed American sports.		Je ne savais pas que vous aimez les sports américains.	
A		Got it. Return the text and catch the time criminal.		OK, il faut retourner le texte et attraper la criminelle du temps.
B		Got it. Put the book where it belongs and get the thief.		OK, il faut mettre le livre à sa place et attraper la voleuse.
C		Got it. Bring the artifact back and stop the meddler.		OK, il faut remettre l'objet et arrêter la fouineuse.
D		Got it. Take a sandwich back in time and eat it.		OK, il faut remettre un sandwich et le manger.
A B C	Excellent. Here is your time-travel Device.		Excellent, pour voyager, voilà l'Appareil pour Retourner dans le Temps, alias A.R.T.	

D	No, you aren't listening at all. But that sandwich does sound pretty good.		Non, vous n'écoutez pas. Mais j'aimerais un sandwich.	
A		Cool, how does it work?		Cool, comment ça marche?
B		I don't know how to use this.		Je ne sais pas comment utiliser un A.R.T.
C		Wow, So I can travel back in time now?		Est-ce que je peut avoir une cigarette avant de partir?
D		Can I grab a baguette before I Go?		Ouah, je peux voyager dans le temps maintenant?
A B C	It's simple. The machine runs on French Grammar and Syntax, because Time travel has very bizarre rules.		C'est simple. L'appareil fonctionne en utilisant la grammaire française, parce que les règles pour voyager dans le temps sont très bizarres.	
D	Pay attention. But also, yes, this is France.		Faites attention! Mais, oui, bien sûr. Nous sommes en France.	
A		Right. Makes perfect Sense.		OK, c'est logique.
B		Of course. What else?		Bien sûr. Quoi d'autre?
C		I've read that.		Je sais.
D		Before I go, may I touch your nose?		Bon voyage.
A B C	You'll also need to speak french to the locals from each time		Aussi, il faut parler en français, parce que c'est la France, où les gens parlent	

	period, Because this is France, where people speak French.		français. Merci pour votre service.	
D	Absolutely not.		C'est à moi de dire bon voyage.	
A		Shouldn't be a problem!		De rien.
B		I'll be sure to brush up then!		Il n'y a pas de quoi.
C		Perfect, French is my first language!		Je vous en prie.
D		I am a grapefruit!		Bienvenue.
A B C	Great.		Très Bien. Bonne chance!	
D	Great.		Très Bien. Bonne chance!	
	Travel Back in time!		Travel Back in time!	
	Player interacts with Time Device, Travels through Time.		Player interacts with Time Device, Travels through Time.	
	MINI GAME 1		MINI GAME 1	
	Player sees Notre Dame Cathedral, 1465. Player places Text where it belongs		Player sees Notre Dame Cathedral, 1465. Player places Text where it belongs	
	Well, that's easy.		Alors, c'est facile.	
	Player Notices Time Device Alert, “TIME ANOMALY”		Player Notices Time Device Alert, “ANOMALIE TEMPORELLE”	

	Huh, I guess something else is out of place.		Euh, il y a quel que chose qui n'est pas à sa place.	
	Find the Time Anomaly		Find the Time Anomaly	
	Player enters Cathedral, Triggers Convo 2.01-2.05		Player enters Cathedral, Triggers Convo 2.01-2.05	
A B C D		Hello, My Daughter, come in.		Bonjour, ma fille, entrez.
A		Excuse me, father, but are you feeling well?		Excusez-moi, mon père, mais comment allez-vous?
B		Hello Father, how are you?		Ouah! Ça va, mon père?
C		Woah! Are you Alright?		Bonjour mon père, comment vas-tu?
D		Are you really a priest? You look like a corpse		Vous êtes vraiment prêtre? Vous vous ressemblez à un cadavre!
A B	I'm feeling quite fine, thank you		Je me sens bien, merci.	
C	Don't be familiar with me, my child!		Pas de familiarités, mon enfant.	
D	Yes, I'm a priest.		Oui, je suis prêtre.	
A		I'm sorry, you look rather... ILL.		Je suis désolée, vous avez l'air d'être...MALADE.
B		It's just... You're pale.		C'est juste...vous êtes pâle.
C		You are sick.		Vous êtes malade.
D		I come from the		Je viens du FUTUR!!!

		FUTURE!		
A B C	Non, I'm completely healthy. May I help you?		Non, je suis en bonne santé. Est-ce que je peux vous aider?	
D	Oh, you're crazy.		Oh, vous êtes folle.	
A		I'm looking for something that seems out-of-place.		Je cherche quelque chose qui n'est pas à sa place.
B		Have you seen anything strange?		Avez-vous remarqué quelque chose de bizzare?
C		I'm trying to find something I've misplaced.		Je cherche quelque chose que j'ai perdu.
D		I'm looking for a horrible disease. Do you have a disease?		Je cherche une maladie. Vous avez une maladie?
A B C	Yes, I noticed the bible is different today		Oui, j'ai remarqué que la bible est différente aujourd'hui.	
D	That's stupid. Go away.		C'est ridicule. Partez!	
A		May I look at the bible?		Est-ce que je peux regarder la bible?
B		Ah, yes, can I see the bible?		Ah, oui, est-ce que je peux la voir?
C		Oh good, I want to examine the bible, if you would permit me.		Ah bon, je veux examiner la bible, si vous me permettez.
D		Do you like cats or dogs?		Est-ce que vous aimez les chats ou les chiens?
A B C	No, because it's misplaced		Non, parce que cette bible a été déplacée.	
D	I like cats.		J'aime les chats.	
A		Any idea where I could search?		Vous avez une idée où je peux chercher?
B		Where is the last place		Où est le dernier lieu où

		you saw it?		vous l'avez vue?
C		You want me to find your lost stuff?		Vous voulez que je trouve vos objets perdus?
D		You will die very soon.		Vous allez mourir bientôt.
A B C	I don't know, maybe you can speak with Quasi Modo.		Je ne sais pas, vous pouvez peut-être parler avec Quasimodo.	
D	Then I'll know God has chosen to save me from you.		Je savais que Dieu allait me sauver de vous.	
	Find the Hunchback and ask him about the Bible!		Find the Hunchback and ask him about the Bible!	
	Player Enter's Bell tower? Triggers Convo 2.06-2.13		Player Enter's Bell tower? Triggers Convo 2.06-2.13	
A		Excuse me, are you Quasi Modo?		Excusez-moi, est-ce que vous êtes Quasimodo?
B		Excuse me, do you live up here?		Excusez-moi, habitez-vous ici?
C		Excuse me, I'm looking for something.		Excusez-moi, je cherche quelque chose.
D		Excuse me, are you Claude Frollo?		Excusez-moi, est-ce que vous êtes Claude Frollo?
A B C	Yes, How can I help you?		Oui, comment est-ce que je peux vous aider?	
D	What? No, I'm a hunchback!		Comment? Non, je suis bossu!	
A		Oh no, are you sick too?		Oh là là, êtes-vous malade aussi?
B		Why is everyone covered in boils?		Pourquoi est-ce que tout le monde est si pâle?
C		How are you?		Comment allez-vous?
D		Can I touch your face?		Est-ce que je peux

				toucher ton visage?
A B C	Oh, I'm not sick like the priest.		Non, je ne suis pas malade comme le prêtre.	
D	No.		Non.	
A		What is this sickness?		Quelle est cette maladie?
B		Why is everyone sick?		Pourquoi est-ce que tout le monde est malade?
C		What's going on?		Qu'est-ce qui se passe?
D		Can I touch your face?		Est-ce que je peux toucher ton visage?
A B C	Oh, don't you know? The Black Death is currently destroying half the population of Paris.		Oh, vous ne savez pas? La peste bubonique décime la population de Paris.	
D	No.		Non.	
A		Wow, that's horrible.		Ouah, c'est horrible.
B		That's terrible…		C'est terrible...
C		That's terrifyinng, I'm sorry...		C'est terrifiant. Je suis désolée.
D		Will you touch my face?		Est-ce que vous allez toucher mon visage?
A B C	And also, we're at war with the English.		Et, nous sommes aussi en guerre avec les anglais.	
D	No.		Non.	
A		Yeah…		Ouais...
B		I See…		Je vois...
C		Woah…		Ouah...
D		Sorry…		Désolée...
A B C D	The rats are infecting us. Or rather, the fleas on the rats. Almost everyone is dying or is already dead.		Les rats nous infectent. Presque tout le monde meurt ou est déjà mort.	

A		…		…
B		…		…
C		…		…
D		…		…
A B C D	It's terrifying to be here, to watch everyone. Soon, it will be just me and the bells.		C'est terrifiant d'être ici, de regarder tout le monde mourir. Bientôt, ce sera seulement moi et les cloches.	
A		…		…
B		…		…
C		…		…
D		…		…
A B C D	Anyway, what do you want?		Enfin, qu'est-ce que vous voulez?	
A		Have you seen the priest's bible?		Avez-vous vu la bible du prêtre?
B		Have you noticed a bible?		Avez-vous remarqué une bible par ici?
C		Do you know where I could get a bible?		Est-ce que vous savez où je peux trouver une bible?
D		Finally! I'm looking for the priest's bible!		Enfin! Je cherche la bible du prêtre!
A B C	Yeah! I was praying for the sick and dead. Here's the bible.		Oui! Je prie pour les malades et les morts. Voici la bible.	
D				
		This isn't a bible…		Ce n'est pas une bible…
		This is a book, not a bible.		C'est un livre, pas une bible.
		It doesn't look like a bible…		Ce ne ressemble pas à une bible…
		You weren't using a bible, it's a book!		Vous n'utilisez pas une bible, c'est un livre!

	Player Gets Book.		Player Gets Book.	
	This is Molière!		C'est Molière!	
	Return the play to rightful time!		Return the play to rightful time!	
	Player interacts with Time Device, Travels through Time.		Player interacts with Time Device, Travels through Time.	
	MINI GAME 2		MINI GAME 2	
	Player sees Gardens of Luxembourg, 1632. Player places Text where it belongs		Player sees Gardens of Luxembourg, 1632. Player places Text where it belongs	
	Well, there's that..		Voilà!	
	Player Notices Time Device Alert, “TIME ANOMALY”		Player Notices Time Device Alert, “ANOMALIE TEMPORELLE”	
	Again? What's going on here?		Qu'est-ce qui se passe?	
	Find the Time Anomaly!		Find the Time Anomaly!	
	Player Walks around to fountain, Triggers Convo with Marie de Medici,3.01-3.03		Player Walks around to fountain, Triggers Convo with Marie de Medici,3.01-3.03	
A B		Lovely Fountain, Isn't it?		C'est une belle fontaine, n'est-ce pas?

C D				
A		Oh yes, it's…pretty.		Oh oui, elle est…jolie.
B		I suppose.		Je suppose.
C		Yeah, I really like it.		Ouais, je l'aime bien.
D		This fountain is the worst thing I've ever seen.		Cette fontaine est la chose la plus abominable que j'ai jamais vue.
A B C	It's here because of me!		Elle est ici grâce à moi! Je l'ai commandée.	
D	Go away, you're bothering me		Allez-vous-en, vous me dérangez.	
A		I'm... looking for something.		Je…cherche quelque chose.
B		Have you seen anything out of place?		Est-ce que vous avez vu quelque chose qui n'est pas à sa place?
C		Do you think you could help me find something?		Pouvez-vous m'aider à trouver quelque chose?
D		Do you like to travel?		Aimez-vous voyager?
A B C	Hmm, what are you looking for?		Hum, qu'est-ce que vous cherchez?	
D	Yes, but I don't travel a lot. Do you need something?		Oui, mais je ne voyage pas beaucoup. Vous avez besoin de quelque chose?	
A		Have you seen a book or something that seems out of date?		Avez-vous vu un livre?
B		I'm looking for something, maybe a text, from a different time?		Je cherche quelque chose, peut-être un texte, d'une autre époque.
C		Do you know where I might find a really old or maybe really new book?		Savez-vous où je peux trouver un très vieux livre ou un livre très récent?
D		I come from the		Je viens du FUTUR!!!

		FUTURE!		
A B C	Well, I have no idea. You could speak with the gardener.		Alors, je n'ai pas d'idées. Vous pouvez parler avec le jardinier.	
D	You're crazy!		Vous êtes folle!	
	Find the Gardener		Find the Gardener	
	Player wanders around in Garden for a while		Player wanders around in Garden for a while	
	Player finds Jacques Boyceau inside, Triggers Convo 3.04-3.09		Player finds Jacques Boyceau inside, Triggers Convo 3.04-3.09	
A B C D		Oh, Hello.		Oh, bonjour.
A		Are you the Gardener?		Est-ce que vous êtes le jardinier?
B		Shouldn't the Gardener be outside?		Excusez-moi, mais êtes-vous le jardinier?
C		Marie said for me to look for the gardener?		Madame de Medicis m'a dit de chercher le jardinier?
D		What are you doing?		Qu'est-ce que vous faites?
A B C	I am not a simple gardener, but a professional gardener.		Je ne suis pas simple jardinier, j'ai dessiné ces jardins.	
D	I'm working.		Je travaille.	
A		What's the difference?		Quelle est la différence?
B		What?		Comment?

C		What is a professional gardener?		Oh, vous êtes paysagiste alors!
D		Madame de Medici said you were a Gardener.		Madame de Medici m'a dit que vous êtes jardinier.
A B C	A Garden Designer is someone who creates form and experience, who juxtaposes construction, nature, and emotion.		C'est ça. Je crée la forme et l'expérience et juxtapose la construction, la nature, et l'émotion.	
D	She's the queen, but I am truly a professionalgardener.		Ça ne m'étonne pas.	
A		So you pick where to put the plants?		Alors, vous choisissez où mettre les plantes?
B		So you draw the garden before creating it?		Alors, vous dessinez le jardin avant de le créer?
C		So you're a pretentious gardener?		Alors, vous êtes un jardinier prétentieux?
D		So do you eat plants?		Alors, vous mangez des plantes?
A B C	...yes.		…oui.	
D	NO! That's ATROCIOUS!		NON! C'est dégoûtant!	
A		Anyway, have you seen a book?		Bref, avez-vous vu un livre?
B		Have you found anything abnormal?		Avez-vous trouvé quelque chose d'anormal?
C		I'm looking for an artifact from a different time		Je cherche un objet d'une autre époque.
D		What day is it?		Quel jour sommes-nous?
A	Oh yes, I have		Ah oui, j'ai	

B C	a book right here!		justement un livre ici!	
D	It's Saturday.		Nous sommes samedi.	
A		May I have it?		Est-ce que je peux l'avoir?
B		I need to Confiscate that		Je dois le confisquer.
C		Give it to me.		Donnez-le-moi.
D		I think that the garden is terrible.		Je pense que le jardin n'est pas beau.
A B C	Oh No no! Not until you say something nice about my garden!		Non non non! Avant, dites-moi que vous aimez mon jardin.	
D	How impolite you are!		Que vous êtes impolie!	
A		It's a charming garden.		C'est un jardin charmant.
B		It's an interesting garden.		C'est un jardin intéressant.
C		It's a pretty garden.		C'est un joli jardin.
D		It's a reptilian garden.		C'est un jardin ennuyeux.
A B C	That's not good enough.		Ce n'est pas suffisament bon!	
D	Definitely unacceptable.		Définitivement inacceptable.	
A		It’s a truly brillant garden!		C'est un jardin vraiment brillant!
B		It is a really modern garden!		C'est un jardin tellement moderne!
C		It's a fascinating garden!		C'est un jardin fascinant!
D		It's a garden…		C'est un jardin…euhhh...
A B C	Allright, that's enough. Here's your old book!		OK, ça suffit! Voilà votre vieux livre.	
D	YES, IT'S A GARDEN. I KNOW.		OUI, C'EST UN JARDIN. JE LE SAIS.	
	Player Gets		Player Gets	

	Book.		Book.	
	Le code civil des Français, I guess we're going to meet Napoleon next.		*Le code civil des Français, I guess we're going to meet Napoleon next.*	
	Return the code to rightful time!		Return the code to rightful time!	
	Player interacts with Time Device, Travels through Time.		Player interacts with Time Device, Travels through Time.	
	MINI GAME 3		MINI GAME 3	
	Player sees Pere LaChaise, 1810. Pages get caught by wind		Player sees Pere LaChaise, 1810. Pages get caught by wind	
	Oh, no! The wind! The pages!		Oh, non! Le vent! Les pages!	
	Player Notices Time Device Alert, “TIME ANOMALY”		Player Notices Time Device Alert, “ANOMALIE TEMPORELLE”	
	There's definitely somebody messing things up on purpose.		Il y a une criminelle qui perturbe l'espace-temps. C'est sûr!	
	Find the Time Anomaly!		Find the Time Anomaly!	
	Player finds gravestone, Triggers convo 4.01-4.04		Player finds gravestone, Triggers convo 4.01-4.04	

A		Do you think you could help me find something?		Pouvez-vous m'aider à trouver quelque chose?
B		Excuse me, sir		Excusez-moi, monsieur.
C		What do you do here?		Qu'est-ce que vous faites?
D		What's the date?		Quelle est la date?
A B C D	I don't have time for you, this place is a mess		Je n'ai pas le temps, ce cimetière est en désordre.	
A		Oh, well maybe I could help you?		Est-ce que je peux vous aider?
B		What do you mean?		Comment?
C		Is there anything I could do?		Est-ce que je peux faire quelque chose?
D		Where is the passport? Do you like the disco music?		Faites-vous du yoga ou du karaoké?
A B C	This wind is making a mess! And there's stuff everywhere!		Le vent met tout en désordre! Et il y a des choses partout!	
D	I don't understand.		Je ne comprends pas.	
A		Have you seen pieces of paper?		Avez-vous vu des feuilles de papier?
B		Anything out of the ordinary?		Rien d'extraordinaire?
C		I'm looking for a large civil code		Je cherche un grand code civil.
D		You smell like dead skin and dirt.		Il fait beau, n'est-ce pas?
A B C	Oh, yes, I think I noticed a civil code in one of the mausoleums.		Oui, j'ai remarqué un code civil dans un mausolée.	
D	No, it's windy!		Non, il fait du vent!	
A		Mausoleum? Which one?		Quelle mausolée?

B		Mausoleum? Where is it?		Où est ce mausolée?
C		Mausoleum? So the mice are in charge now?		On joue de la batterie dans ce mausolée?
D		Mausoleum? Who died and made you king?		On lit des romans dans ce mausolée?
A B	Just along the east side, past where we're planning to bury Oscar Wilde.		À l'est, près de la future tombe d'Oscar Wilde.	
C D	You're an idiot, aren't you.		Vous êtes évidemment une idiote, n'est-ce pas?	
	Player finds pages, picks them up. Triggers convo 4.05-4.14		Player finds pages, picks them up. Triggers convo 4.05-4.14	
A B C D		Darn, there's more pages to find.		Zut, il y a encore des pages à trouver.
A B C D	EXCUSE ME!		EXCUSEZ-MOI!	
A		Oh, Sorry!		Oh, pardon.
B		Excuse me.		Excusez-moi.
C		What?		Comment?
D		I am me!		Je tricote.
A B C	Get down from there! You're standing on a precious relic!		Descendez de là! Vous êtes sur une relique précieuse!	
D	What?		Comment?	
A		What, this rock?		Quoi, cette pierre?
B		This isn't a relic.		Ce n'est pas une relique.

C		Oh, is this a tombstone?		C'est une pierre tombale?
D		What day is it?		Quelle est la date?
A B C	IT'S A PRICELESS RELIC! Get down from there!		C'EST UN TRÉSOR HISTORIQUE! Descendez de là!	
D	It's October 3rd.		C'est le 3 octobre.	
A				
B				
C				
D				
A B C				
D				
A		Ok, I'm getting down. What are you doing here anyway?		OK. Qu'est-ce que vous faites ici?
B		Ok, I'm getting down. Do you study geology?		OK. Étudiez-vous la géologie?
C		Ok, I'm getting down. Who are you?		OK. Vous êtes qui?
D		Ok, I'm getting down. Do you speak English fluently?		OK. Parlez-vous anglais couramment?
A B C	I'm a historian, I'm here doing important research on all of the gravestones!		Je suis historienne. Je fais des recherches importantes sur ces pierres tombales!	
D	Non, je ne parle que français.		Non, je ne parle que français.	
A		Cool!		Super!
B		That's boring.		Cool!
C		Well, If that's what you're into...		Il est bon d'avoir un loisir.

D		For how long?		Depuis combien de temps?
A B	I know! Now tell me, what is it that YOU'RE doing here?		Je sais! Alors, dites-moi, qu'est-ce que vous faites ici?	
C	It's not a hobby, it's my job!		Ce n'est pas un loisir, c'est mon travail!	
D	Seven years.		Depuis sept ans.	
A		I'm looking for the pages of Napoleon's Code.		Je cherche les pages du Code Napoléon.
B		I'm looking for half of a big document.		Je cherche la moitié d'un grand document.
C		I'm here looking for something.		Je cherche quelque chose.
D		I'm here to destroy you before you stop my robot army.		Je cherche une joueuse d'échecs.
A B C	Oh, I might've seen something on some tombstones earlier.		Oh, j'ai vu quelque chose sur les pierres tombales bientôt.	
D	I play chess, but I don't have time to play right now.		Je joue aux échecs, mais je n'ai pas le temps de jouer maintenant.	
A		Really?		Vraiment?
B		Where?		Où?
C		Show me?		Sérieusement?
D		Give me you number?		Ah bon?
A B C	Look back over by the groundskeeper's shed.		Cherchez près de l'abri de jardin du gardien de stade.	
D	I don't know what that means, but no.			
A		Thanks!		Merci!

B		Thank you for helping me out.		Vous m'avez beaucoup aidée.
C		I'll do that. Thank you		Vous êtes merveilleuse.
D		We're going to play chess in the future.		Nous allons jouer aux échecs dans le futur.
A B C	It was nothing.		Il n'y a pas de quoi.	
D	Okay, if you say so…		OK, si tu le dis…	
	Player goes over to pages, picks them up.		Player goes over to pages, picks them up.	
	I need to find the time anomalie now.		Il faut trouver l'anomalie temporelle maintenant.	
	Player sees groundskeeper, he's talking to a grave		Player sees groundskeeper, he's talking to a grave	
A B C D	Its been years, things are still hard.		Depuis des années, la vie est difficile.	
A		…		…
B		…		…
C		…		…
D		…		…
A B C D	I will never leave you. Truly.		Je ne vais jamais te quitter. Vraiment.	
A		…		…
B		…		…
C		…		…
D		…		…
A B	I wil be here forever.		Je serai ici à jamais.	

C D				
A		…		…
B		…		…
C		…		…
D		…		…
A B C D	Don't worry, I see you there.		Ne vous inquiétez pas; je vous vois.	
A		I didn't know.		Pardon!
B		I'm sorry to bother you		Je suis désolée de vous déranger.
C		I'm sorry for your loss		Mes condoléances.
D		…		…
A B C D	It's okay. I know you're probably just doing your job. We're all trying to just get by.		C'est pas grave. Vous faites votre travail.	
A		Yeah.		Ouais.
B		Yeah.		Ouais.
C		Yeah.		Ouais.
D		Yeah.		Ouais.
A B C D	Anyway, I found this weird poster earlier, Is this something you're looking for?		Bref, j'ai trouvé cette affiche bientôt. Est-ce que vous la cherchez?	
A		Wow! Thanks!		Ouah! Merci!
B		Yes! Thank you!		Oui, merci!
C		Yeah, I can't believe you found it!		Ouais, vous l'avez trouvée!
D		Yeah! Good luck with your dead wife!		Ouais, bonne chance avec les tombes.
A B	You're welcome. Now		De rien.	

C	beat it, kid.			
D	Thanks.		Merci.	
	Player Gets Flyer		Player Gets Flyer	
	Huh, the world's fair.		L'exposition universelle?	
	Return the flyer to rightful time!		Return the flyer to rightful time!	
	Player interacts with Time Device, Travels through Time.		Player interacts with Time Device, Travels through Time.	
	MINI GAME 4		MINI GAME 4	
	Player sees World's fair, in 1889		Player sees World's fair, in 1889	
	Wow, this is amazing!		Ouah, c'est extraordinaire.	
	Player Notices Time Device Alert, “TIME CRIMINAL DETECTED”		Player Notices Time Device Alert, “TIME CRIMINAL DETECTED”	
	He's here! Time to catch the Crook!		Elle est ici! Il faut attraper la criminelle.	
	Find the Time Thief!		Find the Time Thief!	
	Talks to Van Gogh. Triggers convo 5.01-5.05		Talks to Van Gogh. Triggers convo 5.01-5.05	
A B C D		Excuse me, sir...		Excusez-moi, m'sieur.

A B C D	What's that!? Speak up!		Comment!? Parlez plus fort!	
A		I'm looking for someone.		Je cherche quelqu'un.
B		I have traveled a lot to find a…foreigner.		J'ai beaucoup voyagé pour trouver une…étrangère.
C		A friend is lost, can you help me find her?		Une amie est perdue, pouvez-vous m'aider à la trouver?
D		I AM FROM THE FUTURE!		JE VIENS DU FUTUR!
A B C	Well, there are people of every nationality here. That will be difficult.		Alors, il y a des gens de toutes nationalités ici! Ça va être difficile.	
D	Wow, that's cool. Do you need something?		Ouah, c'est cool. Vous avez besoin de quelque chose?	
A		Oh. Who are you?		Oh. Qui êtes-vous?
B		I see. What is your name?		Je vois. Comment vous appellez-vous?
C		Dang. Well thanks anyway, Mr...?		Mince. Alors, merci quand même, Monsieur…?
D		Darn. Say, where are you from?		Zut. Dites-moi, d'où venez-vous?
A B C	I am just a painter. My name is Vincent van Gogh.		Je suis artiste peintre. Je m'appelle Vincent van Gogh.	
D	I am Dutch.		Je suis néerlandais.	
A		Well, I'm sure you'll be famous in the future!		Ben, je suis sûre que vous serez célèbre dans le futur!
B		Oh, I think I may have		Oh, je pense que j'ai

		heard of you!		entendu parler de vous!
C		I so admire your works!		J'admire tellement vos œuvres!
D		Paint me like a French woman!		Pouvez-vous faire mon portrait?
A B C	Well, thank you, I hope that's true.		Merci, j'espère que c'est vrai.	
D	I am tired of that joke.		Non, je n'ai pas le temps.	
A		Uh, I'm going to continue my search.		Euh, je vais continuer mes recherches.
B		Tell me if you see something strange.		Dites-moi si vous voyez quelque chose de bizarre.
C		Tell me if you hear something strange.		Dites-moi si vous entendez quelque chose de bizarre.
D		Can I see your ear?		Est-ce que je peux voir votre oreille?
A B C	Look at the Eiffel Tower!		Cherchez au Tour Eiffel!	
D	Quel oreille?		Quelle oreille?	
	Approaches Eiffel Tower. Triggers convo 5.06-5.11		Approaches Eiffel Tower. Triggers convo 5.06-5.11	
A B C D	It's magnificent, isn't it?		C'est magnifique, n'est-ce pas?	
A		Yeah, It's incredible!		Ouais, c'est incroyable!
B		Wow, it's brilliant!		Ouah, c'est brillant!
C		Yeah, It's a beautiful Day.		Ouais, il fait beau.
D		Yeah, that's an magnificent moustache		Ouais, c'est une moustache magnifique
A B	Thank you, It's my work, you see!		Merci, c'est mon œuvre, voyez-vous.	

C D	No, Not that!		Non, pas ça!	
A		Really? It's Tall!		Vraiment? C'est grand!
B		Wow! How high is it?		Ouah! Combien mesure-t-elle?
C		Woah! It's Huge!		Ouah! C'est énorme!
D		No way you did that. Your arms are way too short.		Vous n'avez pas construit cette tour. Vous êtes trop petit.
A B C	324 meters! Almost twice as tall as the Washington Monument, nothing is taller.		Trois cent vingt-quatre mètres! Presque deux fois plus grand que le Washington Monument, rien n'est plus grand.	
D	I DESIGNED it.		Je l'ai DESSINÉ.	
A		That's incredible! But what's wrong?		C'est incroyable! Mais, qu'est-ce qui ne va pas?
B		Why do you seem so sad then?		Pourquoi vous avez l'air triste alors?
C		That seems like such a great achievement, why the long face?		C'est une grande réussite, pourquoi vous êtes triste?
D		You look like a horse		Est-ce que vous êtes triste parce que vous êtes veuf?
A B C	The Imperial Diamond has been stolen. Everyone's leaving.		Un très grand diamant, Le Nizam, a été volé. Donc, tout le monde part. Regardez, ils quittent l'exposition!	
D	I am sad, but not because of that.		Je suis triste, mais pas à cause de cela.	
A		How? What happened?		Comment? Qu'est-ce qui s'est passé?

B		What? How'd that happen?		Quoi? Comment ça s'est passé?
C		When? Who stole it?		Quand? Qui l'a volé?
D		Where? What country are we in?		Où? Où sommes nous?
A B C	It just disappeared, about an hour ago. Nobody knows who took it, or how.		Il a disparu il y a une heure. Personne ne sait qui l'a volé ou comment.	
D	We're in France, you idiot.		Nous sommes en France, évidemment.	
A		Where was the diamond?		Où était le diamant?
B		Where was the diamond last seen?		Le diamant était où récemment?
C		Show me where the diamond was.		Montrez-moi où était le diamant?
D		You are a diamond in the rough.		Avez-vous volé le diamant?
A B C	It was being displayed just ahead up here! The main exhibit!		Il a été exposé juste là! L'exposition principal!	
D	Thank you but that's not helpful.		Bien sûr que non!	
A		Hold on, I have to check on something.		Je vais l'examiner.
B		Let me see what I can do.		Je vais rechercher une solution.
C		I'll go take a look.		Je vais regarder le scène de crime.
D		I'm gonna save the world		Je vais sauver le monde!
A B C	Thank you.		Merci.	
D	Okay.		OK.	
	Player goes to		Player goes to	

	main exhibit, goes back in time an hour.		main exhibit, goes back in time an hour.	
	Player sees the thief! Triggers Convo 5.13-5.16		Player sees the thief! Triggers Convo 5.13-5.16	
A		HEY! STOP!		Arrêtez-vous! Policière du temps!
B		YOU!		Vous voilà, enfin!
C		THERE YOU ARE!		C'est vous!
D		Excuse me, have you seen a diamond thief anywhere?		Vous êtes la voleuse?
A B C	What?		Comment?	
D	No, but I'll be sure to let you know if I see one!		Non, mais je vais vous informer si je la vois.	
A		So, that's what all this was for		Tous cela pour un diamant.
B		You're stealing a diamond? I'm not surprised.		Vous volez un diamant? Je ne suis pas surprise.
C		So here we are, at the end of the line.		Finalement, nous y voilà!
D		Wow, you must really like Salt!		Vous êtes très belle pour une voleuse!
A B C	How'd You find me?		Comment est-ce que vous m'avez trouvée?	
D	What? No, this isn't... Yes. I really love SALT.		Quoi? Euh…merci.	
A		You have been messing up everything since the		Vous dérangiez tous depuis la peste

		bubonic plague!		bubonique!
B		I followed your trail of time anomalies!		J'ai suivi votre piste des anomalies temporelle!
C		I'm smart!		Je suis intelligente!
D		My curly hair is my superpower!		Mes cheveux bouclés sont mon superpouvoir!
A B C	Curses, well, no matter, you can't do anything!		Mince! Alors, peu importe, vous ne pouvez rien faire!	
D	That's Horrifying. Well, I'm out!		C'est horrible. Bon, je vous quitte.	
A		No, you're going to time jail		Si, vous allez aller en prison.
B		The Time police will stop all time criminals!		Moi, policière du temps, j'arrête tous les criminels!
C		Yes I can!		Si je peux vous arrêter!
		...		...
A B C	Bring it on.		Allez-y!	
D				
	Big Fight Sequence!		Big Fight Sequence!	
	MINI GAME 5 TO DEFEAT TIME THIEF!		MINI GAME 5 TO DEFEAT TIME THIEF!	
	Time thief get's sent to time Jail! Time Device Breaks, Player gets knocked out in a cell somewhere strange		Time thief get's sent to time Jail! Time Device Breaks, Player gets knocked out in a cell somewhere strange	
	THE END...?		THE END...?	

	Player wakes up to find themselves in some sort of Jail cell on Mai 68		Player wakes up to find themselves in some sort of Jail cell in Mai 68	
	Ugh, my head...		Ugh, my head...	
	Time device appears broken, displays broken “Time Anomaly detected.”		Aïe, ma tête…	
	It's Busted, what am I going to do?		Ça ne fonctionne pas, qu'est-ce que je vais faire?	
	Find a way to get out of here!		Find a way to get out of here!	
	Time device receives message, Triggers Convo 6.01-6.05		Time device receives message, Triggers Convo 6.01-6.05	
A B C D	Hello? Hello? Agent? Are you there?		Allô? Allô? Agente? Vous êtes là?	
A		Sebastian? Is that you?		Sébastien? C'est vous?
B		Hello? Director?		Allô? Directeur?
C		Yes, I'm here! I can hear you!		Oui, je suis ici!
D		LEAVE ME ALONE CREEPY TIME ROBOT!		Laissez-moi seule!
A B C	Listen. We've received the time thief. You did a good job capturing him.		Écoutez. Nous avons la criminelle du temps. Bravo.	

D	Agent. It's just your time phone.		Agente. C'est votre téléphone du temps.	
A		That's great!		Super!
B		Thank you sir.		Merci, monsieur.
C		All in a day's work, sir.		Je n'ai fait que mon travail.
D		That guy was a time thief???		Elle est criminielle du temps?
A B C	But sadly, the A.R.T. is no longer working.		Mais, malheureusement, l'A.R.T ne fonctionne pas bien.	
D	...yes.		…oui.	
A		What am I going to do? Help me!		Qu'est-ce que je vais faire? Aidez-moi!
B		Oh no! Am I trapped here?		Oh non! Est-ce que je suis attrapée?
C		Can I repair the A.R.T.?		Est-ce que je peux réparer l'A.R.T.?
D		I knew that Van Goat was up to no good.		Je savais que van Gogh ne m'aimait pas bien.
A B C	Non, you need to find the time anomaly for 3015, and you will return to our time.		Non, il faut trouver l'anomalie temporelle pour 3015, et vous allez retourner à notre temps.	
D	Listen, I'm just gonna call you back when you're less stupid.		Ne dites pas des bêtises.	
A		Okay, I'll start looking!		OK, je vais commencer à chercher!
B		I will look in all possible places!		Je vais chercher dans tous les endroits possible!
C		That will not be difficult.		Ça ne va pas être difficile.

D		Do you think it's in the suburbs?		Vous pensez que c'est aux banlieues?
A B C	I know you'll do good work, agent. Seb out.		I know you'll do good work, agent. Seb out.	
D	It's not an old truck, agent		J'imagine que c'est à Paris.	
	Ok, I need to get out.		OK, il faut sortir.	
	Player talks to Rioter in neighboring cell.		Player talks to Rioter in neighboring cell.	
A		Hey, can you hear me?		Hé sommes-nous dans un musée?
B		Hey, are you awake?		Hé, où sommes-nous?
C		Hey, are you alive?		Hé, ça va, toi?
D		Hey, are you a duck?		Hé, où est le lit?
A B C	YES! I am awake and I am ANGRY!		Nous sommes en prison! Je suis FURIEUX!	
D	I will NEVER be a duck!		Il n'y a pas de lits ici.	
A		Oh! wow! I see that!		Je vois bien ça!
B		Why are you angry?		Pourquoi tu es fâché?
C		Ah?		Ah bon?
D		ME TOO!		Où sont les clés?
A B C	The whole country is a mess! Don't you know anything about what's been happening?		La France est toute en désordre! Tu ne comprends pas la situation?	
D	YOU DON'T EVEN KNOW HOW ANGRY I AM		Elles sont sur le rez-de chaussée, pas de chance.	
A		...no?		…non?

B		I'm not from France.		Je ne viens pas de France.
C		What is the situation?		Quelle est la situation?
D		Oh I know all about it. We want free ice cream!		Qu'est-ce que tu as fait pour être en prison?
A B C	The government, the schools, the factories! Everything's corrupted! This whole establishment is corrupted!		Le gouvernement, les écoles, les usines! Tout les organizations sont corrompues! L'ordre social est corrompu!	
D	Do you think this is a joke?		Je n'obéis pas aux lois. Mais tu ne comprends pas la sitiuation!	
A		You're right!		Tu as raison!
B		I see.		Le gouvernement est vraiment corrompu!
C		This city is a mess!		Cette ville est en désordre!
D		I think that the government works very well		Je pense que le gouvernement marche très bien.
A B C	You know what, You're alright, man.		Je t'aime bien, mon amie.	
D	I'm done talking to you.		Je ne t'aime pas.	
A		Say, what's that document beside you?		Dis-moi, qu'est-ce que c'est document à côté de toi?
B		Could you hand me that document there?		Donne-moi le document près de toi?
C		Can I have your sign?		Donne-moi le pancarte à ta gauche.
D		Hey, so how about you give me your sign there.		Je veux le pancarte à côté de toi.
A B	This? Never noticed it		Ce document-ci? Je ne l'ai pas	

	before, here!		remarqué. Voilà.	
CD	I WILL NEVER GIVE UP MY SIGN! THIS IS THE FINAL STRUGGLE!		JE N'ABANDONNERAIT JAMAIS MON PANCARTE! C'EST LA LUTTE FINALE!	
A		Thanks! Good luck with your riot!		Merci! Bonne chance avec ton émeute!
B		Awesome, see you later!		Super, à bientôt!
C		Thanks! Bye!		Merci et au revoir!
D		I'm off to the future! Bye!		Je vais au futur! Au revoir!
ABC	You're Welcome!		De rien!	
D	I doubt there will be a future.		Je doute qu'il soit un futur…	
	Player Gets Treaty of Versailles.		Player Gets Treaty of Versailles.	
	Some Lengthy Treaty? Is this the treaty of Versailles?		Un traité? C'est le traité de Versailles?	
	Time Device senses anomaly, glitches, jumps through time		Time Device senses anomaly, glitches, jumps through time	
	MINI GAME 6		MINI GAME 6	
	Player Sees Versailles Hall of Mirrors		Player Sees Versailles Hall of Mirrors	
	Versaiiles? Well, at least it		Je suis à Versailles?	

	isn't a jail cell..			
	Time device still broken, displays broken “Time Anomaly detected.”		Time device still broken, displays broken “Time Anomaly detected.”	
	I guess I'll keep looking.		Je continue à chercher, je suppose.	
	Find the next time anomaly!		Find the next time anomaly!	
	Player talks to Prime Minister Georges Clemenceau (7.01-7.09)		Player talks to Prime Minister Georges Clemenceau (7.01-7.09)	
A B C D	Where is it? Where is it!?		Où est-ce? Où est-ce!?	
A		Excuse me, do you have the time?		Excusez-moi, quelle heure est-il?
B		Woah, what year is it?		Ouah, nous sommes quel an?
C		I'm a time traveler. What year is it?		Je suis voyageuse du temps. On est quel an?
D		Hi, I'm from the future.		Salut, je viens de la futur!
A B	I don't have time! Oh, I don't even have a copy!		Je n'ai pas de temps! Oh, je n'ai pas même un exemplaire!	
C D	Get out of here, you crazy person!		Sortez et laissez-moi tranquille!	
A		A copy of what?		Un exemplaire de quoi?
B		What has disappeared?		Qu'est-ce qui est disparu?
C		Pay attention to me! I		Faites attention à moi! Je

		come from the future!		viens de la futur!
D		I'm hungry. Can I have a snack?		J'ai faim. Est-ce que je peux avoir un goûter?
A B	The Treaty! The treaty of Versaiiles!		Le traité! Le traité de Versailles!	
C	I DON'T have TIME for you!		J'ai PAS DE TEMPS pour vous!	
D	There's a buffet in the hallway, now leave me alone!		Il y a un buffet dans le couloir, alors laissez-moi tranquille!	
A		I have the treaty!		J'ai le traité!
B		Oh, this treaty?		Oh, ce traité-ci?
C		Are you looking for this treaty?		Cherchez-vous ce traité?
D		Too bad! Hope you find the treaty.		Tant pis! J'espère que vous trouvez le traité.
A B C	This is it! Where did you find it?		C'est ça! Vous l'avez trouvé où?	
D	It's hopeless…		C'est sans espoir…	
A		…in a bag of letters?		Je l'ai trouvé dans un sac des lettres?
B		…in a box of documents?		Je l'ai trouvé dans une boîte des documents?
C		…in your office?		Je l'ai trouvé dans votre bureau?
D		…in your big mustache?		Je l'ai trouvé dans votre grande moustache?
A B C	No matter, thank you for finding this important document. You have saved the continent!		Peu importe. Merci d'avoir trouvé ce document important. Vous avez sauvé le continent!	
D	Are you making fun of my mustache!?		Vous moquez-vous de ma moustache!?	

A		That's great!		Génial!
B		Awesome!		Cool!
C		You're welcome!		Il n'y a pas de quoi!
D		Do you put oil in your mustache?		Mettez-vous de l'huile dans votre moustache?
A B C	Is there anything I could do in return for you?		Is there anything I could do in return for you?	
D	Of course not! I put wax in my mustache.		Bien sûr que non! Je mets de la cire dans ma moustache.	
A		Yes! I'm looking for something.		Oui! Je cherche quelque chose.
B		I can help me, in fact.		Vous pouvez m'aider, en fait.
C		Yes, I want some cake!		Oui, je veux du gâteau!
D		Yes, I want to learn how to grow a mustache.		Oui, je veux apprendre à pousser une moustache.
A B	What do you need?		De quoi avez-vous besoin?	
C	Do you want anything else?		Voulez-vous autre chose?	
D	That's impossible; you're a woman.		C'est impossible; vous êtes femme.	
A		Have you seen anything strange?		Avez-vous vu rien d'anormale?
B		Have you seen anything out of place?		Avez--vous vu quelque chose hors de place?
C		I'm looking for something bizarre.		Je cherche quelque chosse de bizzare.
D		I'm looking for ingredients to make mustache wax.		Je cherche des ingrédiants pour faire de la cire à moustache.
A B C	There was a Newspaper clipping in the library down		Il y a une coupure d'un journal dans la bibliothèque au bout de couloir.	

	the hall. It's…strange.		C'était…bizarre.	
D	Why? You don't have a mustache.		Pourquoi? Vous n'avez pas de moustache.	
A		Thank you!		OK, merci!
B		Many thanks!		OK, mille mercis!
C		Piss off!		Je vais détruire le traité!
D		I'm going to cut off your mustache!		Je vais vous couper la moustache!
A B C	You're welcome! Safe travels!		De rien! Bon voyage!	
D	Never!		Jamais!	
	Player Gets Article about the Louvre		Player Gets Article about the Louvre	
	Huh, this is much later in time... the Louvre Pyramid?		Huh, this is much later in time... the Louvre Pyramid?	
	Time Device senses anomaly, glitches, jumps through time		Time Device senses anomaly, glitches, jumps through time	
	MINI GAME 7		MINI GAME 7	
	Player Sees The Louvre.		Player Sees The Louvre.	
	Back at the Louvre again, but it's a different time.	(PLOT TWIST! THE PLAYER IS THE ONE MOVING THINGS SO SHE CAN GET HERSELF BACK LATER?) (PLOT	Encore le Louvre, mais pas l'an 3015...	(PLOT TWIST! THE PLAYER IS THE ONE MOVING THINGS SO SHE CAN GET HERSELF BACK LATER?) (PLOT

		TWIST! THE PLAYER IS THE THIEF!) (PLOT TWIST! THE PLAYER IS SEB!)		TWIST! THE PLAYER IS THE THIEF!) (PLOT TWIST! THE PLAYER IS SEB!)
	Time device still broken, displays broken "Time Anomaly detected."		Time device still broken, displays broken "Time Anomaly detected."	
	L'A.R.T. still doesn't work, and there's another text to find.		L'A.R.T. ne fonctionne pas toujours, et il y a un autre texte à trouver.	
	Find the next time anomaly!		Find the next time anomaly!	
	Player talks to Disapproving art critic (8.01-8.09)		Player talks to Disapproving art critic (8.01-8.09)	
A B C D	UGH.		BEURK.	
A		What?		Quoi?
B		Did you say something?		Avez-vous dit quelque chose?
C		What?		Comment?
D		Are you hungry?		Avez-vous faim?
A B C	I said, "UGH!"		J'ai dit "BEURK!"	
D	No!		Non!	
A		Okay.		OK.
B		Ahh.		Ah.
C		I see.		Je vois.
D		I have some walnuts if you want some.		J'ai des noix si vous en voulez.
A	It's a horror!		C'est un horreur!	

B C				
D	No, I'm not hungry!		Non, je n'ai pas faim!	
A		Oh really?		Ah bon?
B		I don't understand.		Je ne comprends pas.
C		OK.		OK.
D		They are walnuts FROM THE FUTURE!		Ce sont des noix DU FUTUR!
A B C	The Pyramid! This PYRAMID outside the Louvre!		La pyramide! Cette PRYAMIDE hors du Louvre!	
D	UGH!		BEURK!	
A		It's not that awful…		Ce n'est pas si affreuse…
B		I like it.		Je l'aime.
C		Well, the pharaoh is going to die soon…		Alors, le pharaon va mourir bientôt…
D		Is that where you put the wine?		Est-ce que c'est où on mets du vin?
A B	It should be destroyed!		Je veux le détruire!	
C D	You're an idiot, aren't you.		Vous êtes idiote, n'est-ce pas?	
A		Woah now. I don't think that's necessary.		Holà, ce n'est pas nécessaire.
B		That seems like a bad idea.		C'est une mauvaise idée.
C		I think you should learn to be peaceful.		Évitons la déstruction de la propriété publique…
D		Yeah! Burn it to the ground!		Prisons-la!
A B C	You're right, of course.		Vous avez raison, bien sûr.	
D	I'll get started right now! One question: What kind of fuel melts steel		Commençons! Une question: comment brûle-t-on de la verre?	

	beams?			
A		On another note…		À part ça…
B		Can you help me?		Pouvez-vous m'aider?
C		I'm looking for something…		Je cherche quelque chose…
D		I'm hungry. Do you have a cheese omlette.		J'ai faim. Vous avez une omelette au fromage?
A B C	Yes? What is it?		Oui? Qu'est-ce que c'est?	
D	Non, I ate all of them.		Non, j'en ai toutes mangé.	
A		Have you seen anything strange?		Avez-vous vu rien d'anormale?
B		Have you seen anything out of place?		Avez--vous vu quelque chose hors de place?
C		I'm looking for something bizarre.		Je cherche quelque chosse de bizzare.
D		I'm bitter because I don't like looking for documents. I'm going to quit my job.		Je n'aime pas chercher des documents. Je vais quitter mon travail.
A B C	I think that there's something on the other side of that terrible pyramid.		Je pense qu'il y a quelque chose à l'autre côté de cette pyramide terrible.	
D	I have no idea what that means.		Je ne comprends pas.	
A		Thank you!		Merci!
B		Many thanks!		Milles mercis!
C		You are marvellous!		Vous êtes merveilleux!
D		Yesterday, I spoke to Georges Clemenceau.		Hier, j'ai parlé avec Georges Clemenceau.
A B C	Ah. Yes.		Ah. Yes.	
D	You're crazy.		Vous êtes folle.	

	Player Gets Moulin Rouge Poster		Player Gets Moulin Rouge Poster	
	What is this?		Qu'est-ce que c'est?	
	Time Device senses anomaly, glitches, jumps through time		Time Device senses anomaly, glitches, jumps through time	
	MINI GAME 8		MINI GAME 8	
	Player Sees The Moulin Rouge		Player Sees The Moulin Rouge	
	Oh! My favorite! I've always wanted to go here!		Oh! My favorite! I've always wanted to go here!	
	Time device still broken, displays broken “Time Anomaly detected.”		Time device still broken, displays broken “Time Anomaly detected.”	
	I've gotta be close to getting home		I've gotta be close to getting home	
	Find the next time anomaly!		Find the next time anomaly!	
	Player talks to Mistinguett (9.01-9.07)		Player talks to Mistinguett (9.01-9.07)	
A B C D	OH my, what have we here?		Qu'est-ce que c'est que ça?	

A		Yes?		Oui?
B		Did you say something?		Avez-vous dit quelque chose?
C		Me?		Moi?
D		It's a cigarette, madame		C'est une cigarette, Madame.
A B C	Yes, you are so cute! What is your name, darling?		Oui, vous êtes si mignonne! Comment vous appellez-vous, ma chère?	
D	That's funny, but that's not what I'm talking about, dear.		C'est drôle, mais ce n'est pas ce dont je parle.	
A		Ummm... It's not important.		Euhh, c'est sans importance…
B		Weeeeell...		Beeeeen...
C		…		…
D		My name is...Élodie		Je m'appelle…Élodie.
A B C	A lady of mystery, I can understand that!		Une femme de mystère, je comprends bien!	
D	Oh, Élodie! That's lovely!		Oh, Élodie, c'est charmant!	
A		Is this you here?		C'est vous sur cette affiiche?
B		is this poster of you?		Je vous rends cette affiche, c'est un dessein de vous?
C		I found this, am I in the right place?		C'est toi sur cette affiche?
D		How am I going to return home?		Savez-vous comment je vais retourner chez moi?
A B C	Oh yes, that's me! Where'd you find this?		Oh, oui, c'est moi! Où l'as-tu trouvé?	
D	Oh, my dear, you can use		Oh, ma chérie, tu peux me tutoyer!	

	"tu" with me! (tu is informal/vous is formal)			
A		It's a long story...		L'histoire est trop longue…
B		The Louvre?		Le Louvre?
C		Once upon a time…		Il était une fois…
D		In a lobster.		Dans un homard.
A B	Well, it's me, Mistinguett! You could say I'm a sort of... attraction around here.		Alors, c'est moi, Mistinguett! On peut dire que je suis…attraction ici	
C D	haha, what an imagination! But I have to go perform now!		Quelle imagination! Mais je dois jouer sur scène maintenant.	
A		I see. Have you attracted anything odd?		Je vois. As-tu attiré quelque chose d'étrange?
B		Wow! Hey have you seen a weird book or flyer or anything?		Ouah! Tu as vu un livre curieuse où une chose semblable?
C		Oh. Is there anything odd you've noticed?		Oh. Est-ce que vous avez noté quelque chose de bizarre?
D		Oh, since when?		Ah, depuis quand?
A B	You know what, I think I did see something over in my dressing room!		Tu sais, je pense que j'ai vu quelque chose dans ma loge!	
C	Use "tu" with me, my dear! (tu is informal/vous is formal)		Tutoie-moi, ma chérie!	
D	I have been a dancer for		Je suis danseuse depuis vingt-six	

	twenty-six years.		ans.	
A		Thank you! I'll look!		Merci! Je vais chercher!
B		If it's alright for me to go?		Si ça va pour toi, est-ce que je peux chercher?
C		That's very helpful. Thanks.		C'est très utlie. Merci.
D		I have been to the past.		Je suis allée au passé.
A B C	Yes, be my guest! I hope you find what you're looking for!		Oui, je t'en prie! J'espère que tu y trouveras ce que tu cherches.	
D	ha ha! You are such a character.		Ha ha! Tu es un sacré personnage!	
	Player Gets WHICHEVER WWII DOCUMENT THE GIRLS DECIDE ON	thanks haha	Player Gets WHICHEVER WWII DOCUMENT THE GIRLS DECIDE ON	
	Oh no, WWII? I don't know if I'm ready for—		Oh, non, la deuxième guerre mondiale?	
	Time Device senses anomaly, glitches, jumps through time		Time Device senses anomaly, glitches, jumps through time	
	MINI GAME 9		MINI GAME 9	
	Player Sees Notre Dame. It's Nazi-Invaded paris, WWII		Player Sees Notre Dame. It's Nazi-Invaded paris, WWII	
	Woah, this place looks		Ouah, la cathédrale est	

	different...		différente.	
	Time device still broken, displays broken “TIME DEVIANT. TIME DEVIANT”		Time device still broken, displays broken “TIME DEVIANT. TIME DEVIANT”	
	Whoever's been messing everything up must be here.		La blâmable est ici	
	Find the culprit responsible!		Find the culprit responsible!	
	Player knocks on door, it's answered by member of Resistance (10.01-10.06)		Player knocks on door, it's answered by member of Resistance (10.01-10.06)	
A B C D	Who are you?		Qui êtes-vous?	
A		Woah woah woah!		Holà, holà, holà!
B		AH!		AH!
C		You surprised me!		Vous m'avez surpris!
D		I have come from the future!		Je suis venue du futur!
A B C	An answer or no entrance!		Réponse ou pas d'entrée!	
D	None of that nonsense! Who are you?		Pas de bêtises! Qui êtes-vous?	
A		I'm from paris!		Je suis de Paris!
B		I'm a french police officer!		Je suis agente française!
C		I'm just a woman who wants to return to the		Je ne suis qu'une femme qui veut retourner à l'an

		year 3015!		3015!
D		I am a shrimp.		Je suis crevette.
A B	So... You're loyal to the French.		Alors…vous êtes loyal au français.	
C D	I'm not letting you in.		Vous ne pouvez pas entrer.	
A		Yes, I work for the French.		Oui, je travaille pour les français.
B		Yes, I'm a french secret agent		Oui, je suis agente secrète française.
C		I'm loyal to the food and the food alone.		Je suis loyal aux aliments et les aliments seuls.
D		Yes yes. Han han han! Baguette the cheese's omlettte.		Oui oui. Hon hon hon! Baguette l'omlette du fromage.
A B	You're an Agent?		Vous êtes agente?	
C D	I'm sorry, I can't let you in.		Dégagez!	
A		Well… from another time.		Alors…d'un autre temps.
B		Well, one day!		Alors…un jour!
C		Well... I hope on day to be an agent.		Alors…j'espère un jour être agente.
D		Well, I'm sort of french and sort of an agent.		Alors…je suis presque française et presque agente.
A B	That's good enough!		C'est assez bon.	
C D	That's not good enough.		Ce n'est pas assez bon.	
A		So let me come in!		Alors, laissez-moi entrer!
B		So I can come in?		Alors, je peux entrer?
C		So I can be a watermelon?		Alors, je peux être pastèque?
D		So we can get married		Alors, je peux avoir des poitrons?
A B C	Ok. There's someone here that I think that		OK, Il y a une personne ici que je pense que vous	

	you would like to see.		aimeriez voir.	
D	Alright, you're clearly crazy. You're not getting in.		Euh, il est clair que vous êtes folle. Vous ne pouvez pas entrer.	
	Player enters, goes to back room. Talks to FUTURE PLAYER CHARACTER (10.07-10.013)		Player enters, goes to back room. Talks to FUTURE PLAYER CHARACTER (10.07-10.013)	
A B C D	Hello. Surprised?		Bonjour. Ai-je vous surprise?	
A		What? Is this a trick?		Comment? C'est une ruse?
B		How? You? Me?		Quoi? Vous? Moi?
C		I'm confused.		Je suis désorientée.
D		I AM FROM THE FUTURE!		Je suis du futur!
A B C	I know you're confused, but let me explain.		Je sais que vous êtes désorientée, mais je vais expliquer.	
D	NO. I AM FROM THE FUTURE!!!		Je suis du futur aussi!	
A		So who was moving all of those documents to the wrong times?		Alors, qui a mis tous les documents dans les temps incorrects?
B		So where's the culprit?		Alors qui a causé tous ces problèmes.
C		I, YOU, WE, ME, US? All are the same		Moi, vous, nous? Tous sont le même.
D		The Culprit must be behind this mirror!		Le coupable est au-dessous de la table!

AB	It was me, I'm the culprit.		C'est moi, le coupable. J'ai tout fait.	
CD	That's what I said too.		C'est ce que j'ai dit.	
A		You? Why?		Vous? Pourquoi?
B		Why do that? We FIX time.		Pourquoi faire ça? Nous RÉPARONS le temps.
C		So, we're going to disappear?		Alors, nous allons disparaître?
D		Shouldn't we like, implode or something?		Euh, allons-nous exploser?
AB	I did it to bring you back home. The A.R.T. used the documents and you are in this time now. You are going to return to our time.		Je l'ai fait pour vous ramener chez nous. L'A.R.T. a utilisé les documents et vous êtes dans ce temps maintenant. Vous allez retnourner à notre temps.	
CD	I don't think so.		Je ne pense pas.	
A		You had to mess things up so I could get back.		Vous avez changé tous et maintenant je peux retourner!
B		You saved me from imprisonment!		Vous m'avez sauvé de l'emprisonnement!
C		You saved me so we both could keep existing!		Vous m'avez sauvé et je ne vais pas disparaître!
D		You brought me here to kill me?		Vous m'avez sauvé pour me tuer!
ABC	Yes. Now, have you learned anything?		Oui. Alors, avez-vous appris quelque chose?	
D	No, you don't get it at all.		Non, vous ne comprenez pas du tout.	
A		I learned a lot of French!		J'ai appris comment

				parler français!
B		I learns a much of French!		J'appri parler François!
C		I learned a lot of French!		Je suis appris comment parler français!
D		I met a man named Francis!		J'ai raconté un homme qui s'appelle François!
A	Good. Are you ready to return?		Bon. Êtes-vous prête à retourner?	
B C D	You learned nothing!		Vous n'avez rien appris!	
A		Yep!		Oui!
B		Yes, I'm exhausted		Ouais, je suis fatiguée.
C		I think I am!		Je pense que oui!
D		Absolutely.		Absolument!
A B C D	Alright. Let's leave!		OK, sortons!	
	Player time-warps, one final time.		Player time-warps, one final time.	
	MINI GAME 10		MINI GAME 10	
	Scene of being back home? Cheering co-workers? Credits showing all chars in their day-to day lives, hopefully happier!		Scene of being back home? Cheering co-workers? Credits showing all chars in their day-to day lives, hopefully happier!	
	THE END.		THE END.	

Vita

Rachel Marie Floyd was born in Knoxville, Tennessee on March 1, 1992. He graduated from Knoxville Catholic High School in May 2010. After spending a year of study at Virginia Polytechnic Institute and State University, she transferred to the University of Tennessee where she majored in Psychology and French and Francophone Studies. She spent one semester in Pau, France in intensive French language study, and finally received her Bachelor of Arts degree magna cum laude in Psychology and French and Francophone Studies in May 2014.

The following semester, she enrolled at the University of Tennessee as a graduate student pursuing a Masters degree in French and Francophone Studies as a Graduate Teaching Assistant. She provided support for or taught elementary French classes, maintained a full course load, and after December 2014, worked on the project that would develop for this thesis with her year-mate, Brooke Tybush.