GAMIFYING THE SPANISH CURRICULUM TO PROMOTE MOTIVATION AND WILLING COMMUNICATION IN THE COLLEGE-LEVEL CLASSROOM

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Second/foreign language (L2) learners benefit from less stressful environments, such as games, and are more willing to take advantage of opportunities in which they can use the L2. Gamifying the curriculum has not only the potential to motivate L2 students but also help them develop strategies for communicating willingly in L2 in real-life situations. In this paper, I describe my study about gamification that may potentially be an effective framework for designing language learning curricula in the 21st century. My research consisted of designing, implementing, and assessing the effectiveness of a culturally-enriched gamified instructional unit, *Vida Perú*, for an Elementary Spanish college-level course. Using quest-based learning (QBL) pedagogy, I empirically investigated the effects of gamified quests in the motivation and willingness to communicate in Spanish of my students. In the study, I used a variety of instruments to collect quantitative and qualitative data from thirty-six student participants. The results showed that participants felt more relaxed with *Vida Perú* compared to the traditional classroom setting, but also that the game did not provide enough opportunities for them to communicate willingly in Spanish with others. In addition, most participants felt engaged with *Vida Perú* features such as goal, structure, storyline, narratives, gameplay, challenge and competition, avatars, rewards, badges, and feedback. Others did not feel engaged with the game rules, point system, setup, and

quest design. Most importantly, participants provided recommendations that will help me revise *Vida Perú* in order to move forward the research on gamification in the L2 classroom.

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PREFACE

First of all, I would like to thank my advisor, Dr. Richard Donato, for his guidance, encouragement, and support throughout the three years of my graduate study. I have learned not only sound ways of doing research from him, but also how to be a better instructor. I would also like to thank my committee members Dr. Jill Perry and Dr. Stacey Triplette for their valuable suggestions and thoughtful comments throughout the course of this dissertation. In addition, I would like to express my appreciation to Pitt-Greensburg and the support of my students, colleagues, and staff. Many thanks to my LLC Cohort (Tracy Driver, Angela Gaito-Lagnese, Christine Herring, Chuck Herring, Nicole Mitchell, Clyde Pickett, Alicia Smail, and Tamika Thomas) for three amazing years of friendship and mutual support. Last but not least, I wish to express special thanks and to dedicate this work to my husband, Mark, and to my son, Lucas, for their endless love and encouragement. I simply could not have taken the initial step of my study nor have gone this far without them. I would like to share my happiness with them.

OPENING SCENARIO

Mary and Susan are American students in a Canadian college. Today they are quite busy exploring their university campus and interacting in French with all kinds of media popping up on their phones. They are, in fact, playing a game that has challenged them with a 'quest': to work as assistants to a French politician who needs them to run some errands in Paris. For their quest, the girls use their phones to locate virtual places in Paris, although they never leave their college campus! At the Eiffel Tower (a monument on campus), Mary uses her phone to scan a QR code posted there. The QR code links to a talking avatar of the politician. He is asking her and Susan to find the closest coffee shop (by GPS) and role play, and record, a conversation in which they order an espresso and a strawberry crêpe for him. After reaching their destination (a window) and practice what to say, Mary and Susan record their dialogue, upload it to the game blog, and instantaneously get a star with a message that says 'quest complete' (in French). For the next task, the talking avatar of the politician asks them to write and mail a postcard to his family. They consult the map on the game board and, using GPS, they follow directions to get to the next virtual location. This time, they arrive at a bench. However, the QR code posted there links to the picture of the main post office in Paris and also to a website with templates of blank postcards. Their task is now to choose a template and to type,

in French, a message to the politician's family introducing themselves as their assistant and telling them where he is staying in the city. Once they upload the postcard to the game blog, they receive another star and the 'quest complete' message again. The quest continues until they finish their required tasks for the day. They are happy because they have received many stars as well as collected 100 XP (experience points). Most importantly, they have enjoyed exploring their campus while practicing French along the way. They like these quests and they love playing the game: Explorez. Surprisingly, Explorez is a design of their French instructor who is using it as the core curriculum for the French 1 class!

- Example adapted from *Explorez,* http://tinyurl.com/explorez

1.0 INTRODUCTION

Americans today find it disconcerting that while access to information and digital technologies have increased tremendously in recent years, schools have not changed at the same rate. Haskell (2013) is right to call schooling "a one-size-fits-all approach" (p. 1). Robson et al. (2015) add weight to this argument by highlighting three recent developments that hold great promise for educational innovations: "1) new knowledge about the design and management of gaming experiences, 2) the advent of social media and technology, and 3) the heightened interest in providing more engaging experiences" (pp. 412-413). Along the same lines, Haskell (2013) stresses the importance of integrating digital games and social networks in instruction to promote engaging, self-paced, and adaptive student experiences.

In recent years, the interest in studies about the benefits of digital games for language learning has increased. Consider, for example, Reinders and Wattana's (2015) claim that "games are motivating, lower affective barriers in learning, and encourage foreign or second language (L2) interaction" (p. 38). Haskell (2013) adds that certain 'elements' make games more attractive to learners such as student choice of tasks, ongoing feedback, achievement systems, and the concept of failure without punishment. Haskell (2013) also reminds us that "despite our knowledge of student diversity, pedagogical approaches have failed to value and incorporate this knowledge into new and more effective instructional design" (p. 1). Indeed, examinations of gamified approaches to language learning suggest that instructors could

incorporate multimodal hybrid environments to nurture more individualized experiences so that students are able to guide their own learning (Abrams & Walsh, 2014).

In regards to higher education, Lang (2014) observes that many students spend lots of time and energy playing video games but that they don't appear to experience the same excitement in their classrooms. Moreover, Lang (2014) suggests that these students' lack of interest in college learning is the direct consequence of lecture-based courses where professors just stand in front of their rooms and teach. Although I disagree with much that Lang (2014) says about university teaching, I think he makes a good recommendation that "rather than think of ourselves as content delivery vehicles, we faculty may have to re-conceive our role as that of an architect or curator of a learning space" (p. 3).

1.1 PROBLEM OF PRACTICE

My main area of interest in foreign language pedagogy is the integration of technology into the curriculum. Technology makes it possible for many people to communicate across national borders, not just in different languages, but also in different modalities. As a result, I believe that technology complements language learning and is a fundamental part of an engaging classroom experience. Recently, I also became intrigued in gamified quests and, particularly, in their potential to motivate learners and enhance purposeful communication in the foreign language classroom. Therefore, I argue that gamifying the Spanish curriculum not only can motivate students but also help them develop strategies for communicating willingly in Spanish with others in real-life situations.

My problem of practice thus consisted of designing, implementing, and assessing the effectiveness of a strategically crafted gamified instructional module for a college-level Elementary Spanish course. Using quest-based learning (QBL) pedagogy, I empirically investigated the effects of a gamified curriculum in the motivation and willingness to communicate in Spanish of my students. Specifically, I designed a gamified instructional unit around the theme of leisure activities and contextualized in Peru in which students explored various aspects of the Spanish language and culture while acquiring the tools and strategies that they needed to become successful 21st century language learners. Admittedly, the student products (e.g., memes, comic strips, video clips, etc.) reflected many new literacies while conveying the intended message required from each task. Most importantly, the gamified environment provided students with ample opportunities to make connections with other disciplines, compare products, practices and perspectives between the Peruvian culture and their own, and communicate in Spanish in meaningful ways.

1.2 INQUIRY SETTING

The University of Pittsburgh at Greensburg (Pitt-Greensburg) is a four-year baccalaureate degree-granting institution with approximately 1500 students. It offers small classes characterized by individualized and hands-on learning opportunities. There are also student clubs and organizations that offer students a variety of activities on campus and in the nearby community. At Pitt-Greensburg, students in the Spanish program learn the language and culture that they will need for bilingual positions in the workforce or simply for communicating with native speakers of the language in real-life situations. Besides, "Spanish majors explore the

language, history, literature and culture of the Spanish-speaking world, with an emphasis on diversity and cultural exchange" (University of Pittsburgh-Greensburg, 2016). Students are also enticed to pursue study abroad opportunities in Spanish-speaking countries, individually or in groups, through university-led trips or suitable scholarships. Additionally, in the Spanish Education major, students take additional coursework and engage in immersive experiences that prepare them for work as certified K-12 teachers in the state of Pennsylvania.

1.3 STAKEHOLDER PERSPECTIVES

Nearly all the Elementary Spanish students in Pitt-Greensburg are not pursuing a major or a minor in Spanish. Therefore, to them, the Elementary Spanish sequence consists of one to three general education courses that are only needed to satisfy graduation requirements. Consequently, the level of motivation for these courses is lower than for those directly related to their major discipline. Faculty members often suffer from the same lack of motivation related to teaching students in general education courses. These students are not their own advisees who are majors or minors in Spanish. In fact, the difficulty in teaching a general education course is not always in the content of the curriculum but in the challenge of teaching the course to unmotivated students. In addition, Grubb (2012) argues that it is more likely for students to get engaged with courses "where they can construct meaning, engage in sense-making on their own, and play an active role in learning" (p. 9). This observation is particularly true for Pitt-Greensburg Elementary Spanish 1 students, the main stakeholders in my problem of practice.

As an Elementary Spanish 1 instructor at Pitt-Greensburg, I want to strive to move beyond imparting language skills as the sole focus of my instruction by planning lessons around

the major goal areas of foreign language learning (Communication, Cultures, Connections, Comparisons, and Communities). This endeavor would certainly be much easier if I were using a standards-oriented textbook, but that is by no means a justification to not incorporate the aforementioned goal areas in my teaching. Indeed, if my instruction changed in a way that supported students' ability to communicate, compare target cultures with their own, make practical connections with other cultures and disciplines, and participate in multilingual communities, I would find that students can engage in language learning in a way that, in James's (1998) words, "cannot be equaled by the 'cover the textbook' approach" (p. 13). By extension, from my perspective, three main factors appear to affect Pitt-Greensburg students' motivation and willingness to communicate in the Elementary Spanish 1 classroom: problematic course materials, lack of motivation, and textbook-driven teaching practices. Once put this way, it is hard to disagree with James's (1998) claim that "the college curriculum itself has to change" (p. 11).

1.4 RESEARCH QUESTIONS

The main purpose of my study was to design, implement, and assess the effectiveness of a gamified unit of instruction in the motivation and willingness to communicate in Spanish of college-level students.

Specifically, my research questions were:

- *To what extent do game-like features (i.e. storyline, choice of tasks, rules, rewards, badges, scoreboard, feedback, etc.) make a course attractive and motivate Spanish students?*

- *To what extent do game-based learning environments promote willing communication in Spanish among students?*

2.0 LITERATURE REVIEW

2.1 GAMES AND LANGUAGE LEARNING

2.1.1 Language learning in the 21st century

With the crucial role that interaction plays in language learning, communication becomes then an important skill that students need to acquire for developing language proficiency and intercultural competence in our diverse society. In addition, as corroborated in recent world events, "deep cultural knowledge and linguistic competence are equally necessary if one wishes to understand people and their communities" (Geisler et al., 2007, p. 2). To take a case in point, the World-Readiness Standards for Learning Languages (W-RSLL) describe the future steps in language teaching and learning for the next decade and beyond, particularly in "the expansion of student opportunities for language learning that can occur anytime and anywhere" (NSFLEP, 2015, p. 17). In addition, NSFLEP (2015) stresses that "access to a variety of technologies helps learners strengthen linguistic skills, establish interactions with peers, and learn about contemporary culture and everyday life in the target country" (pp. 31-32). Moreover, technology not only gives students opportunities to connect with speakers of other languages, it also motivates them to want to learn languages and cultures. As a result, language instruction should also place an emphasis on the development of 21st century skills (NSFLEP, 2015; Romero et al., 2015). Indeed, according to ACTFL (2011), "it is only through the language of others that we can truly understand how they view the world, and this is what makes the language student a 21st

century skilled learner" (p. 3).

ACTFL (2011) criticizes approaches to teaching that require students to know a lot of facts about a target language rather than use it for authentic purposes. In other words, those instructors are only concentrating on "the *how* (grammar) to say *what* (vocabulary)" and, "while these components of language remain crucial, the current organizing principle for language study is communication, which also highlights the *why* (purpose), the *to whom* (audience), and the *when* (context)" (ACTFL, 2011, p. 11). Learning language facts, such as vocabulary and grammar, does not help students 'acquire' a language and use it for real communication. Besides, students need to be able "to carry out a complex interactive process that involves speaking and understanding what others say in the target language, as well as reading, viewing, and interpreting materials in a variety of media" (NSFLEP, 2015, p. 26). Therefore, NSFLEP (2015) stresses that, to develop communicative competence, students also need to acquire complex concepts that blend culture and communication. As a result, instructors should focus on teaching a language so that students are able to use it to communicate with native speakers of it, thus encompassing the sociolinguistic and cultural aspects of language. This strategy, according to ACTFL (2011), truly prepares students "to use their language learning as a 21st century skill" (p. 4).

In education, when people talk about 21st century skills, they refer to those meta-skills known as the 4C's of Communication, Creativity, Critical thinking, and Collaboration. As an illustration, "21st century skills for creativity and innovation include brainstorming and refining ideas, seeking diverse perspectives, and implementing innovations" (Kingsley & Grabner-Hagen, 2015, p. 6; P21, 2002). Critical thinking and problem solving skills deal with knowing how to transfer information acquired previously to new contexts. Online communication technologies,

according to Kingsley and Grabner-Hagen (2015), "can motivate students to write for a larger audience, provide meaningful exchanges, and help students develop social identities" (p. 8). Lastly, creating and collaborating with others can also transform a graded writing task into a social endeavor with a situated style, genre, and audience.

To promote 21st century skills, Romero, Usart, and Ott (2015) propose the use of active learning methodologies in which students get engaged in tasks that enable them to face new challenges and solve problems. To take a case in point, "game-based learning (GBL) is grounded in active learning methodologies and encourages learning activities by building on engagement and challenges to achieve the intended learning objectives" (Romero et al., 2015, p. 149). Cornillie, Thorne, and Desmet (2012) add that games are contributing to "shift away from models of learning based on information delivery" towards models anchored in "experiential problem-solving and complex and spatially distributed forms of collaboration" (p. 245). Along the same lines, Kingsley and Grabner-Hagen (2015) recognize a tight bond between games and critical thinking in the sense that "games are just well-designed experiences in problem-solving" (p. 7) where "learning becomes situated within an affinity space to provide increased opportunities to pursue interests and collaborate on projects" (p. 8). Furthermore, Reinders and Wattana (2015) corroborate that digital games are engaging environments consisting of problem-solving tasks and multiple pathways to mastery. This is important because games can thus be seen as pedagogical tools that help develop 21st century skills.

In today's globalized world, instructors should strive to provide students with online learning opportunities that occur anytime and anywhere. Technology not only gives students opportunities to connect with speakers of other languages, it also motivates them to want to learn languages and cultures. NSFLEP (2015) insists that "access to a variety of technologies help

learners strengthen linguistic skills, establish interactions with peers, and learn about contemporary culture and everyday life in the target country" (pp. 31-32). According to ACTFL (2011), instructors should also take advantage of technological advances to enhance student learning with personalized real-world tasks. Advocates of digital games in the classroom argue that "providing authentic and enriched learning scenarios is an important game characteristic that contributes to the acquisition of 21st century skills" (Romero et al., 2015, p. 168). Most importantly, "good digital games incorporate learning principles and have a variety of design features that are particularly relevant to language learning" (Reinders & Wattana, 2015, p. 38).

2.1.2 Games and play

In the early 1980s, when the first computer games hit the market, Human-Computer Interaction (HCI) and games research consisted mostly in the design of enjoyable user interfaces that made routine work activities interesting, fun, and easy. Deterding et al. (2011) report that 'playfulness' was a desirable mode of game interaction so many studies focused on how to design for it. Yet, later in the 2000s, researchers turned their attention to the development of 'playability' heuristics in order to evaluate the user experience with games. Admittedly, there is a distinct difference between games and play. Caillois (1961) explains it using the concepts of *paidia* and *ludus. Paidia* (or 'playing') is a free form and improvisational combination of behaviors while *ludus* (or 'gaming') refers to a more structured play infused with rules and characterized by goal-oriented, competitive behaviors (Deterding, 2012).

"Classic definitions in game studies state that gaming and games, in contrast to playing and toys, are characterized by explicit rule systems and the competition or strife of actors in those systems toward discrete goals or outcomes" (Deterding et al., 2011, p. 11). By extension,

Reinhardt and Sykes (2014) refer to *game* as "a goal-oriented, rule-based, and playful (usually voluntary) activity" (p. 5), and *play* as a fundamental step in human ontogenesis. Interestingly, among all languages, English is the only one that differentiates the word *game* from *play*. On the one hand, as Reinhardt and Sykes (2014) posit, it would make sense to study the *ludic* independently from the *paedic*; that is, the rule-structured gameplay separate from the playful quality of it. On the other hand, they appear inseparable as in the term 'gameplay'. Pedagogically speaking, the importance of having two words might help us think of 'gamefulness' (McGonigal, 2011) as "a quality that can bring the transformative potential of play into the already goal-oriented and rule-based classroom" (Reinhardt & Sykes, 2014, p. 5).

Proponents of game-based learning, such as Prensky (2003), highlight that today's children have a complete different attitude toward video games than school. Indeed, most children are highly engaged when they play video games that offer continuous challenges, engaging storylines, interesting choices, and attractive rewards in a fun, and at times realistic, medium (Bruder, 2015). As an example, serious games motivate learners to complete tasks in authentic environments where entertainment and learning are seamlessly integrated (Romero et al., 2015). In addition, games that provide authentic learning scenarios where players collaborate with and compete against each other help develop 21st century skills.

As educators, we want our students to pay attention in class and become interested in our subjects but, most importantly, have them "engage in a manner that sustains their interest and keeps them coming back for more" (Buckley & Doyle, 2014, p. 2). To take a case in point, "video games provide a fictional context in the form of narrative, graphics, and music which, if used appropriately, can encourage the interest of players on non-gaming topics" (Dominguez, 2013, p. 380). In addition, video games have the potential to promote higher-order thinking

through goal-oriented interactive activities and challenges for the players (Dominguez, 2013). Another important characteristic of video games is that actions in the virtual world have no lasting consequences in the real world; that is, learners can play the game with no fear of failure (Romero et al., 2015).

Domínguez et al. (2013) insist that "games are motivating because of their impact on the cognitive, emotional, and social areas of players" (p. 381). In the *cognitive* area, Dominguez et al. (2013) explain, a game resembles a sequence of non-linear tasks from which players can choose based on their own skills and personal preferences. By extension, game interactions influence players' *social* areas allowing players to "build different in-game identities, take meaningful roles, and obtain recognition from other players" (Domínguez et al., 2013, p. 382). Additionally, the impact on the *emotional* area falls under the dichotomy 'success-failure'. On the one hand, players experience positive emotions just by overcoming challenges during the game. On the other hand, when players are unable to complete a task, they experience anxiety. Danowska-Florczyk and Mostowski (2012) claim that "the sense of control and responsibility for one's own success or failure while gaming are crucial in the process of broadening minds and acquiring skills" (p. 3), and may also increase student motivation.

At the same time, Cornillie et al. (2012) describe video games from their prehistory in 1958 to the contemporary Massively-Multiplayer Online Games (MMOGs) in which players interact in and with multiple languages. For instance, Reinders and Wattana (2015) explain that the Massively-Multiplayer Online Role-Playing Games (MMORPGs) are "linguistically-rich and cognitively-challenging environments" (p. 39) in which learners find many opportunities to get immersed and acquire a foreign language. Specifically, "MMORPGs afford learners opportunities to learn conversational language, use and practice the foreign/second language

(L2), engage in various forms of interaction (such as negotiation of meaning) necessary for language learning, foster pragmatic development, and develop their communicative competence" (Reinders & Wattana, 2015, p. 39). Those unfamiliar with this school of thought may be interested to know that it basically addresses "the study of game-mediated social and cognitive activity in the design and practice of Teaching and Learning a Second/Foreign Language (L2TL)" (Reinhardt & Sykes, 2014, p. 5).

Lastly, Reinhardt and Sykes (2014) developed a framework that classifies the research of digital games in L2 teaching and learning according to the functional characteristics of games. The framework consists of three distinct research areas; a) *game-enhanced* research, that involves L2 learning and pedagogy with commercial games, b) *game-based* research, that investigates digital games specifically designed for pedagogically-oriented L2 learning, and c) *game- (and play-) informed* research, that consists in using games and play research to better understand L2 teaching and learning outside of traditional games. This latter category refers to the contemporary phenomenon known as 'gamification' (Kapp, 2012) or, as also known by others, 'gamefulness' (McGonigal, 2011).

2.1.3 Gamification

Having just discussed historical perspectives on games and play as well as their implications on the teaching and learning of a foreign/second language (L2) in the 21st century, let us now turn our attention to the concept of *gamification*. Deterding et al. (2011) explain that gamification is based on games, which are more structured and formal, and not on play, which is more loosely defined, free form, and improvisational. Although it is true that gamified applications focus almost exclusively on design elements for rule-bound, goal-oriented play (i.e., *ludus*), with little

space for open, exploratory, free-form play (i.e., *paidia*), recent studies have demonstrated that gamified L2 environments benefit from the integration of structured and non-structured play as a means for learning. And, in some cases, "it is not possible to determine whether a given empirical system is a 'gamified application' or a 'game' without taking recourse to either the designers' intentions or the user experiences and enactments" (Deterding et al., 2011, p. 14). In other words, the 'design' of a gamified system is what determines its purpose and pedagogical value in the L2 classroom.

Deterding et al. (2011) define gamification as "the use of game design elements into non-game contexts" (p. 9). The use of the term *element* indicates that gamified applications do not employ 'fully-fledged' games but rather they "merely incorporate 'elements of' games (or game 'atoms')" (Deterding et al., 2011, p. 11). Therefore, Deterding et al. (2011) suggest "restricting 'gamification' to the description of elements that are characteristic to games; that is, elements that are found in most (but not necessarily all) games, readily associated with games, and found to play a significant role in gameplay" (p. 12). As an illustration, game characteristics such as competition, goals, rules, choice, and fantasy are at the 'core' of educational (serious) games and "even though these characteristics are listed separately, they are inherently interdependent, and all have a similar overall purpose in motivating the learner" (Romero et al., 2015, p. 164). Pedagogically speaking, Buckley and Doyle (2014) define gamification as "the integration of design elements traditionally found in games into educational contexts" (p. 2), such as specific rules, reward systems, feedback cycles, and competition. Along the same lines, Nicholson (2012) emphasizes that 'meaningful' gamification is "the integration of 'user-centered′ game design elements into non-game contexts" (p. 5). Game design elements may include badges, rewards, experience points (XP), quests, storylines, and curriculum maps (Bruder, 2015).

In Abrams and Walsh's view (2014), "gamification motivates students to engage in sustained play" (p. 55). To take a case in point, well-designed video games include elements that keep players engaged for hours (Gee, 2014). It appears, then, that Csikszentmihalyi's (1990) concept of *flow* is also a core element of gamification due to its roots in "control, competence, appropriate challenges, immediate experiences, and clear goals and feedback" (Abrams & Walsh, 2014, p. 56). That is, as the challenge of a gaming experience increases, the participant's skill must also increase proportionally. "If a user's skill exceeds the challenge of the experience, they will become bored. And, if the challenge exceeds the participant's skill, they will suffer anxiety" (Raymer, 2011, p. 4). The essence of 'flow' consists, then, in achieving the perfect balance between boredom and anxiety; that is, keeping players engaged in the gamified experience (Raymer, 2011). In other words, "in addition to cognitive mastery and flexible social roles, gamification involves an emotional element in the form of real-time feedback and rewards as the player experiences concrete challenges that are perfectly tailored to the player's skill level, increasing the difficulty as the player's skill expands" (Abrams & Walsh, 2014, pp. 50-51). Consequently, according to Abrams and Walsh (2014), designing with 'flow' in mind helps sustain students' engagement and interest in gamified learning tasks.

Although it might seem important to consider a wide range of game elements when designing a gamified system for foreign/second language (L2) learning, Reinders and Wattana (2015) argue that "good digital games incorporate learning principles and have a variety of design features that are particularly relevant to language learning" (p. 38). Along the same lines, Danowska-Florczyk and Mostowski (2012) stress that every L2 learning game should have three basic elements: 1) goals (e.g., to communicate in everyday situations), 2) obstacles (e.g., language tasks), and 3) collaboration or competition (e.g., overcoming one's own communication

barrier or competing with others for a score). Additionally, Danowska-Florczyk and Mostowski (2012) observe that there are other elements that may contribute to a student's greater involvement in L2 learning: 1) challenge (e.g., achieving a communicative skill), 2) curiosity (e.g., the game has elements of surprise), 3) control (e.g., students' choices have an immediate and visible effect), and 4) fantasy (e.g., a fascinating game plot).

The literature provides a few examples of gamified systems for language learning. For instance, Perry (2015) describes the prototype learning tool *Explorez* (our opening scenario) that she used with her first year French language students. *Explorez* takes learning outside of the classroom and, according to Perry (2015), it provides "a contextual and immersive learning experience: one that is meaningful and relevant for the learner" (p. 2311) (e.g., ordering a drink in French at the campus café, looking for a French book in the university library, etc.). In short, *Explorez* transforms a college campus into "a virtual francophone environment" so that learners can "interact with characters, items, and media as they improve their French language skills and discover their campus" (Perry, 2015, pp. 2310-2311). At each location, via GPS and QR codes, Perry (2015) explains, players interact with real-world virtual characters (e.g., French celebrities) who give them 'quests' (e.g., taking pictures, performing communicative tasks, exploring locations on campus, etc.). Furthermore, players are able to choose from individual or group work as well as select their own tasks that they create in written, audio, or video formats (Perry, 2015).

Most importantly, gamification helps sustain students' interest because of its core characteristics of "engagement, story, autonomy, and meaning" (Kapp, 2012, p. xxii), and because it promotes "working with others in cooperative and/or competitive situations" (Abrams & Walsh, 2014, pp. 52-53). In addition, Tulloch (2014) argues that "rather than understand

gamification as the use of game design elements in non-game contexts, it is more productive to see it as the deployment of an alternative pedagogic system developed for, and refined in, gaming, in non-game contexts" (p. 326). This assertion adds weight to Perry's (2015) argument that gamification is more than just combining game elements; it is an 'experience' for the learner in the sense of "creating avatars, completing quests, collecting badges, and collaborating with teammates" (p. 2314). Ultimately, what really matters here is that the potential of gamification in L2 teaching and learning lies in its focus on learner engagement with the subject matter as well as on the learner's motivation to complete tasks (Tulloch, 2014; Kingsley & Grabner-Hagen, 2015).

2.2 THEORETICAL PERSPECTIVES

2.2.1 Motivation

Dörnyei (1994) believes that "motivation is one of the main determinants of L2 learning achievement" (p. 273). Moreover, to explain L2 motivation in a learning situation, Dörnyei (1994) postulates "three sets of motivational components: 1) *course-specific motivational components* (e.g., syllabus, teaching materials, teaching method, and learning tasks), 2) *teacher-specific motivational components* (e.g., teacher's personality, teaching style, feedback, and relationship with students), and 3) *group-specific motivational components* (e.g., dynamics of the learning group)" (p. 277). Although described by previous researchers as "an eclectic, multifaceted construct", Dörnyei's (1994) conceptual framework of L2 motivation "consists of three levels: the *language level*, the *learner level*, and the *learning situation level*" (p. 279). What is most significant, "these three levels coincide with the three basic constituents of the L2

learning process (the L2, the L2 learner, and the L2 learning environment) and also reflect the three different aspects of language (the social dimension, the personal dimension, and the educational subject matter dimension)" (Dörnyei, 1994, p. 279). Figure 1 shows Dörnyei's (1994) framework of L2 motivation.

Dörnyei's (1994) findings about L2 motivation have practical applications in the classroom. Actually, he suggests motivational strategies at the *learning situation level* because teachers can easily manipulate and modify them. Some strategies include: 1) increasing the attractiveness of the course content, 2) arousing and sustaining students' curiosity and attention by designing varied and challenging activities, 3) increasing students' interest and involvement by designing personalized tasks, 4) including imaginative elements that engage students' emotions (e.g., game-like features), 5) making the assessment criteria clear, transparent, and meaningful, and 6) celebrating accomplishments.

In regards to motivating students in the classroom, "gamification does not assume engagement and interest, but instead seeks to generate it" (Tulloch, 2014, p. 327). *Explorez*, for instance, engages French college students with authentic tasks and strategically-placed gamified elements. By comparison, Dörnyei's (1994) motivational strategies resemble the characteristics of a gamified learning environment appropriate for teaching and learning a foreign/second language (L2) in "the sense of engagement, immediate feedback, feeling of accomplishment, and success of striving against a challenge and overcoming it" (Kapp, 2012, p. xxii).

LANGUAGE LEVEL	Integrative motivational subsystem Instrumental motivational subsystem
LEARNER LEVEL	Need for achievement Self-confidence * Language use anxiety * Perceived L2 competence * Causal attributions * Self-efficacy
LEARNING SITUATION LEVEL	
Course-specific motivational components	Interest (in the course) Relevance (of the course to one's needs) Expectancy (of success) Satisfaction (one has in the outcome)
Teacher-specific motivational components	Affiliative motive (to please the teacher) Authority type (controlling vs. autonomy-supporting) Direct socialisation of motivation * Modelling * Task presentation * Feedback
Group-specific motivational Components	Goal-orientedness Norm and reward system Group cohesiveness Classroom goal structure (cooperative, competitive or individualistic)

Figure 1. Dörnyei's (1994) framework of L2 motivation

2.2.2 Willingness to communicate

MacIntyre et al. (1998) define *willingness to communicate* (WTC) as "a readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (p. 547). The construct of WTC is, according to MacIntyre et al. (1998), the final step before actual L2 use. Many research studies have determined that an increase in WTC leads to positive effects in L2 learning and acquisition. Reinders and Wattana (2015), for example, report that "L2 learners with high levels of WTC are more likely to benefit from communicative language teaching", "are

more inclined to take risks using the L2 to communicate", and "interact in the L2 more frequently" (p. 40). Moreover, in Reinders and Wattana's (2015) view, "WTC appears to be a good predictor of L2 interaction, more so than motivation alone" (p. 41). Figure 2 shows the heuristic model of variables influencing WTC (MacIntyre et al., 1998).

In sum, WTC theory suggests that "interaction in a non-threatening environment conducive to authentic language use will lead to increased self-confidence, decreased anxiety, and increased willingness to practice and use the L2" (Reinders & Wattana, 2015, pp. 43-44). Ultimately, what matters here is that L2 learners benefit from less stressful environments, such as games, and are more willing to take advantage of opportunities in which they can use the L2.

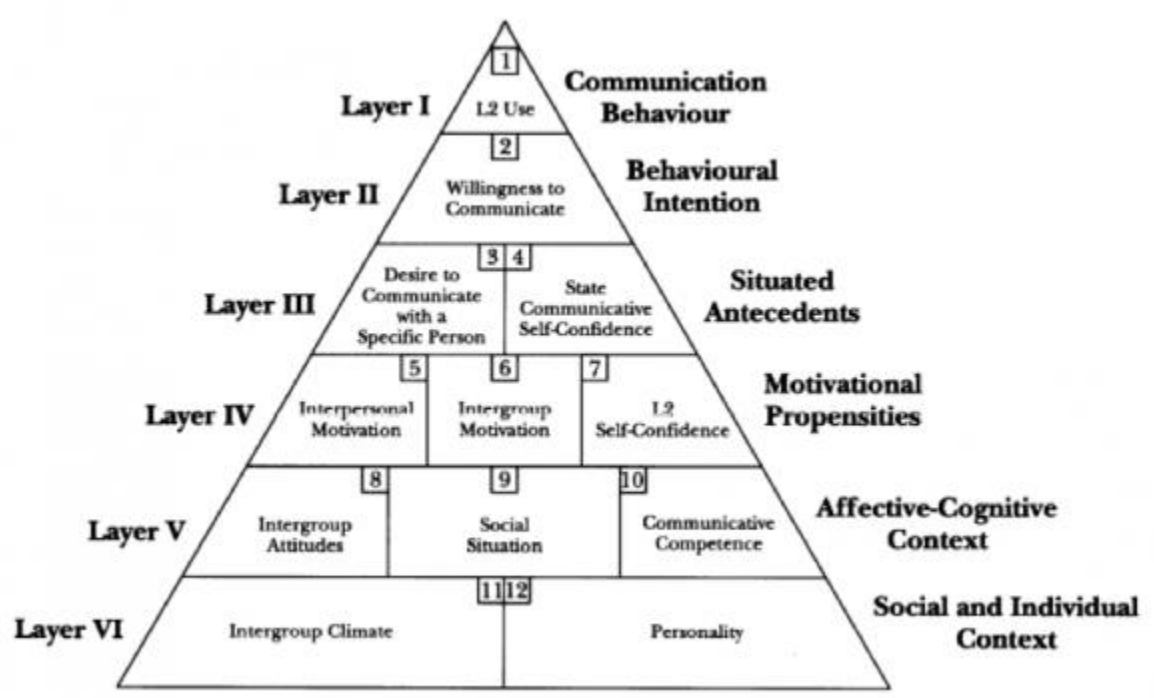


Figure 2. Heuristic model of variables influencing WTC (Macintyre et al., 1998)

2.2.3 Multiple literacies

The New London Group (2000) uses the term *multiliteracies* to describe a new pedagogical approach that emphasizes multimodality (e.g., linguistic, auditory, spatial, visual, and gestural) in communicative expression and representation. Kingsley and Grabner-Hagen (2015) add that "new literacies are more participatory, collaborative, and distributed when compared with conventional literacies" because they involve "reading, examining, and creating with both print and digital texts" (p. 3). Besides, in order for literacies to be considered 'new', Kingsley and Grabner-Hagen (2015) explain, they must promote 21st century skills and situated learning. To take a case in point, emerging technologies provide novel opportunities for social interaction and collaboration where students can take advantage of authentic opportunities to communicate with each other in various modes of communication. Moreover, contemporary forms of multimodality and multimedia can truly change how our students communicate in a target language (Kingsley & Grabner-Hagen, 2015).

Out-of-school digital literacies, such as gaming, differ from school literacies in that they have more success in motivating learners (Lewis & Fabos, 2005). Additionally, Gee (2007) believes that a video game is an example of a semiotic domain and that video gaming is a multimodal literacy. Furthermore, the meanings of signs (e.g., words, actions, objects, artifacts, symbols, texts, etc.) in video games are part of 'embodied' stories; that is, stories about what 'real' life looks like (Gee, 2007). As an example, gamified environments such as *Explorez* allow students to practice oral and written language skills with real-life examples as well as engage in various communicative language modalities, individually or with their peers.

2.2.4 Quest-based learning

Haskell (2013) defines quest-based learning (QBL) as "an instructional design theory that leverages game mechanics and gamer-like learning communities to support student choice within the curriculum" (p. 2). In QBL, Haskell (2013) explains, students engage in *quests*, which, like most traditional assignments, incorporate text, audio, or media, and have a culmination activity (e.g., group skit, individual blog, infographic, etc.). Villagrasa et al. (2014) add that "virtually any activity that involves solving problems to reach a final, tangible goal can be considered a quest" (p. 43). In addition, besides problem-solving, quests promote meaningful communication, creative and innovative thinking, and the use of multiliteracies in different modalities (Kingsley & Grabner-Hagen, 2015; New London Group, 2000). As an illustration, in Kingsley and Grabner-Hagen's (2015) study, students use new literacies when they craft their responses using multiple learning modalities, including digital, print, and other multimodal formats; that is, they become "multimodal designers of content via technology-rich quests" (p. 6). In addition, unlike conventional assignments, "a quest is a task-based journey with obstacles that students must overcome" and, although the tasks are not arranged in a fixed linear order, "a storyline links the tasks together to create a cohesive whole" (Villagrasa et al., 2014, p. 43). To take a case in point, *Explorez* consists of individual and group quests linked by a storyline around the themes of 'travel', ‘food’, and ‘entertainment’.

Most notably, as opposed to more traditional grading systems, "teachers in a quest-based approach do not assign letter grades to completed quests. They either 'approve' a quest because it meets all expectations or 'return' the quest to the student for revisions and resubmission" (Haskell, 2013, p. 3). These features have important consequences for the broader domain of assessment as QBL supports multiple attempts without punishment with the purpose of allowing

students to learn from their mistakes. In addition, successfully completed quests earn and help accumulate experience points (XP) that contribute to progression through levels and ranks, and ultimately lead to a winning stage (unit or course completion). In comparison, “games are generally structured so that players have various 'layers' of goals. That is, they have the long-term goal of completing the game, the medium-term goal of completing the levels in the game, and the short-term goal of completing the missions in the levels (sometimes these missions are even broken up further into additional tasks)" (Raymer, 2011, p. 3). Consequently, "like digital games, quest-based learning promotes the use of badges, achievements, and awards to mark student progress, recognize specialization, and provide multiple forms of formative feedback and evaluation" (Haskell, 2013, p. 3).

In a gamified learning environment driven by QBL, "game-based feedback tools like experience points, progress bars, badges, and achievements, are quite motivating and meaningful to students" (Haskell, 2013, p. 1). In *Explorez*, for instance, Perry's (2013) first assigned quest is about "creating two avatars: one to represent the student, created individually, and the second avatar, created in collaboration, to represent the team's chosen French celebrity" (p. 2312). Once the requirements for each quest are fulfilled, the system responds 'quest complete' and the player (or team) becomes aware of successful quest completion. Besides, a badge (e.g., star, trophy, L2 symbol, etc.) may also reward the player/team for successfully completing an individual quest. What matters here is that "when a teacher blends gamification with other teaching methodologies, like QBL, they are creating the perfect environment for students to engage in a lesson" (Villagrasa et al., 2014, p. 55).

3.0 METHODOLOGY

My problem of practice consisted of designing, implementing, and assessing the effectiveness of a gamified instructional unit on my students' motivation to learn Spanish (Dörnyei, 1994) and on their willingness to communicate in Spanish (MacIntyre et al., 1998). The inquiry approach that I used was design-based research. "Design-based research, or formative experiment, is a systematic approach of development and improvement of instructional methods in natural classroom settings through cycles of development, implementation, evaluation, and revision" (MacArthur & Philippakos, 2013, p. 178). Barab and Squire (2004) add that design-based research may involve developing technology, curriculum, or theory "to understand and support learning" (p. 1). In addition, design-based research can also be described as an iterative process of data collection to determine what is or is not working followed by modifications to enhance the effectiveness of an intervention (Bradley & Reinking, 2011).

The intervention that I designed, implemented, and assessed was a gamified unit of instruction where, individually and in teams, students pursued and engaged in real-world tasks (e.g., discuss likes and dislikes, plan activities based on weather conditions, etc.) contextualized in a Spanish-speaking country (i.e., Peru). The student products (e.g., memes, comic strips, video clips, etc.) reflected many new literacies while conveying the intended message required from each task. The gamified instructional unit also provided students with opportunities to make connections with other disciplines, compare products, practices and perspectives between the

Peruvian culture and their own, and communicate in Spanish with others in meaningful and successful ways.

After designing the first prototype of the gamified instructional unit, which I called *Vida Perú*, I implemented it with my Elementary Spanish 1 students during the last four weeks of the semester (in the fall of 2016). I found this timing advantageous because, by then, students had familiarized themselves with the course, the professor (myself), and their classmates.

My research questions were:

- *To what extent do game-like features (i.e. storyline, choice of tasks, rules, rewards, badges, scoreboard, feedback, etc.) make a course attractive and motivate Spanish students?*
- *To what extent do game-based learning environments promote willing communication in Spanish among students?*

3.1 INQUIRY METHODS

Thirty-six students in my Elementary Spanish 1 course agreed to participate in the study. With them, I used a variety of instruments to collect quantitative and qualitative data with the purpose of assessing the effectiveness of the gamified instructional unit on their motivation to learn Spanish (Dörnyei, 1994) and on their willingness to communicate in Spanish (MacIntyre et al., 1998). Table 1 shows the specific inquiry methods that I used to collect the evidence needed to address both research questions, and how I analyzed the collected data. In addition, Figure 3 shows the time sequence of the instruments that I used to collect the data.

Table 1. Inquiry methods and analyses

Inquiry question	Evidence	Method	Analysis
To what extent do game-like features (i.e. storyline, choice of tasks, rules, rewards, badges, scoreboard, feedback, etc.) make a Spanish course attractive and motivate students?	Students' perceptions of motivation in Spanish with a gamified instructional unit	Student questionnaire (motivation): a) 15 Likert-scale items b) Two open-ended questions	a) *Quantitative data*: Frequency distribution and descriptive statistics b) *Qualitative data*: Content and thematic analysis
To what extent do game-based learning environments promote willing communication in Spanish among students?	Students' willingness to communicate (WTC) in Spanish with a gamified instructional unit	c) Two student questionnaires (WTC) d) Online gameplay records e) Ratings of three team-based communicative quests f) Comments on three team-based communicative quests	c) *Quantitative data*: Frequency distribution and inferential statistics d) *Quantitative data*: Frequency distribution and descriptive statistics e) *Quantitative data*: Frequency distribution and descriptive statistics f) *Qualitative data*: Content and thematic analysis

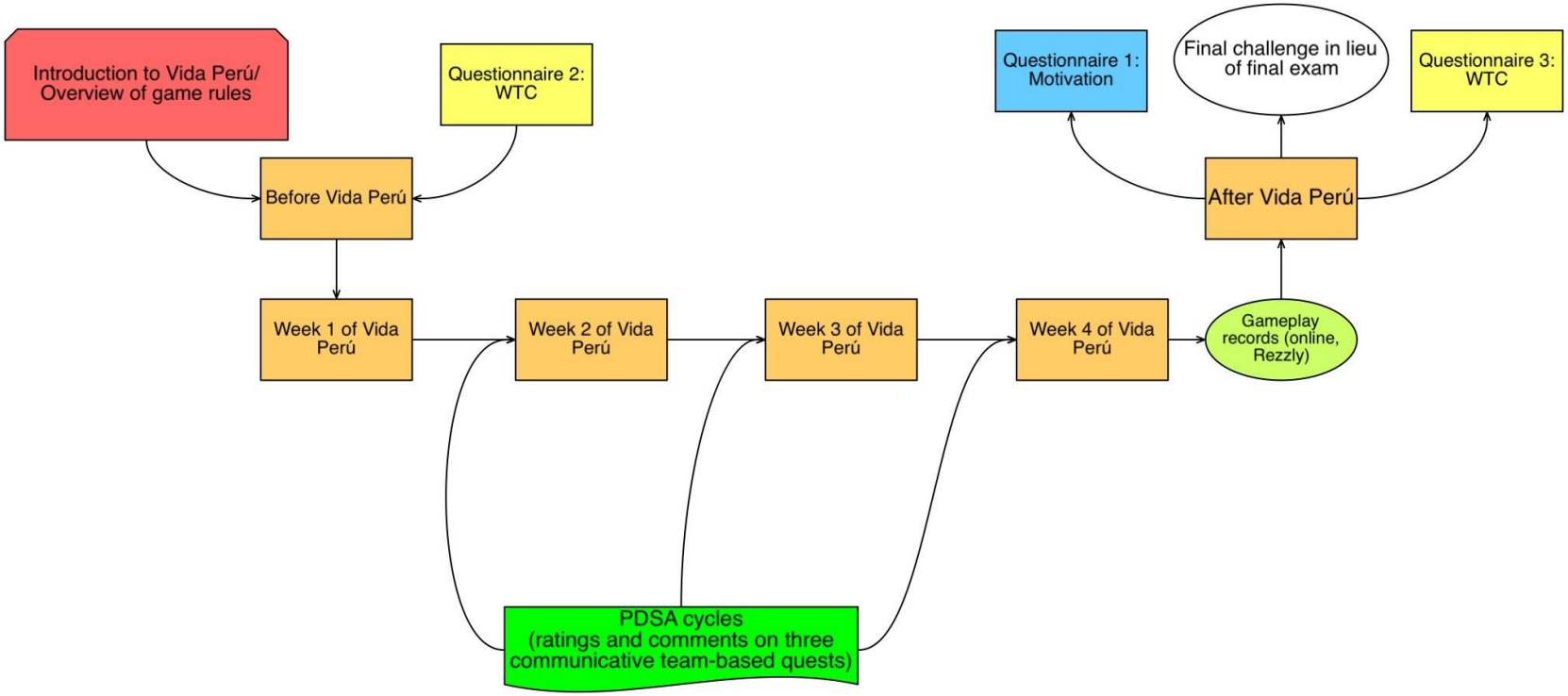


Figure 3. Time sequence of data collection instruments

3.1.1 Motivation in Spanish: Questionnaire

At the end of the semester, I gave the participants a questionnaire to gather their perceptions of motivation in Spanish with the game-like features in the instructional unit *Vida Perú*. To design my questionnaire, I adapted some of the questions from Lin's (2014, p. 1776) and Kingsley and Grabner-Hagen's (2015, p. 9) surveys, and re-phrased the instructions from Reinders and Wattana's (2014, pp. 117-119) questionnaires. The motivation questionnaire consisted of 15 Likert-type and two open-ended items. In the Likert-scale set, participants were asked to provide feedback about *Vida Perú* playability as well as assess its various game-like elements (e.g., storyline, goal, experience points, rewards, badges, feedback, etc.). In the first open-ended item, participants were asked to comment on one quest that they had completed while playing *Vida Perú*. In the second open-ended item, they were asked to provide recommendations on how to improve *Vida Perú* for a future version of it. See Appendix A for the motivation questionnaire (Questionnaire 1).

3.1.2 Willingness to communicate in Spanish

3.1.2.1 Questionnaires

Reinders and Wattana (2014) developed two sets of questionnaires (pp. 117-119) for willingness to communicate (WTC) that I adapted for use in my study. I administered the first questionnaire prior to the first week of the gamified module, which enabled me to gauge participants' WTC for communicating in Spanish during a traditional instructional unit. I administered the second questionnaire at the end of the gamified module, which allowed me to ask participants more

specific questions related to their WTC for communicating in Spanish within a gamified instructional unit. It is important to note here that the items in the two sets of questionnaires were slightly different, in order to reflect their focus on either the traditional or the gamified environment, but similar enough to measure the WTC construct. The instruments covered: 1) WTC in Spanish and 2) state communicative self-confidence, with the latter covering a) state anxiety and b) state self-perceived communicative competence. See Appendix B for both WTC questionnaires (Questionnaires 2 and 3).

3.1.2.2 Online gameplay records

I also studied the effectiveness of *Vida Perú* in promoting willingness to communicate in Spanish through the participants' gameplay records on the gamification platform (*Rezzly* @ http://www.rezzly.com) used for the study. Learners with high willingness to communicate in a target language are generally more inclined to take advantage of any opportunity to practice the target language. Keeping that in mind, after concluding *Vida Perú*, I collected participants' online behaviors recorded on *Rezzly* in the form of quantitative (discrete) data. These online gameplay records (i.e., quests completed, experience points earned, rewards received) represented participants' attempts to willingly communicate in Spanish with *Vida Perú*.

3.1.2.3 Feedback on team-based communicative quests

Lastly, to triangulate findings, I also collected participants' feedback (ratings and comments) on three team-based communicative quests with the help of Plan-Do-Study-Act (PDSA) cycles. A PDSA cycle is a formative assessment implemented in a design-based approach. Furthermore, "the PDSA cycle is a systematic series of steps for gaining valuable learning and knowledge for the continual improvement of a product or process" (The W. Edwards Deming Institute, 2016).

In the 1st step of the PDSA cycle (Plan), one identifies a learning goal (or purpose) and puts together a plan of action to be tested against achieving the goal. The next step of the cycle (Do) is the enactment of the plan. Then, one must test the plan (Study) by identifying successes, failures, problems, and areas of improvement. In the 4th and last step of the cycle (Act), one learns from the test results, and refines the plan for the next cycle. In my study, I used three PDSA cycles to learn about team-questing and how it affected participant engagement when implemented in class with communicative tasks. See Table 2 for the PDSA cycle used in my study.

Table 2. *PDSA* cycle

Tester:	Silvina Orsatti (Practitioner-Researcher)	**Date:**		**Cycle #:**	
Change Idea:	Team-questing				
Goal of the Test:	To assess the effectiveness of team-based communicative quests on participant engagement				
1. PLAN Questions: *(What questions do I have about what will happen?)*		Predictions: *(What predictions do I have?)*			
Engagement: What percentage of students will find team-questing with communicative tasks engaging?		My predictions are: 80% of students will find team-questing with communicative tasks engaging.			
Details: *(What is the who/what/when/where of the test? What is the data plan?)*					
2. DO					
Did the test go as planned? What obstacles arose? Do I have any possible change ideas?					
3. STUDY					
What were the results?					

Table 2 continued

In terms of student engagement...
What did I learn?
In terms of student engagement...
4. ACT
What will I test in the next cycle?

3.2 ANALYSIS AND INTERPRETATION

3.2.1 Motivation in Spanish

To assess motivation in Spanish, I analyzed quantitative and qualitative data collected with a questionnaire that included 15 Likert-type questions and two open-ended ones. Boone and Boone (2012) distinguish Likert-type data from Likert-scale data. Likert-type data refer to individual questions that include Likert response options. When Likert-type questions, in combination, describe a personality trait or attitude (e.g., motivation), they are called Likert-scale data. Consequently, the motivation questionnaire consisted of Likert-scale data because all 15 Likert-type questions, combined, intended to measure one construct: motivation in Spanish.

A reliable instrument consists of internally consistent items. Internal consistency is usually measured with Cronbach's alpha (α). Therefore, I calculated Cronbach's alpha to assess the internal reliability of the Likert-scale portion of the motivation questionnaire. Commonly, an alpha of 0.7 indicates acceptable reliability while 0.8 or higher shows good reliability. Very high reliability (0.95 or higher) is not actually desirable as it might indicate that there are redundant items that don't contribute any unique information to the data set.

For the Likert-type question "*Vida Perú* keeps me engaged during gameplay", for example, a high percentage of Strongly Agree responses indicated a high level of participant engagement with *Vida Perú*. After analyzing the responses to other questions (e.g., *Vida Perú* has a culturally-relevant storyline, *Vida Perú* motivates me to work harder, etc.), I made other interpretations about the participants' reactions to game-like features of the gamified instructional module. As a criterion, I used 80% and above of Strongly Agree/Agree responses to

the Likert-scale portion of the questionnaire (on average) to conclude that participants perceived that the gamified environment motivated them with the Spanish instructional unit.

I used qualitative analysis for the participants' responses to the open-ended questions of the motivation questionnaire. For the responses to the first open-ended question, I used codes such as use of vocabulary, grammar and cultural background knowledge, among others. After compiling the results, I had information on which quests were more effective in motivating participants to sustained play with *Vida Perú*. For the responses to the second open-ended question, however, I did not have pre-established codes so I looked for themes and keywords that emerged from the participants' responses. Most importantly, what I found out from the qualitative analysis of the motivation questionnaire will be critical for the revision of *Vida Perú*.

3.2.2 Willingness to communicate in Spanish

To assess willingness to communicate in Spanish (WTC), I also analyzed quantitative and qualitative data collected with two questionnaires and online gameplay records. For the WTC questionnaires, I used inferential statistics (*t-test*) to compare participants' answers (pre- and post- *Vida Perú*), examine any differences, and determine whether game elements in the instructional unit played a significant role in participants' willingness to communicate in Spanish or not. In addition, gameplay records helped me assess the participants' online interactions as well as their reactions to three team-based communicative quests. The amount of experience points, badges, levels, and awards collected by participants, alone, *could not* help me determine their willingness to engage with the gamified module. However, I looked at the amount of experience points and rewards *in combination* with the *t-test* results to help me determine the level of participants' willingness to communicate in Spanish with *Vida Perú*.

In regards to quests, students chose how many of them and which ones to pursue based on personal interest and/or familiarity with language topics. With the help of descriptive statistics (mean), I calculated the average number of quests completed by participants while playing *Vida Perú*. As a criterion, 80% (and above) of the quests completed *could* show that participants were engaged with *Vida Perú* and willing to communicate in Spanish with it. However, to make that claim, I also looked at the *t-test* results and the participants' feedback (ratings and comments) on a few team-based communicative quests, *in combination* with other findings in the study, to make interpretations whether *Vida Perú*, the gamified instructional unit, helped participants communicate willingly in Spanish or not.

4.0 DESIGN AND IMPLEMENTATION OF THE GAMIFIED INTERVENTION

Deterding et al. (2012) emphasize that "gamification is really a motivational design problem, one that can be solved with design thinking and design processes" (p. 17). Moreover, Deterding et al. (2012) add that, to be successful, "gamification must include game design, not just game components" (p. 16). In addition, Kingsley and Grabner-Hagen (2015) claim that "well-designed games engage the player in complex and critical thinking, embodying dispositions necessary for 21st-century learners" (p. 2). To take a case in point, the gamified intervention in my study, *Vida Perú*, included design features drawn from the New London Group's (2000) multiliteracies and design processes derived from quest-based learning (Haskell, 2013), an instructional design theory.

Cornillie et al. (2012) posit that, pedagogically speaking, the design of a gamified module for a foreign/second language (L2) learning environment also means planning for students to receive meaningful input with ample opportunities to get exposure to the L2 and for producing the L2 in interaction with others. Therefore, to design such a gamified system, "it is necessary to focus on the fundamental elements that make games appealing to players" (Domínguez et al., 2013, p. 381). As an illustration, game design elements such as focused tasks, resources for solving complex problems, reduction of failure, support for risk-taking, instantaneous and rich feedback, and an emphasis on performance over competence, all contribute to the attractiveness of the gamified experience (Cornillie et al., 2012).

At the same time, Piirainen–Marsh and Tainio (2014) remind us that game design involves "a range of tasks to be carried out and problems to be solved in order to proceed in the game" (p. 1025). Admittedly, purposefully designed gamified tasks that take into account learners' age-appropriate interests have the potential to promote willing and relevant discourse practices in L2. Furthermore, in foreign/second language (L2) pedagogy, tasks have linguistic as well as non-linguistic goals. In other words, "*task* is an activity that involves primarily meaning-focused language use (as opposed to form-focused *exercises)* that results in some specified *language aim*" (Cornillie et al., 2012, p. 250). Therefore, to be able to advance in *Vida Perú*, students had to 'level up' by demonstrating appropriate command of the Spanish linguistic tools and discursive skills in the various communicative tasks (e.g., dialogues, writing projects, interpretive assignments, etc.) that they encountered along the way. In my case, I used technology applications to design authentic communicative tasks in a wide range of modalities while meeting the diverse needs and interests of adult learners.

4.1 DESIGN OF VIDA PERÚ

In order to describe how I envisioned and designed *Vida Perú*, the gamified prototype used as the intervention in my study, I followed Sykes and Reinhardt's (2013) 'game plan' that consists of five sections: basic information, tasks, interaction, feedback, and context. It is important to note here that at times, for simplicity, I will be referring to *Vida Perú* as 'the game'. However, *Vida Perú* is a gamified instructional unit that incorporates 'elements' of games and not a fully-fledged game.

4.1.1 Basic information

To design the intervention, I took the language elements (vocabulary and grammar) of a traditional unit of instruction on leisure activities and used them to develop a gamified module around the same theme. The traditional unit 'El tiempo libre' (free time) was thus transformed into the gamified module *Vida Perú* (Peruvian life). I designed *Vida Perú* with the idea of a learning adventure game that takes players in a journey to ancient and modern Peru. For the game characters, players chose Quechuan avatars and names to fully immerse themselves in the language and customs of the Incas.

In terms of language learning objectives, I used the original ones from the traditional unit and then added two more to reinforce the cultural goal of *Vida Perú*. The original objectives as well as the new ones (marked with an asterisk) are listed below:

- "Talk about likes, dislikes, pastimes and other activities in the present tense
- Tell someone you address informally what to do
- Express opinions, doubts and obligations
- Talk about the weather and the seasons
- Talk about who and what you know
- Express future activities" (Dawson et. al., 2013)
- *Discuss typical leisure activities in modern Peru
- *Explore salient characteristics of the Incan time period

To create the game board, I used geographical as well as historical elements about Peru. For instance, during the Incan empire, Peru was divided in four regions called *suyos*. Currently, it is divided in 24 departments. Therefore, in *Vida Perú*, players navigate a game board consisting of a geographic overlap of the four suyos from the Incan time and five areas from

modern Peru. Figure 1 shows the game board used in *Vida Perú* that has five dots (Lima, Nazca, Lake Titicaca, Cuzco, and Macchu Picchu) which represent the five areas that participants explored during the game. Players moved along the board and explored each of the five spaces/areas where they engaged in various quests about leisure activities in ancient and modern Peru. In other words, learners got to explore five Peruvian regions/cities in which they completed various quests with the purpose of learning and practicing the language and culture skills needed to discuss leisure activities, the instructional unit theme.

The goal (or purpose) of *Vida Perú* was for players to explore all five Incan/Peruvian regions and collect the experience points needed to apply for a global explorer 'passport' (by completing quests, earning rewards, and leveling up in the game) as well as create a comprehensive 'portfolio' (comprised by four communicative quests). The points, badges and rewards that players earned along the way allowed them to level up and advance in the ranks to become global explorers.

Figure 4. *Vida Perú* game board

4.1.2 Tasks

Vida Perú has five *spatial* elements (game spaces or areas) and several *temporal* ones (narrative introduction to the game, stories to introduce vocabulary/grammar tools and cultural contexts, gamified quests, and a final challenge). In terms of design, *Vida Perú* incorporates *linear* play (progression design) as well as *emergent* play (open-ended design). Linear play means that players progress through the five regions in order: 1st, Lima; 2nd, Nazca; 3rd, Lake Titicaca, 4th, Macchu Picchu; 5th and last, Cuzco. Emergent play means that, for the most part, players are able to take on quests in any order of preference. Levels are spatially bounded; that is, a player has to complete a certain amount of quests and earn a certain amount of rewards to achieve the experience points needed to level up in the game and move up in the ranks of global explorers.

A collection of smaller tasks represent a quest, for which there is one large reward for completion in the form of experience points. The various quests offered in *Vida Perú* are *core* or *tangential*. Some core quests (i.e., vocabulary and grammar practice activities) needed to be completed first in order to unlock other ones (i.e., communicative tasks). Tangential quests, on the other hand, were generally offered as choices and they included advanced communicative tasks or cultural activities. In short, learners had *agency*; that is, the ability to choose quests based on their own preferences and/or skills. In addition, the quests in *Vida Perú* were *authentic*; that is, they were culturally relevant but also activities that learners were able to relate to at a personal level as well.

Appendix C includes three sample quests (*Un meme inca*, *Las líneas de Nazca*, and *Infoclima de Perú*) as well as examples of them once completed by participants.

4.1.3 Interaction

"Interaction is a function of a good interactive design" (Sykes & Reinhardt, 2013, p. 42) and it can be promoted through *formal* interaction (with the game itself), *social* interaction (with other players), and *cultural* interaction (with broader cultural discourses and communities). These three categories are further explained below:

- *Formal interaction:* As an instructor-designer-researcher, I pre-established the game content (e.g., leisure activities in ancient and modern Peru). Players learned the content by interacting with the game through various quests incorporating linguistic and cultural elements.
- *Social interaction:* Players engaged in social activity *through* or *around Vida Perú* with classroom tasks that were not all part of the game itself (e.g., vocabulary games in teams, etc.).
- *Cultural interaction:* For foreign/second language (L2) learners, language is more easily understood when it is connected to larger situational and cultural contexts. Therefore, I designed *Vida Perú* to have immediate and local relevance for learners. As an example of cultural interaction tasks, players might be able to produce materials for Pitt-Greensburg students doing a study abroad in Peru (e.g., infographic with 'the top ten things to do' in Cuzco, etc.).

4.1.4 Feedback

The feedback systems in *Vida Perú* are a fundamental aspect of the game design and gameplay. They do not only guide the players in successfully navigating the game, but also "play a significant role in the player's decision to continue playing or abandon the game, contributing to the *flow* experience of the player" (Sykes & Reinhardt, 2013, p. 57).

The feedback mechanisms incorporated in *Vida Perú* were:

- *Levels*, to demonstrate how far the player was progressing towards the next step
- *Experience points (XP)*, given on a numeric scale and increasing as the player successfully completed quests and earned rewards
- *Rewards,* to indicate expertise in a certain skill, or level of engagement with the game (e.g. singing in Spanish, completing three quests in one day, etc.).

Also, during gameplay with *Vida Perú*, I gave feedback to players in various ways:

- In a quest involving a vocabulary or grammar practice activity, players got experience points for successfully completing the task. They got formative feedback at the end of each try and had the chance to re-do the activity as many times as they wanted until they had mastered it or felt satisfied with the experience points that they had earned.
- If the quest was a performance-based activity, players received directions on how to do the activity and rubrics on what was expected from their performance. Once the task was completed, the player submitted it to me for approval. I either approved the quest or sent it back to the player for revision and resubmission. Once the quest was approved, the player received the experience points allotted to the task.
- *Wraparound tasks* took the form of communicative team-based activities during face-to-face class meetings. Players earned experience points and/or rewards for successful performance of these activities and/or active participation in them.
- After a certain amount of quests had been completed (and experience points earned), students successfully completed a *level*, which allowed them to earn a *badge*, and achieve a higher status in the ranks of global explorers. Appendix D shows the badges in *Vida Perú.*

4.1.5 Context

Digital games use narratives to contextualize game rules and structures, creating an immersive in-game context (Sykes & Reinhardt, 2013). There are two perspectives on narratives: *designed narrative* (the background fictional world that contextualizes game content) and *personal narrative* (the player's interpretation of the gameplay experience). Designed narratives include linguistic and cultural content involving characters, stories, images, videos, etc. In regards to in-game (non-player) characters, some examples from *Vida Perú* were: 1) *Inti* (God of the Sun), 2) *Pacha Mama* (Mother Nature), 3) *Manco Qhapaq* (Inti's son and first Sapa Inca), and 4) *Hiram Bigham* (the American explorer who 'rediscovered' Macchu Picchu in 1911). Personal narratives, on the other hand, include completing quests, interacting with other players, etc. During gameplay, personal narratives become more important than designed narratives because they provide players with a strong sense of agency.

4.2 IMPLEMENTATION OF VIDA PERÚ

After designing *Vida Perú*, I implemented it with my Elementary Spanish 1 students during the fall of 2016. *Vida Perú* consisted of seventy-one quests. These quests included language activities and culturally authentic tasks, all linked together by a compelling storyline related to the theme of leisure activities in modern and ancient Peru. The majority of the quests were completed by players individually, online, while a few others were performed in teams, face to face, during regular class meetings. Many quests involved performance-based tasks (e.g., discuss hobbies and pastimes with friends, read and interpret an article about sports in Peru, write a blog about future plans with family, etc.) that participants chose to do based on familiarity with the

language topic and/or personal interest in the task. Instead of traditional grades, these participants earned experience points (XP) for successfully completing quests. They also earned badges, awards, and achievements (in many cases, for additional experience points) based on their level of participation and engagement with *Vida Perú.*

In terms of location, I considered moving to a computer lab for the duration of *Vida Perú.* After reflecting on the pros and cons, I decided to stay in my regular classroom and asked students to bring their laptops/tablets to class instead. In fact, students were already bringing their devices to class for online quizzes and/or technology projects, so this request did not come out as a surprise for them. Other reasons for staying in the classroom and not moving to a computer lab were: 1) the Wi Fi was strong in my assigned classroom, 2) the projector and sound system had always worked flawlessly with my iPad and laptop, 3) there were plenty of power outlets in the classroom so students could use them to keep their devices charged during playtime, and 4) the classroom was not in use before class, so I had time to move the tables and chairs and arrange them in any way I found appropriate for the in-class game activities.

During class, the gamified quests included, but were not limited to, communicative activities acted out in pairs and/or larger groups in which all players could earn experience points (XP) and/or rewards. Outside of class, students completed online quests individually. I did not foresee any problems with students working at home (or in their dormitories) on *Rezzly* (the online gamification platform). They were using another platform at the time (*WileyPlus*) for online homework assignments with no (or extremely rare) technical difficulties.

5.0 FINDINGS

5.1 WILLINGNESS TO COMMUNICATE IN SPANISH

To answer the inquiry question *'To what extent do game-based learning environments promote willing communication in Spanish among students?'* I collected quantitative data: a) with two questionnaires, b) from participants' online gameplay records, and c) through participants' ratings of communicative team-based quests. The qualitative data came from the participants' comments about the team-based communicative quests. The questionnaires were administered before and after the students had experienced gameplay with *Vida Perú*. The participants' gameplay records as well as the ratings and comments about the team-based communicative quests were mined from *Rezzly*, the gamification platform used in the study.

5.1.1 Quantitative analysis

5.1.1.1 Questionnaires

I used *Qualtrics* to design and administer two questionnaires; one pre- and the other post-game. In the first section of the questionnaires (items 1-5), participants were asked how willing (1 very unwilling, 2 unwilling, 3 willing, and 4 very willing) they would be to perform specific communicative tasks in Spanish. In the second section of the questionnaires (items 6-15), participants were asked their degree of agreement (1 strongly disagree, 2 disagree, 3 agree, and

4 strongly agree) with statements related to their anxiety about communication and self-perceived communicative competence when communicating in Spanish. It is important to note here that the post-game questionnaire was adapted to reflect the students' gameplay in *Vida Perú*. As an illustration, the first item in the pre-game questionnaire was 'Talk to your classmates in Spanish about a class assignment', while in the post-game questionnaire it was modified to 'Talk to other players in Spanish about a quest assignment'. Both WTC questionnaires (pre- and post-game) can be found in Appendix B.

First, I calculated the descriptive statistics (i.e., mean, standard deviation) for the responses to all questionnaire items. Then, I performed a paired-samples *t-test* for each pair of Likert items. Each pair consisted of one Likert item from the questionnaire administered pre-game and the corresponding item from the questionnaire administered post-game. Table 3 shows the 15 pairs of Likert items, the descriptive statistics for each pair, and the interpretation of the mean values for all items. In addition, Table 3 displays the *p* value obtained from the *t-test*, which helped me determine whether the difference in mean values for each pair of Likert items was significant or not. Therefore, Table 3 provides a visual comparison of pre- and post-game participant responses about their willingness to communicate, their anxiety about communication, and their self-perceived communicative competence when communicating in Spanish. By extension, Table 3 represents how the participant responses to the Likert items changed (favorably or not) after the gamified intervention.

It is worth mentioning that the sample size used for the *t-test* was 34 and not 36 (number of participants). The reason for this was because two participants were absent when I administered the second questionnaire so, due to the 'same sample size' requirement for paired samples, I removed these participants' answers to the first questionnaire before conducting the

t-test. Also, Table 3 shows very low standard deviations (SD's) for all Likert items, which means that the 34 participants generally agreed with each other and gave similar responses. In other words, their responses clustered very closely together and there were no major outliers.

Table 3. Descriptive statistics and t-test for each pair of Likert items from the WTC questionnaires administered pre- and post-game

Section 1 of Questionnaire: Willingness to communicate in Spanish **Questions 1-5**					
Pair	**Mean**	**SD**	**Interpretation of the mean value** 1-1.49 = Very unwilling 1.50 – 2.49 = Unwilling 2.50 – 3.49 = Willing 3.50 – 4 = Very willing	***p* value**	**Interpretation of the *p* value** $p \leq 0.05$ = statistically significant
1.					
Talk to your classmates in Spanish about a class assignment.	3.09	0.75	Willing	0.861	Not statistically significant
Talk to other players in Spanish about a quest assignment.	3.12	0.69	Willing		

Table 3 continued

2.					
Communicate ideas, feelings and opinions in Spanish.	3.15	0.50	Willing	0.325	Not statistically significant
Communicate ideas, feelings and opinions in Spanish.	3.00	0.74	Willing		
3.					
Ask for clarification in Spanish when you are confused about a task you must complete.	3.26	0.83	Willing	0.778	Not statistically significant
Ask for clarification in Spanish when you are confused about a quest you must complete.	3.21	0.84	Willing		
4.					
Read task description/instructions before you start completing.	3.29	0.80	Willing	1.000	Not statistically significant

Table 3 continued

Read quest description/instructions before you start completing.	3.29	0.72	Willing		
5.					
Listen to what your classmates say in Spanish.	3.41	0.74	Willing	**0.038**	**Statistically significant**
Listen to what other game players say in Spanish.	3.06	0.74	Willing		

Section 2: Communicative self-confidence when communicating in Spanish

Questions 6 - 15

Pair	**Mean**	**SD**	**Interpretation of the mean value** 1-1.49 = Strongly disagree 1.50 – 2.49 = Disagree 2.50 – 3.49 = Agree 3.50 – 4 = Strongly agree	***p* value**	**Interpretation of the *p* value** $p \leq 0.05$ = statistically significant

Table 3 continued

6.					
I am not worried about making mistakes in Spanish.	2.59	0.89	Agree	0.563	Not statistically significant
I am not worried about making mistakes in Spanish.	2.71	0.68	Agree		
7.					
I find it difficult to communicate in Spanish*.	2.59	0.70	Agree	1.000	Not statistically significant
I find it difficult to communicate in Spanish*.	2.59	0.74	Agree		
8.					
I am worried that I will not understand what my classmates say in Spanish*.	2.76	0.70	Agree	0.088	Not statistically significant
I am worried that I will not understand what other players say in Spanish*.	2.53	0.83	Agree		

Table 3 continued

9.					
I feel nervous about using Spanish while participating in class activities*.	2.32	0.84	Disagree	0.619	Not statistically significant
I feel nervous about using Spanish while participating in gamified quests*.	2.24	0.74	Disagree		
10.					
I can say what I want to say in Spanish.	2.35	0.73	Disagree	0.147	Not statistically significant
I can say what I want to say in Spanish.	2.59	0.66	Agree		
11.					
I think my classmates cannot understand me because of my poor Spanish*.	2.12	0.59	Disagree	0.729	Not statistically significant

Table 3 continued

I think other players cannot understand me because of my poor Spanish*.	2.06	0.74	Disagree		
12.					
I feel comfortable sharing my ideas/feelings/opinions in Spanish with my classmates.	2.82	0.67	Agree	0.406	Not statistically significant
I feel comfortable sharing my ideas/feelings/opinions in Spanish with other players.	2.68	0.73	Agree		
13.					
I know the Spanish words required for each task completion.	2.71	0.63	Agree	0.737	Not statistically significant
I know the Spanish words required for each quest completion.	2.65	0.60	Agree		

Table 3 continued

14.					
In general, I find communicating in Spanish in class situations relaxing.	2.18	0.76	Disagree	**0.014**	**Statistically significant**
In general, I find communicating in Spanish in game-based situations relaxing.	2.62	0.70	Agree		
15.					
I think participating in class activities in Spanish help me develop my fluency (i.e., with little hesitation and pauses).	3.26	0.67	Agree	**0.003**	**Statistically significant**
I think participating in game-based activities in Spanish help me develop my fluency (i.e., with little hesitation and pauses).	2.65	0.81	Agree		

N=34 (participants) **Note:* Responses for these items were reversed.*

In terms of ***willingness to communicate in Spanish*** (items 1-5), Table 3 shows that, overall, participants were willing to communicate in Spanish before and after *Vida Perú*; that is, the gamified unit did not change their degree of willingness to communicate in the target language. Participants were willing to listen to what their classmates said in Spanish both pre-game (Item 5, M= 3.41, SD = 0.74) and post-game (Item 5, M= 3.06, SD = 0.74), but less willingly in the gamified environment. Moreover, even though participants' willingness to communicate in Spanish was maintained in the new instructional environment, there was a statistically significant difference (p = 0.038) between the means of the items in pair 5: 'Listen to what your classmates say in Spanish' and 'Listen to what other game players say in Spanish'. I will explain possible reasons for this unfavorable finding later in the paper, when I discuss the analysis performed on participants' gameplay records as well as on the ratings and comments about communicative team-based quests.

For items 1, 2, 3 and 4, Table 3 shows no significant findings. Participants were willing to talk to their classmates about a class assignment (Item 1, M= 3.09, SD = 0.75) or a quest assignment (Item 1, M= 3.12, SD = 0.69), communicate ideas, feelings and opinions in Spanish both pre-game (Item 2, M= 3.15, SD = 0.50) and post-game (Item 2, M= 3.00, SD = 0.74), ask for clarification when they were confused about a task (Item 3, M= 3.26, SD = 0.83) or a quest (Item 3, M= 3.21, SD = 0.84) that they had to complete, and read task descriptions (Item 4, M= 3.29, SD = 0.80) or quest instructions (Item 4, M= 3.29, SD = 0.72) before they started completing those tasks or quests.

In regards to ***anxiety about communication when communicating in Spanish*** (items 6, 8, 9, 12, and 14), Table 3 shows that, for the most part, participants felt more relaxed in a gamified environment than in a traditional class setting. Participants disagreed with the statement

that, in general, they find communicating in Spanish in class situations relaxing (Item 14, *M*= 2.18, *SD* = 0.76) while they agreed that, in general, they find communicating in Spanish in game-based situations relaxing (Item 14, *M*= 2.62, *SD* = 0.70). As Table 3 illustrates, there was a statistically significant difference (p = 0.014) between the means of the items in pair 14: 'In general, I find communicating in Spanish in class situations relaxing' and 'In general, I find communicating in Spanish in game-based situations relaxing', meaning that the gamified environment made participants feel less anxious about communicating in Spanish.

For items 6, 8, 9 and 12, Table 3 shows no significant findings. Participants agreed with the statements about not being worried about making mistakes in Spanish both pre-game (Item 6, *M*= 2.59, *SD* = 0.89) and post-game (Item 6, *M*= 2.71, *SD* = 0.68). Participants also agreed with the statements about being worried that they would not understand what their classmates (Item 8, *M*= 2.76, *SD* = 0.70) or game players (Item 8, *M*= 2.53, *SD* = 0.83) said in Spanish. In addition, participants disagreed with the statements about feeling nervous about using Spanish while participating in class activities (Item 9, *M*= 2.32, *SD* = 0.84) or gamified quests (Item 9, *M*= 2.24, *SD* = 0.74). Lastly, participants agreed with the statements about feeling comfortable when sharing their ideas, feelings, and opinions in Spanish with their classmates (Item 12, *M*= 2.82, *SD* = 0.67), or with other players (Item 12, *M*= 2.68, *SD* = 0.73).

Now, about ***self-perceived communicative competence when communicating in Spanish*** (items 7, 10, 11, 13, and 15), Table 3 shows that, for the most part, participants regarded the traditional, pre-game atmosphere as more conducive for developing communicative fluency in Spanish. Participants thought that participating in class activities in Spanish helped them develop their fluency (Item 15, *M*= 3.26, *SD* = 0.67) and that participating in game-based activities in Spanish helped them develop their fluency as well (Item 15, *M*= 2.65, *SD* = 0.81),

but at a lesser degree. As Table 3 illustrates, there was a statistically significant difference (p = 0.003) between the means of the items in pair 15: 'I think participating in class activities in Spanish help me develop my fluency (i.e., with little hesitation and pauses) and 'I think participating in game-based activities in Spanish help me develop my fluency (i.e., with little hesitation and pauses)'. Apparently, the traditional classroom was perceived by participants as a better medium for developing communicative fluency in Spanish. I will dig deeper into the reasons for this finding later in the paper when I discuss the analysis of participants' gameplay records and feedback about in-class communicative quests.

For items 7, 10, 11 and 13, Table 3 shows no significant findings. Participants agreed with the statements about finding it difficult to communicate in Spanish both pre-game (Item 7, M= 2.59, SD = 0.70) and post-game (Item 7, M= 2.59, SD = 0.74). Moreover, participants agreed with the statements about being able to say what they wanted to say in Spanish both pre-game (Item 10, M= 2.35, SD = 0.73) and post-game (Item 10, M= 2.59, SD = 0.66), and they also agreed with the statements about knowing the Spanish words required to complete each task (Item 13, M= 2.71, SD = 0.63) or each quest (Item 13, M= 2.65, SD = 0.60). Lastly, participants disagreed with the pre-game statement 'I think my classmates cannot understand me because of my poor Spanish' (Item 11, M= 2.12, SD = 0.59) as well as with the corresponding post-game statement 'I think other players cannot understand me because of my poor Spanish' (Item 11, M= 2.06, SD = 0.74).

To summarize the findings from this section:

- Participants felt more relaxed in the gamified environment than in their traditional classroom setting.

- Participants did not perceive that *Vida Perú* changed their willingness to communicate in Spanish or their self-perceived communicative competence in Spanish in substantial ways. However, the data also showed some limitations:
    - Participants were less willing to listen to what their classmates said in Spanish in the gamified environment.
    - The traditional classroom was perceived by participants as a better medium for developing communicative fluency in Spanish.

5.1.1.2 Gameplay records

In *Vida Perú*, game players had the goal of collecting 600 experience points, which represented the game 'winning condition' equivalent to earning an 'A' in the gamified unit. Participants could earn experience points by completing quests and also with rewards (e.g., attending class regularly, completing three quests in one day, rating quests, etc.). It is important to mention that there were enough quests and awards in *Vida Perú* for students to exceed the game goal and earn more than 600 experience points. In fact, experience points in excess of 600 were considered 'bonus' points. When the game was over, I mined two different types of game players' records from the gamification platform (*Rezzly*). The records collected (quests completed and experience points earned) were quantitative (discrete) data and, for the purpose of my study, they represented participants' willing attempts to communicate in Spanish with *Vida Perú*.

Quests

In *Vida Perú*, participants had four different types of quests available to them: individual core quests, individual tangential quests, team-based core quests, and team-based tangential quests. 'Core' quests provided participants with language tools and communicative tasks essential to

meet the unit objectives. 'Tangential' quests provided additional opportunities to communicate in Spanish in real-life situations, or to learn more about leisure activities during the Incan Empire or in modern Peru. Participants had both core and tangential quests available to them at all times, and they had equal opportunities to earn experience points with either type. Some of the quests had prerequisites though; that is, they were unavailable to participants until they had completed other 'required' quests. For example, participants were required to practice with language tools before doing communicative tasks that included those specific tools.

Table 4 displays the four types of quests available to participants, how many quests of each type were available for them to complete, the total number of quests that participants completed by the end of *Vida Perú*, and the completion percentage for each type of quest. It is important to mention that, even though *Vida Perú* had 71 quests total, participants could see and complete only 67 of them. One of five quests was explicitly assigned to each team and, so, any team player in the game could only see (and complete) one of those five team-based quests.

Table 4. Types of quests completed by participants, and completion percentages

Type of quest	Quests available for completion (total number of each type of quest x N)	Total quests completed	Completion percentage
Core individual quests (48 different quests)	1,728	1,217	70.43%
Tangential individual quests (11 different quests)	396	88	22..22%

Table 4 continued

Core team quests (7 different quests)	252	213	84.52%
Tangential team quest (1 quest only)	36	15	41.67%
***Vida Perú* quests (67 quests)**	**2,412**	**1,533**	**63.56%**

N = 36 (participants)

Table 4 shows that participants completed a total of 1,217 (70%) of the 1,728 core individual quests and 88 (22%) of the 396 tangential individual quests available to them. Clearly, by looking at the numbers, participants missed opportunities of earning experience points with tangential quests. In *Vida Perú*, tangential quests were labeled as 'optional' so, even though these quests clearly indicated how many experience points could be earned with them, participants might have thought that it was not 'beneficial' to them to complete tangential quests. Looking back, I should have emphasized that all quests were worth doing for the purpose of collecting experience points and achieving the game goal. Or, better yet, I should have attached a special award to the optional quests with the purpose of enticing participants to complete them. This is one aspect of the game design that I can revise for the next round of *Vida Perú.*

Another outcome from Table 4 is that participants completed a higher percentage of core quests in teams (84.52%) than individually (70.43%). In fact, participants completed a higher percentage of tangential quests in teams (41.67%) than individually (22.22%) as well. My

interpretation is that participants were more willing to work with their peers, in teams, during regular class time, than individually, online. And, since only eight of the 67 *Vida Perú* quests were team-based, it appears then that *Vida Perú* did not provide enough quests (core or tangential) for participants to complete in teams. By extension, participants did not have enough team-based quests where they would have been more willing to communicate in Spanish with other game players. This finding also helps understand why participants thought that *Vida Perú* was not better for developing communicative fluency in Spanish than traditional classroom discussions.

In my initial proposal, I stated that I would use 80% and above of quest completion as a criterion to show that students were willing to use quests as the means to communicate in Spanish with *Vida Perú*. From Table 4, the quest completion percentage was only 63.56% (< 80%), which shows only 'some' willingness to communicate in Spanish with *Vida Perú*. Admittedly, the quest completion percentage would have been higher if players had had more team-based quests with opportunities for them to communicate fluently and willingly in Spanish with others.

Experience Points

The amount of experience points (XP) that participants collected by the end of the game provided another way to analyze their willingness to engage with *Vida Perú*. Experience points came from quests and rewards (i.e., badges, achievements, and awards). In *Vida Perú*, there were 67 quests (worth 5, 10, or 20 XP) available for all participants to complete and collect experience points with. When participants reached a certain number of experience points, they received a **badge** that placed them in a specific level (or rank). The badges in *Vida Perú* were 'visitante' (initial level, with 0 XP), 'observador' (after reaching 250 XP), 'navegador' (after reaching 300

XP), ‘aventurero’ (after reaching 350 XP), ‘investigador’ (after reaching 450 XP), ‘explorador’ (after reaching 600 XP), and ‘inca’ (with 700 XP or more). I added the ‘inca’ rank to *Vida Perú* towards the end of the game as a way to reward those students who had gone beyond the game goal by earning more than 700 experience points.

Participants also collected experience points through **achievements** (e.g., complete five quests in one day for 5 XP, complete ten quests in two days for 10 XP, etc.), and **awards** (e.g., perfect attendance to class for 10 XP, etc.). The amount of experience points that game players collected with achievements and awards ranged from 1 to 50 experience points. A few achievements, however, did not award experience points; they just marked the completion of important quests (i.e., passport and portfolio) that participants needed to do as part of their ‘final challenge’ (final exam).

Table 5 shows the sources of experience points, the total amount of sources that were available and completed (on average) by participants, and the total amount of experience points that participants received (on average) with these sources. Table 5 also displays the total amount of experience points that participants received (on average) at the end of *Vida Perú*, and the percentage (and grade) that it represented. See Appendix D for a complete list of the badges, achievements, and awards in *Vida Perú*.

Table 5. Sources and experience points (XP) received by participants

Sources of experience points	Total sources available	Total sources completed (on average)	Total experience points received per source (on average)
Quests	67	43 (64.2%)	351 XP
Rewards (achievements and awards)	28	21 (75%)	109 XP
Rewards (badges)	6	4	0 XP
Total experience points received by participants (on average)			**460 XP** (out of 600 XP) = 76.67% grade

As shown in Table 5, participants completed 64.2% of the quests available, earning a total of 351 experience points (on average) with them. In addition, participants collected 75% of the achievements and awards, earning a total of 109 experience points (on average) with them. As a result, participants received 460 experience points (on average) equivalent to a grade of 76.67% in the gamified unit. In terms of badges, participants received an average of four badges (the rank of 'aventurero') although there were two participants who received seven badges and earned the rank of 'inca' (the highest rank in *Vida Perú*) for collecting more than 700 experience points with the game.

In my initial proposal, I said that I would use 80% and above of collected experience points (on average) as a criterion to indicate participants' willingness to engage with *Vida Perú*.

With 77% of collected experience points (on average), I can still say that participants were willing to engage with *Vida Perú*, but just not at the expected level. In addition, participants earned more experience points with rewards (75% of total rewards earned, on average) than with quests (64.2% of total quests completed, on average), meaning that participants showed more willingness to engage with *Vida Perú* by collecting rewards than by completing quests. Tying in this interpretation with an earlier finding, I can add that participants would have shown more willingness to engage with *Vida Perú* if quests had incorporated more collaborative teamwork. In other words, the low number of team-based quests affected how participants engaged with *Vida Perú* and communicated willingly in Spanish with other players.

To summarize the findings from this section:

- Participants did not complete many optional quests.
- Participants completed a higher percentage of quests in teams than individually.
- Participants earned more experience points with rewards than with quests.
- *Vida Perú* did not offer enough team-based quests with opportunities for participants to communicate willingly in Spanish with others.
- On average, participants received a grade of 77% in the gamified unit.

Communicative Team-Based Quests

During the course of the gamified unit, I assessed the effects of three communicative team-based quests on the participants' engagement with *Vida Perú*. I implemented, observed, and collected results from one quest first. Then, I used the results to plan, implement, observe, and collect results from the second quest. Next, I used the results to plan, implement, observe, and collect results from the third and last quest. This process for testing a change by planning it, trying it, observing the results, and acting on what is learned is called Plan-Do-Study-Act (PDSA). In my

study, I ran three PDSA cycles with three different communicative team-based quests. See Appendix E for more details about the PDSA cycles that I implemented in my study.

After completing the team-based communicative quests, participants used stars to rate their level of engagement with them (1 star = very low, 2 stars = low, 3 stars = average, 4 stars = high, 5 stars = very high). Table 6 shows the mean of the participants' ratings for each quest. For the quest 'El juego de la identificación', 35 participants completed it and rated it. When I implemented the quests 'Macchu Picchu en fotos' and 'Cinco frases y disfraces', I had 34 participants in attendance who completed and rated these two quests.

Table 6. Mean of the participants' ratings for three team-based communicative quests

Quest	Mean of the quest ratings (1 star = very low, 2 stars = low, 3 stars = average, 4 stars = high, 5 stars = very high)
El juego de la identificación	4.16 (83%)
Macchu Picchu en fotos	4.10 (83%)
Cinco frases y disfraces	4.50 (90%)

The average rating for the quest 'El juego de la identificación' was 4.16, which means that 83% of the participants thought that the quest was engaging. The average rating for the quest 'Macchu Picchu en fotos' was 4.10, which means that 83% of the participants thought that this quest was also engaging. Lastly, the average rating for the quest 'Cinco frases y disfraces' was 4.50, which means that 90% of the participants thought that this particular quest was highly engaging. In all three cases, the actual percentages were higher than my original predictions (see Appendix E),

leading to my summarized interpretation of this section - that participants found the team-based communicative quests highly engaging for them.

5.1.2 Qualitative analysis

Participants also provided comments about the three team-based communicative quests discussed in the previous section. I coded and analyzed the codes so I could narrow down the most salient characteristics that made the three quests highly engaging for participants. For the analysis, I used *evaluative* codes because they "assign judgements about the merit, worth, or significance of programs or policy" (Saldaña, 2013, p. 263). Table 7 shows the three quests, how many participants commented on each quest, and the most common codes (i.e., words or phrases) found in the comments.

Table 7 highlights (in bold) the five codes that emerged as the most mentioned by participants. These codes were *fun*, *interactive*, *helpful (for language practice)*, *enjoyable*, and *simple*. For the quest 'El juego de la identificación', 20 participants commented on it; 13 said that the quest was interactive and ten mentioned that the quest helped them practice the language. In terms of the quest 'Macchu Picchu en fotos', 18 participants commented on it; six said that it was helpful for practicing the language and five expressed that it was a simple quest. Lastly, the quest 'Cinco frases y disfraces" had the highest number (28) of participants' comments, and 20 of them said that the quest was fun.

Table 7. Communicative quests, number of participants' comments, and comments coding

	Quest name		
	El juego de la identificación (20 comments)	Macchu Picchu en fotos (18 comments)	Cinco frases y disfraces (28 comments)
Codes			
Fun	**3**	**3**	**20**
Interactive	**13**	**2**	**4**
Helpful (for language practice)	**10**	**6**	**3**
Enjoyable	**6**	**3**	**6**
Simple		**5**	
Engaging	4	2	4
Challenging		4	
Good (for team-building)		1	3
Interesting	1	1	3
Not sufficient time to prepare for it			3
Not enjoyable	1		2
Too simple		1	

As shown in Table 7, the three communicative team-based quests: 'El juego de la identificación', 'Macchu Picchu en fotos', and 'Cinco frases y disfraces' were engaging to participants because

they were fun, interactive, enjoyable, simple, or helpful to practice the language. These are characteristics that I need to purposely add to quests in order to promote and sustain student engagement with *Vida Perú*.

5.2 MOTIVATION IN SPANISH

To answer the inquiry question **'*To what extent do game-like features (i.e., storyline, choice of tasks, rules, rewards, badges, scoreboard, and feedback) make a Spanish course attractive and motivate students?*'** I collected post-game data with one questionnaire that I created and administered in *Qualtrics*. The questionnaire had 15 Likert items (for quantitative data) and two open-ended questions (for qualitative data). See Appendix A for the full questionnaire.

5.2.1 Quantitative analysis

First, I calculated Cronbach's alpha (α) in order to assess the internal reliability of the Likert-scale portion of the motivation questionnaire. The α value was 0.937 (excellent), which assured the internal reliability of the instrument used for measuring motivation in Spanish. For the analysis, I combined the Strongly Agree and Agree categories into one 'Agreed' category. I did the same with the Strongly Disagree and Disagree categories, calling the new category 'Disagreed'. Next, I classified the individual Likert items agreed by 60% or more participants as 'positive' reactions to *Vida Perú*, and those agreed by 59% or fewer participants as 'negative' reactions to it. Table 8 shows the frequency distribution and mean of the responses (Agreed and Disagreed) to the Likert-scale portion of the motivation questionnaire. In Table 8, I also sorted

the Likert items from most Agreed to least Agreed, and added the labels ‘positive’ (100%-60% agreement) and ‘negative’ (59%-0% agreement) for easier visualization of the findings.

Table 8. Frequency distribution and mean of the responses to the Likert items of the motivation questionnaire

Item	Agreed	Disagreed
POSITIVE		
The avatars of *Vida Perú* are culturally-appropriate	36 (100%)	0 (0%)
Vida Perú has a culturally-relevant storyline	35 (97.2%)	1 (2.8%)
Vida Perú rewards me for completing more quests	35 (97.2%)	1 (2.8%)
Vida Perú has different amounts of challenge and competition	32 (88.9%)	4 (11.1%)
Vida Perú provides me with feedback as I play it	31 (86.1%)	5 (13.9%)
Vida Perú has an engaging goal	28 (77.8%)	8 (22.2%)
Vida Perú has interesting narratives	28 (77.8%)	8 (22.2%)
I like earning badges in *Vida Perú*	28 (77.8%)	8 (22.2%)
Vida Perú keeps me engaged during gameplay	24 (66.7%)	12 (33.3%)
The game structure of *Vida Perú* is easy to follow	22 (61.1%)	14 (38.9%)
NEGATIVE		
I like *Vida Perú* quests better than paper and pencil activities	17 (47.2%)	19 (52.8%)
Vida Perú motivates me to work harder	17 (47.2%)	19 (52.8%)

Table 8 continued

Vida Perú makes learning Spanish easier		17 (47.2%)	19 (52.8%)
My quality of work is better with *Vida Perú*		14 (38.9%)	22 (61.1%)
The experience points in *Vida Perú* should replace the current grading system		13 (36.1%)	23 (63.9%)
	Mean	25.1 (69.8%)	10.9 (30.2%)

N = 36 participants

5.2.1.1 Positive reactions to *Vida Perú*

As shown on Table 8, 36 (100%) participants agreed with the item 'The avatars of *Vida Perú* are culturally-appropriate', 35 (97.2%) agreed with the items '*Vida Perú* has a culturally-relevant storyline' and '*Vida Perú* rewards me for completing more quests', 32 (88.9%) agreed with the item '*Vida Perú* has different amounts of challenge and competition', 31 (86.1%) agreed with the item '*Vida Perú* provides me with feedback as I play it', and 28 (77.8%) agreed with the items '*Vida Perú* has an engaging goal', '*Vida Perú* has interesting narratives', and 'I like earning badges in *Vida Perú*'. In addition, 24 (66.7%) participants agreed with the item '*Vida Perú* keeps me engaged during gameplay' and 22 (61.1%) agreed with the item 'The game structure of *Vida Perú* is easy to follow'. In sum, at least 60% of the participants ***agreed*** with ten items of the motivation questionnaire – those were the 'positive' reactions to *Vida Perú*. In other words, 60% or more participants showed a high level of engagement with game features of *Vida Perú* such as goal, structure, storyline, narratives, gameplay, challenge and competition, avatars, rewards, badges, and feedback.

5.2.1.2 Negative reactions to *Vida Perú*

Table 8 also shows that only 17 (47.2%) participants agreed with the items 'I like *Vida Perú* quests better than paper and pencil activities', '*Vida Perú* motivates me to work harder', and '*Vida Perú* makes learning Spanish easier'. Moreover, only 14 (38.9%) participants agreed with the item 'My quality of work is better with *Vida Perú*' while only 13 (36.1%) agreed with the item 'The experience points in *Vida Perú* should replace the current grading system'. Summarizing, at least 40% of the participants ***disagreed*** with five items of the motivation questionnaire – those were the 'negative' reactions to *Vida Perú*. That is, 40% or more participants did not feel engaged with the quests or point system of *Vida Perú*, they did not think that *Vida Perú* motivated them to work harder nor that their quality of work was better with the game. Last but not least, they did not believe that learning Spanish was easier with *Vida Perú*.

In my initial proposal, I said that I would inspect the motivation construct (the entire set of Likert-scale items) and use a criterion of 80% and above of Strongly Agree/Agree responses (on average) to conclude that students perceive a gamified Spanish course to be engaging for them. From the table, this average was 69.8%, a percentage that I still find encouraging to move forward with revisions for *Vida Perú*. Most importantly, the analysis of the data gathered from the participant responses to the two open-ended items of the motivation questionnaire discussed in the next section will provide insights on why five features of *Vida Perú* resulted in negative reactions for at least 40% of the participants and what to do, according to them, to reverse these adverse reactions.

5.2.2 Qualitative analysis

5.2.2.1 Popular quests

In the first open-ended item of the motivation in Spanish questionnaire (Question B in Appendix A), participants were asked to comment on one specific quest that they had chosen to complete in *Vida Perú*. Specifically, they were asked to describe their use of previous knowledge of vocabulary, grammar, and culture and/or personal interest in their selection of the quest. For the analysis, I quantified the qualitative data that I had collected with Question B; that is, I 'coded the data' and 'looked for emerging patterns'. Simply put, the quantification of qualitative data involved 'transforming words into numbers'.

First, I determined which quests were mentioned most often by participants, and the frequency of those mentions. Out of 36 participants, 30 of them mentioned one quest, two of them mentioned two quests, and four participants did not mention any quests. For the two participants who mentioned two quests, I counted only one of their mentions - the one that was most popular with other participants. Table 9 shows the types of quests mentioned by participants, and how frequently these quests were mentioned. Each code (type of quest mentioned) has a number that represents how often that code appeared in the data (frequency of quest mentions). It is important to add that the technology used to create quests played an important role in the participants' quest mentions, so I added them to Table 9.

Table 9. Quests mentioned by participants, and frequency of mentions

Type of quest	Frequency of mentions
Vocabulary, grammar, and culture quizzes (on Quizziz**)**	**9**

Table 9 continued

Vocabulary flashcards (on Quizlet**)**	**4**
Cultural video-quizzes (on Playposit**)**	**4**
Verb drills (on Conjuguemos.com)	3
Photo displays (i.e., Prof. Orsatti in Peru) with activities	3
Slide shows (e.g., Power Point) with activities	2
YouTube videos (i.e., grammar, culture) with activities	2
Meme creators	2
Other	3
None	4

N=36 (participants)

Three types of quests emerged as the most mentioned by participants: a) vocabulary, grammar, and culture quizzes on Quizziz (9 mentions), b) vocabulary quizzes on Quizlet (4 mentions), and c) cultural video-quizzes on Playposit (4 mentions). These three quests are described in detail below:

- ***Vocabulary, grammar, and culture quizzes:*** I used *Quizziz* (http://www.quizziz.com) to create online multiple-choice quizzes that blended vocabulary, grammar, and culture. When students took these quizzes, they received feedback (a score). In *Vida Perú*, players took these quizzes as many times as they wanted until they reached their highest score. Scores of 80% and up granted players the ten experience points that the Quizziz quests were worth.
- ***Vocabulary quizzes:*** I used *Quizlet* (http://www.quizlet.com) to create vocabulary flashcards with audio and text. On Quizlet, students practiced vocabulary with the help of various learning tools. In class, I used *Quizlet Live* as a team-based learning game for participants to

play collaboratively. They had to correctly match terms and definitions using various Quizlet sets in order to collect prizes and/or rewards. Participants also played Quizlet quests, individually, for a certain amount of time (at least 15 minutes) in order to collect the five experience points that the Quizlet quests were worth.

- ***Cultural video-quizzes:*** I designed quests that combined the use of vocabulary, grammar, and culture with *Playposit* (http://www.playposit.com), a tool that allowed me to use *YouTube* videos to create content (i.e., Lake Titicaca, Macchu Picchu, etc.) with interactive quizzes intermixed in it. In *Vida Perú*, scores of 80% and up granted players the ten experience points that the Playposit quests were worth.

Once the most popular quests had been identified, my next step was to explore the reasons for their popularity. For the coding, I used a combination of pre-determined codes plus others that emerged from the data. The pre-determined codes were directly related to the question that I had asked: *use of previous vocabulary knowledge* and *use of previous grammar knowledge*. The non-predetermined codes that emerged from the responses themselves were descriptive and evaluative. *Descriptive* codes are labels that summarize (usually in a word or short phrase) the basic topic of a passage of qualitative data (Saldaña, 2013); that is, they 'describe' what is talked or written about. The descriptive codes that emerged from the data were *vocabulary learning*, *grammar learning*, and *culture learning*. *Evaluative* codes are those that "assign judgements about the merit, worth, or significance of programs or policy" (Saldaña, 2013, p. 263). The evaluative codes emerged from the participants' comments about quests. The evaluative codes were *fun or enjoyable*, *engaging or motivating*, *helpful or useful*, *interesting* and *competitive*. Table 10 shows the three most popular types of quests selected by participants (Quizizz, Quizlet,

and Playposit quizzes), and the codes used to analyze the reasons for their popularity. Each code has a number that represents how often that code appeared in the data.

Table 10. Three most popular types of quests in Vida Perú, codes (words or phrases) used by participants to describe the quests, and frequency of these codes in the participants' comments

	Type of quest		
	Vocabulary, grammar, and culture quizzes on Quizziz	Vocabulary quizzes on Quizlet	Cultural video-quizzes on Playposit
Codes	**Frequency of codes**		
Use of previous vocabulary knowledge	4		3
Use of previous grammar knowledge	3		2
Vocabulary learning	6	4	
Grammar learning	5		
Culture learning	5		4
Fun or enjoyable	6	2	1
Engaging o motivating	1		1
Helpful or useful	4	3	4

Table 10 continued

Interesting		1
Competitive	3	

The vocabulary, grammar, and culture quizzes on Quizziz were the most popular quests among participants because they were fun or enjoyable (six mentions), helpful or useful (four mentions), and competitive (three mentions). Participants also felt that they learned vocabular, grammar, and culture with Quizziz quests (six, five, and five mentions respectively). In addition, participants said that they used vocabulary and grammar knowledge (four and three mentions respectively) when they completed these quests. Two participants' comments that support the findings about Quizziz quests were:

> "*I enjoyed doing the Quizizz challenges because they allowed us to practice what we knew and to compete against each other."*
>
> *"I really enjoyed all of the Quizizz activities. They made it more fun to learn Spanish."*

The vocabulary quizzes on Quizlet were the second most popular quests among participants. Participants said that they used their previous knowlege of vocabulary and grammar (four and three mentions respectively) and that they had fun (two mentions) with these quizzes. In addition, they found these quizzes useful (three mentions) when learning vocabulary (four mentions). One participant's comment about Quizlet quests that corroborates the described findings was:

"Out of all the quests, Quizlet was the most helpful because I knew exactly what I was doing. Also, it helped me to know the vocabulary for class and improved my Spanish."

Lastly, the cultural video-quizzes on Playposit were the third most popular quests among participants for their usefulness (four mentions). Participants also said that they were able to use previously learned vocabulary and grammar to learn culture (three, two, and four mentions respectively). Two participants' comments about Playposit quests that endorse these findings are included below:

"Using previous knowledge of the information we learned I was able to apply it while listening to the video to get an overall more fulfilling and useful experience while completing the quiz."

"It was a great way to hear more Spanish and go over the information in a way that was culturally-relevant."

When I did the analysis of the Likert-type section of the questionnaire, I concluded that at least 60% of the participants had shown a high level of engagement with game features of *Vida Perú* such as goal, structure, storyline, narratives, gameplay, challenge and competition, avatars, rewards, badges, and feedback. The analysis just performed on the three most popular quests in *Vida Perú* corroborates some important points. Participants: a) felt challenged to use previous knowledge while learning more vocabulary, grammar, and/or culture, b) enjoyed the competitive nature of the quizzes (on Quizziz and Quizlet), c) felt engaged with the cultural narratives of the video-quizzes (on Playposit), d) liked playing vocabulary games (on Quizlet), and e) appreciated the immediate feedback (on all three quizzes). The technology used to create the quests (Playposit, Quizziz, and Quizlet) highly contributed to their popularity because the three

applications have in common an important design feature: interactive and immediate feedback. My final interpretation here is that the quests created with Playposit, Quizziz, and Quizlet were selected as the three most popular ones in *Vida Perú* because they were engaging, playful, competitive, challenging, and allowed students to take control of their learning and get feedback with them.

5.2.2.2 Feedback about *Vida Perú*

In the second open-ended item of the motivation questionnaire (Question C in Appendix A), participants were asked to provide recommendations on how to make *Vida Perú* more engaging for them. For the analysis, I coded the data first and then looked for emerging patterns. The coding method that I employed for Question C consisted in identifying key words and/or phrases that appeared many times in the participants' responses. The majority of these codes were *descriptive* in nature because they 'described' what happened at the participants' level in their interactions with *Vida Perú*. These codes also referred to features of *Vida Perú*, as well as of quests, that needed further revision. Specifically, the most important recommendations for *Vida Perú* that emerged from the data were *inclusion of traditional instruction, longer duration of game, revised rules,* and *clearer point system*.

In addition, participants reacted to *Vida Perú* with evaluative adjectives about their experience with the game that were then used for coding. The *evaluative* codes that emerged from the data were *overwhelming*, *engaging or interesting*, *rushed or stressful*, and *confusing or frustrating*. Lastly, I used *In Vivo* coding when I captured whole phrases that participants used in their comments about *Vida Perú.* Saldaña (2013) explains In Vivo coding as using "words or short phrases from the participant's own language in the data record as codes" (p. 264). Table 11 shows the codes (words or phrases) used by participants in their reactions and recommendations

for *Vida Perú*, and its quests, as well as the frequency of these codes in the participants' comments. Each code on Table 11 has a number that represents how often that code appeared in the data.

Table 11. Codes used by participants in their reactions and recommendations for Vida Perú, and its quests, as well as the frequency of these codes in the participants' comments

Codes	Frequency of codes
Recommendations for *Vida Perú*:	
Inclusion of traditional instruction	**6**
Longer duration of game	**5**
Revised rules	**5**
Clearer point system	**5**
Recommendations for quests:	
Clearer quests directions	**8**
More in-class explanations	**8**
Revision of quests pre-requisites	4
No expiration of quests	4
Inclusion of learning aids	2
Better feedback	2
Reactions to *Vida Perú:*	
Positive reactions:	
Engaging or interesting	**7**

Table 11 continued

Negative reactions:	
Overwhelming	**9**
Did not like it / Don't do it again	4
Rushed or stressful	3
Confusing or frustrating	3

Participants reacted to *Vida Perú* in several ways. Table 11 shows one positive and popular reaction to the game; that it was engaging (or interesting), with seven participant comments about it. Table 11 also provides a negative and strong reaction to the gamified unit, made by nine participants; that it was overwhelming. Other negative reactions to *Vida Perú* from Table 11 include that it was: a) rushed or stressful, and b) confusing or frustrating (each with three participant comments).

From Table 11, it is not surprising that participants commented more on the negative aspects of *Vida Perú* than on the positive ones. In Question C, I had clearly asked them to provide recommendations on how to improve *Vida Perú*, so participants (accurately) interpreted the question that I was more interested in what did ***not*** work well with the game than in what did. Nonetheless, the negative reactions to *Vida Perú* were accompanied by important recommendations for quests as well as for the game as a whole, all of which are described below.

Quests

Eight participants mentioned that some quests lacked clearer directions while eight other participants said that some quests needed in-class explanations. When I planned the design of this first prototype of *Vida Perú*, I wanted it to resemble a real gaming experience where participants could feel completely immersed in the story and the context. Therefore, I purposely

included simple directions in Spanish with a very few English words. Apparently, my design was not ideal because 16 participants felt confused and frustrated when they found themselves unsure about what to do in some quests. Looking back, I should have given players all directions in English (both in class and online) before having them embark on the most challenging quests, even if that meant sacrificing the immersive experience that I wanted for them to have with *Vida Perú.* In the future, I could create 'game cards' with user-friendly directions for quests that students could refer to as they play the game. Another idea might be to include 'checkpoints' along the game for students to get help with language tools (i.e., vocabulary and grammar). Below are two participants' comments that address the aforementioned issues as well as their recommended changes:

> *"I think if she taught us the words, grammar, and structure first it would be easier and more understanding. After that we could use the games and quizzes to practice and put it to use."*
>
> *"I could have performed better if I understood the instructions of certain activities."*

In addition, four participants expressed their frustration with the expiration of quests; that is, they were not happy with quests having 'due dates', like traditional homework assignments. Apparently, the expiration of quests caused stress in some participants, forcing them to rush in completing the quests before their expiration date. On a similar note, four participants felt that some prerequisites of quests needed revision. To give some background here, some quests had prerequisites; in other words, participants had to meet predetermined conditions (e.g., completion of basic quests or achievement of certain number of experience points) in order to unlock certain quests. Apparently, these two game features (prerequisites and expiration of quests) might have

taken participants by surprise and, in some instances, caused confusion and frustration. My takeaway here is that, even though my intention was to push participants forward in the game by including prerequisites and expiration dates for quests, it was not such a good idea at the time *Vida Perú* was implemented. *Vida Perú* replaced the last unit of the course, which obviously fell towards the end of the term, when participants were particularly stressed with final papers and projects that they needed to turn in for other classes.

Vida Perú

Participants felt that the game rules and point system had not been explained clearly at the beginning of the game (with five comments for game rules and point system, respectively), causing a lot of frustration and confusion for players along the way. True, before starting the game, I gave participants only an overall idea of the rules because *Vida Perú* was not completely designed when I implemented it. Therefore, I did not provide participants with any rules in writing and I certainly did not add many details about *Vida Perú* in the syllabus. Looking forward, as participants claimed, it will be extremely important to create a 'game rulebook' to hand in (and post online as well) at the beginning of the game. In fact, it will be useful to also create pop-up windows, with just text, or talking avatars, like in most contemporary games, explaining game rules and make them easily accessible during the entire game.

In regards to the point system, I started with 1000 experience points as the game goal, but had to cut it down to 700 experience points in the middle of the game because it became obvious to me that designing quests was not as easy as I thought it would be and providing feedback for quests took much longer than I expected. A solution to this might be, as suggested by a participant below, to train a teaching assistant (possibly a student in the Spanish major or better,

in the Spanish Education major) who could help me design, revise, and approve *Vida Perú* quests in the future, thus speeding up the game flow for most participants.

> *"Maybe have an assistant who can approve quests when she is busy, so future students would not have to wait so long before they could start the next quest that had pre-requisites."*

In terms of more recommendations, five participants thought that *Vida Perú* should have lasted longer than four weeks to make it less rushed and overwhelming for them. This is something that I can fix by making some changes to the Elementary Spanish 1 curriculum. Other six participants mentioned that *Vida Perú* lacked 'traditional instruction', which I interpreted as 'teacher-directed learning'. Possibly, these participants felt that the move from 'traditional' to 'gamified' was too abrupt and that they would have preferred a mix of traditional learning and online quests first so that they could have gotten 'acclimated' to the gamified environment. Lastly, the most negative reactions to *Vida Perú* came from four participants who stated that 'they did not like it' and 'to not do it again', but they did not give any specific recommendations for improving the game.

Early on, when I analyzed the responses to the Likert-type questions of the motivation questionnaire, I said that at least 40% of the participants did not feel engaged with the quests or point system of *Vida Perú*, did not think that *Vida Perú* motivated them to work harder, did not believe that their quality of work was better with *Vida Perú*, and did not feel that learning Spanish was easier with *Vida Perú*. After analyzing the responses to Question C, it becomes apparent why these participants reacted negatively to *Vida Perú* and, most importantly, what can be done in order to reverse their negative reactions to the game. These participants found that the quests lacked clearer directions and in-class explanations. They felt frustrated with the expiration of quests and their prerequisites as well. Besides, in terms of the game as a whole, these

participants experienced confusion with the rules and point system. Lastly, they felt overwhelmed with the amount of quests in *Vida Perú* and had no choice other than rush to complete them in the limited time that they had at the end of the term. Clearly, I have many things to revise in this first *Vida Perú* prototype before implementing it again in the future.

6.0 CONCLUSION

In this paper, I have described how I empirically researched gamification not just as a simple set of mechanics but as an alternative, viable academic discourse (Tulloch, 2014) "focused on an individualized and flexible curricular experience" (Haskell, 2013, p. 3) that holds promise for motivating students to communicate willingly in a target language. Specifically, my problem of practice consisted of designing, implementing, and assessing the effectiveness of a gamified instructional unit (*Vida Perú*) with my Elementary Spanish 1 students at the University of Pittsburgh in Greensburg. Using a quest-based learning (QBL) approach, I empirically investigated the effects of gamified quests on the participants' motivation to learn Spanish (Dörnyei, 1994) and on their willingness to communicate in Spanish (MacIntyre et al., 1998). I posed two inquiry questions: '*To what extent do game-based learning environments promote willing communication in Spanish among students?*' and '*To what extent do game-like features (i.e., storyline, choice of tasks, rules, rewards, badges, scoreboard, and feedback) make a Spanish course attractive and motivate students?*'. To answer my questions, I used a variety of instruments to collect quantitative and qualitative data from thirty-six participants who completed quests and earned rewards with the goal of collecting enough experience points to become global explorers and 'win' the game (the equivalent of earning an 'A' in the unit).

In terms of ***willingness to communicate***, I learned that participants felt more relaxed in *Vida Perú* than in their traditional classroom setting. Also, participants found team-based communicative quests highly engaging for them because they were fun, interactive, enjoyable,

simple, or helpful to practice the language. These findings corroborate Reinders and Wattana's (2015) claim that second/foreign language (L2) learners benefit from less stressful environments, such as games, and are more willing to take advantage of opportunities in which they can use the L2. Apparently, though, *Vida Perú* did not provide enough team-based quests or similar opportunities for players to communicate fluently and willingly with others, both face to face and online. By extension, participants perceived the traditional classroom to be a better medium for developing communicative fluency in Spanish. This finding is important because, as MacIntyre et al. (1998) claim, "generating a willingness to communicate appears to be a crucial component of modern foreign language pedagogy" (p. 558). Therefore, moving forward, I will want to add more team-based quests to *Vida Perú* so that learners have better opportunities to communicate fluently and willingly in Spanish with each other.

In terms of ***motivation***, I found out that slightly more than 60% of the participants felt engaged with some features of *Vida Perú* (i.e., goal, structure, storyline, narratives, gameplay, challenge and competition, avatars, rewards, badges, and feedback). Furthermore, three types of quests (i.e., vocabulary flashcards, interactive quizzes, and cultural video-quizzes) emerged as the most popular among participants because they were engaging, competitive, challenging, and provided immediate feedback. These findings corroborate Sykes and Reinhardt's (2013) claim that "well-designed systems of goal orientation, interaction, feedback, and context are key features of an engaging game" (p. 99) and that gamification provides participants with active learning opportunities that emphasize interaction, challenge, and instantaneous feedback (Abrams & Walsh, 2014; Perry, 2015).

At the same time, about 40% participants did not feel engaged with some features of *Vida Perú.* The features with which the participants felt the least engaged were game setup,

rules, point system, and quest design. These participants said that the point system and rules of *Vida Perú* were confusing. They were also frustrated with some quests because of their unclear directions and lack of proper guidance. Additionally, they felt stressed by the locked quests because of prerequisites. Lastly, these participants felt overwhelmed with the amount of quests and how long it took to complete them. Even though Buckley and Doyle (2014) argue that gamified learning interventions can positively impact learning, this was not 100% true in my study. About 40% participants did not think that *Vida Perú* motivated them to work harder nor that their quality of work was better with it. In addition, these participants did not believe that learning Spanish was easier with *Vida Perú*.

Ideally, the gamification of learning "affords students opportunities to become motivated, self-directed learners who seem to enjoy receiving immediate and relevant feedback, earning points and status levels, and engaging in independent learning" (Abrams & Walsh, 2014, p. 57). In my study, participants reacted positively and negatively to the gamified learning environment. The implication here is that even though I designed *Vida Perú* with a culturally rich environment (i.e., content-based learning) and game design elements (i.e., quest-based learning) that motivated the majority of participants, it is important not to neglect other important instructional design features and principles of language pedagogy which, in turn, motivate and ensure the success of the students. Consequently, moving forward, I will have the challenge to refine the existing *Vida Perú* prototype by strategically blending game design principles, 21st century literacies, and instructional strategies for second language acquisition so that *all* players can feel motivated and successful when communicating in Spanish with others in authentic scenarios within the gamified learning environment. Specifically, I will need to be concerned about integrating the technology (e.g., gamification platform, interactive quizzes,

comic strip creators, etc.) without losing sight of sound research-based pedagogical principles of language learning.

6.1 RECOMMENDATIONS

With an inquiry approach of design-based research, it becomes critical to "identify factors that inhibit or advance the effectiveness of the intervention toward reaching the pedagogical goal" and to "modify the intervention and implementation to more efficiently address the pedagogical goal" (Ivey & Broaddus, 2007, p. 515). In my study, some participants felt that *Vida Perú* did not provide enough opportunities for them to communicate in Spanish and thus did not promote a willingness to communicate in them. Although a seemingly obvious finding, it is not a trivial one. If the goal of language instruction is to promote students' willingness to communicate, the pedagogical tools that are developed and implemented, technological or otherwise, must provide sufficient opportunities for interaction in the foreign language. Others did not feel motivated with the game and its quests. Kapp (2012) describes motivation as "using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems" (p. 10). In regards to their own motivation, participants made important recommendations for changes in the design of *Vida Perú* that could potentially make the gamified unit more engaging and learning-oriented for them. They are described below:

- *Complete set of rules*. The game rules need to be shared with the players at the beginning of the game. A game rulebook (in print and online) may work for some students. Ideally, pop-

up windows with game rules, created with text or audio (e.g., talking avatars), could be made easily accessible at all times during *Vida Perú*, like in most contemporary games.

- *Clear point system*. The point system, such as the amount of experience points that players need to reach a certain level (i.e., rank), or earn a special reward (e.g., complete 10 quests in one day to earn 50 XP, etc.), should also be explained upfront, at the beginning of the game. This way, it is easier for players to budget the time required to complete the quests and collect the experience points that they need to achieve the game goal.
- *Quest directions in English*. This feature is important for novice language learners, and an aspect of the game that I did not anticipate in the first prototype of *Vida Perú*. I learned that students need to understand fully the 'language' of the game (e.g., rules, point system, etc.) and that they also need to understand *exactly* what to do to be successful in the game. Therefore, it will be important for me to revise the design of *Vida Perú* keeping 'flow' in mind; that is, players should not be anxious about the game mechanics nor bored with easy tasks if I want them to be engaged with the game (Raymer, 2011). In the case of *Vida Perú*, it might be attractive for players if I create game cards or video-tutorials with cultural characters that give directions in English, with or without visuals, for each quest.
- *More guidance along the way*. This is another important aid for language learners that I need to incorporate in the revision of *Vida Perú*. One idea might be to include 'checkpoints' along the way for students to get help with language tools (i.e., vocabulary and grammar) or anything else. Here we encounter an important pedagogical principle that is as important for technological tools as it is for face-to-face instruction. For students to engage fully in language learning tasks of any kind, they need to be prepared with the language of the task to support their involvement with and commitment to task completion.

Participants mentioned a need for more teacher-student interaction, which I understand as a more dedicated teacher role during the game. So, as an illustration, the checkpoints could take the form of dedicated office hours in the form of 'check-in time with the game master', or something similar, to allow one on one time with those individual students who are struggling with the subject matter or with the game itself.

- *Fewer, or longer, quests.* Participants suggested merging a few short *Vida Perú* quests into longer ones (for more experience points) or simply eliminating some of the quests. For this endeavor, it might be a good idea to invite students in the Spanish Education major to become part of the (re)design process. They could help me revise existing quests, eliminate quests, merge smaller quests into larger ones, or even create new quests. But, most importantly, this could be a unique opportunity for them to learn how to incorporate the principles of language pedagogy into a thematic unit. Together, we could look at the ratings and comments that players provide about quests upon their completion, and use their feedback for simple, ongoing revisions during the course of the game. Last, but not least, the upper-level students could also help me see the quests from a student's perspective with the ultimate goal of making *Vida Perú* more effective and engaging to 21st century adult learners.
- *Longer game life.* Another option I am exploring is to make *Vida Perú* last a little longer (maybe an extra week or so) which could facilitate the addition of team-based quests that bring valuable and much needed student-student interaction. Admittedly, the plan of working with upper-level students as a team and extending the game life are ways to acknowledge how critical it is to develop L2 pedagogies and game based spaces for socialization, collaboration, and language use (Reinhardt & Sykes, 2014).

- *Prerequisites of quests*. For the next version of *Vida Perú*, students will not experience a time lag, waiting for me to approve a quest after they submit it. This time, I want players to move faster and get excited, 'addicted' to the game - not frustrated with it. Indeed, I want to motivate my students so they can immerse themselves and successfully experience a target language and culture (Lin, 2014) and remain in a state of 'flow' that will help sustain their engagement and interest in the gamified learning tasks (Raymer, 2011).

  First, then, I will revise the quests with practice of the language tools that players will need to know (Quests 1, 2, 3, 4, and 5) before completing a performance-based task (Quest 6) and waive their prerequisites, as shown in Figure 5. In other words, once players complete Quests 1 thru 5, they will collect the points (e.g., 5 XP) without me approving any of their attempts. However, once they submit Quest 6, I will review it for approval or send it back to them for corrections and resubmission. Once Quest 6 gets sent back to me and approved, players will be able to collect the points allotted to that quest (e.g., 50 XP).

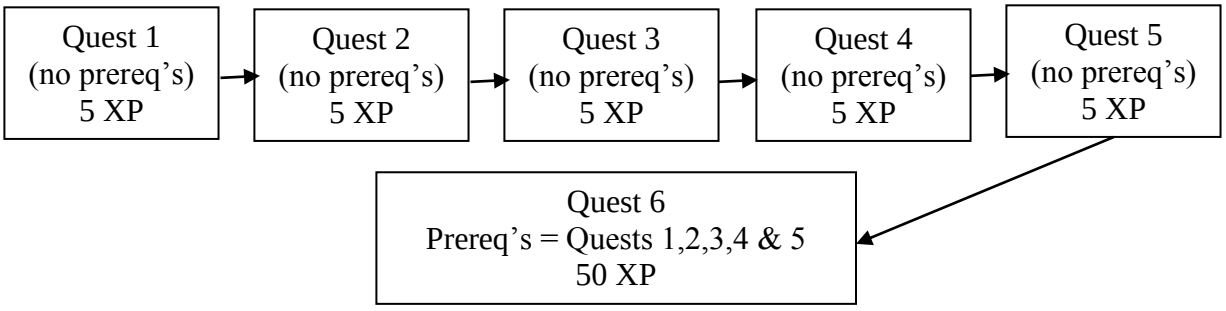


Figure 5. Sequence (and prerequisites) of quests

- *Expiration of quests*. This is a tough one, but I will need to find a compromise between giving students freedom to play the game at their own pace and keeping them accountable so they can reach the game goal before their final challenge (i.e., final exam). My hope is, if

all the revisions described earlier are successful, students will feel motivated to advance in the game that they won't have to worry about any quests expiring for them.

6.2 FINAL THOUGHTS

"Games and play are embedded in our cultural history and identity" (Buckley & Doyle, 2014, p. 1). Language play, according to Reinhardt and Sykes (2014), appears to be fundamental to language learning. On the one hand, Reinhardt and Sykes (2014) admit, there are still "significant gaps in our understanding of game and play perspectives on L2 teaching and learning" (p. 3). On the other hand, Cornillie et al. (2012) argue, there is a strong pedagogical research interest in gamification. Currently, game-based learning is considered a mere enrichment activity in most foreign language classrooms. However, in my opinion, the discussion about gamification, motivation, and willingness to communicate is crucial in terms of contemporary concerns about educational curricula not meeting the needs and interests of 21st century learners. Even with limitations, my study does show that gamification holds great potential in motivating students to immerse themselves and successfully experience a target language and culture.

Even though "studies specifically examining gamification and second language acquisition are not as prevalent" (Perry, 2015, p. 2309), my study might help encourage language educators to incorporate multimodal literacies that blend real-life experiences in individualized, student-driven quests so that learners are able to develop the skills that they need to communicate with others in authentic situations and become agents of their own learning (Abrams & Walsh, 2014). After having shared the process of designing, implementing, and

assessing the effectiveness of the gamified instructional unit *Vida Perú*, I hope I have sparked the interest of like-minded colleagues who might want to join me in moving forward the research on games and gamification in the world language classroom. I wholeheartedly agree with Menter et al. (2011) that "the process of preparing and presenting understandings to others transforms and deepens our understandings as well as influences the transformation of others" (p. 225).

Undoubtedly, the process of engaging in empirical research with my students has changed the way I view my role as a practitioner-researcher. I am already thinking about the next step – how does gamification have the potential to impact motivation and willingness to communicate, but what language *learning* outcomes can be documented after students participate in a game cycle? Simply put, what do students learn through their participation in a well-designed gamified lesson, unit, or curriculum? I would actually like to take advantage of my involvement with professional language associations to start a network that could help other practitioners make informed decisions in their classroom by engaging in empirical research with their own students. Other peers see me as a leader, so I can make use of my leadership skills to impact others and help transform language education? So, even though this is the last paragraph of my dissertation in practice, it is hardly 'game over'. A new leadership game is out there waiting for me, and I am ready to 'go' – waiting for the signal at the start line.

APPENDIX A

QUESTIONNAIRE 1: MOTIVATION

This questionnaire contains 15 multiple-choice items and two open-ended questions. It should take about 15-20 minutes to complete. Please answer truthfully, and remember that there are no right or wrong answers.

A) First, I am interested in your perceptions of motivation in Spanish with *Vida Perú*, the gamified instructional unit. Put an "X" in the box that best represents the degree to which you agree or disagree with each statement, using the following scale:

1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree

Statements about *Vida Perú*	1	2	3	4
1- *Vida Perú* has a culturally-relevant storyline.				
2- *Vida Perú* has an engaging goal.				
3- *Vida Perú* has interesting narratives.				
4- The avatars of *Vida Perú* are culturally-appropriate.				

Statements about *Vida Perú*	1	2	3	4
5- The game structure of *Vida Perú* is easy to follow. 6- *Vida Perú* keeps me engaged during gameplay.				
7- *Vida Perú* has different amounts of challenge and competition.				
8- I like *Vida Perú* quests better than paper and pencil activities.				
9- *Vida Perú* provides me with feedback as I play it.				
10- *Vida Perú* rewards me for completing more quests.				
11- I like earning badges in *Vida Perú.*				
12- *Vida Perú* motivates me to work harder. 13- My quality of work is better with *Vida Perú*.				
14- The experience points in *Vida Perú*				

Statements about *Vida Perú*	1	2	3	4
should replace the current grading system. 15- *Vida Perú* makes learning Spanish easier.				

B) Now, please comment on <u>one</u> specific quest that you chose to complete in *Vida Perú*. Specifically, describe your use of previous knowledge of vocabulary/grammar/culture and/or personal interest in your selection of the quest. In short, why did you choose that particular quest?

C) Lastly, in your opinion, what specific recommendation(s) would you give to the instructor-researcher (Professor Orsatti) to make *Vida Perú* more engaging to you personally?

APPENDIX B

WILLINGNESS TO COMMUNICATE (WTC) QUESTIONNAIRES

B.1 WTC QUESTIONNAIRE 2 (PRE-GAME)

This questionnaire contains two sections for measuring your willingness to communicate in Spanish, particularly in the language classroom. It should take you about 10-15 minutes to complete. Please answer truthfully, and remember that there are no right or wrong answers.

Section 1: Willingness to communicate

Below you will read a number of different communication tasks in which you might engage in the Spanish classroom. Please say how willing you would be to do each of these in Spanish. By 'willing' I mean 'showing strong intention' so put an X in the box that best describes the level of your willingness, using the following scale:

1 Very unwilling 2 Unwilling 3 Willing 4 Very willing

Communication Tasks	1	2	3	4
1- Talk to your classmates (in Spanish) about a class assignment.				
2- Communicate ideas, feelings and opinions				

Communication Tasks	1	2	3	4
in Spanish. 3- Ask for clarification (in Spanish) when you are confused about a task you must complete. 4- Read task description/instructions before you start completing. 5- Listen to what your classmates say (in Spanish).				

Section 2: State communicative self-confidence to communicate

Now I am interested in your anxiety about communication and self-perceived communicative competence when communicating in Spanish in the language classroom.

Put an "X" in the box that best represents the degree to which you agree or disagree with each statement, using the following scale:

1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree

Communication Tasks	1	2	3	4
6- I am not worried about making mistakes in Spanish.				
7- I find it difficult to communicate in				

Communication Tasks	1	2	3	4
Spanish.				
8- I am worried that I will not understand what my classmates say in Spanish.				
9- I feel nervous about using Spanish while participating in class activities.				
10- I can say what I want to say in Spanish.				
11- I think my classmates cannot understand me because of my poor Spanish.				
12- I feel comfortable sharing my ideas/feelings/opinions (in Spanish) with my classmates.				
13- I know the Spanish words required for each task completion.				
14- In general, I find communicating (in Spanish) in class situations relaxing.				
15- I think participating in class activities (in Spanish) help me develop my fluency (i.e., with little hesitation and pauses)				

B.2 WTC QUESTIONNAIRE 3 (POST-GAME)

This questionnaire contains two sections for measuring your willingness to communicate in Spanish during gameplay with *Vida Perú* (online and/or face to face) in the Spanish classroom. It should take you about 10-15 minutes to complete. Please answer truthfully, and remember that there are no right or wrong answers.

Section 1: Willingness to communicate

Below you will read a number of different communication tasks in which you might engage during gameplay with *Vida Perú*. Please say how willing you would be to do each of these in Spanish. By 'willing' I mean 'showing strong intention' so put an X in the box that best describes the level of your willingness, using the following scale:

1 Very unwilling 2 Unwilling 3 Willing 4 Very willing

Communication Tasks	1	2	3	4
1- Talk to other players (in Spanish) about a quest assignment. 2- Communicate ideas, feelings and opinions in Spanish. 3- Ask for clarification (in Spanish) when you are confused about a quest you must complete.				
4- Read quest description/instructions before				

Communication Tasks	1	2	3	4
you start completing. 5- Listen to what other game players say in Spanish.				

Section 2: Communicative self-confidence when communicating in Spanish

Now I am interested in your anxiety about communication and self-perceived communicative competence when communicating in Spanish during gameplay with *Vida Perú* (online and/or face to face) in the language classroom.

Put an "X" in the box that best represents the degree to which you agree or disagree with each statement, using the following scale:

1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree

Communication Tasks	1	2	3	4
6- I am not worried about making mistakes in Spanish.				
7- I find it difficult to communicate in Spanish. 8- I am worried that I will not understand what other players say in Spanish. 9- I feel nervous about using Spanish while				

Communication Tasks	1	2	3	4
participating in gamified quests. 10- I can say what I want to say in Spanish.				
11- I think other players cannot understand me because of my poor Spanish.				
12- I feel comfortable sharing my ideas/feelings/opinions (in Spanish) with other players. 13- I know the Spanish words required for each quest completion.				
14- In general, I find communicating (in Spanish) in game-based situations relaxing.				
15- I think participating in game-based activities in Spanish help me develop my fluency (i.e., with little hesitation and pauses).				

APPENDIX C

EXAMPLES OF QUESTS

C.1 QUEST 'UN MEME INCA' (10 XP)

Directions:

A) Busca y guarda (*search and save*) una imagen auténtica de un inca. ¿Eres una mujer o un hombre? Elige (*choose*) una imagen apropiada.

Modelo: un hombre inca

B) Piensa y escribe (*think and write*) una oración simple en español (entre 5 y 10 palabras). Usa tu nombre (de juego) en español y vocabulario de los capítulos 1, 2 y 3.

Modelo:

Nombre => inka (quechua) = rey (español)

Oración => El rey es muy rico y guapo.

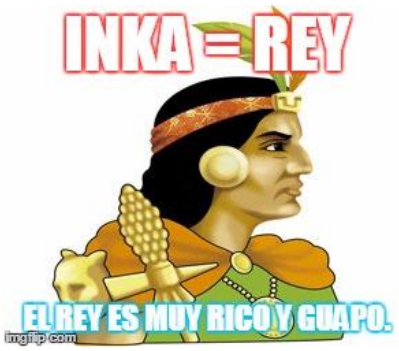
C) Crea un 'meme' con la imagen, el nombre en quechua y en español, y la oración en español.

Usa

- Mematic (iOS, Google Play), o

- Meme Generator (PC, Mac) @ https://imgflip.com/memegenerator

Modelo:



Student example of a completed quest:

C.2 QUEST 'LAS LÍNEAS DE NAZCA' (25 XP)

Directions:

A) Explorar las líneas de Nazca con tres vídeos, y luego contestar las preguntas:

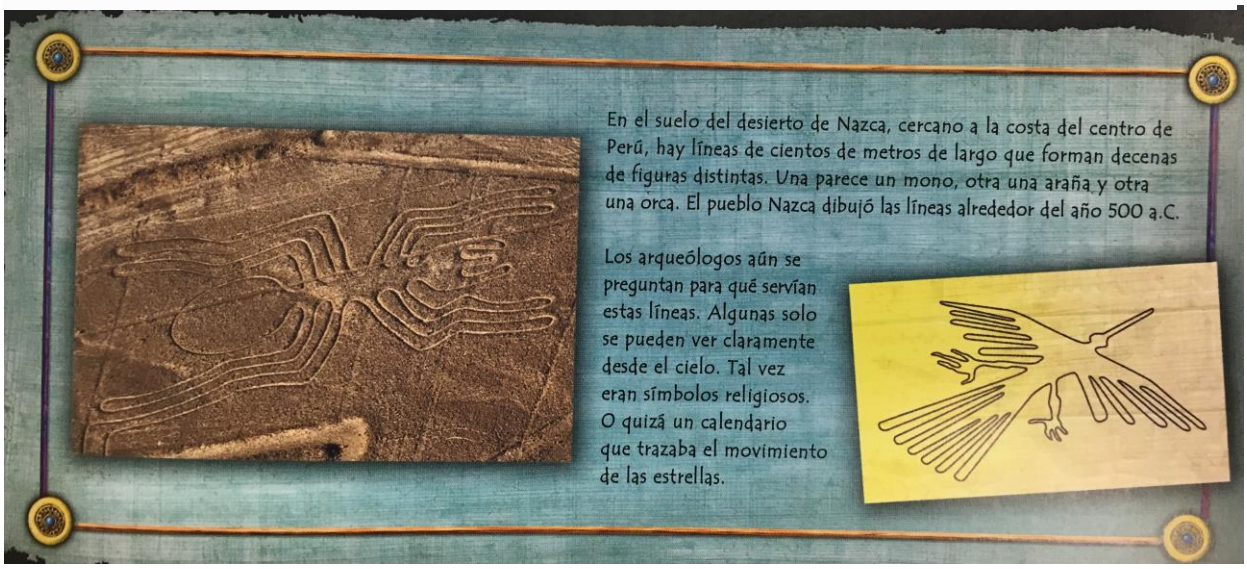
- Vídeo con texto @ https://youtu.be/5cN2ckTXUcA

- Vídeo con audio (*Plaza Sésamo*) @ https://youtu.be/NIkVuNrj_0A
- Video en 360° @ https://lstar.co/v/d6a1129c

Pregunta 1: ¿Dónde están las líneas de Nazca? ¿En la costa, el desierto, la selva, o la sierra?

Pregunta 2: ¿Se puede ver las líneas de Nazca desde (*from*) un carro o un helicóptero? ¿Por qué?

B) Leer el documento (en azul), y luego contestar las preguntas:

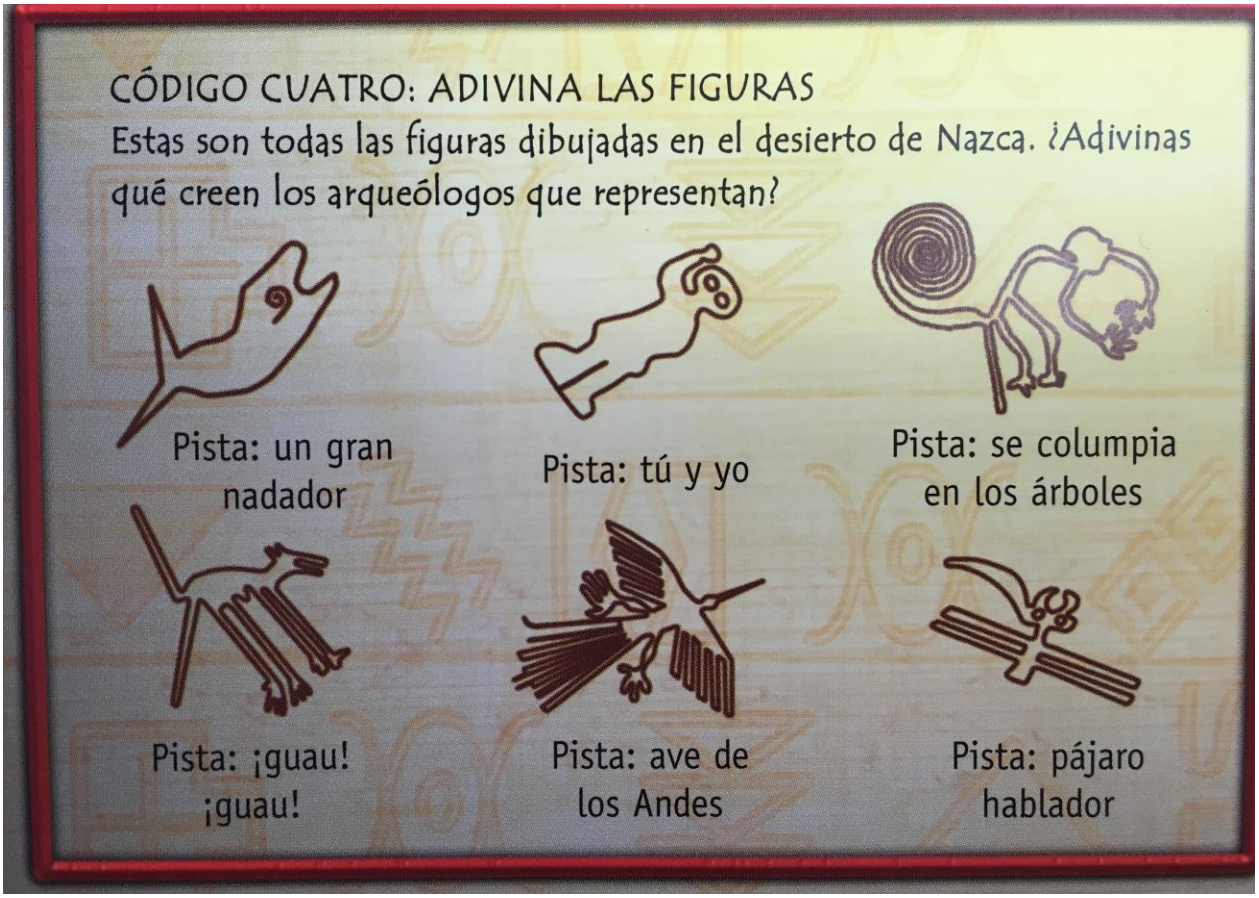


Pregunta 3: ¿Cómo se llama la civilización que trazó (*carved*) las líneas de Nazca?

Pregunta 4: ¿Qué tres figuras (o dibujos) menciona el documento? Escribe las palabras en español y en inglés.

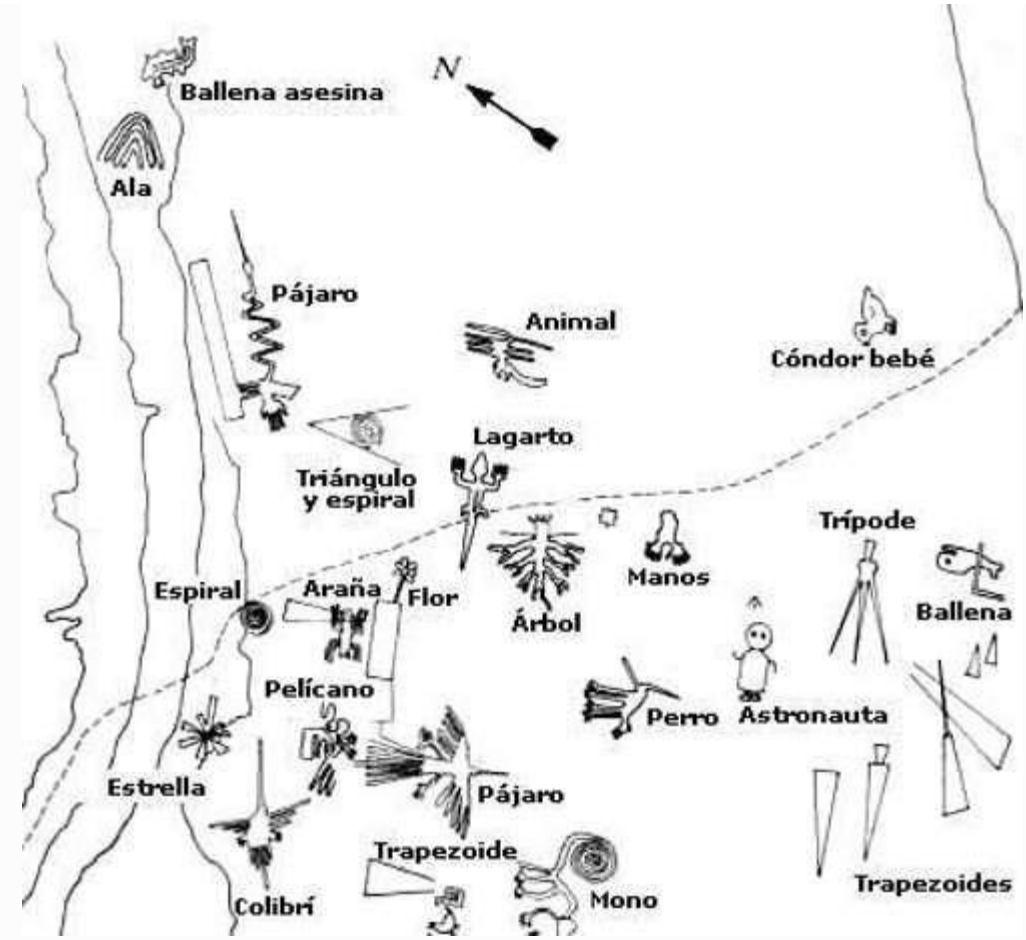
Pregunta 5: ¿Qué uso tienen estas líneas? Menciona dos usos.

C) Analizar las líneas de Nazca abajo (*below*)**,** y luego contestar la pregunta:



Pregunta 6: ¿Qué <u>seis</u> figuras representan las líneas de la foto? Escribir las palabras en español y en inglés.

D) Analizar <u>más</u> las líneas de Nazca abajo**,** y luego contestar la pregunta:



Pregunta 7: ¿Qué otras (*other*) figuras (o dibujos) hay? Menciona <u>tres</u> figuras, en español y en inglés

E) Leer el documento de abajo con más información de las líneas, y luego contestar las preguntas:

"¿Por qué han durado tanto?

Las líneas y los dibujos están realizados en una superficie estable, hay pocas lluvias y son de poca intensidad. Además las piedras por el calor irradian aire caliente sobre la superficie que sirve de parachoque a los vientos.

¿Cómo las hicieron?

*Para hacer las **líneas** se cree que fueron colocando estacas que permitieran el trazado de una línea recta. Los nazquenses conocieron el cuadriculado gracias a su experiencia en los textiles. Se calcula que 1,000 personas, a un ritmo de ocho horas diarias, en 3 semanas habrían efectuado todas las figuras. Aunque las figuras y líneas son impresionantes, los arqueólogos sostienen que es una obra fácil y que se puede hacer, relativamente, en poco tiempo."*

Pregunta 8: ¿Por qué se puede ver las líneas de Nazca después de muchos, muchos años? Escribir una respuesta simple, en español.

Pregunta 9: ¿Es un trabajo fácil o difícil dibujar estas líneas?

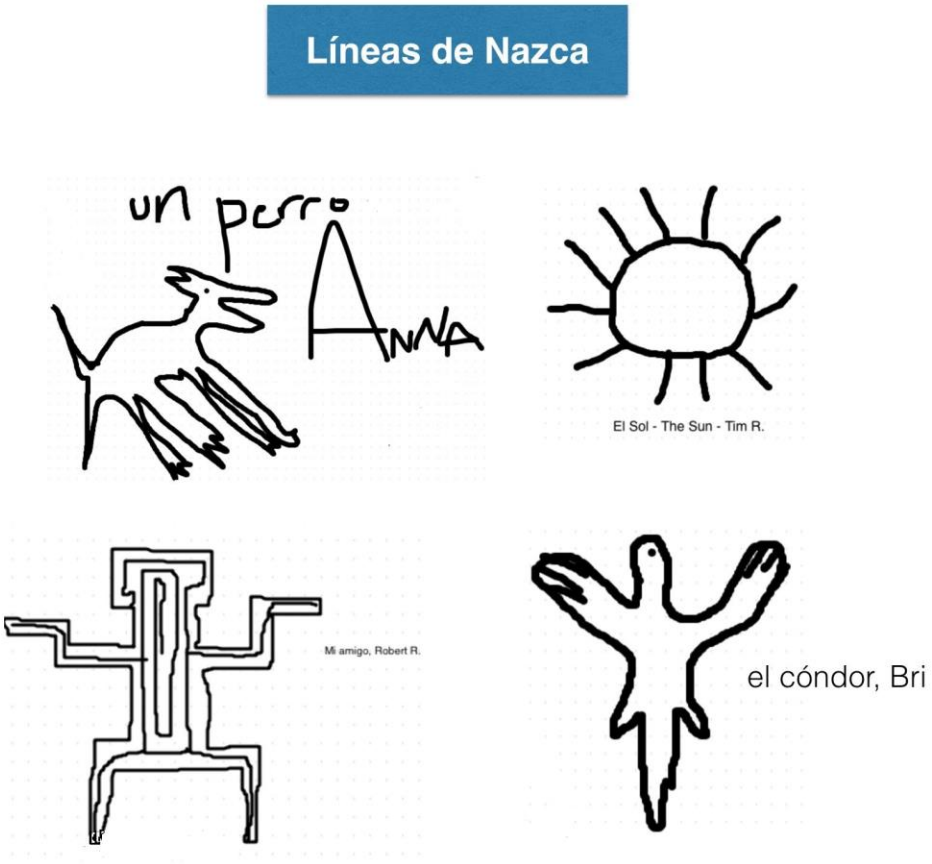
Pregunta 10: ¿Cuántas personas trabajan en las líneas? ¿Por cuánto tiempo?

F) Y ahora, una actividad creativa:

- Dibujar una "línea de Nazca".
- Usar el enlace (*link*) @ https://awwapp.com/b/uifupep6a/
- Mirar el modelo de la Profesora Orsatti.
- Escribir tu nombre y qué figura es.

Nota: Se puede crear una línea de Nazca 'real' o 'ficticia'.

Student creations of Nazca lines:



C.3 QUEST 'INFOCLIMA DE PERÚ' (15 XP)

Directions:

In this quest, you will create a weather infographic for the five regions explored in Vida Perú: *Lima*, *Nazca*, *Lago Titicaca*, *Macchu Picchu*, and *Cuzco*

A) Resources

You will need three websites:

- El Canal del Tiempo @ http://Weather.com/es (to gather weather information)

- Typeit in Spanish @ http://Spanish.typeit.org (to type, copy, and paste words with accent marks)
- Google Maps @ http://www.google.com/mymaps (to create the weather infographic)

Note: You need a Google account for this task - if you don't use Google, let me know!

B) Steps

- Go to http://www.google.com/mymaps
- Click on 'Create a new map'
- Click on 'Untitled map'
- Write 'Infoclima de Perú - *your last name*' as the map title, and 'El clima y las actividades' as the description
- Click 'Save'

Now...

- Click on 'Untitled layer'
- Write 'Lima' as the layer name
- Click 'Save'

Then...

- Type 'Lima' in the Search Box (look on top of the map)
- Once the box named 'Lima' appears, click on '+ Add to map' in order to add Lima to your 'infoclima'

Next...

- Click on the bucket icon
- Click on 'more icons'

- Choose 'weather' (menu on top) and select the appropriate weather icon for today (you will need accurate weather information from *El Canal del Tiempo* to complete this step)
- Click OK, and close the box (important -> keep the box named 'Lima' open)

In the box named 'Lima'...

- Click on the camera icon
- Click on 'More' (menu on top), then select "Google Image Search", and type 'Lima' in the Search Box
- Select <u>one</u> picture of Lima (tip -> choose one that you can describe in terms of weather and activities
- Click 'Select'

Then...

In the 'text box' that appears under the picture…

- Write two weather expressions matching the weather icon
- Write three activities that one can do in Lima (e.g., *se puede*...) based on the selected picture
- Use vocabulary from the unit and your imagination!
- Click 'Save'

Next...

- Click on 'Add layer' and repeat steps 6) to 16) for Nazca, Lago Titicaca, Macchu Picchu and Cuzco

C) Submission

Once done with all five layers...

- Click 'Share' (tip -> look next to 'add layer')

- Change who has access to the Google Map from 'private' to 'anyone with the link (VERY important step)
- Click 'Save'
- Copy the link, and submit it to complete your quest!

D) **Student example of a completed quest** @ http://bit.ly/infoclima

APPENDIX D

REWARDS IN VIDA PERÚ

Badges


Visitante


Observador


Navegador


Aventurero


Investigador


Explorador


Inka

Awards


Participar en clase


Hablar español


Ayudar a otros


Prestar atención


Asistir a clase


Jugar en equipo


Competir en equipo


Ganar en equipo


Cantar en español

Achievements

5 Calificaciones

10 Calificaciones

15 Calificaciones

20 Calificaciones

30 Calificaciones

5 Comentarios

10 Comentarios

15 Comentarios

20 Comentarios

30 Comentarios

3 en 1

5 en 1

10 en 2

20 en 7

50 en 20

A mitad de camino

GANADOR

Portafolio

Pasaporte

APPENDIX E

PLAN-DO-STUDY-ACT (PDSA) CYCLES

E.1 PDSA CYCLE 1

Tester: Silvina Orsatti (Practitioner-Researcher)

Change Idea: Team-questing

Goal of the Test: To assess the effectiveness of team-based communicative quests on participant engagement

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1. PLAN

What percentage of students will find team-questing with communicative activities engaging? My prediction is that 80% of students will find team-questing with communicative activities engaging.

Activity: El juego de la identificación

First, I divided each class in five teams of 3-4 students each. The members of each team received a handout with ten sentences. The sentences were in the present tense and described activities that people normally do as a hobby or in their free time (e.g., a student who speaks a little French, etc.). Each team member then had to walk around in the classroom and survey other team members until they had identified students who were a perfect match to each of the ten sentences in their handouts.

Before sending everyone off, I went over the sentences to make sure everyone understood what they meant and how to pronounce the words in them. After the survey was finalized, everyone went back to their seats and shared their findings with their team members.

In Rezzly, all participants rated their engagement with the communicative activity (using a scale from 1 to 5; 1 not very engaging and 5 highly engaging), and provided some comments about it.

2. DO

The activity went more or less as planned; it just took longer than anticipated (25 minutes).

3. STUDY

In terms of participants, 35 students were in attendance, participated in the activity, and rated it. The average rating was: 4.16 (out of 5), which means that 83% of the participants thought that the activity ***'El juego de la identificación'*** was engaging. The rating was actually higher than I had predicted.

4. ACT

In the next cycle, I intended to try a different (and shorter) communicative activity where participants interacted only with their team members. This approach would help me save some class time while still having participants interact with each other.

E.2 PDSA CYCLE 2

Tester: Silvina Orsatti (Practitioner-Researcher)

Change Idea: Team-questing

Goal of the Test: To assess the effectiveness of team-based communicative quests on participant engagement

1. PLAN

What percentage of students will find team-questing with communicative activities engaging? My prediction is that 80% of students will find team-questing with communicative activities engaging.

Activity: Macchu Picchu en fotos

First, I divided each class in the same five teams as before. Each team received a stack of 8-10 cards that had pictures of Macchu Picchu on them. Participants had to draw two cards and take turns in describing them using vocabulary and grammar learned during the semester. They had

10 minutes to complete the activity.

In Rezzly, all participants rated their engagement with the communicative activity (using a scale from 1 to 5; 1 not very engaging and 5 highly engaging), and provided some comments about it.

2. DO

The activity proved to be a little hard to participants because they lacked vocabulary words to say what they wanted to say about the pictures. I could have used a picture and demonstrate how to use previously learned vocabulary and grammar for the descriptions, but I wanted for them to improvise a bit.

3. STUDY

In terms of participants, 34 students were in attendance, participated in the activity, and rated it. The average rating was: 4.1 (out of 5), which means that 83% of the participants thought that the activity ***'Macchu Picchu en fotos'*** was engaging. The rating was a little lower than before, but still higher than I had predicted.

4. ACT

In the next cycle, I intended to try a different, but still short, communicative activity where participants had more guidance on how to express themselves. I also wanted them to have some fun with the task.

E.3 PDSA CYCLE 3

Tester: Silvina Orsatti (Practitioner-Researcher)

Change Idea: Team-questing

Goal of the Test: To assess the effectiveness of team-based communicative quests on participant engagement

1. PLAN

What percentage of students will find team-questing with communicative activities engaging? My prediction is that 85% of students will find team-questing with communicative activities engaging. I increased my prediction from 80 to 85% because I thought students would be more

engaged with an activity in which they had to speak Spanish and use fun props at the same time.

Activity: Cinco frases y disfraces

First, I divided each class in the same five teams as before. This time, I brought A LOT of props to the classroom (e.g., two Wii controllers in the shape of a tennis racket and a golf club, small balls for all sports, hats, a helmet, a pair of large funky glasses, musical instruments, plates and utensils, etc.).

On the board, I posted five phrases that had blanks in them (e.g., I have…, I'm going to…, Let's…, etc.). Next, each team received a game card that had the name of a place on it (e.g., on the beach, in the mountains, at home, etc.). In 5 minutes, all teams had to prepare a mini-skit with the five phrases from the board applied to the context in their game cards while using appropriate props to help them convey the intended message. <u>All</u> team members had to equally participate in the skit and they <u>all</u> had to have their lines memorized so that the <u>entire</u> team could earn the experience points of this quest. After a quick prop rehearsal of 1-2 minutes, all teams presented their skits to the class.

In Rezzly, all participants rated their engagement with the communicative activity (using a scale from 1 to 5; 1 not very engaging and 5 highly engaging), and provided some comments about it.

2. DO

The activity was fun – I regret not having recorded it! Personally, it took me some time to find the right props for the phrases and contexts. In class, the activity took no longer than 15-20 minutes overall.

In terms of learning goals, participants not only experienced the interpersonal communicative mode, but also the interpretive mode (by listening to other teams present their skits) and presentational mode (by acting out the skits for the other teams) as well.

3. STUDY

In terms of participants, 34 students were in attendance, participated in the activity, and rated it. The average rating was: 4.5 (out of 5), which means that 90% of the participants thought that the activity ***'Cinco frases y disfraces'*** was engaging. The rating was, again, higher than I had predicted.

4. ACT

This was the last cycle.

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