

A Positive Psychology Perspective on Designing a Technology-Mediated Learning Experience: Engagement and Personal Development

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Abstract

This study takes a positive psychology approach to the integration of technology in the foreign language classroom. Specifically, it explores the benefits of using flow criteria (Czimmerman & Piniel, 2016; Egbert, 2003) to guide the design sequence of a technology-mediated project for a French for business course (advanced level). In the course of six weeks, twenty students progressed through several collaborative and individual tasks culminating in the co-construction and presentation of a website designed to introduce a new company and product. The analysis of their reflection essays, produced at the conclusion of the project, shows that clear objectives, interest, time to explore, sense of control, and being pushed out of their comfort zone to address various challenges they encountered led to a meaningful experience. Experiencing positive emotions in relation to achievement and creativity was transformative leading them to build confidence, resilience, language skills and strategies, and plan for their future learning path. The findings suggest that fruitful integration of technology should not be judged solely on its effect on linguistic development but also on its potential to generate positive emotions to support engagement in foreign language learning.

Key words: Foreign language pedagogy, technology-mediated project, emotions, French for specific purposes, engagement

Research on the integration and implementation of technology in the curriculum has examined the role of affect on students' perceptions. Emotions such as enjoyment, pride, frustration, and anxiety have all been linked to engagement with technology-mediated tasks and the perceived usefulness of technology for foreign language learning (Castaneda, 2013; Ducate & Lomicka, 2008; Karabulut, LeVelle, Li, & Suvorov, 2012; Liu, Wang, & Tai, 2016; Yang & Chen, 2007). In their extensive review of the effectiveness of the use technology for foreign language learning, Golonka, Bowles, Franck, Richardson, and Freynik (2014) remark that

reporting the affective benefits tied to the use of technology (e.g., enjoyment and motivation) is certainly valuable and informative but does not demonstrate improvement in learning or proficiency. However, as MacIntyre and Mercer point out (2014), attention to “the processes and timescales in which learners can be seen to be happy and experience flourishing” (p. 163) offers a worthy perspective for foreign language teaching. Solely focusing on the effects of technology on language competence or on the depth of achievement is not sufficient to inform the design and implementation of technology-mediated tasks. Successful integration is inevitably tied to what makes the overall learning experience positive and engaging for students.

Csikszentmihalyi (1988) contends that concerns with the quality of human experience makes flow relevant. Defined as a state of intense focus and involvement that stimulates learning and development (Csikszentmihalyi, 1997, 2003), flow can be viewed as a heightened form of engagement. Experiencing flow can lead to losing one’s self in the task, and being completely absorbed can alter one’s sense of time spent on task. In order to successfully complete the task, students have to activate or adapt their skills, which promotes a sense of achievement, allowing them to measure progress in their development and feel positive about the learning experience. Csikszentmihalyi also points out that enjoyment and interest are key to finding flow. Positive emotions and engagement are the first two elements of the Seligman’s (2011) PERMA model, which characterizes the dimensions of well-being. The other three are “developing positive interpersonal relationships (R), finding meaning by serving a cause beyond oneself (M), and recognizing areas of accomplishment and achievement (A) (Seligman, 2011, as cited in MacIntyre & Mercer, 2014, p. 154). Determining if flow and engagement are one and the same is beyond the scope of this study. However, recent investigations of student engagement reflect the components of the optimal experience described by Csikszentmihalyi. Shernoff (2013) defines engagement as “the heightened, simultaneous experience of concentration, interest, and enjoyment in the task at hand” (p. 12). Oxford and Cuéllar (2014) refer to “the positive undercurrent of flow” (p. 197) as supportive of engagement and argue that the notion of meaning and engagement are inextricably linked because “learners become engaged in that which they consider meaningful” (Oxford, 2016, p. 25).

This article investigates students’ emotional experience of a pilot website design and planning project in a French for business course (advanced level) and how it relates to characteristics known to induce flow. The study examines how using flow criteria to guide the

integration of technology affects the learning experience and aims to better understand the links between flow, emotions, project design criteria, and effective use of technology for language learning. To frame my approach, I start by examining the role of positive and negative emotions in the learning process. Next, I combine characteristics of flow-inducing tasks (Czimmerman & Piniel, 2016; Egbert, 2003) and conditions for project-based language learning (Stoller, 2006) to develop design criteria for the project. I proceed to explain my rationale for incorporating website development in a business-oriented course and describe how I used the criteria developed for the purpose of this study to sequence the various tasks in the project. Finally, I report on why students found producing a website a meaningful experience and how the emotions they experienced impacted their perception of progress and personal development as language learners and users.

Emotions and Learning

As Achor (2010) points out, students who experience positive emotions are better students because positive emotions “flood our brains with dopamine and serotonin, chemicals that not only make us feel good, but dial up the learning centers of our brains to higher levels” (p. 14). In other words, positive emotions are tied to mental processes and can enhance learning by providing opportunities to flourish. For Fredrickson and Cohn (2008), they drive active engagement in the learning environment and students’ inclination to participate in tasks and activities. Fredrickson (2001, 2003) identified several positive emotions, such as joy, interest, contentment, pride, and love, and proposes that experiencing these emotions generate an impetus for creativity, exploration, and development of new perspectives of how one sees the self and the world. As a result, individuals build personal resources, “which function as reserves that can be drawn on in subsequent moments and in different emotional states” (Fredrickson, 2001, p. 220). Therefore, positive emotions have an enduring effect that goes beyond their momentary occurrence because they help develop one’s ability to cope with future challenging situations. As such, they can build self-confidence by enhancing understanding and awareness of one’s capabilities, strengths, and weaknesses.

MacIntyre and Mercer (2014) remark that positive and negative emotions are not mutually exclusive; one does not signify the absence of the other. Rather, they should be considered as “two dimensions of experience” (p. 162): positive-broadening and negative-

narrowing, both belonging to the learning process, because they help regulate “the whole emotional entity to maintain engagement” (Ibrahim, 2016, p. 277). An interesting, enjoyable, and satisfying task can empower students to mediate negative-narrowing emotions and handle the “dissonance found within their possible selves” (MacIntyre & Gregersen, 2012, p. 211) by taking remedial actions or developing new skills or strategies. However, as Lake points out (2016), from a positive psychology standpoint, the focus is not “on reducing the discrepancy between a present and future self” (p. 329), as Dörnyei’s (2005) L2 self-system model proposes. Rather, the power of positive-broadening emotions resides in how they can unveil one’s self-potential and develop outlook and perspectives on what one is capable of accomplishing.

Defining Design Criteria for a Positive Learning Experience

Taking a positive psychology approach to design a technology-mediated project implies creating conditions to engender positive emotions in order to stimulate engagement and potentially trigger a flow-like state of complete immersion, when “overall awareness of the self as well as the sense of time is reduced” (Guz & Tetiurka, 2016, p. 140). Egbert (2003) specifically addresses the use of technology in relation to flow. In her study, she focused on reading and computer-mediated tasks (emails and online chat). Her participants attributed their heightened interest and focus to communicating with native speakers rather than the computer tool, leading her to conclude that it is not the technology itself but how it is used within the task that will contribute to engagement, immersion, and fulfillment (flow) or frustration and boredom (anti-flow). Her findings suggest that engaging tasks entail initiative-taking and meaning-making, with language “serving a purpose that learners perceive to be authentic” (p. 505). Designing to induce flow requires optimally balancing the challenge within the task with the skills necessary to perform it (Czimmermann & Piniel, 2016). This optimal balance between task demands and skills prompts students to explore ways to improve their performance and take risks to meet the challenge. However, as Egbert points out, achieving this balance is not sufficient on its own to promote heightened engagement. She stipulates other conditions necessary to support flow: focusing learners’ attention, which calls for minimal interruptions; capturing learners’ interest; and eliciting learners’ sense of control by providing opportunities to make choices in terms of content and self-expression. Tasks must have clearly defined goals, and the information and actions necessary to reaching the goals need to be incorporated throughout. In addition,

Czimmerman and Piniel (2016) recommend variety and creativity to engage and sustain attention.

Despite the guidelines provided by Egbert (2003) and Czimmerman and Piniel (2016), how to balance challenge and skills to foster a positive emotional state conducive to engagement is conceptually vague and abstract. Because pride, enjoyment, interest, satisfaction as well as increased engagement are often reported in project work (Lee, 2002; Mills, 2009; Stoller, 2006), project-based learning seems ideally suited to create conditions of a positive learning experience. Stoller (2006) lists sequential and manageable tasks, integration of skills, language use and content, choice, responsibility, and collaboration as key elements of a project-based approach. The Essential Project Design Elements outlined by Larmer (2015), which emphasize sustained inquiry, authenticity, student voice and choice, reflection, critique and revision, offer additional pedagogical guidelines to designing a project aimed at generating and supporting a positive learning experience. The following criteria emerged from the integration of the PBL design elements with characteristics of flow-inducing tasks:

- Appropriate and manageable challenge
- Clearly defined goals (real-world)
- Interesting or authentic topic and task
- Sufficient time for completion and a chance to focus
- Structured opportunities for regular and varied types of feedback (to sustain attention)
- Sense of control (choice)

Creating a Realistic and Authentic Context for Language Use

Although projects can be configured in many ways, they usually entail sequenced tasks that help students progress toward the completion of a final tangible product with real-world relevance (Mills, 2009; Stoller, 2006). Using language for purposes that reflect real-world contexts and situation in a collaborative setting provide opportunities to “work on different competences simultaneously” (Barba, 2006, p. 60). At the university where this study took place, the curriculum of an existing French for business course was revisited and emphasis was placed on developing students’ communicative skills and cross-cultural problem-solving abilities

through the exploration of business protocols and practices. One of its redefined objectives was to provide opportunities to engage self-expression in the presentational mode of communication within a business environment.

Martin and Adrada-Rafael (2017) point out that, “practicing job interviews, writing a report, or giving a formal presentation to colleagues using PowerPoint all represent common tasks in the business world that, consequently, need to be addressed in the L2 classroom” (p. 57). However, while these tasks do reflect real world situations beyond the classroom, they do not integrate current business digital practices. Companies (regardless of their size) use websites to reach their customers and promote themselves and their products. Because “the world’s internet users prefer to surf the web in their native language” (Blake, 2013, pp. 25-26), it seems quite fundamental to address website development in a business-oriented language course. Websites are localized communication tools that are well suited to the practice of evaluating and producing culturally situated written and visual messages, highly conducive to developing 21st century communication skills (Warschauer, 2001). To ensure that students would not focus on the technology itself, emphasis was placed on the tangible purpose of website development: to present and communicate information. In this course project, students needed to develop a website to introduce a new company and product (that they invented), which they presented orally in class at the end of the semester.

Designing the Website Project

The criteria outlined above guided the development and sequencing of this project. They are presented in the order they were used to articulate its organization and content. The French for business course met twice a week for 75 minutes. The project was conducted entirely in French over the last six weeks of a 15-week semester. In the presentational mode of communication, students are expected to “present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics using appropriate media and adapting to various audiences of listeners, readers, or viewers” (National Standards, ACTFL, 2015). The website design and planning project described below contained five tasks (individual and collective) all designed to address different aspects of the presentational mode: a business action plan (10% of the final grade), an ebanner with a slogan (5%), a website (15%), an oral

presentation (10%), and a reflection essay (5%). Each component was graded individually based on rubrics I developed.

Appropriate and manageable challenge

Building a website might at first seem intimidating. Students might worry they do not have the necessary skills (technological or linguistic), or they may be overwhelmed by the amount of work they imagine it will entail, which might induce anti-flow experiences, such as anxiety, boredom, or apathy (Czimmerman & Piniel, 2016). It was, therefore, important to ensure that the technological burden would not interfere with the website development. I elected to use Wix, a free and easy-to-use platform for website construction. Wix requires no coding skills and provides templates, allowing users to focus on content rather than on the technical aspects. To ensure that students felt they possessed the level of linguistic competence necessary to presenting a product and a company, the course content addressed some specific notions related to a business website: company types and organization (including job positions), industry sectors and the fastest-growing ones worldwide, companies' modes of communication with consumers, and website component analysis.

Clear goals

A contextualization articulating the authentic purpose of using French was required to signal that the website represented the communicative tool and that the main goal was to publicize a new product. To introduce the project, I sent each student an email to invite them to participate in an innovative entrepreneur incubator workshop. In class, I explained that as participants in the workshop, they would partner with another attendee, identify a need or an issue, and devise a solution (i.e., the product). Each pair would create their own company and develop a website to present their product solution to the other participants in the workshop, who would then decide the top four to be entered in a seed-funding contest. The project goal was thus to identify an issue and envision how to solve it. Partner selection was integrated in a "meet and greet" class session. Armed with a set of predetermined questions, students discussed their interests with a minimum of five other students.

An interesting task

The authentic nature of the task is not sufficient to induce interest. Czimmerman and Piniel (2016) contend that a task should also be open-ended and enable creativity. Designing an ebanner and a website, developing a marketing action plan and creating a product and company meet these criteria. A meaningful purpose and clear guidelines articulated the task; however, students could decide which issue they wished to work with, constructed their own solution, and had the freedom to choose the content of the website, provided the information contained in the action plan and the ebanner were included.

Sufficient time and chance to focus

To ensure that students could focus their attention on the task, homework and classwork consisted of tasks that guided them in developing the content for the website. Several benchmarks were aimed at keeping them on task to create a sense of progress toward the final tangible product. The breaking down of distal goals into proximal goals contributes to engagement because a sense of progress emerges from completing smaller steps. During week one, they found a partner and identified an issue or need. Week two was spent creating the action plan describing the product and company, customers characteristics, product price and distribution methods. They handed in their actions plans at the beginning of week three. During that week, we also analyzed website architectures, use of colors and images, and students started planning content and organization of their website. Weeks four and five were devoted entirely to building the website. Oral presentations took place during the last two class sessions (week 6).

Immediate feedback

To sustain attention, focus and engagement, students need to know that they are progressing successfully toward the final objectives by achieving smaller goals and milestones. Cooper and Murphy (2016) consider the role of feedback is to “articulate how [students] are doing and help [them] decide what [they] should do next” (p. 91). During week one, each pair presented their issue and solution in an elevator pitch (short and brief description) to another group. I provided written feedback on the business action plan regarding content and language use (beginning of week 4). Students commented on each other’s presentations. In addition to peer and instructor feedback, eliciting self-evaluation seemed highly relevant to reflect on

engagement with the project. Bandura (1986) stresses the importance of self-reflection, which engages an individual in evaluating the self and can lead to modifying self-beliefs and behaviors. Aragão (2011) explains that, “through reflection, students are able to identify beliefs, emotions, challenges and how to deal with them” (p. 305). Thus, following their presentation at the end of the project, students wrote a reflection essay to consider and examine their performance, what they had accomplished, what they had learned from the experience, and how it might apply to future endeavors.

A sense of control

Clear goals and guidelines outlining students’ responsibilities activate the perception of autonomy (Egbert, 2003) and contribute to sustaining engagement and flow. Czimmerman and Piniel (2016) remark that allowing students some control over the outcome will maintain their interest and involvement. As they developed their website, students could draw on their existing knowledge and experience and tailor the content to the level of linguistic competence they felt comfortable with. They were able to choose their partner based on mutual interest in an issue and control the look, feel, and organization of the website.

Table 1 summarizes all the components and criteria incorporated into the design of the project to foster engagement and generate a positive learning experience.

Table 1

Design Components to Foster Engagement

Design Criteria	Components
Manageable challenge	Easy-to-use technology tools Adapted to level of linguistic competence
Clear goals	Contextualization Authentic and purposeful language use
Interesting task	Open-ended and creative Real-world connection
Chance to focus	Break down a large distal goal into proximal goals Integrated tasks with specific deadlines
Personalized feedback	Collaboration (peers and instructor) Self-reflection
Sense of control	Opportunity to make decisions Choice (partner, topic, content)

Methods

This study focuses on the links between project design criteria and students' emotional experience of the project to examine if incorporating characteristics of flow to engender positive emotions helped them "become aware of their personal strengths and to develop strategies for building on and employing these strengths in new ways to assist their own language learning" (MacIntyre & Mercer, 2014, p. 161). Narratives constitute an excellent source to explore students' subjective experiences (Barcelos, 2008; Oxford & Cuéllar, 2014). When students recall their experience, "the narrated experience becomes the object of study promoting reflection about narrated phenomena and new meaning making" (Aragão, 2011, p. 305). Retrospective accounts offer the possibility of recognizing emotions connected to an experience and considering their impact on decisions. The comparison of the individual narratives produced by the participants provides insights on how connecting emotions with the experience helped them process how the project affected their self-development. The following research questions guided the study:

1. To what extent was the project a positive broadening experience?
2. What factors and criteria did students report as contributing to their engagement?
3. What was the effect of the project on students' personal development?

Participants

Twenty undergraduate students (14 females and 6 males), all native speakers of English, were enrolled in the course, which met twice a week for 75 minutes. They were between 19 and 22 years old. French for business is an elective, except for students pursuing a dual major in French and Business. Three participants were dual majors, four were French majors and 13 were minoring in French. Thus, the majority of students (17) were not required to take this course. Per the Institutional Review Board's approval, after I introduced the project in class, I left the classroom. A professor from the Spanish program used a script I provided to present the study to the 20 students enrolled. They were asked for their consent to use their final reflection paper for research purposes. They were told that neither participation nor non-participation would have any effect on their course grades or their relationships with me, their instructor. I would not be aware whether or not they had given consent until after submission of final grades. The consent

forms were kept under lock and key in the office of the department chair. All the students gave consent to participate in the study.

Data collection and instrument

The project was conducted entirely in French, but the reflection component was in English to facilitate both the expression of personal feelings and the processing of the experience. Following Tse's (2000) recommendation, the reflection essay handout provided nine open-ended questions to assist students in developing their subjective understandings and elicit what they felt meaningful in this experience. Questions were bulleted rather than numbered to avoid giving students the impression that questions had to be addressed in order, allowing them to structure their narrative in a manner that suited them. The questions did not explicitly name emotions or elements of flow. Instead, students were encouraged to share their subjective appraisal of their feelings, likes and dislikes, challenges, satisfaction, frustration, and what they had learned about themselves during the experience. The essay was limited to a minimum of three and a maximum of four double-spaced pages. Via email six days after the last class period, 17 students submitted their three-page reflection, one submitted four pages and two submitted two pages (50 pages total or 16 577 words).

Data analysis procedures

Analysis of the reflection essays followed guidelines of constructivist grounded theory (Charmaz, 2017; Hadley, 2017) because this approach to qualitative data "brings people and their perspectives into the foreground" (Charmaz, 2017, p. 41). I used emotions (positive or negative) as a "sensitizing concept" (Charmaz, 2014, p. 117) to guide the initial coding of the data. I first read the raw text line-by-line, isolating all instances that mentioned an emotion to identify all the emotions reportedly experienced (emotion corpus). Next, I considered the statements classified under the different emotions to establish what aspects and factors of the project were related to these emotions. The following connections emerged: technology-satisfaction, technology-application, technology-anxiety, collaboration-frustration, collaboration-rewarding, control-satisfaction, freedom-rewarding, creativity-interest, meaning-making-rewarding. Within this connection corpus, each statement referring to a positive experience were grouped according to what made the website development project rewarding and interesting in

order to address RQ1. To isolate the factors and criteria that made the experience engaging (RQ2), I used both the initial raw text (the reflection papers) and the connection corpus searching for any statement that referred or alluded to the design criteria I had developed. Because RQ3 was concerned with students' personal development in relation to the project, I grouped all instances where students reported what they had gained, searching for recurring ideas and statements. Five main themes emerged: confidence, resilience, strategies, personal goals, and renewed passion.

Findings

This study was qualitative in nature and sought to understand the subjective experiences of the participants. Subjective interpretation was an integral part of the process (Auerbach & Silverstein, 2003). Students selected the prompts they perceived most suitable to address what was personally significant to them in connection to the course and the project. Their reflections followed their own interpretation of the handout guiding questions. As project designer, teacher, and researcher, I was inevitably personally involved and invested. I acknowledge that my own perspectives and interpretation influenced the findings reported below. My interpretation of their words and comments is "one of the several 'right ways' in which the data can be interpreted" (Auerbach & Silverstein, p. 32).

To provide an overall picture of the range of emotions mentioned by participants in the reflection essays, Table 2 shows the number of students who mentioned an emotion at least once.

Table 2

Emotions Reportedly Experienced During the Project

Emotions	Number of students
Contentment/Satisfaction	19
Enjoyment	16
Interest	11
Frustration	10
Anxiety	9
Worry	9
Gratitude	8
Pride	8
Amusement	5
Awe/Surprise	4

As long as they express the same emotion, instances were classified in the same category. For example, “nice to have free reign,” “challenging and at the same time rewarding,” “a gratifying experience” “happy with how the project tested knowledge” “feel satisfied with what we accomplish” were grouped under contentment/satisfaction. Comments such as “very daunted by the immensity of the project,” “at first, I was overwhelmed,” “worried about technology skills,” “a little nervous starting the website” were classified as worry. As shown in Table 2, ten types of emotion emerged from this preliminary analysis: seven positive (contentment/satisfaction, enjoyment, interest, gratitude, pride, amusement, awe/surprise) and three negative (frustration, anxiety, worry). Two students expressed relief that the project was over, which can be considered a positive emotion. However, I coded these instances as a negative emotion because in both cases they were associated with frustration as exemplified in this comment: “As a whole, completing the final project is an immense relief. At times I found it difficult to converse the ideas with my partner.”

Website development as a broadening experience

The analysis of the final reflection papers revealed that developing a website was intrinsically interesting and valuable to students. As they coped with technical challenges and worked with their partner, they experienced positive (enjoyment, contentment, interest, pride) and negative (frustration, worry) emotions.

Capturing interest. Twelve students were happy to do something “fresh and exciting.” Creating a website was unexpected, “especially for a French class!” (five students) and “a welcome change from the typical Powerpoint” (three students). Doing “things that seem applicable” and “real” provoked interest and made the outcome self-relevant: “Students tend to be intrinsically motivated when we can see how the particular assignment or material will benefit us in the long run.” Seven students noted that communicating for an authentic purpose as opposed to “simply answering questions on a test” was more effective for learning terminology associated with business and website architecture, unlike tests which “force students to collect information, cram it into their brains, and then forget it as soon as the test is over.”

Finding value in the task. Ten students deemed knowing how to design a website could be useful for future professional endeavors because “in the job market we, as millennials [*sic*], will be expected to do things such as making websites.” Only one found that the project “did not do much for my professional skills.” He explained that as “a “skilled” web designer, using the provided platform made “the whole thing pointless” because he could not add this website to his professional portfolio. By contrast, four students were happy “to have something concrete to show as a product of [their] work” that they could point to in job applications. Eleven students liked the creative aspect because “creativity is not something that [they] get to express very often in [their] French classes.” In their comments, creativity was tied to enjoyment and interest. Four of them mentioned the benefits of collaboration, which stimulated creativity making building the website really enjoyable.

Sharing responsibility. Data analysis revealed that working with one consistent partner was in and of itself a learning experience. One student mentioned that although she generally enjoys working alone, collaborating has advantages: “Our website turned out so good because I worked with someone who was genuinely invested in the success of our project.” The idea of mutual investment to accomplish the same goal led one student to conclude that, in the process, she “learned to work and rely on others better.” A difficult collaboration led another to feel “content with my own abilities” because she realized she is “very patient with others and do[es] not always look to outdo [her] partner.” One student had issues with her partner’s proficiency level: “I found it extremely frustrating to try to proofread her work and figure out what we should and should not include in our presentation and our website.” Having the bulk of the responsibility for content and accuracy resting on her shoulders instead of being shared forced her to take on an expert role, which she clearly resented. However, she admitted that in the process she “definitely learned a lot about what [she is] capable of doing technologically and linguistically.”

Experiencing achievement. Fourteen students reported a “huge sense of accomplishment” at having created “a website that looks like a real, professional website that a company could own and utilize.” Imagining the product, producing the website, and presenting to their classmates was rewarding (six students) and satisfying (six students). For four, how

professional their website looked was a source of pride, especially when they considered that they “did not know the first thing about designing a website.” Six students initially worried they did not have the proper skills to address the challenge, as exemplified in this comment: “When I heard that we had to make a website, I panicked and felt frustrated by the challenge in front of me. I thought, ‘I do not know how to do this!’” The platform and the templates helped demystify their pre-conceived notion that special coding skills were necessary, making website design easy and “much simpler than originally thought.”

Factors and criteria for an engaging experience

Data analysis revealed that all six design criteria outlined above in Table 1 reportedly contributed to creating conditions for a positive and stimulating learning experience. These criteria were linked to interest, freedom, and creativity as well the open-ended and real-world nature of the project.

Challenging but manageable. Unsurprisingly, the oral component (presenting the company and product with support of the website) was a source of fear (three) or anxiousness (four). Nonetheless, these seven students reported that, “being forced to stand and talk in front of the class” was a positive experience and indicated “being grateful to have faced the challenge.” Comments show gratitude was linked to self-discovery: “I can actually think on my feet in French!” and “I am much better at speaking French than I thought!” Eight students reported that collaborating was an inspiring and stimulating environment. One student explained having a partner “encouraged [them] to stretch beyond [their] existing knowledge” since “working with a partner meant that [they] had to try to match the areas they were knowledgeable about.” Developing the website with a peer created the urge to be productive, as shown in this other comment: “I felt responsible for trying to keep up with my partner to contribute meaningfully to our website.” Finally, four students found that the project “pushed me to my creative limits,” which was ultimately satisfying because they did something that did not come naturally to them.

Clear goals and authentic. Introducing a new product is about creating interest to convince customers they need it, inspiring four students to alter their strategic approach to language use. One student took more risks: “I pushed myself to utilize tenses and grammar that I

had avoided in the past.” As a result, he felt that in the process his ability to form complex sentences improved. Another student focused on producing more sophisticated language because he had to “consider and express many of the things a real business owner might have to.” He made more conscious effort “to find varied ways to say things, and could not rely only on only the most basic structures.” Elaborating a slogan for the ebanner motivated one student to change his approach to writing. He explained, “I spent a lot of time translating different versions of it in my head, until I realized that I had to think about the grammar and the meaning only in French, if it was to be meaningful in that language.” Spending a lot time suggests that he found himself in the flow, allowing him to notice a gap and act upon it to reach a satisfactory outcome. He concluded, “This was just one of many ways that the project improved my language skills without me really noticing as it happened.” Writing a slogan is certainly not a large task, nevertheless even such a small challenge can have an enduring effect on how students use their linguistic resources.

Personal feedback. Three students mentioned the supportive environment created by the collaborative setting: “It was always nice to have a partner to work with who could double check many of the assignments we turned in.” Their comments indicate that the availability of constant and regular feedback on both content and form as well as deciding on what to include on the website and in the final presentation helped them find solutions to issues “[they] would have had no idea how to figure out otherwise.” Another four found that the annotations and observations they received on the different project components contributed to their sense of progress related to their language use: “I received personalized feedback and ideas on how to improve my French speaking and writing abilities.” The nature of the feedback appeared to be especially valued because it gave a sense of personal and direct relationship with the instructor: “I really felt special and as though someone wanted to see me do well moving forward.”

Time to explore and chance to focus. Eight students found “the way the project was broken up into different parts, each building off of one another until [they] all had [their] final project” relieved initial stress related to “the immensity of the project.” The different due dates “made the project manageable and allowed for it to become a fun learning experience instead of becoming an overly stressful one.” Six students mentioned the time devoted in class to develop

ideas and the opportunity to work outside of class on each component without any other work due “allowed room for [their] minds to explore.” In three cases, students found themselves in a state of flow. Two mentioned that they “spent a lot of time” researching and exploring websites of companies that sold similar products “to determine the best layout and structure,” and one “ended up spending hours working on the website, changing photos and layouts and playing with the flow,” adding, “I had so much fun!” These comments suggest that time promotes the urge to explore from which follows enjoyment.

Subjective control. The sense of freedom associated with creating their own product and making their own choices in terms of content and design of the website activated engagement. Two students (partners) reported that “having free reign” encouraged them to “branch out” and immerse themselves in the task. Five students found it empowering “to be able to write up [their] own ideas,” “turning [their] ideas into an actual logo, website, and brand,” and “having the ability to personalize [their] work.” Freedom to choose gave them autonomy, a sense of control over the outcome and enabled them to express their own individuality and subjectivity. However, four students felt that collaborating reduced freedom in the decision-making process because they had to “sacrifice” their own ideas. They expressed frustration at the lack of complete control, indicating that their partners did not “care” for their ideas and that “often would prefer [their] information and ideas being placed on the website before mine.” One of them reported that he “gave up and just wanted the whole thing to be over.” He explained that his partner was “focused on the product too much and not enough on the reasoning of why the product should be used.” Because they were unable to reconcile their vision, he indicated feeling “severely hamstrung.” He concluded that “it may have been more beneficial to have a PowerPoint, enabling greater exploration into the ideas of the project.”

Personal growth and development

Nineteen students reported experiencing both positive and negative emotions during the project or even during the course as illustrated by this comment: “This course never ceased to bring me a variety of feelings, from laughter to frustration and pride.” Their narratives revealed a sense of transformation, a “before” and “after,” related to an inner sense of triumph in accomplishing a challenging task and overcoming obstacles. They built confidence, resilience,

and new strategies. Some also set new personal goals and others reported feeling galvanized by the experience.

Building confidence. Discovering her own creative side increased one student's self-confidence: "Now I know that I can be creative and I do not have to be worried or ashamed that what I think of does not measure up with everyone else." Another reflected that the "context-based learning" experience showed her she "might benefit from studying abroad" and concluded that "this project has given [her] more confidence for participating in immersion programs." Four students felt more confident in their "ability to navigate French websites and locate all the information [they are] looking for," and three felt ready "to take on similar project in the workplace." Five found that the oral presentation helped raise their confidence "in [their] ability to express [their] thoughts and opinions" and how to "present on the fly." This newfound confidence seemed to be related to the pride of having faced their own fears and taking measure of their own progress as shown in this comment: "I have pride in my own growth, because I do not speak the same level of French as when the semester began."

Growing strategies. Developing content for the website and the slogan for the ebanner helped one student realize the ineffectiveness of translating from English to French. Although his "French language teachers and professors have always stressed to [him] the importance of 'thinking in French'," he usually used English as a starting point. This challenge led him to reconsider how he approached the task of writing and revealed a new course of action: "Though determining the best way to phrase certain sentences in French was difficult at times, I managed to think in French in the end and that worked so much better than translating in my head!" Another student discovered that French was not just an object of learning, she could also use it for her subjective positionality: "It was the first time I focused on needing to be polite, charming, or even diplomatic." One student realized that language is not neutral, as communicating involves taking into consideration how it might affect the recipient and the interaction: "This was my first experience trying to think about how the other person would feel about how I was saying something and not just what I was saying." As she reflected on her oral presentation performance, another student figured out how to deal with her anxiety: "If I can stay relaxed when speaking I have the ability to speak pretty well."

Building resilience. Comments show that five students were able to mitigate the narrowing effect of negative emotions because of how they succeeded in dealing with a difficult situation. Working with a partner helped one student overcome a tendency to not participate in class: “My biggest fear was that I would say something wrong or not know a word while trying to get my point across. Practicing with my partner help me get over my fear of saying it wrong.” Two students confided that they intended to give up their French major at the end of the semester, but decided to persevere in their study because the website project was “challenging, intriguing, and one that inspired [them] to continue applying the knowledge [they] acquired to [their] future professional endeavors.” Accomplishing this tangible task seemed to validate time and effort invested in learning French and renew commitment to study: “Now I know that if I work hard this summer I will be far more successful.”

Setting personal goals. Two students set personal agendas for the next academic year. They both determined that they planned to take more chances in their classes to feel “really more comfortable and confident when speaking and writing.” Another student resolved to “to work on engaging more with others.” She explained that she usually never “gave input” in any of her French classes, but this project challenged her to participate. One student planned to use her new web design skills over the summer to make “a personal website for an online professional portfolio.”

Strengthening passion. Feeling proud, satisfied, and gratified seemed to galvanize some students’ interest and drive. Four students reported an enhanced connection to the language as illustrated by this comment: “I am more in love with the French language than ever – and now I just have to keep practice speaking it.” Another two felt validated in choosing marketing as their major: “Learning these abilities in a French context clarified my interest” and “Wow, I learned that I really enjoy creating business plans and marketing ideas.”

Discussion

The findings of this study suggest that the project was a positive and transformative experience for all but two students. The data support Dewaele and MacIntyre’s (2016) statement that enjoyment arises “when people not only meet their needs, but exceed them to accomplish

something new or even unexpected” (p. 217). Students perceived that building a website was relevant to their needs as Millennials and thus valued the experience. Envisioning how these website design skills might benefit them activated their interest, which produced the urge to explore and to invest time and effort in the task. Students pushed themselves out of their comfort zone, finding solutions and modifying their approaches or actions in order to succeed. Satisfaction and pride with their own accomplishment emerged from overcoming challenges and inhibitions, which led to the discovery of unsuspected strengths, skills, and abilities. Whereas pride was mostly connected to the performance in the oral presentation of the website, enjoyment appeared to be related to a sense of achievement embodied by their completed website. Building the website, creating the ebanner, and presenting their product and company had a broadening effect on students’ perception of their self-potential. Forced to step beyond their comfort level, they built confidence, resilience, and language strategies and developed commitment and plans for future learning, which they interpreted as progress in their personal development. Although the data do not prove that developing content and building the website improved linguistic proficiency, they indicate that this project engendered positive emotions and that students perceived growth in attributes conducive to the foreign language learning process such as creativity, confidence, presentational skills, relationship building, the ability to reflect on one own’s learning (Arnold, 2011) as well as self-perception of language improvement.

A sense of transformation or growth was absent in the reflections of the two students who did not report a sense of achievement in connection to the project. Although they indicated that they liked some aspects, overall words expressing positive emotions were scarce, suggesting that the frustration tied to either the use of the platform for website construction (Wix template) or the collaboration had a debilitating effect. In one case, there was a lack of balance between the individual skills and the challenge. In the other, the inability to get his point across led the student to conclude that a Powerpoint presentation would have been preferable because he believed it would have allowed more control over the outcome. No further insights emerged from the data, which might be due to the self-reflection being a graded component. However, these two cases illustrate the challenge of designing a pedagogical intervention that meets the needs and is adapted to the skills and competences of all students. In contrast, the other students’ comments show instances when positive emotions helped mitigate the effects of negative-narrowing emotions such as frustration, fear, and anxiety, which affected self-image and led to a

sense of transformation. Thus, the findings confirm Oxford and Cuéllar's (2014) observation that self-discovery is contingent on experiencing positive emotions in connection with achievement, meaning, commitment, and relationship.

Students' reflections show that the authentic purpose of building a website to present a product (and a company), mutual responsibility, the open-ended nature of the project, sufficient time, and a sense of control encouraged explorations and investment and thus sustained attention. The project seemed to be adequately balanced, with students finding themselves neither overwhelmed nor underchallenged (with the exception of one who considered that using the platform was beneath his technical skills).

Limitations of the Study

Despite the numerous references to enjoyment and interest, only three students mentioned experiencing an occasional time shift (spending hours researching and exploring websites or working on the site). Although these instances suggest they may have felt a sense of flow, the students' narratives did not yield evidence of the heightened state of engagement envisioned in Csikszentmihalyi's theory (1997, 2003), an outcome that might be related to the instrument used for data collection and the construct of flow. The questions on the reflection handout were purposefully generic to allow students to report what they found significant and meaningful in the experience. Although it cannot be ascertained that questions specifically addressing flow may have yielded satisfactory data, interviews would have allowed to find more details on "the underlying processes at play associated with the state of flow" (Czimmerman & Piniel, 2016, p. 208). Nevertheless, the reported instances suggest that using conditions of flow as guiding principles to incorporate technology positively affected the learning experience of most students. Even if most did not describe how they may have found themselves in a flow state, comments indicate that enjoyment occurred because creativity, control (or freedom to choose) and enabling students to assist each other made the project more personal. Perhaps then on this timescale (6 weeks), expecting students to find themselves immersed in a state of intense focus and involvement is unrealistic. Guz and Tetiurka (2016) note that, "engagement invariably coincides with the emergence of positive emotions" (p. 140). Therefore, in this study, positive emotions might serve as indirect indices of engagement. In some cases, an unbalanced collaboration appears to have affected the experience by removing a sense of control and thwarting creativity.

Partner selection was integrated within the project, but the time devoted might have been too limited. Requesting further out of class contact (via social media for example) to further discuss not only interests but also working habits might help alleviate some issues.

Conclusions

Although the findings in this study are limited to the specific course in which the project was implemented, they illustrate that conceiving a technology-mediated project as a flow-inducing process creates conditions for a personally successful learning experience. The website represented an opportunity to share ideas but also a “showcase” product with real world applications, and, in that sense, it became more than a mere academic exercise. Whereas some studies have pointed out that the use of technology can have disruptive effects due to technological difficulties (Karabulut et al., 2012) or a focus on learning the technology itself (Yang & Chen, 2007), this study suggests that experiencing positive emotions in connection to the use of technology might be key to a successful integration in the curriculum. Perhaps then, it might be worth considering a shift regarding the outcomes of the use of technology for foreign language learning. Future studies could adopt a strength-based approach to develop technology-enhanced pedagogical interventions and explore how they support students’ personal development and increase well-being. The power of technology might not be entirely related to what technology can do to increase students’ linguistic proficiency but rather how technology can support the development of a mindset crucial to their linguistic development (Dewaele, Chen, Padilla, & Lake, 2019).

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