FACEBOOK AS A VIRTUAL LEARNING SPACE TO CONNECT MULTIPLE LANGUAGE CLASSROOMS

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ABSTRACT

This study examined the potential of the Facebook group utility in assisting 54 university Spanish students and pre-service Spanish teachers as they explored their roles as teachers and learners. Participants represented two Spanish language classes and two Spanish teaching methods classes at the university level. These classes were combined into a Facebook group and student interactions were recorded. A qualitative case study was used to frame the 12 week research project. Data were collected from the Facebook group wall, weekly student reports, and a final optional survey (n = 42). Results were organized with respect to how participants used the Facebook group, how the virtual and physical learning spaces were connected, benefits of participation as perceived by the students, and genuineness of student contributions. Recommendations are offered for those considering the implementation of similar virtual learning spaces as extensions of face-to-face foreign language or teacher training classrooms.

INTRODUCTION

A growing body of research involves the exploration of social networking communities (SNCs) and their potential to enhance the traditional paradigm of language teaching and learning. With interests ranging from the use of social network games for language learning purposes (Reinhardt & Zander, 2011) to foreign language teacher education and experiential learning (Arnold & Paulus, 2010), SNCs are currently being explored as virtual learning spaces by a wide range of interested scholars. Other researchers have sought to enhance language learning by extending the physical classroom space into a variety of virtual spaces including blogs, wikis, online games, Skype, podcasts, and Twitter (Sykes, Oskoz, & Thorne, 2008; Godwin-Jones, 2005; Antenos-Conforti, 2012; Stevenson & Liu, 2010). This study aims to build on this growing body of research by illustrating how a particular SNC, specifically, a Facebook group, was used by language students and pre-service language teachers.

Designed and implemented as a case study (Merriam, 1998), this project explored the participation of students from four distinct foreign language classrooms as they interacted with each other for 12 weeks. In addition to the data generated by the interactions in the Facebook group, participants provided weekly reflections on their experiences in the space and participated in a final survey. The study began with a set of broad questions. This allowed for us to work backwards as patterns of evidence emerged from the collected data (Strauss & Corbin, 1998). Although the use of the Facebook group function has previously been analyzed (Bickel, Kang Shin, Taylor, Faust, and Penniston, 2013; Blattner & Fiori, 2011), this study was able to bring together two distinct populations of students in order to observe their online interactions. These populations included both future Spanish language teachers as well as Spanish language learners. Although this study was not particularly an analysis of teacher education in the area of computer assisted language learning (CALL), some of the data led to interesting findings with regard to how these two populations of students interacted with one another. In our findings we will discuss how students utilized the virtual space, how the physical learning space was connected to the virtual learning space, some of the student-perceived benefits of use, and the genuineness of participation.

CONCEPTUAL FRAMEWORK

The question of whether or not to use technology to enhance learning has been replaced by explorations of how and when to use it in the classroom. Much of the research in CALL has focused on answering these questions as they pertain to various models of learning. Arnold and Paulus (2010) discussed a need for additional research regarding the role of social networking in blended learning environments. Blended learning differs greatly from distance learning as there is some degree of face-to-face interaction in the blended environment. Such was the case with our study as the Facebook group was set up as an extension of the physical classroom space. By setting up a common virtual space we hoped to create a sort of virtual student commons where ideas, theories, strategies, and concepts could be discussed by students who were at various levels of language proficiency. Although a disparity existed with regard to language proficiency, the participants appeared to be on the same level when it came to their knowledge of Facebook.

As current and future students continue to exhibit high levels of proficiency in digital literacies, research in language pedagogy must continue to ask and answer questions that will accommodate the learning preferences of these digital natives (McBride, 2009; Prensky, 2001). With the increased popularity and convenience of mobile technologies students appear more than ever to fit Naomi Baron's (2008) description of being "always on." The traditional model of the classroom, particularly as it exists in the higher education setting, does not often reflect this model of constant connectivity. Students meet for a few hours each week to learn and discuss but then they quickly disperse to find their next appointment. Our study sought to evaluate the Facebook group utility as a learning space for the constantly connected student. We hoped to explore the potential of this particular technology and its ability to break down the physical barriers of the traditional classroom.

Although some analyses have sought to assess the virtual space as a learning environment with connections to the physical classroom (Arnold & Ducate, 2006; Arnold & Paulus, 2010; Irwin, Ball, Desbrow, & Leveritt, 2012), others have observed the virtual space as stand-alone learning environments (Bickel et al., 2013; Mitchell, 2012). This study would be included with the former investigations because the virtual space was set up as a direct extension of four

face-to-face classrooms. It is important to note that this particular study did not primarily focus on the use of the target language. In fact, target language use was not an explicit requirement for participation in the group. The lack of such a requirement may be one reason why there were only 10 out of hundreds of posts that employed any substantial use of Spanish. Instead, our study focused on the Facebook group as a 24-hour classroom where classmates could, at any time, begin new conversations regarding the language learning process or continue existing conversations that had originated in the physical classroom. Furthermore, we were concerned that a target language requirement might result in an imbalance of participation between the various levels of language proficiency represented in the group. In order to effectively assess the potential of the Facebook group to accomplish these goals, we decided to begin the study with some general questions to help guide the research:

1. How do participants use the Facebook group?

2. How does interaction in the physical learning space affect interaction in the virtual learning space?

3. What aspects of the virtual learning space do students perceive to be beneficial?

As the study proceeded, the data began to demonstrate interesting patterns of usage. Based on these later developments, an additional research question was added to help expand the analysis and to assist in the articulation of conclusions:

4. What is the relationship between participation requirements and genuineness of participant contributions?

METHODOLOGY

Course Design and Implementation

As we wondered about the best way to integrate the Facebook group into the four classrooms, it was decided to add the project into the syllabus as a graded component. A previous pilot study that we had conducted one semester before had led us to believe that consistent and active participation in the Facebook group would be best achieved through extrinsic motivation. Others have indicated low levels of participation when relying primarily on intrinsic motivation (Irwin et al., 2012). Student participants were told that 5% of their

final grade would be dependent on their participation in the Facebook group. Students who met the minimum participation requirements in the Facebook group and who provided the weekly report via email were given full credit for the week. Participation requirements in the Facebook group were originally set at four group posts per week. Two posts had to be initiatory in nature (beginning a dialogue) and two posts had to be contributory in nature (responding to an existing post). A few weeks into the study we began to receive feedback from a number of students who expressed that, because of the high number of required posts per week, their contributions sometimes felt forced. In response to this concern, it was decided to lower the minimum participation requirements to one initiating post and one contributing post.

Thorough orientation to new learning spaces is important in order to avoid misunderstanding and frustration (Hubbard, 2013; Wang & Vásquez, 2012). To help orient participants for this study, a variety of handouts and in-class tutorials were offered. The handouts served to illustrate some possible uses for the virtual space and to provide further details on what constituted as initiating and contributing posts. Handouts included screenshots of the Facebook group and samples of student use. Even though some ideas for how to use the space were provided to the students, creativity in use was encouraged throughout the entire process. Tutorials included walkthroughs of the Facebook group and explanations of how to join the group. Privacy and proper behavior within the group were also addressed during these orientation meetings.

In launching the Facebook group, members from each class section were invited to join through a private link. In setting up the Facebook group for the study, we were concerned with the integration of the project into the language curriculum. We wanted to provide students enough freedom to be creative in the space while also giving them sufficient direction to allow for high levels of pedagogical exchange. Kreijns, Kirschner, and Jochems (2003) warned that "just placing students in groups does not guarantee collaboration" and that "the incentive to collaborate has to be structured within the groups" (p. 338). Although interesting data could have been generated through the use of a more structured project implementation, the goal of this study was to see how students would use the space that was provided them, regardless of instructor presence in the group. Adequate incentive for student participation was achieved by including student participation in the online space as a graded component of the course. Finally, the decision to use Facebook as the virtual learning space was based on previous findings that indicated student preference for using technology that was already familiar to them (Bickel et al., 2013; Oradini & Saunders, 2008).

Research Design and Data Collection

Using a case study research design (Merriam, 1998) we sought to record participant interactions in the common virtual space and then to code and analyze the data as informed by Strauss and Corbin (1998). Data were generated from three main sources: the Facebook group wall, weekly reports elicited from the participants, and a final survey. Once the group was established and the member participants had joined, the data collection began. Exchanges from the group wall were copied into a single Word document at the conclusion of each week. Students also provided their weekly reports and reflections by email. In addition to serving the practical function of reporting participation in the virtual space, these measures allowed students to voice their thoughts, concerns, and opinions about the project in an open-ended comments section. The final survey helped to gather additional information that allowed us to better articulate the results of the findings.

Participants

The participants in this study were college students enrolled at a large university in the Northwest United States. The four class sections that comprised the Facebook group included one first semester Spanish section (SPAN 101), one section of fourth semester Spanish (SPAN 206), and two sections of Spanish teaching methods (SPAN 377 and SPAN 378). A total of 32 students were from the Spanish language classes; 17 were from SPAN 101 and 15 were from SPAN 206. A total of 22 students were from the Spanish teaching methods classes; 8 from SPAN 377 and 14 from SPAN 378. A total of 54 students joined the Facebook group.

The Spanish language courses were designed around helping students communicate with the language and exposing them to a variety of related cultural aspects. The Spanish teaching methods courses each emphasized different areas of teaching methods. SPAN 378 consisted of students who had previously taken SPAN 377. Areas of emphasis in these two courses included the history of language teaching methods, the use of instructional media and technology, and assessment of language learner performance. Language proficiency levels of all participants ranged from true beginners to native speakers of the language. In recruiting instructors who were willing to involve their classes in this study, these four classes were the most convenient samples. Because of the representation of language students and pre-service Spanish teachers, we were able to gather data

on how both population samples used the virtual space. These findings enriched our initial purpose of simply gathering data on how language students might use the digital space.

These four courses were taught by three different instructors. The instructor of the two Spanish language courses was also the principal investigator of this study. The other two instructors taught the Spanish teaching methods courses. The instructors were contacted prior to the beginning of the semester to ask if they were willing to participate and, perhaps more importantly, if they were willing to integrate the project into their curriculum as a graded element of their course.

DATA ANALYSIS

Data generated from all three data collection resources were analyzed using an adapted approach to the open and axial coding procedures as outlined by Strauss and Corbin (1998). The amount of data generated during the study was larger than anticipated and the task of coding the data was quite a challenge. For example, the Facebook wall data when copied to a Word document was 231 pages in length. A simple calculation of number of students times number of posts required allows us to estimate that at least 1500 posts were made to the Facebook group. The initial round of open coding resulted in 61 different categories each representing a different theme or topic.

Those categories were then recoded and reanalyzed through axial coding (Strauss & Corbin, 1998). Some categories were excluded from this process because they contained only a very limited number of actual samples. Others were combined and collapsed in efforts to refine the analysis. After combing and collapsing the original 61 categories, 21 categories emerged. As a final layer of analysis, the data were then grouped into four final representative categories. These categories facilitated a more organized and effective discussion of the research questions. The four final categories included uses, connections, benefits, and genuineness.

The uses category included all of the many uses that were either observed by the researchers or discussed by the participants themselves. The connections category included anything that related to how one learning space was affected or influenced by the other. The benefits category consisted of only student-perceived benefits as expressed on the Facebook wall, through the weekly

reports, or as articulated in the final survey. It is important to note that the majority of the discussion of benefits of the virtual learning space is tied to what the students perceived as being beneficial and does not necessarily reflect the researchers' interpretations or perceptions of what was beneficial. The bulk of the data included in the genuineness category was found in the open-ended comments section of the weekly reports where students were encouraged to voice their concerns, opinions, and ideas regarding their participation in the study. No attempts were made to judge or differentiate the degree of genuineness of the actual participant exchanges.
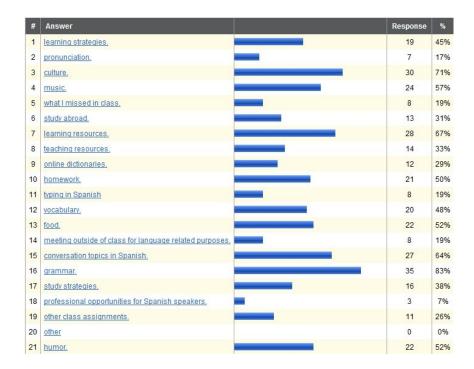
FINDINGS

Uses

In order to strengthen our observations of how the virtual learning space was used, we asked participants to self-report the various ways they used the space. Figure 1 illustrates usage as indicated by the students themselves.

Figure 1. Participant Self-Reported Uses of the Virtual Learning Space

#	Answer		Response	%
1	learning strategies.		19	45%
2	pronunciation.		7	17%
3	culture.		30	71%
4	music.		24	57%
5	what I missed in class.		8	19%
6	study abroad.		13	31%
7	learning resources.		28	67%
8	teaching resources.		14	33%
9	online dictionaries.		12	29%
10	homework.		21	50%
11	typing in Spanish		8	19%
12	vocabulary.		20	48%
13	food.		22	52%
14	meeting outside of class for language related purposes.		8	19%
15	conversation topics in Spanish.		27	64%
16	grammar.		35	83%
17	study strategies.		16	38%
18	professional opportunities for Spanish speakers.		3	7%
19	other class assignments.		11	26%
20	other		0	0%
21	humor.		22	52%

The top four uses as indicated by students included grammar, culture, learning resources, and conversation topics in Spanish. The options listed in Figure 1 were generated from our initial observations of how the space was being used by the students. It could be that there were also other uses that we did not observe but that the students participated in. However, none of the respondents selected "other" and so we felt that the selection of uses was sufficiently representative. Actual samples from the virtual space are now shared to support the self-reported data from the survey. Representative samples will be shared from each of the four most popular uses of the virtual space.

One popular use that emerged from the survey was that students used the virtual space to discuss conversation topics. As part of the face-to-face classroom, current Spanish students had to complete a number of conversation hours per week in the target language. As an example of how students discussed Spanish conversation topics, we offer the following sample:

> StudentA101: Does anyone have a good way to keep the 2 conversation hours interesting?

> StudentB101: I got a bunch of Spanish children's books at the library and we read them to each other and discussed them in Spanish. It was way fun and you learn a lot!

Additionally, using the virtual space to discuss learning resources was quite popular among participants from all four classes. These additional resources included collaboration through Quizlet flashcards, links to target language magazines, books, online articles, online Spanish dictionaries, and other resource-rich websites. One student's inquiry received a good amount of dialogue with respect to this finding:

> StudentA378: What are some good activities your teachers have used in class to help teach grammar/vocab?

> StudentA101: It may sound boring, but flashcards are always useful. I really enjoy role-playing conversations too.

> StudentA377: I observed a class where the teacher taught characteristics or adjectives and put up photos of famous people. The students then got to choose which adjectives they wanted to use to describe them. It got the students excited because it had to do with something they knew about.

StudentB377: Spanish bananagrams is super fun, but a little challenging unless you've got some serious vocab under your belt. Scategories and Catchphrase are super fun in Spanish if you're into the 200 level grammar and vocab, and they're just fun even in English.

StudentB378: A good website for making flashcards is http://quizlet.com/. It's helpful for students to learn as a personal resource, and you can save different flashcard sets and gives you different options to quiz yourself. (And it's free!)

Students also used the virtual space to discuss many aspects of culture. This was observed in the following exchange:

StudentA101: I always get mixed up when to use tu versus usted. Do you always use usted when you are talking to people older/wiser than you? Or once you know someone well enough do you use tu? And if you don't know someone, do you automatically use usted? I just get confused with this. . .

StudentA378: Tú is familiar, usted is formal/polite. With friends, and family (no matter how old or wise) you use Tú. In professional situations or with people you are not well acquainted, you use usted. When we pray, we use tú because we are in a close relationship with God. Age has a lot less to do with it when you are an adult.

Many other exchanges involved discussion of cultural events on and off campus:

StudentA206: Did anyone go to the Noche de Canto y Poesía?? Thoughts?!

StudentB206: I thought it was really fun to hear how beautiful spanish poetry is!

StudentC206: Yes! I loved the old man with the guitar. So cool to get a taste of Spanish culture!

With respect to grammar, we observed many exchanges similar to the following example:

StudentA101: Hey, does anyone know a quick way of explaining, or like some kind of trick they ever used to remember when to use por/para? I remember a friend that had some kind of acronym and was wondering if anyone else knew it…

StudentB378: SO one that I have found to be ok is PERFECT for por and the rest for para. PERFECT stands for Purpose ,like in order to, Effect, of one thing on another, Recipient, of a gift or something similar, Future, dates deadlines and events, Employment, you work for..., Comparison, between two things, and Toward a specific place. and the rest is para I would say look at the rules and understand them then this acronym just becomes a helpful reminder.

StudentA101: that's nice! thanks!!

StudentC378: I think you got it reversed! All of those are for para, and the rest is for por!

This sample exemplifies other similar discussions of grammar in the virtual space. This particular exchange also illustrates how the Spanish language students often received answers from the pre-service Spanish students. Another discussion of grammar even included a brief response in the target language:

StudentA101: 101 question here: the gender of a word can change based on who you're talking to right? So if I asked my friend if she was ready I would ask 'lista' instead of 'listo'?

Student206: Creo que sí

StudentA378: That's correct. Most adjectives that end in "o" change to "a" at the end for the feminine form.

Not all inquiries received this level of discussion. Indeed, some students' posts received no responses. One participant from the Spanish teaching methods class wrote, "I was a little disappointed when no one responded to my questions about teaching certain grammar principles." One student's inquiry went completely unanswered:

StudentA378: Does anyone have any good ways to remember the difference between por and para? I understand the basics, but sometimes I question which one to use.

As an earlier post was very similar to this inquiry, the lack of response here might be explained by students perceiving it as a simple repeat of an earlier discussion.

Connections

Some exchanges in the Facebook group facilitated additional face-to-face connections beyond the established learning spaces. There were multiple exchanges where students used the virtual space to coordinate schedules to later meet up in a face-to-face setting:

StudentA101: Spanish movie night at my house tonight! We will be meeting between 6:30 and 6:45. I live [. . .] Anyone is welcome! We will be watching a disney movie

StudentB101: I'm so there!

Getting together to watch movies outside of class became quite a popular event. One post indicated that Spanish food was also integrated into these events:

StudentA101: Hey 101ers! We are watching Tangled in Spanish TOMORROW(Sunday) at 5pm at [. . .] :

StudentB101: Bring central/South American food!

Students also used the space to coordinate meeting times to complete conversation hours which were a requirement for the students enrolled in the Spanish language classes:

StudentA206: For those in 206 would anyone want to talk after class one or two times each week to help with our two hours of convo? if so what days would work?

StudentB206: Yes. Definitely. But only Tuesdays and Thursdays right after class work for me.

StudentC206: Yeah girl! Count me in. We can talk in class for sure. Glad you finally have a Facebook! Gracias chica!

StudentD206: I'd be down you can talk to me in class about time or you can set one here on fb, if you don't know who I am just look for the only guy in class besides [the instructor], lol.

Another exchange in the virtual space illustrates how a student references a pronunciation strategy discussed in the physical classroom to answer a question posted in the virtual space:

StudentA378: So what is the best way to teach someone to roll their rr's, Ive kinda grown up with it and just known how so any good advice?

StudentA101: [The instructor] gave an example in class on how to learn. When you say 'butter' (if you don't enunciate the t's) you are half way there to rolling your r's. So if you can just try to elongate that soft t you can roll your r's. Hope that helps.

Benefits

With regard to quick feedback about language-related topics, there were mixed results. One 206 student explained, "It's actually kind of nice to have somewhere to ask all of those Spanish grammar questions that I've had for a while." Another student stated that the "project has been useful in asking emergency questions to classmates about how to do assignments." However, a third student commented the following:

I find if I have a question about Spanish, I ask one of my friends via text or my study partner for conversation hours. I don't know if it is because the group is a new thing or I get a quicker response from friends, but asking the FB group isn't my first thought at this point when I have a question.

The follow-up survey provided additional evidence regarding benefits of interaction in the online space. A 6-point Likert scale was used for some survey questions and others were open-ended in nature. A number of benefits were apparent in participant responses to Question 16 of the survey, "What did you like most about your experience in the Facebook group this semester?" One specific benefit was being able to ask questions about the language at their own

convenience. One respondent wrote, "I could ask questions that I wasn't necessarily going to ask in class." Similarly, another stated, "I was able to receive quick answers to questions I had with the language outside of class."

Several comments mentioned that they enjoyed being in a group with a mix of Spanish language learners. One student wrote, "It was easy to ask questions about anything. There were students who were a lot more advanced than I who were willing to answer and explain my questions." Another student responded, "It provided a means for experienced spanish speakers and those with little experience to support each other in learning and mastering the language."

Other responses to this same question indicated that some students experienced benefits in professional development. One student simply wrote, "I liked that I got to help people learn." Another student stated, "It was nice to see students from the younger classes sharing their difficulties about learning the language. This helped me feel better prepared to know what I need to teach well." One student wrote, "It was good to see what things students struggle with as they learn Spanish so that I can keep those difficulties in mind better when I am teaching spanish myself." In support of having a variety of perspectives from language learners at different proficiency levels, one student explained, "I learned that studying a language is best when you can get input regarding whatever it is you're studying from a lot of different sources at multiple proficiency levels."

Another survey question shed additional light with regard to benefits of participation. Question 18 asked, "In what ways did you benefit from your participation in the Facebook group this semester?" Several students mentioned culture as a benefit of participation. One student wrote in general terms, "I was able to learn more about the Spanish culture outside of the classroom." Another student stated, "I did like learning about little cultural things that other students shared."

Although the large majority of feedback to these survey questions was positive and favorable, there were also responses that indicated negative feelings. For example, 9% of the respondents indicated either somewhat disagree, disagree, or strongly disagree to Question 6, "The Facebook group was a benefit to me this semester" (M = 4.52, SD = 1.11). In response to Question 18 addressing benefits of participation, one student wrote, "None, really." This same student stated that what they liked least about the project was "being required to participate in it."

More concerns emerged in answers to survey Question 17, "What did you like least about your experience in the Facebook group this semester?" With regard to the large amount of student exchange early on in the study, one student commented, "I felt overwhelmed at times reading the posts in the group." A number of students mentioned that being required to post a minimum number of contributions caused participation to feel contrived. As a reflection of these sentiments, one student wrote, "At first I did not like that we had to comment a certain amount of times each week because it felt fake. I felt like I needed to make things up to ask or comment."

Genuineness

As discussed in the previous section, concerns were raised with regard to the genuineness of student contributions in the online space. A number of students mentioned in their weekly reports that their posts felt forced because the minimum participation requirement was too demanding. One student's comments were particularly representative of this sentiment, "I think the project is going well. My only concern is that sometimes I don't have a question or something to initiate and I don't want to just say something to get the credit." Another student described the experience in this manner:

> It feels "fake" (best way to describe it I guess) to make comments or ask questions when someone has already asked the questions I have or have already answered someone else's question better than I ever could. I love reading all the posts and things, but feel like I really don't have anything to contribute as such a beginner. I feel like I am making things up just so I can mark the X's above.

Student commentary also revealed that more proficient students, typically those enrolled in the Spanish teaching methods courses, sometimes found it difficult to post initiating tasks but were much more comfortable with contributing tasks as they found themselves in the more natural role of answering questions. One such student wrote, "It still seems like a lot of people in the 378 class are still just posting things to get it done (myself included) and the lower level Spanish students are actually including initiating tasks that are of some real value to them and others." This was reinforced as students who lacked higher levels of proficiency in the language indicated that asking questions was easier for them as they felt like they weren't confident enough to answer other students' inquiries. The following sentiment was representative: "Because I know so little

Spanish, I have found that it is a lot easier to ask questions, rather than answer them."

DISCUSSION

How Students Used the Virtual Space

A wide variety of uses were observed in the virtual space. Although grammar, culture, and the sharing of resources were among the most popular uses, students also used the space to share funny videos related to Spanish, to discuss class textbooks, and to seek clarification regarding homework and other assignments. As seen in the findings section of this paper, much of the Facebook group conversations were short exchanges between a small subset of the total group membership. Longer exchanges might have been achieved by using detailed prompts provided to the students at different times throughout the semester.

A number of variables played a role in how the virtual space was used by the students. First, student use was clearly affected by the four courses involved in the single Facebook group. As mentioned earlier, many students discussed the benefits of interacting with students at different proficiency levels in the target language. Another influential variable was the presence, or lack thereof, of instructors in the online space. In this study, instructors were not present in the Facebook group. The decision was also made to omit the use of activity prompts or conversation topics. This was all by design as one of the goals of the study was to discover how students would use the virtual space provided them if given maximum control and freedom to use it according to their own pedagogical needs.

Another variable that dictated use was the minimum participation requirement of posting initiating and contributing tasks on a weekly basis. Without this requirement the virtual space may have experienced quite a different pattern of use. Irwin et al. (2012) recorded that only 38.1% of participants left comments on course Facebook pages. They note that although participation in the virtual space was strongly encouraged by instructors, there was no grade incentive attached to participation. The percentage of students who left comments in the virtual space in our study was 100%. We decided to remove the participation requirements for the last two weeks to see how student interaction in the virtual space would fare. There was a noticeable decrease in the amount of

participation in the virtual space during those weeks. Finally, although students were encouraged to use the Facebook group after the conclusion of the study, participation in the virtual space has since been non-existent.

Also, there was very minimal use of the target language in the virtual space. Although some target language use was anticipated, even despite a formal requirement, the resulting infrequent use of Spanish in the Facebook group was surprising. Much more target language use could be encouraged through channels of intrinsic and extrinsic motivation, but this would very likely affect the other student use patterns observed in this study.

Additional uses were observed because of the mixing of language students and pre-service language teachers. One exchange that occurred in the Facebook group began as a question posted by a pre-service participant to the Spanish language students:

> Student A378: I'm curious, students from the 100 level and 200 level courses, what made you want to learn Spanish?

This question encouraged a comparatively high number of responses including these:

> StudentA206: My mom is from Mexico but was learning english when I was little so I never learned spanish. But now I want to 'cause its useful and I would like to be able to talk to my family on my mom's side

> StudentB206: MY husband speaks Spanish and I want to be able to understand him when he talks with others. Also, I have seen him be able to touch a number of people's lives because he can understand and speak to them. I want to be able to do that too.

> Student101: I lived in Ecuador for 4 months and I did not know spanish before I moved there. I pick up on a bit of it while I was there but I want to lean proper grammer so I decided to take some classes. Aslo my brothers and my dad speak spanish so I wanted to be part of the club :)

> StudentC206: I just love the sound of it and being fluent in two languages would be so useful and it's just interesting to learn a whole new way of speaking

StudentD206: I took it in high school just to get into college. Then I realized I wanted to go on a study abroad so I kept taking classes in college.

In this exchange, the pre-service Spanish teachers were allowed an authentic look at student motivation for wanting to learn a second language.

Maintaining Connected Learning Spaces

As we reflected on the data, we started to notice that usage patterns appeared to be strongly tied to assignments, activities, and areas of emphasis as found in the physical space of the classroom. As grammar, conversation, culture, and other topics were emphasized in the physical classroom space, uses with respect to those concepts appeared to flourish in the virtual learning space. Several student comments in the survey supported this finding. In answering how the two spaces were connected, one student wrote, "Most often topics discussed came from class discussions and lined up with what we were learning at the same time with the instructor." However, other comments mentioned that the virtual space was either minimally integrated, "It was mentioned several times, but other than that, not much," or not integrated at all, "It was not used in our classroom at all."

A stronger connection between the two learning spaces might have been achieved through more active instructor promotion of the online space (Panckhurst & Marsh, 2011). However, this was difficult to carry out as pedagogical philosophies and teaching styles between the three participating instructors were varied. McBride (2009) discussed the practical challenges with implementing technology when foreign language curricula are designed and implemented by more than one instructor. We might have accounted for this disconnect between learning spaces by spending additional time with the participating instructors beforehand in order to emphasize a protocol for connecting the two learning spaces.

Student Benefits

We observed strong patterns in the data that indicated a variety of benefits. These benefits add to others identified in the research including sociopragmatic awareness, identity formation, improved 21st century skills, a relaxed learning environment, and increased collaboration (Blattner & Fiori, 2011; Greenhow & Robelia, 2009; Wang & Vásquez, 2012). Quick and easy access was mentioned

in a variety of ways by the participants. As support for this finding, the survey reports that 69% of respondents either agreed or strongly agreed that their participation in the Facebook group allowed them to continue to learn about language even when they were not in class (M = 4.48, SD = 1.08). In answer to the survey question regarding what students enjoyed the most about the experience we find additional support for this claim: "I was able to receive quick answers to questions I had with the language outside of class," "I liked having other students as an easily accessible resource," and "Being able to ask a question whenever it popped into my head."

Additionally, multiple comments focused on the benefit of interacting with students from different language proficiency levels. 67% of survey respondents either agreed or strongly agreed that it was helpful to interact with students from different Spanish classes (M = 4.62, SD = 1.15). Another benefit was expressed by the pre-service participants as they explained how they enjoyed being able to observe real language questions and help students find answers to their inquiries. One pre-service student expressed, "It was nice to see students from the younger classes sharing their difficulties about learning the language. This helped me feel better prepared to know what I need to teach well."

Again, it is important to note that these benefits are from the students' perspectives. No attempt was made to elicit the instructors' opinions about how their students benefitted from participation in the Facebook group. Some concerns also become evident as students described feeling overwhelmed at times with the high volume of interactions taking place in the Facebook group. The majority of these concerns were tied to participation feeling forced or contrived because of the minimum participation requirement.

Fostering Genuine Participation

Arnold and Paulus (2010) mentioned similar findings with respect to online contributions lacking genuineness. They noted that talking with the students about task authenticity can help to encourage more meaningful contributions. A possible solution for this particular challenge might be to require the majority of the answers to come from the more proficient students while the less proficient students would be required to generate questions about the language. This might also create an environment that allows for more professional development opportunities for the pre-service Spanish teacher participants.

Finally, most students mentioned an improvement in the genuineness of their contributions after the minimum participation requirements had been changed from four posts per week to two. After the change, one student remarked, "Just doing one each was so much better. I felt that it was easier to contribute and think of a sincere question." A student from a different class echoed these sentiments by expressing, "I think our tasks now will be more meaningful because rather than feeling pressured to 'get credit' we can enjoy trying to contribute." One student did express that their contributions were still feeling forced even after the reduced requirement for participation:

> At this point, to be completely honest, it's getting a little harder to find genuine things to post on the FB group page. At first, the ideas were coming from me (both mine and others'). Now my ideas feel a little forced, and so do many of those I read when I visit the group page. It's not a bad resource, but I just think that the posts are getting a little bit unoriginal and forced at times.

This student's comment was expressed at about seven weeks into the project so the lack of genuineness may have been caused by participation fatigue in addition to the minimum participation requirements. Another student expressed similar concerns at around week six of the project by saying, "I'm finding it a bit harder to find things to post about. Guess I just need to be more creative!" These findings further suggest the importance of where to set the minimum participation requirement level and how to foster genuine student participation for the duration of the learning experience.

Summary of Discussion

The findings from our study can be summarized into four areas. First, given maximum amount of freedom regarding how to use the virtual space, students used the Facebook group for a wide variety of tasks. Among the most popular uses were the discussion of grammar and culture, the exchange of additional learning resources, and the sharing of topics for conversation in the target language. It was also encouraging to see that students used the virtual space to facilitate face-to-face encounters where they continued to work together in a variety of informal settings to study and explore the language.

Second, in order to effectively connect the virtual and physical learning spaces, a number of considerations should be given attention. The first is that, for high levels of participation, we recommend tying student participation to some

sort of graded component of the course. The evaluation of this component can be on a simple complete or incomplete scale, but, as we saw when we removed the minimum participation requirement, there is a risk of underutilization of the learning space if students are to rely solely on intrinsic motivation. Additionally, instructors, even if their presence is not fully present in the online space, should put forth effort to connect conversations between the two learning environments.

Third, a variety of benefits were mentioned by the participants. Students reported ease of access, interaction with students at different proficiency levels, and cultural insights as benefits of participation in the virtual space. Pre-service teacher participants also expressed that they benefited from seeing real questions and trying out techniques and strategies in explaining certain principles of the language.

Finally, in order to ensure genuine student participation, care and concern should be given to how the project is set up. As we observed, the most influential setting of the project was the minimum participation requirement. Students expressed feelings of being overwhelmed with the requirement of having to post four times per week in the Facebook group. They explained that their contributions were feeling forced and even fake. After reducing the requirement, student experience appeared to improve as exchanges became more meaningful.

Because of the exploratory nature of this study, the results noted here are limited in their generalizability. The data, including the benefits discussed here, should give a sense of what kinds of participation might be produced under similar contexts and circumstances.

CONCLUSION

Just as one classroom differs from another, so too will technology implementation and integration differ among practitioners and participants. As this study was largely exploratory in nature, definitive conclusions regarding the data are limited in scope. The conclusions that we do offer here will hopefully lead to continued exploration of how students choose to use virtual learning spaces under various contexts and conditions.

A large amount of data were successfully generated and these findings provide some interesting starting points for future studies. For example, future investigations might consider taking a closer look at how a virtual space might be used by language students who have a similar level of language proficiency.

Other researchers might reflect on the interactions between language students and pre-service language teachers presented in this paper to develop a study that explores those specific exchanges. Additionally, our findings might lead to a closer analysis of how to connect virtual and face-to-face learning spaces or even how to foster genuine student participation in the virtual learning space. Studies that explore different participation requirements as well as the use of conversation prompts would also be beneficial.

The data from this study were organized into four major areas. These areas included the ways in which students used the virtual learning space, how the virtual and face-to-face learning spaces were connected, student-perceived benefits of participation in the virtual space, and genuineness of student contributions. After sorting through the large amount of data generated during the study, these four categories of findings emerged as having the most support. For researchers, these data provide an idea of what sorts of participation patterns might emerge in similar contexts. For the current language teacher, these data give some sense of what to expect in using a similar virtual learning space as an extension of their physical classroom. For the current teacher trainer, a potential model is presented with some supporting findings of how pre-service teachers might benefit from interacting with current language students in an online setting.

Based on the findings from this study, we offer the following recommendations for fellow practitioners who might be considering the use of a virtual learning space as an extension of the physical classroom. First, the decision needs to be made with regard to how much structure will be provided to the students. Our study opted to prioritize freedom and creativity and, consequently, we observed a wide range of student use of the online space. A more structured implementation could narrow the different kinds of student use. However, this narrowing of use might also lead to usage patterns that are more in line with course objectives. For example, if one of the course objectives is to introduce students to the target culture, a specific prompt could be integrated that asks students to post links to online cultural resources and reflect on them in the group.

Second, the findings from this study suggest that in order to maintain a cohesive connection between the two learning spaces, the instructor should try to tie the two spaces together. Consistent referencing to student interaction in the virtual learning space will help provide a stronger connection between learning activities in the physical classroom space. The role of the instructor is likely to influence the way students participate in the learning spaces. In our study, we

decided to not include the instructor as an active member in the online space. It is likely that a more active instructor role would produce different student participation results than what we observed in our study.

Third, a number of student benefits might be anticipated. Some benefits presented in this study were particular to the mixture of language proficiencies and the inclusion of pre-service teachers with current language teachers. Other benefits like quick and easy access might be more generalizable.

Finally, careful consideration should be given with regard to setting the minimum requirement for participation in the online space. As this study indicates, setting the requirement too high may reduce the genuineness of student contributions as they begin to feel forced to participate. On the other hand, setting the requirement too low may fail to properly stimulate student interaction. In offering these findings-based recommendations, we hope to better inform the perhaps hesitant practitioner as they explore the use of virtual learning spaces as part of their personal pedagogical practices.

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