

COMPARATIVE ANALYSIS OF ONLINE VS. FACE-TO-FACE SECOND LANGUAGE LEARNING

ANÁLISIS COMPARATIVO DEL APRENDIZAJE DE UNA SEGUNDA LENGUA ONLINE Y PRESENCIAL

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Abstract

This study analyzes students' perceptions of their own learning of Spanish as a second language (L2) when comparing face-to-face (F2F) courses to online (OL) environments before the pandemic. It appears that most students are satisfied learning Spanish in either OL or F2F classes, but their self-reported perception of learning is lower for OL students than F2F participants. It also seems that a higher percentage of F2F participants are more satisfied with the format of their classes (F2F vs OL). It is argued that incorporating more asynchronous computer-mediated communication (CMC) and teacher presence among this particular population of students may increase satisfaction with both learning environment and perception of learning. A further analysis compared Spanish final-exam scores among OL and F2F participants; the results showed that participants in F2F classes obtained statistically significant higher scores than participants in OL classes. Some pedagogical suggestions are presented for this particular population of Spanish as L2 online students.

Keywords: language teaching technology, second language acquisition, computer-mediated communication, online teaching and learning.

Resumen

Este estudio analiza la percepción de aprendizaje de español en estudiantes de español como segunda lengua comparando el medio de enseñanza virtual (online) frente a clases presenciales antes de la pandemia. La investigación revela que los estudiantes están en general satisfechos con su aprendizaje de español tanto en clases presenciales como en virtuales, no obstante, la percepción de aprendizaje de los estudiantes en aulas virtuales es más baja que la de los estudiantes en aulas presenciales. Adicionalmente, los estudiantes presenciales tienen un nivel de satisfacción con sus clases superior al de los estudiantes online. La incorporación de más comunicación mediada por ordenador (computer-mediated communication, CMC) asincrónica y presencia virtual del profesor parece incrementar el nivel de satisfacción de los estudiantes tanto con el entorno (medio, online o presencial) de la enseñanza como con el propio aprendizaje. También se comparó las notas finales de los estudiantes en clases online y presenciales y los resultados indican que los estudiantes en clases presenciales obtuvieron notas significativamente más altas que los estudiantes en clases virtuales (online). Se ofrecen algunas consideraciones pedagógicas en base a los resultados.

Palabras clave: tecnología de la enseñanza de lenguas, adquisición de una segunda lengua, comunicación mediada por ordenador (CMC), enseñanza online o virtual.

1. Introduction

Many college students are increasingly eager to complete their education online. A recent report by Allen and Seaman (2016) estimated

that 28% of all students are enrolled in online (OL) courses at institutions of higher education. The National Postsecondary Student Aid Study (NPSAS: 20) reported that in the United States 84% of undergraduate students had experienced having their classes be moved online in light of the pandemic. The post pandemic data reports an average of 52% of students that are taking online courses. Carr (2014:99) stated that “It is commonplace to shift delivery of coursework in higher education programs from the traditional four walls of a classroom, face-to-face, to an internet-based instruction commonly referred to as OL instruction”. There is a general belief that studying OL allows you to manage your learning and gives you plenty of flexibility with regard to time, family, and work (Bangert, 2004; Maeorff, 2003). Moeller (1997:7) explained, for “many older learners, particularly those who have learned other second languages in classrooms where traditional approaches prevailed, the fact that they are asked to extemporize in a language over which they have only rudimentary control is extremely threatening”. Thus, some learners may choose to learn OL in order to avoid the stress that the traditional face-to-face (F2F) classroom may inflict upon them. Teaching and learning OL can involve unforeseen and unprecedented issues completely unrelated to teaching or learning itself (i.e. technology) that may frustrate students and instructors alike. In addition to the student-teacher relationship, instructors are also expected to solve technical problems. Lee (2016:81) explained that “Given the rapid growth of OL education supported by emerging technologies, OL courses are becoming a more widely popular and viable option for many adult learners”. In some universities, language programs (e.g., UCLA, University of North Carolina at Chapel Hill) OL classes have completely replaced traditional F2F classes, the rationale being that campus space is limited and that teaching lower-level language classes OL relieves the

demand on classrooms. The intention is increased flexibility, improved productivity, and reduced costs (Blake, 2011; Rubio & Thomas, 2012).

The new classroom setting is one in which the space transforms while one sits comfortably at a computer desk and dives into virtual markets, countries, and sites. Students may thus be in control of their (OL) travels and manage their time and experiences. The cultural offerings of music, folklore, food images, site images, may seem limitless, and some students may be drawn to the second language (L2) environment thinking they will have minimal anxiety and more flexibility, although there are some concerns regarding time management and motivation (Sun, 2014).

Despite the broadly adopted OL format for L2 learning, not enough research has been conducted on its teaching effectiveness or the actual learning gains for students (Blake & Delforge 2007; Blake, 2011, Blake, 2016). Some researchers explicitly state the need to examine languages fully taught OL (Blake & Delforge, 2007). Other researchers (Bangert, 2004; Maeorff, 2003; Moeller, 1997) claim that OL classes may be very helpful to students who work or have other commitments. The current study sought to delve into student's perceptions of the effectiveness of the OL L2 learning format. It investigated how students react to this method of learning an L2 at the undergraduate level, and it also looked at their perception of their own learning. Effectiveness of OL vs. F2F teaching was also measured by comparing final-exam score results. Additionally, this study argues that there is a need for more asynchronous computer-mediated communication (CMC) in L2 OL courses to establish better rapport with students and to motivate them to be successful OL learners when circumstances deem it necessary, which is further discussed below.

The current research took place before the COVID outbreak and the sudden move to OL environments by most academic institutions. This study illustrates the students' self-perception of learning by comparing F2F and OL environments. Despite the pre-pandemic timing the results are still relevant today. This investigation explored various approaches to teaching L2s online. It begins by explaining the use of computer mediated communication at the site where the study took place, followed by a general overview of online learning and L2s. It then delves into the particular research of students' perceptions of their own learning of Spanish as L2 in F2F courses to OL environments. Quantitative and qualitative data from the study is subsequently laid out, and it finally shows the results and conclusions drawn from the data.

2. Review of the Literature

2.1. Computer Mediated Communication

Computer Mediated Communication (CMC) is incorporated in various forms at the university where the study took place (email, chat rooms, videos, etc.). However, more CMC would result in higher satisfaction levels and better final-exam scores among OL learners of Spanish. Asynchronous CMC in the form of email and program notifications, and synchronous CMC in the form of videoconferencing, Skype, and chat, can help establish a more solid L2 learning environment by allowing students to engage in meaningful exchanges and by empowering instructors as they remind students of the tasks to be completed. CMC allows interactions and negotiations that emulate those experienced by F2F learners (Blake, 2000; de la Fuente, 2003; Yanguas, 2010). Lin (2015) conducted a meta-analysis of 59 studies to analyze if CMC was effective for L2 learning. Lin found that CMC may foster cultural exchanges, and it has positive effects on grammatical accuracy. CMC may also

help motivate students to keep up the pace and to be reminded of assignments to be completed. Individual emails from instructors may also be a helpful tool in making students feel less isolated in the OL environment. OL instructors can send regular reminders and post weekly calendar snapshots to remind students of the assignments to be completed on a daily, weekly, or biweekly basis. A strong supporter of CMC, Blake (2012) explains how OL courses should preferably integrate a synchronous CMC component. Enkin and Mejías Bikandi (2017) mention that email should be used considerably in OL courses (p. 180). Another supporter of CMC use in the OL classroom is Carr (2014), who states that some OL students may be less confident than others and that email can provide the support needed from the teachers. Emails from instructors can be a great source of encouragement (p. 102). Anderson, Rourke, Garrison, and Archer (2001:3) propose a model of critical thinking and practical inquiry to better address the challenges of OL teaching. This model is formed by three elements: "cognitive presence, social presence, and teaching presence". CMC can be used as a helpful tool to offer at least two of these elements. Thus, email, video chats, and interactive exchanges can provide the basis for social presence. Teaching presence can be accomplished by being more visible in the OL class. Teacher visibility can be achieved by sending daily or weekly calendar snapshots, video-recorded announcements, or assignment videos, or by using discussion boards. All these forms of CMC are currently being implemented and some studies are being conducted in order to gauge if CMC increases student satisfaction and learning (Kern, 1996).

2.2. OL Learning and L2

Teaching L2 OL has many supporters although study results regarding the effectiveness of technology in language learning are mixed (for

research reviews of over twenty years see Grgurović et al. (2013) and Suh (2015) who examined the benefits, applications and drawbacks of technological tools in the L2 classroom). Moeller (1997:11) explained: “Today’s on-line technologies afford opportunities for enhancing student access to up-to-date and even up-to-the-minute cultural materials and realia. The use of these online authentic materials can help provide students with a level of cultural awareness that is most often acquired by means of experience abroad”. Cahill and Catanzaro (1997) showed that OL L2 learning is as effective, if not more so, than languages taught F2F. Cahill and Catanzaro provided a framework and outline for teaching L2 languages OL. At the time, they claimed that OL courses reflected the five goals from the Standards for Foreign Language Learning (1996:98), which are: 1. Communicate in languages other than English 2. Gain knowledge and understanding of other cultures 3. Connect with other disciplines and acquire information 4. Develop insight into the nature of language and culture 5. Participate in multilingual communities at home and around the world. The expansion and progress of course-management sites such as Blackboard and Canvas have greatly improved the OL environment (Carr, 2014), as have other OL tools, like wikis, chat rooms, or social media (Thorne & Payne, 2005). Salaberry (1996) found that OL L2 instruction actually promotes learner-centered interactive approach, and Blake (2000), Pellettieri (2000), and Salaberry (2000) found that both OL and F2F are both equal formats to foster the ability to negotiate L2 meaning. Other researchers may not advance such ambitious claims; nevertheless, some found that while L2 learning OL may not be as effective as F2F, it is at least comparable (Blake & Delforge, 2007; Blake, Wilson, Cetto, & Pardo Ballester, 2008; Cahill & Catanzaro, 1997; Chapelle, 2010; Murday, Ushida & Chenoweth, 2008; Salcedo, 2010). Soo and Ngeow (1998) compared F2F with OL classes, and their results suggested that OL

learning is more effective than F2F. In a more recent study comparing assessment types among F2F and fully OL students, Salcedo (2010) compared overall course GPA and lab classes and she found that F2F students outperformed OL students on lab classes but the results were not significant. The U.S. Department of Education (2009: XIV) conducted a study that analyzed OL versus F2F instruction in all disciplines. The report stated that “Students in OL conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction”. There are also conflicting results among studies that compare F2F versus OL L2 courses (Blake, 2009; Blake et al., 2008; Sanders, 2005).

Arguably, many studies address different aspects of research that may not be comparable for example, oral vs written skills (Healy/Beauvious,1997; Abrams, 2003; Payne and Whitney, 2002), or OL intercultural competence (Chun, 2011), or synchronous versus asynchronous communication (Pérez, 2003; Sotillo, 2000), therefore, the results understandably vary. Nevertheless, many researchers claim that OL learning provides students with opportunities (cultural and oral exchanges) that they might not otherwise experience (Moreno-López et al., 2017). Others reveal that technology provides authentic language-learning environments (Thorne, 2005).

Despite research that seemingly supports OL education, there are several challenges that need to be addressed. The first is whether students learn all four skills (listening, speaking, reading, and writing) OL as well as they do F2F. (See Blake, 2016 for a discussion of technology and the four skills.) The second challenge is whether cultural appreciation and engagement can be experienced OL. And, finally, there is a more practical question about learning: Do students learn the same OL as they do F2F? Carr (2014:100) explains that “Even when courses can be delivered in an OL environment, shifting from

a traditional program of study to an OL format is not without challenges". It is possible, given these challenges, that teaching languages OL may not yield the same results as teaching F2F. Furthermore, learners' attitudes in OL environments may not be as positive as F2F unless OL students understand how to use technology effectively (Murday et al, 2008), which may very well lie outside the realm of the language instructor.

Given the many implications and questions regarding OL L2 courses, the aim of the current study was student perspectives on F2F and OL L2 learning.

3. Methodology

The two research questions guiding the present study are:

1. Do F2F and OL Spanish courses show a significant difference between final-exam grades?
2. What are students' perceptions of OL and F2F Spanish classes?

3.1. Background information to the Study

3.1.1. Spanish Courses

The department of Languages, Literatures, and Cultures at a regional university offers four Spanish courses for students to complete the language requirement. These courses are Spanish 101, Spanish 102, Spanish 203, and Spanish 204. They can be taken F2F or OL. During the fall and spring semesters, there are approximately eight sections of each course taught F2F and two or three sections of each course taught OL. Many students alternate taking courses OL and F2F; there is limited availability of courses OL, although the demand is high. So, priority is given to distance-learning students. Beyond that, the courses are open to any student who wishes to register for the OL format. Notwithstanding the high demand, the department feels cautious about offering more

sections OL since there is not enough rigorous quality assurance to prove that OL language teaching is comparable or parallel to F2F teaching under the current conditions at this university, especially when it comes to speaking ability in spite of research conducted elsewhere and the benefits found (Moneypenny and Aldrich, 2016), it is argued that our particular population of students may benefit more from F2F classes since they may not have otherwise taken other language classes prior to coming to college.

3.1.2. Course Materials

OL courses are designed with less group work and practice than F2F classes, where students spend most of the time participating in activities that foster oral communication (task-based activities, structured input/output activities, etc.). OL and F2F Spanish classes employ identical materials. The only difference with regard to the textbook is that F2F students are required to purchase a print copy of the textbook, while OL students may purchase the e-book. All students complete homework OL. Content, assignments, and exams are identical except for mode of delivery (OL vs. F2F). The textbooks used in this course focus on Communicative Language Teaching Methodology. The student learning outcomes focus on developing proficiency in four language skills: speaking, listening, reading, writing, as well as culture. The textbook is, thus, divided up in these five parts and instruction and exams devote around 20% for each of these skills and culture. Consequently, OL learners do not get as much aural interaction as F2F students. Instructors offer virtual office hours for OL students, but many students do not take advantage of them whereas it is much more common to have F2F students come to the instructor's office. OL students are encouraged to seek opportunities to practice speaking. They are required to complete some activities like watching videos and

listening activities. Listening is, thus, practiced. OL students are also required to complete some activities that expect them to engage with other students (pair work). However, many fail to finish these activities due to logistics. Students claim it is difficult to set up virtual meetings due to scheduling conflicts.

3.1.3. Final Exam

The final exam was initially announced as being OL, but nothing was specifically mentioned as to whether it would be proctored or not. Students were allowed to complete all quizzes, midterm exams, and other assignments OL without being proctored. During the first weeks of classes, it was decided that OL final exams should be proctored. Consequently, as exams were not explicitly announced as being proctored, students were given two options to take the final exam; one was to go to campus (many of our OL students live on campus or near campus) to take it F2F with the instructor, and the other option was to take it OL with a proctor. The latter monitors students' activities while taking OL exams. Instructors from OL and F2F classes sent final-exam results without names to the researcher for this study simply indicating Spanish level and whether the data came from OL or F2F courses. These were the only assessment measurements employed in the current study. This part of the study was aimed at answering research question 1. Do F2F and OL Spanish courses show a significant difference between final-exam grades? A total of $n=352$ final exam scores were submitted.

3.2. Participants

Approximately 800 students were invited to participate in an OL survey. All these students were studying Spanish as an L2. Most students were freshman or sophomores studying various types of majors in the

College of Arts and Sciences. None of the students were obviously Spanish/English bilinguals or had learned Spanish at home prior to taking these classes. The College of Arts and Sciences requires all its students to take an L2 for four semesters. Spanish or any of the nine L2 languages offered in the department (besides American Sign Languages and Classical Studies, which also offers Latin and Greek) can meet this language requirement. Thus, many of the participants in the study are students that select Spanish as a language requirement. Of the 800 invited students, 201 participants started the survey, and 200 finished it. Ethnographic data were not collected to preserve anonymity. The final exam scores of 352 of these students were submitted by their instructors for analysis. Among the students who finished the survey, five were taking Spanish 101, seventy-eight were taking Spanish 102, forty-nine were taking Spanish 203, and sixty-eight were taking Spanish 204. Of these, fifty-two students were taking an OL course, and 148 were taking a F2F course. Tables 1 shows this distribution of the student participants from the survey. Table 2 shows the distribution of students in OL or F2F classes based on their answers to the survey.

Table 1: *“What course are you taking?”*

Course	%	Count
SPA 101	2.5%	5
SPA 102	39%	78
SPA 203	24.5%	49
SPA 204	34%	68
Total	100%	200

Table 2: *“Are you taking Spanish OL or face-to-face?”*

Answer	%	Count
OL	26%	52
Face-to-face	74%	148
Total	100%	200

3.3. Instrument

An IRB approved questionnaire was developed (see Appendix) consisting of two parts: (1) fourteen Likert-scale questions examining students' perceptions about their Spanish learning, and (2) twenty-one open-ended questions providing a more qualitative analysis. The fourteen Likert-scale items, anchored on a five-point scale ranging from 1 ("Strongly Agree") to 5 ("Strongly Disagree") also included a possible "unanswered" response. These items aim at probing the students on their personal opinion of their course, whether they prefer OL or F2F, whether or not they like the textbook, the homework, or in terms of amount of learning. The twenty-one open ended questions allow students to respond with more concrete examples and these answers were employed in the qualitative analysis.

Students were invited to participate via email sent from their course instructors. The email had a link to a "Qualtrics" Survey. They completed it after reading and signing a consent form. The survey took students approximately twenty to thirty minutes to complete. For the purpose of this study, only a

portion of these questions were analyzed, and some of them were examined together via cross-tabulation. This study is part of a larger study that had been previously piloted in two occasions.

4. Results

4.1. Final-Exam Scores

All participants in this study took an identical OL or F2F final exam with regards to content. The format of delivery was, however, different. All F2F students took their final exam in the classroom. OL students chose between coming to campus to take the exam with their instructor, or going to a site in close proximity to their location to take the exam with a proctor. The content was the same for each level. Results from Spanish 101 were insufficient to the submitted for analysis, so they were discarded. All exams include listening, grammar, reading, writing, and culture components. Each part is worth 20% of the total grade. Thus, the only courses whose instructors submitted results for final exams were Spanish 102, Spanish 203, and Spanish 204 (second, third, and fourth semester). For Spanish 102 there were a total of 84 exams; there were 51 for F2F courses and 32 for OL. For Spanish 203 there were a total of 99 exams, 46 F2F and 53 OL. And for Spanish 204 there were a total of 170 exams, 81 F2F and 89 OL. The total average for scores by class was 80.6 for Spanish 102 F2F, whereas for OL the average was 73.1. For Spanish 203, the total average for final-exam scores was 85.5 for F2F and 51.1 for OL. The final-exam grade results data were analyzed using an independent t-test. The results are displayed in Table 3.

Table 3: *Independent t-test for final-exam scores*

Course	n size F2F/OL	F2F M (SD)	OL M (SD)	t	df	p
SPA 102	51/32	80.6 (13.6)	73.1 (17.0)	-2.10*	55	.04
SPA 203	46/53	85.5 (12.3)	51.1 (22.2)	-9.69**	83	.00
SPA 204	81/89	83.1 (9.2)	65.7 (15.5)	-9.03**	145	.00

Note. Equal variance not assumed. * $p < .05$, ** $P < .01$

The results indicate that for all Spanish courses, OL vs. F2F final-exam scores were significantly different. The significance level was reached at $p < .04$ level for Spanish 102 and at $p < .00$ for Spanish 203 and Spanish 204. Consequently, all final-exam grades from participants in F2F courses were higher than those for OL courses, indicating that F2F participants were able to score higher grades than OL participants for this study among all three levels of Spanish.

4.2. Survey Results

Although the survey was composed of more questions, for the purpose of this study, the current study only focused on those with the most salient and relevant responses. Of the 200 participants that initiated the questionnaire, 52 were taking Spanish OL and 148 were taking it F2F. When students were asked to respond to the statement “I have learned very much in this Spanish course,” most students (77.5%) agreed or strongly agreed that they had learned very much in that Spanish course as seen in Table 4.

Table 4: *"I have learned very much in this Spanish course."*

Answer	%	Count
Strongly agree	28%	56
Agree	49.5%	99
Neither agree nor disagree	12%	24
Disagree	7%	14
Strongly disagree	3.5%	7
Total	100%	200

However, a closer analysis yields a singular trend. Participants from the study were taking courses both OL and F2F. Several cross-tabulation analyses were carried out comparing the responses of OL vs. F2F students. Table 5 shows the cross-tabulation analysis between the question “Are you taking Spanish OL or face to face,” and “I have learned very much in this Spanish course.” As can be observed in the first two rows (with dark grey shadow), there seems to be a different tendency among OL vs. F2F students. Fifty percent of OL students strongly agree or agree to having learned very much, whereas in the case of F2F students, 87% strongly agree or agree to having learned very much. Alternatively, 27% of OL students disagree or strongly disagree that they have learned very much, while only 5% of F2F students disagree or strongly disagree that they have learned very much Spanish. The level of satisfaction among OL vs F2F students

taking these OL courses varies indicating higher level of satisfaction among F2F students.

Table 5: *Cross-Tabulation: Are you taking Spanish OL or F2F? / I have learned very much in this Spanish Course.*

		Are you taking Spanish OL or F2F?		I have learned very much in this Spanish course.						
		OL	F2F	Total	SA*	A*	Neither*	D*	SD*	Total
1*	OL	52	0	52	8	18	12	10	4	52
	F2F	0	148	148	48	81	12	4	3	148
	Total	52	148	200	56	99	24	14	7	200
2*	SA*	8	48	56	56	0	0	0	0	56
	A*	18	81	99	0	99	0	0	0	99
	Neither*	12	12	24	0	0	24	0	0	24
	D*	10	4	14	0	0	0	14	0	14
	SD*	4	3	7	0	0	0	0	7	7
	Total	52	148	200	56	99	24	14	7	200

Note. *1=Are you taking Spanish OL or F2F? 2= I have learned very much in this Spanish course. SA=Strongly Agree, A=Agree, Neither= Neither Agree nor Disagree, D=Disagree, SD=Strongly Disagree

When students were asked to react to the statement “I learn more Spanish OL than F2F,” Table 6 shows their overall response.

Table 6: *“I learn more Spanish OL than F2F.”*

Answer	%	Count
Strongly Agree	8.5%	17
Agree	9%	18
Neither agree nor disagree	30%	60
Disagree	25%	50
Strongly disagree	27.5%	55
Total	100%	200

Table 6 shows that 8.5% of students strongly agree or agree that they learn more Spanish OL than F2F. 30% neither agree nor disagree, and 52.5% disagree or strongly disagree that they learn more Spanish OL than F2F.

A cross-tabulation was run, and the results, again, indicate a trend that separates OL and F2F students. It is impossible to know whether F2F students have taken OL courses before. Thus, this fact needs to be taken into consideration when analyzing cross-tabulation tables. Table 7 displays the first cross-tabulation run. It shows that 87 students taking courses F2F disagree or strongly disagree that they learn more Spanish OL than F2F (58.7% of the total number of F2F students). Forty-two F2F students (28.4% of F2F) neither agree nor disagree, and seventeen OL students (32.7% of OL) likewise, neither agree nor disagree. Seventeen (32.7% of the total OL) OL students

strongly agree or agree that they learn more Spanish OL. Nineteen (36.5% of the total OL) OL students disagree or strongly disagree that they learn more Spanish OL. Nineteen F2F students (13% of the total F2F) strongly agree or agree that they learn more Spanish OL than F2F. The results of this cross-tabulation analysis indicate that OL students' opinions are divided; approximately a third strongly agree or agree, another third feels more neutral, and the last third disagrees or strongly disagrees that they learn more Spanish OL. It would have been interesting to follow up with a question asking participants the reasons why they feel one way or another. Among F2F students, 13% strongly agree or agree, about a third feel more neutral, and 58.7% strongly disagree or disagree that they learn more Spanish OL, thus they are placed in the correct class, according to their opinion about the method of learning.

Table 7: *Cross-Tabulation: Are you taking Spanish OL or F2F? / I learn more Spanish OL than F2F.*

		Are you taking Spanish OL or F2F?		I learn more Spanish OL than F2F.						
		OL	F2F	Total	SA*	A*	Neither*	D*	SD*	Total
1*	OL	52	0	52	10	6	17	8	11	52
	F2F	0	148	148	7	12	42	42	45	148
	Total	52	148	200	17	18	59	50	56	200

2*	SA*	10	7	17	17	0	0	0	0	17
	A*	6	12	18	0	18	0	0	0	18
	Neither*	17	42	59	0	0	59	0	0	59
	D*	8	42	50	0	0	0	50	0	50
	SD*	11	45	56	0	0	0	0	56	56
	Total	52	148	200	17	18	59	50	56	200

Note. *1= Are you taking Spanish OL or F2F? 2= I learn more Spanish OL than F2F. SA=Strongly Agree, A=Agree, Neither=Neither Agree nor Disagree, D=Disagree, SD=Strongly Disagree

Participants were asked to respond to the statement “I prefer OL classes” in general, without specifying Spanish, in an attempt to gauge whether they prefer the OL platform in other areas of study. Table 8 displays the overall results, with more individual responses disagreeing or strongly disagreeing or feeling neutral about the aforementioned statement. Thus 23.5% strongly agree or agree that they prefer OL classes, 27.5% neither agree nor disagree, and 49% disagree or strongly disagree to the statement that they prefer OL classes.

Table 8: “I prefer OL classes.”

Answer	%	Count
Strongly Agree	12%	24
Agree	11.5%	23

Neither agree nor disagree	27.5%	55
Disagree	24.5%	49
Strongly disagree	24.5%	49
Total	100%	200

Another cross-tabulation was then run in order to isolate the responses from OL and F2F students. The results are displayed in Table 9. Predictably, 65.4% of OL students strongly agree or agree that they prefer to take OL classes. A shocking 19.2% disagree or strongly disagree with the statement about preferring OL classes, which raises the question of their motivation enrolling in Spanish OL. Fourteen percent of OL students neither agree nor disagree with the statement. A similar tendency is observed among F2F students; 59.5% disagree or strongly disagree with the statement that they prefer OL classes. A surprising 37% of F2F neither agree nor disagree, and 8.8% declare they would prefer OL classes.

Table 9: *Cross-tabulation: Are you taking Spanish OL or F2F? / I prefer OL classes.*

		Are you taking Spanish OL or F2F?		I prefer OL classes						
		OL	F2F	Total	SA*	A*	Neither*	D*	SD*	Total
1*	OL	52	0	52	23	11	8	6	4	52
	F2F	0	148	148	1	12	47	43	45	148

	Total	52	148	200	24	23	55	49	49	200
2*	SA*	23	1	24	24	0	0	0	0	24
	A*	11	12	23	0	23	0	0	0	23
	Neither*	8	47	55	0	0	55	0	0	55
	D*	6	43	49	0	0	0	49	0	49
	SD*	4	45	49	0	0	0	0	49	49
	Total	52	148	200	24	23	55	49	49	200

Note. *1= Are you taking Spanish OL or F2F? 2= I prefer OL classes.
 SA=Strongly Agree, A=Agree, Neither=Neither Agree nor Disagree,
 D=Disagree, SD=Strongly Disagree

Table 10 displays participants' level of satisfaction with their OL or F2F Spanish course. It seems that 79% are extremely satisfied or somewhat satisfied with their Spanish course. Eight percent are neither satisfied nor dissatisfied, and 13% are somewhat or extremely dissatisfied with their Spanish course.

Table 10: *"How satisfied are you with your OL/F2F Spanish course?"*

Answer	%	Count
Extremely satisfied	38.5%	77
Somewhat satisfied	40.5%	81
Neither satisfied nor dissatisfied	8%	16
Somewhat dissatisfied	9%	18

Extremely dissatisfied	4%	8
Total	100%	200

Table 11 depicts data from a cross-tabulation to separate OL vs. F2F participants. The results indicate that 61.5% of OL students are extremely satisfied or somewhat satisfied with their Spanish class. Of F2F participants, 85% are extremely satisfied or somewhat satisfied with their Spanish class. With regards to neither being satisfied nor dissatisfied, 11.5% of OL students feel neutral, whereas only 6.7% of the F2F students feel the same way. Dissatisfaction is reflected in responses by 26.9% of OL students and only 8.1% of F2F students. It appears that F2F students are, in general, more satisfied with their course than OL students.

Table 11: *Cross-tabulation: Are you taking Spanish OL or F2F? / How satisfied are you with your OL/F2F Spanish Course?*

		Are you taking Spanish OL or F2F? (1)		How satisfied are you with your OL/F2F Spanish course? (2)						
		OL	F2F	Total	ES*	SS*	Neither*	SD*	ED*	Total
1*	OL	52	0	52	13	19	6	10	4	52
	F2F	0	149	149	64	62	10	8	4	148
	Total	52	149	201	77	81	16	18	8	200

	ES*	13	64	77	77	0	0	0	0	77
	SS*	19	62	81	0	81	0	0	0	81
2*	Neither*	6	10	16	0	0	16	0	0	16
	SD*	10	8	18	0	0	0	18	0	18
	ED*	4	4	8	0	0	0	0	8	8
	Total	52	148	200	77	81	16	18	8	200

Note. *1= Are you taking Spanish OL or F2F? 2= I prefer OL classes.
 ES=Extremely Satisfied, SS=Somewhat Satisfied, Neither= Neither Satisfied nor Dissatisfied, SD=Somewhat Dissatisfied, ED=Extremely Dissatisfied

Table 12 displays the participants' overall opinion about learning OL and F2F. It appears that more students prefer to learn in F2F (N=156) courses than are actually taking them at the time of the study (N=148). A cross-tabulation between students' preference and the type of course they are actually taking is displayed in Table 12.

Table 12: *“Do you prefer to learn OL or F2F?”*

Answer	%	Count
OL	22%	44
F2F	78%	156
Total	100%	200

Finally, Table 13 shows that thirty-four students who are taking OL actually prefer OL, while eighteen students taking OL courses prefer F2F. On the other hand, eleven participants taking F2F courses prefer OL courses, and 137 participants taking F2F courses prefer F2F courses, thus they are well placed. Obviously, the majority of students select the learning method that more closely suits their preference. But there are still some participants who may be in OL or F2F courses even though they prefer the opposite.

Table 13: *Cross-tabulation: “Are you taking Spanish OL or F2F? /Do you prefer to learn OL or F2F?”*

	Taking OL	Taking F2F
Prefer OL	34 (65%)	11(7%)
Prefer F2F	18 (35%)	137(93%)
Total	52 (100%)	148 (100%)

4.3. Quantitative Results

The results from this study lead us to consider the OL format a less desirable one for learning Spanish among participants from this study. OL participants are not as satisfied with their learning as their F2F counterparts. Furthermore, OL participants declare that they learn less Spanish OL than F2F students say they learn. This claim is further supported by the final-exam results. Participants in F2F courses score higher in their Spanish final exams than participants in OL courses at all the levels that were analyzed. A closer look at their in-depth responses may shed some light over these results.

4.4. Qualitative analysis

Many students responded similarly to open-ended questions. Some of the most frequent (unedited) answers to the question “Why are you taking Spanish OL?” are:

- Required for my major.
- OL – I work full time/job related.
- Flexible schedule.
- Distance Learners.
- Wanted to try it.
- I can do it at my own pace.
- I hate F2F.
- It gives me more time to work my job.
- Registration issues.
- Because I am able to go at my own pace and use much more time to memorize and learn which helps me score higher on quizzes.
- OL, because I’m better at reading it and understanding it than hearing it.
- I’m not good at speaking Spanish.
- I didn’t realize what I was getting myself into.
- I have a fear of speaking in front of people and I prefer the way this course is set up.
- I have taken Spanish courses OL and face to face. Face to face I can hear how the words are supposed to sound when the teacher speaks it. OL, I can take practice quizzes, have extra learning. I could do the same in a face to face course, but I seem to utilize it better in an OL course.

Several participants responded that OL classes allowed them flexibility and the possibility to hold a full-time job. Others stated their preference to learn at their own pace as a positive aspect of the OL environment. Some students declared that learning OL decreased

their anxiety level, as they were not forced to speak in front of others in the classroom.

The most frequent (unedited) and salient answers to the question “Why are you taking Spanish face-to-face?” are as follows:

- I like Face to Face better because I feel I learn more in terms of the language. OL is not as applicable to me as I don't have another person to speak the language with feedback in real time. Being in a Face to Face setting feels more authentic and immersive.
- Face-to-face offers more opportunities to practice speaking Spanish.
- I learn better when Face to Face, and practicing speaking the language is harder OL.
- I took Spanish face to face due to the fact I'm able to ask questions on the spot if I'm not understanding.
- I did not know I could take it OL.
- I take all language courses face to face because I am an audio learner. I cannot learn a language just by reading; I have to speak.
- Face to Face because more opportunities to get clarification on difficult concepts and it helps to hear Spanish spoken by the professor.
- Face to face is better for my learning style.
- Because I struggled taking it OL in the Fall so I figured it'd help me out better if I took it face to face this semester.
- I am taking Spanish face to face because I feel like it's better for me to have someone explain things to me.
- Because it motivates me to work harder when it is face to face.
- I like taking the class face to face with my professor. She is very helpful and I have learned a lot more than I thought I would.
- OL isn't as effective for learning. You really need the authority in the room to direct you.
- I'm taking Spanish face to face so I can learn Spanish through conversation.

- Face to Face because I find it more beneficial to be able to learn from and ask questions to a physical being.

It seems that some students are aware of their particular learning style or of specific methodologies that may work for them. Others mention opportunities to practice as a positive aspect of the F2F class. Several participants also mention feedback as an essential part of learning, and they seem to find it in the F2F environment.

There were two research questions in this study:

1. Do F2F and OL Spanish courses show a significant difference between final-exam grades?

Table 13 displays the results of the comparison between F2F and OL students with regards to final exam grades. As can be observed on this table, there are significant differences among these two groups of students with regard to grades. These differences, given the variables, can only be applied to the participants in this study. F2F students scored significantly higher than OL students in the three levels compared, second semester, third semester and fourth semester Spanish. The results of these comparisons are all statistically significant. The significance level was reached at $p<.04$ level for Spanish 102 and at $p<.00$ for Spanish 203 and Spanish 204.

2. What are students' perceptions of OL and F2F Spanish classes?

It appears from the combination of quantitative and qualitative responses that more OL students are less satisfied with their classes than F2F students. OL students are also less satisfied with their learning than F2F students. It could be argued, as stated above, that learners' attitudes in OL environments may not be as positive as

the ones F2F unless OL students are shown how to use technology effectively (Murday et al, 2008). Spanish instructors at this University are explicitly told that they have to prepare the teaching environment and students are informed in numerous occasions orally in written form, that they have IT services they can access, should the need arise. They can contact the book IT service, and the University IT service, but instructors are not expected to answer technical questions, although most do, when they know the answers to those questions.

5. Conclusions

Unquestionably, OL learning offers students flexibility and independence that F2F instruction cannot afford. Not all students may be ready to take an L2 OL, based on the qualitative responses of this study. They may not have understood what taking an OL class entails (“I didn’t know what I was getting myself into”). At the time data were collected, students in OL courses had less opportunities to practice orally or negotiate meaning than F2F. The addition of videoconferences with Spanish native speakers may have solved the issue of practice at this university. Further, students may not be ready to take courses OL as suggested by responses: “Face to Face because more opportunities to get clarification on difficult concepts and it helps to hear Spanish spoken by the professor” or “Face to face is better for my learning style,” among others. “I have a fear of speaking in front of people and I prefer the way this course is set up” is a typical response by OL students who enroll in these courses expecting to learn without having to practice oral skills with others. They may be unaware that oral practice or negotiation of meaning is needed for acquisition whether OL or F2F (Blake 2000; Pellettieri, 2000; Salaberry, 2000).

The frustration experienced when learning OL may lead students to express negative thoughts about the learning

environment, the language, and their overall level of satisfaction. Most F2F participants are satisfied with their class and how much they are learning. While most OL students are also satisfied with their learning, the rate of satisfaction is lower than F2F students. Some participants report low anxiety levels when taking OL classes, which may help with learning an L2 (Young, 1991). It is unclear, however, if the OL environment would reduce anxiety levels for all students. Further studies should address this issue.

As far as grades are concerned, the striking results that F2F final-exam scores are significantly higher than OL ones may reflect F2F students' previously stated level of satisfaction with their learning and their learning environment (F2F vs. OL). In previous iterations of the study (pilot) grades were always higher among F2F vs OL students. This aspect of the study is currently being further analyzed to discern whether learning is affected by environment, or whether it is simply the act of test taking that may be affected by the OL vs F2F environment.

The results obtained from this study may only be applicable to the particular set of student participants. It could be argued that students who take courses OL do so for various reasons, which may be key in the understanding of the "OL student profile", if there is such a thing. As stated above, Bangert (2004), Maeroff (2003) and Moeller (1997) claim that OL classes may be very helpful to students who work or have other commitments. These are valid claims, but for students with regular jobs or other commitments, these be a higher priority than the OL classes themselves. Arguably, students who also work may have more responsibility than full-time students.

It appears that students embark in OL classes motivated by external factors like flexibility and autonomy. Some courses may lend

themselves nicely to this type of format. When it comes to L2 learning, the lack of practice, lack of negotiation of meaning, and lack of pair/group work may impede students to keep them encouraged enough to be able to learn or be ready to learn as much as students in F2F classes, who get to practice oral skills, negotiate meaning, and engage in task-based activities, etc. Participants in this study reported being enrolled in the correct course format, whether F2F or OL, and indicated that they were satisfied with their L2 learning at similar levels, F2F being a bit more satisfied overall than OL students. However, final exam results showed that students in F2F courses outperformed their OL counterparts. It is not possible to prove that one group learned more than the other, but it is safe to say that the F2F group performed better during their final exams than the OL group. A follow up study is now being conducted to be able to gauge what specific language skills may be more affected by learning environment at this particular institution, more specifically, oral, listening, speaking, or writing, as well as culture. The addition of more CMC in these OL classes could potentially solve issues of oral practice and perhaps level of satisfaction with regard to Spanish learning. The incorporation of videoconferences with native speakers in these OL classes may result in different results at the level of student satisfaction and may motivate learners to learn more, thus increasing final exam rates. Several studies are also being conducted to gauge these classroom enhancements. This study took place before the pandemic and there are other alternative studies now analyzing these trends and whether Spanish OL learning can be enhanced. It appears that adding more CMC and one on one meetings with native speakers of Spanish yields better results regarding overall acquisition of the L2.

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Appendix: Student Questionnaire

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Unanswered
I prefer OL classes						
I really like my Spanish course						
I have learned very much						
I had fun with my class						
My instructor was helpful						

I liked the type of learning environment						
The course stimulated my critical thinking						
The course was difficult						
I liked the OL (where applicable) book						
I liked the OL (where applicable) manual						
I liked the activities						
Registration was easy						
Registration process was fast						
I learn more Spanish OL than in class						

1. Why are you taking Spanish OL?
2. Have you taken an OL course before this semester?
3. Do you prefer to take classes OL?
4. How many classes are you taking OL this semester?
5. Why?
6. How many classes are you taking on campus this semester?
7. How satisfied are you with your OL course?
8. Would you take another language course OL in the future?
9. Are you learning much OL? What skills do you practice the most?

10. Do you think you are learning more Spanish OL than you would learn face-to-face?
11. If your course was only offered on campus, would you have taken it?
12. Why don't you take Spanish face-to-face?
13. Don't you think learning Spanish would be better in a classroom setting?
14. Do you think speaking a language helps you learn it?
15. Do you think you have learned much?
16. Have you taken a Spanish class face-to-face?
 - a. Did you learn more or less?
 - b. Did you prefer it or not?
17. What do you need Spanish for?
18. Do you think learning Spanish will help you in your career?
19. Is your instructor helpful?
20. Do you know you can hold office hours via Skype or Collaborate?
21. Do you like your Spanish OL course?

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