

**Online and Face-to-Face Language Learning:  
A Comparative Analysis of Oral Proficiency in Introductory Spanish**

**Dianne Burke Money Penny**, Indiana University East, Richmond, Indiana, USA

**Rosalie S. Aldrich**, Indiana University East, Richmond, Indiana, USA

**ABSTRACT**

The primary resistance to online foreign language teaching often involves questions of spoken mastery of second language. In order to address this concern, this research comparatively assesses undergraduate students' oral proficiency in online and face-to-face Spanish classes, while taking into account students' previous second language experience. The sample consisted of 90 undergraduate students, both online and face-to-face, who completed the Versant test at the end of the two semester sequence of Introductory Spanish. The Versant test assessed pronunciation, vocabulary, sentence formation, and fluency as factors of oral proficiency and calculated an overall oral proficiency score. T-test, one-way analysis of variance (ANOVA), and Kruskal-Wallis H test were used to determine whether there were any significant differences between online and face-to-face students' proficiency scores. The results indicate that there were no statistically significant differences in oral proficiency at the introductory level between students who completed Spanish online and those that participated in face-to-face courses.

## INTRODUCTION

In the field of foreign languages (FL), online teaching is a contentious topic as many foreign language professionals are staunchly opposed to the idea of teaching online, arguing that it is “technology driven at the expense of theory” (Hubbard, 2009, p. 2). As an example, some universities or faculty refuse to accept credit for work completed in online second language (L2) courses or accept it provisionally, only after an approval process (Blake, 2013). As Ehsani and Knodt (1998) noted, detractors argue the online (OL)[1] classroom exchange is not an equivalent educational experience to that of face-to-face (F2F) courses because of a lack of theoretical framework, absence of area research on pedagogical benefits, and technological limitations (Hauck 2006). Although not discrediting OL FL education entirely, Spodark (2004) believed face-to-face coursework is best for introductory language levels. Central to this ideological framework is the idea that the F2F course is the golden standard, without consideration of class size, culture, or the talents of the teacher (Blake, 2013). As productive skills in the L2 (speaking and writing) are preceded by receptive skills (listening and reading) a large part of opponents’ objections are based on the belief that OL student production cannot be achieved at the same level as in a F2F classroom. Oral proficiency, in particular, is an area of concern because of the synchronous and spontaneous nature of conversation (Dodigovic, 2005; Salaberry, 1996). It should be noted that there are also concerns not based on skill acquisition, but rather on the

classroom environment and learner difficulties related to student collaboration and study strategies, such as time management and motivation (Sun, 2014).

However, some FL professionals believed that, “Good teaching remains good teaching with or without the technology” (Higgins, Beauchamp, and Miller, 2007, p. 215) and suggested that blanket statements that consider all F2F courses superior to all OL courses, are a grave overgeneralization and “individual talents and limitations of each instructor and the quality of learning materials” (Blake, 2013, p. 19) are greater indicators of student learning than is format. Saba (2000) supported this idea stating “implied assumption that in most comparative studies that there is meaningful interaction in the classroom merely by the virtue of the physical proximity of the student” (p. 3). To further examine the argument that class format does not determine students’ ability to achieve oral proficiency in Spanish, this study compares proficiency scores in both OL and F2F formats.

Although some FL professionals doubt the legitimacy of OL L2 instruction, Salaberry (1996) found that OL courses promote learner-centered interactive approach while Hauck (2006) noted the transition from “instruction to construction of knowledge as a major tenet of online pedagogy” (p. 464). Blake (2000), Pellettieri (2000), and Salaberry (2000) found that the ability to effectively negotiate meaning was essentially equal in both formats. Studies with similar results comparing the ability to recognize and create L2 grammatical formations via chat rooms also assert equality (Fiori, 2005). These studies challenged those opposed to the legitimacy of OL L2 instruction. Furthermore, in hybrid classes (i.e., a portion of the class is completed online) students scored similarly on assessments to those in a traditional classes (Chenoweth, Ushida, and Murday, 2006). In many instances, the use of the hybrid system allowed students to outscore

F2F students in various language skills (Abrams, 2003; Healy-Beauvois, 1997; Kern, 1995; Payne and Whitney, 2002; Sykes, 2005).

The studies discussed below show how online technologies can be effective tools for second language acquisition (SLA). However, given the lack of studies that specifically measure oral proficiency in the OL environment, the review begins with other language skills with documented transference to oral proficiency.

### **Asynchronous and Synchronous Writing Skills**

Sykes (2005) assessed students' abilities in the speech act of refusing an invitation. The students who had engaged in written chat outperformed the others during a spoken assessment for the speech act by using more complex language structures and strategies. Students with online experience were speaking more. Perhaps a rationale for this could be provided by Kamhi-Stein (2000) who noted an inverse relationship in web-based discussions between students and professors. Specifically, the OL students showed an increase in student L2 production, while there was a decrease in faculty participation. Further support comes from Bayle (2013) who noted the decrease of teacher dominance in OL environments using Second Life. It makes sense that students get more practice when they speak more and that the increased practice results in a higher performance level. Darhower (2002) also noted increased and equalized student participation when using synchronous chat rooms as opposed to F2F discussions. Moving from chat text type, to more complex structures, Cahill and Catanzaro (1997) found that OL students outperformed F2F students in essay writing. Using a ratings scale based on global quality and percentage of errors, they assessed two course essay questions for students in OL and F2F Introductory Spanish classes and concluded that the OL students produced higher quality writing.

Many researchers reaffirmed the positive connection between written chat and oral skills including; Healy-Beauvois (1997), who noted that asynchronous written chat outside of the classroom lowered student anxieties and increased oral skills; Abrams (2003), who found that written chat activities increased quantity in posttest F2F discussion and increased students' oral fluency; and Payne and Whitney (2002) who measured pronunciation, syntax and grammar, vocabulary, fluency, and comprehensibility and found that "direct transfer of skills across modality from writing to speaking does occur" (p. 17) and that students who employed the synchronous text conversation outscored the F2F students who only conversed in the classroom. Furthermore, beyond merely language skills, Chun (2002) noted an increase in intercultural communicative competence when synchronous chat rooms were utilized between German and U.S. students. Together these studies provide support for the validity of OL language learning, specifically regarding students' ability to obtain high quality writing skills.

#### **Asynchronous oral skills.**

Beyond the written-oral connection, researchers also examined how technology can improve oral skills. Visual feedback systems that utilize formant frequency components have been found to improve pronunciation for English language learners (ELL) (Carey, 2004). Tanner and Landing (2009) have found that computer assisted "Cued Pronunciation Readings" (another visual system) had a significant effect on ELLs' perception of pausing and word stress and controlled production of stress. The ability to practice and self-correct oral skills in an asynchronous environment may lead to increased linguistic dexterity in the synchronous setting.

#### **Synchronous oral skills.**

Concerning the assessment of oral proficiency in completely online classes, there is a noticeable dearth of research. However, in the limited research available the results suggest OL

students can achieve recommended levels of oral proficiency (Blake, 2008). One reason OL students are successful is because working in the online environment increases students' "interactive competence" and confidence in L2 as compared to F2F students (Kötter, 2001). Yanguas (2010) noted the similarity between synchronous video-based computer-mediated-communication (CMC) versus F2F communication, which would promote similar skill acquisition. Use of Interchange, video conferencing software similar to Skype, was found to produce more balanced conversation and increased discourse functions compared to F2F discussion (Kern, 1995). Given what Kötter and Yanguas found regarding how online tools can promote oral proficiency, it is not surprising that Volle (2005) found significant gains in oral proficiency when comparing pre and post examinations for online students over the course of a semester. To test this further, Blake et al. (2008) assessed oral proficiency in three different class formats, F2F, hybrid, and OL over the course of two years, using Pearson's Versant for Spanish, the test employed in the current study. Two hundred and thirty-three students were assessed in the F2F classes and 85 were in hybrid or OL across these levels. All students completed the Versant test during the last two weeks of class. The results suggest that there is no statistically significant difference between oral proficiency related to class format. In short, similar, though not equivalent, online tools and practices led to similar gains often found in a F2F classroom.

### **Theoretical Considerations in Course Design**

Many FL professionals agree that the following criteria are necessary to become fluent: 1. Learners hear a significant amount of speech; 2. Learners receive input from varied speakers; 3. Learners create a significant amount of their own speech; 4. Learners are provided relevant feedback; and 5. The language is practiced in a significant context (Eskenazi 1999; Kenworthy,

1987; Laroy, 1995; Richards and Rodgers, 1986). Fluency is a component of overall language proficiency, which is measured by the communicative competence in a language and is “demonstrated in the understanding of authentic aural and written materials and in the ability to generate spoken and written language for real-life purposes” (Egan, 1999, p. 278).

The content-rich OL environment lends itself to many of these principles, but speech production and feedback can be more difficult to incorporate. Both F2F and OL courses in this study were developed based on ACTFL (American Council for the Teaching of Foreign Languages) standards (communication, cultures, connections, comparisons, and communities). Therefore, for the online courses examined in this study, special curricular design considerations were given to Moore’s (1989) Theory of Transactional Distance and Theory of Interaction. Taking into account the concept of transactional distance, communication between educator and learner was emphasized in the OL course since there would not be weekly F2F interactions (as is typical in F2F courses). Specifically, communication was required through multiple channels, including email, chat rooms, discussion boards, online conversation hours, and oral exams. Student needs also influenced structure of the course to a reasonable extent with accommodations like increased time on exams, selection of research topics that were of interest to the student. The Theory of Interaction prompted course instructors to ensure various OL interactions between different parties (learner-learner, learner-content, and learner-instructor). These interactions, while commonplace in the F2F classroom, provide incorporation challenges in the OL contexts. However, they are just as vital to promote oral output in the OL contexts as the F2F and must be implemented in order to promote oral output.

### **Rationale for Current Study**

Soba (2000) critiqued comparative research on OL versus F2F environments citing lack of theoretical foundations and failure to consider “individual differences in learning or prior knowledge.” These comparative studies found no significant difference (Russel, 1999) between OL and F2F learning outcomes, but many of these conclusions were drawn based on student grades and the data were not analyzed by a third party (Spodark, 2004). Other researchers embraced OL learning, but only for specific skills or levels of language. For example, Spodark (2004) postulated that only listening, reading, writing, and culture can be successfully taught online and only at intermediate and higher levels. However, Egan (1999) stated, “CALL [Computer Assisted Language Learning] cannot keep learners mute” (p. 291); the learning technology must produce meaningful ways for students to communicate in the L2 (Chapelle, 1998). So, there is a petition among researchers for using CALL to teach speaking, but Hauk (2006) noted an absence of research based on online environments where synchronous video conferencing technologies are utilized. Perhaps this lack of research contributes to the perpetuated belief that oral proficiency cannot be improved in the OL environment. Hampler and Stickler (2012) also noted the lack of research in this area. Therefore, they examined a virtual classroom and found the:

...impact of multimodal environment combining text, voice, image and live video on communication and interaction. It illustrates that the interaction that goes on in this distance learning and teaching situation reflects in many ways the discourse functions in face-to-face classroom settings-social conversations, negotiation of meaning, and off-task conversations-plus frequent conversations about technical issues such as sound problems (p.133).

Blake et al. (2008) called for more research in the field due to the “relative dearth of mainstream DL language course offerings” (p. 116) leading to “more difficulties in comparing DL student outcomes with those of students found in more traditional classroom formats” (Blake et al., 2000, p. 116). Soba (2002) also called for a continuity of research in the field of CMC. Therefore, the current study seeks to employ a comparative assessment of oral proficiency in F2F and completely OL L2 courses, based on theory, and assessed by a third party.

With the emphasis on oral output, this study seeks to add to the corpus of research related to OL FL learning and retests Blake’s findings in F2F and OL courses in a different educational system with different texts and instructional techniques. Although there is limited data suggesting OL learning is as effective as F2F learning of a FL there is not enough evidence to propose predictions at this time. Vocabulary acquisition and sentence formation are essential to oral communication, which prompts their inclusion below. Therefore, the following research questions are put forth to address this line of inquiry:

*RQ1: Does the method of course delivery (OL vs. F2F) affect overall Spanish oral proficiency?*

*RQ2: Does the method of course delivery affect pronunciation ability in Spanish?*

*RQ3: Does the method of course delivery affect acquisition of vocabulary in Spanish?*

*RQ4: Does the method of course delivery affect sentence formation in Spanish?*

*RQ5: Does the method of course delivery affect acquisition of oral fluency in Spanish?*

## **METHODS**

Participants ( $n=90$ ) for this study were undergraduate college students taking Introductory Spanish, using the Arriba text (Zayas-Bazán, Bacon, and Nibert, 2012), at a small

regional campus in the United States' Midwest. Students were new language learners (i.e., no language experience), false beginners (students who started at beginning Spanish despite having some experience in the language), or placement exam/transfers into the second semester.

Twenty-two students reported having had no previous experience in Spanish; and the remaining 68 students were false beginners. Further analysis of the false beginner cohort shows that 17 reported having had less than three semesters of high school or middle school Spanish language experience and 51 reported having had over three semesters of language study.

Introductory Spanish is a sequence of two courses, each worth four credit hours. Students generally complete Introductory Spanish in two consecutive semesters, although students who successfully complete a placement exam could take only the second semester of Spanish. Some students completed the two courses only F2F or only OL, but others switched between the F2F and OL formats between the semesters. All sections covered the same chapters each semester and used myspanishlab online homework system with similar amounts of homework. During the last two weeks of the second semester oral proficiency was tested, and oral proficiency exam results were evaluated by course format (OL vs. F2F) for the two course Introductory Spanish requirement, using a third party assessment called Pearson's Versant for Spanish Test. The Versant exam is based on psycholinguistic theories of language acquisition of facility (Levitt, 1989) and automaticity (Cutler, 2003). Levitt's model of language production includes five levels: conceptualizer, lexicon, formulator, monitor system, and articulator between listening to a language prompt and response necessary for conversation. Versant measures listening, processing, and responding times while taking into account automaticity, or comprehending and producing language without conscious thought. A computer algorithm then assesses the speech using a parser and speech recognition software.

The exam follows this framework by including spoken prompts at a conversational pace by native speakers from different countries, which controls for regional accents. It then measures: “phonological fluency, sentence comprehension, vocabulary, and pronunciation of rhythmic and segmental units” (Versant). On the exam students engage in reading sentences for pronunciation, repeating, providing an opposite for an oral prompt (Versant: “Hot,” Student: “Cold”), story retelling, unscrambling jumbled sentences and short answer questions. Upon completion the student receives an overall proficiency score and subscores for pronunciation, vocabulary, sentence mastery, and fluency.

The Versant test can be linked to ACTFL Oral Proficiency Interview (OPI) results with a correlation of .86, which validates the Versant model for assessing oral proficiency (Versant). The table below shows how Versant scores correspond to ACTFL OPI scores. It is anticipated that at the end of the second semester students will score somewhere between 33 (Intermediate Low) and 52 (Intermediate Mid).

*Table 1. Versant to ACTFL Score Comparison*

Versant Score	ACTFL Score
63-72	Advanced Low
53-62	Intermediate High
43-52	Intermediate Mid
33-42	Intermediate Low
23-32	Novice High
20-22	Novice Mid

As outlined in the chart below, six possible cohorts were formed based on the various combinations of F2F/OL methods in which the two semesters of Spanish were completed.

Beyond course completion, students also indicated previous language study and informal language experience.

*Table 2. Participants for Second Semester Versant Test*

Cohort	Manner of 1 <sup>st</sup> Semester Course Completion	Manner of 2 <sup>nd</sup> Semester Course Completion
1 (n=44)	F2F	F2F
2 (n=33)	OL	OL
3 (n=5)	F2F	OL
4 (n=2)	OL	F2F
5 (n=3)	Placement Exam/Transfer	F2F
6 (n=3)	Placement Exam/Transfer	OL

### Procedures

Students enrolled in Introductory Spanish courses either OL or F2F based on their academic or personal needs/desires. At the end of the second semester course, students completed an assessment of oral proficiency, the Versant for Spanish test. The students were then asked to provide consent to use their data from the standardized test as well as complete a short questionnaire online to provide basic information related to their experience in the L2. Students were required to complete the assessment, but they could deny permission to allow their scores to be used in the study. To ensure blind grading, all consent forms were housed by an IRB approved individual and released to the researchers after semester grades were submitted. This study was approved by the university’s IRB.

In the last weeks of the semester students completed the Versant exams. They scheduled the exams at their own convenience and completed them at a location of their choosing. Oral proficiency scores and subscores were then produced and submitted.

As another part of the proficiency exam, and to account for potential variables, students self-reported their experience in the L2. They were asked 1. If they had any experience in Spanish before the course; 2. If so, the number of semesters of Spanish studied (in middle and high school); 3. If they had taken any Spanish at another university; 4. If they had significant interactions with Spanish speakers outside of the classroom (for example, via long term travel stays or frequent interactions with Spanish speakers) that could affect their oral proficiency. Finally, they were asked how they completed their Spanish coursework for the two introductory semesters: F2F, OL, placement exam, or as a transfer student.

### **Data Analysis**

The data were analyzed in SPSS. In order to control for instructor effect, a one-way ANOVA analyzed Versant scores between the students' instructors ( $n=4$ ). There were no significant differences between instructors,  $F(3,85)=1.584$ ,  $p=.199$ , related to student overall Versant results, indicating to the researchers that any differences found in Versant scores were not related to course instructor.

Because data were collected after the second semester the researchers accounted for transfer students and voluntary placement test-ins who did not complete the first semester of the prescribed sequence, which could impede evaluation of oral proficiency. Nevertheless, it is important to include these students in pedagogically-based research, because the outliers are learners and their learning experience is part of what's being studied. They are, therefore, included in the analysis and an Independent sample t-test  $t(88)=-.238$ ,  $p=.64$  showed no

significant difference between those who transferred or tested-in ( $M=32.60$ ,  $SD=8.95$ ) to the second semester of the program, compared to those who completed both semesters at the host campus ( $M=33.50$ ,  $SD=9.71$ ). Note that false beginners and test-ins could have had similar previous language experience, so with the large number of false beginners enrolling in Introductory Spanish this result is to be expected. Also, as students with different levels of experience enter into Introductory Spanish, controlling for the possible effects of language experience on oral proficiency was essential. Independent sample t-test revealed no significant difference between students with previous Spanish language experience (again false beginners or transfers) ( $n=68$ ) and true beginners ( $n=22$ ) when tested at the end of Introductory Spanish,  $t(88)=1.365$ ,  $p=.167$  with respective means of  $31.93$  ( $SD=7.7$ ) and  $34.91$  ( $SD=12$ ).

Another area of concern was the possible effect of heritage speakers, students whose parents or grandparents may be native speakers of the L2, or those who had had significant daily interaction, such as with a friend, or prolonged study abroad experience. However, the results suggest that self-identifying as having had significant and prolonged interaction in Spanish did not increase oral proficiency scores in a statistically significant way,  $t(8.7)=-.298$ ,  $p=.77$ .

Finally, due to smaller class sizes it took several semesters to collect enough data to present on the findings. Testing rounds were completed in spring 2013, summer 2013, spring 2014, and extended to summer 2014. A one-way ANOVA was conducted to verify that there were no significant differences between the groups who completed their coursework at different times. The results suggest no significant difference  $F(3,86)=.367$ ,  $p=.78$  between the four rounds of testing.

## Results

Students enrolled in F2F and OL courses to complete the requirements for Introductory Spanish. At the end of the two course Introductory Spanish sequence, students completed the Versant exam.

### **Mode of Instruction**

The results on this exam were then compared to how the students reported having completed their Introductory Spanish coursework (OL, F2F) and their self-reported language experience. To answer the first research question of this study, “Does the method of course delivery (OL vs. F2F) affect overall Spanish oral proficiency?” To examine overall score based on those who completed the coursework in the same format each semester, an Independent sample T-test was conducted comparing the overall Versant scores of students who completed both semesters online ( $n=33$ ) and those who completed both semesters face-to-face ( $n=44$ ). The results were not significant,  $t(75)=-1.29$ ,  $p=.11$ , online ( $M=34.06$ ,  $SD=10.89$ ) and face-to-face ( $M=31.34$ ,  $SD=7.65$ ).

Having observed no significant differences in overall score based a homogenous course sequence, Versant test results were compared based solely on how students fulfilled their first-semester Introductory Spanish. These results indicate that there were no significant differences,  $t(82)=-1.345$ ,  $p=.21$ , in oral proficiency for students who self-reported completing their first semester Spanish OL or F2F. Although there were no statistically significant differences between students enrolled in OL or F2F courses in their first semester of study when data was collected at the end of the second semester, it should be noted that students who completed the first semester online had an overall higher mean ( $M=34.14$ ,  $SD=10.66$ ) on their Versant scores than those who completed F2F ( $M=31.5$ ,  $SD=7.43$ ). Further, Cohen’s effect size value ( $d = 0.29$ ) suggested small to moderate practical significance.

Having noted that method of delivery of the first semester L2 did not affect Versant scores in a statistically significant way, another Independent sample t-test based was conducted to determine if the method of delivery for second semester Introductory Spanish impacted Versant scores. To further answer the research question 1, no statistically significant difference,  $t(88)=-.1, p=.32$ , was found between those who completed the second semester OL versus the second semester F2F. Again, the mean score was higher for students who completed second semester online ( $M=33.68, SD=9.98$ ) than for students who completed it F2F ( $M=31.8, SD=7.99$ ). However, Cohen's effect size ( $d = .21$ ) suggested small practical significance.

Because the sample size in each cohort was quite different the non-parametric Kruskal-Wallis H test was used to further investigate if the six cohorts were statistically different. The results showed no statistical difference between the cohorts and their Versant scores  $X^2(5) = 1.55, p=.91$ . Therefore, these results suggest the six different paths for completing Introductory Spanish were roughly equivalent.

### **Pronunciation**

The remaining research questions addressed pronunciation, vocabulary, sentence formation, and oral fluency, the specific subscores of oral proficiency as defined by the Versant Spanish test. Independent sample t-tests revealed no significant difference for pronunciation between the OL and F2F students,  $t(82)=-1.43, p=.16$ . Results for first semester were not statistically significant. As observed with the overall Versant proficiency score, the students who completed the first semester OL ( $M=42.26, SD=8.2$ ) outscored those who completed it F2F ( $M=39.63, SD =8.4$ ) in the subcategory of pronunciation. Further, Cohen's effect size value ( $d = 0.32$ ) suggested a moderate practical significance. The results for second semester course mode were in line with those from the first semester,  $t(88)=-1.26, p=.21$ . The difference in mean

pronunciation scores is also surprisingly consistent, F2F  $M=39.86$ ,  $SD=8.8$ , OL  $M=42.05$ ,  $SD=7.6$ . However, Cohen's effect size ( $d = -0.27$ ) suggests only a small practical significance. These results indicate no significant difference in pronunciation based on course mode for the first year of language.

### Vocabulary

Concerning the subcategory of vocabulary, one might not expect a pronounced difference because it is largely based on memorization techniques and use in context based exercises. Opportunities to practice these skills would seemingly be equal in OL and F2F classrooms. However, there is no research that analyzes acquisition of vocabulary in the OL only environment. Therefore, independent sample t-test results based on the first semester mode of instruction was performed and was not statistically significant,  $t(53.8) = -1$ ,  $p=.33$ . Again the OL students ( $M=29.71$ ,  $SD =13.7$ ) outscore the F2F students ( $M=27.1$ ,  $SD=8.9$ ). However, Cohen's effect size ( $d = 0.23$ ) suggest only a small practical significance. Students who took second semester Spanish OL ( $M=29$ ,  $SD=13.2$ ) outscored F2F ( $M=27.59$ ,  $SD=9.1$ ) in the vocabulary category, however, not in a statistically significant way,  $t(88) = -.6$ ,  $p=.55$ . Again, Cohen's effect size ( $d = 0.12$ ) suggest only a small practical significance.

### Sentence Formation

Like vocabulary, sentence formation is a skill that perhaps FL professionals would less contentiously debate mastery of in the OL environment because of its ability to be easily practiced in both course formats. But, again like vocabulary, there is limited to no data on this skill in the OL only classroom. When tested the results indeed showed that OL and F2F in first semester mastered the content at a similar level,  $t(82) = -.841$ ,  $p=.40$ , but the OL students' average was higher ( $M=31.4$ ,  $SD=15.6$ ) than F2F ( $M=29$ ,  $SD=10.6$ ). As with the other Versant

subscores Cohen's effect size ( $d = 0.18$ ) suggest only a small practical significance. Based on second semester course completion, the findings are similar and not significant,  $t(88) = -.786$ ,  $p = .43$ . Again, OL mean scores ( $M = 31.44$ ,  $SD = 15.4$ ) are higher than F2F mean scores (29.29,  $SD = 10.4$ ). However, Cohen's effect size ( $d = 0.16$ ) suggests only a small practical significance. For the first year of language, the results indicate that course mode does not affect sentence formation skills in a statistically significant manner.

### Fluency

Finally, a measure of the last subcategory reveals similar results. When testing fluency based on having had a first semester class OL or F2F, the difference between scores for the cohorts was not significant,  $t(82) = -.77$ ,  $p = .44$ . On average OL students ( $M = 36.8$ ,  $SD = 9.8$ ) outscored F2F students ( $M = 34.88$ ,  $SD = 12.2$ ). However, Cohen's effect size, again, only suggested a small practical significance ( $d = 0.17$ ). When considering mode of instruction for the second semester, the results were similar:  $t(88) = -.414$ ,  $p = .68$ , with means of 35.08 ( $SD = 12.4$ ) for F2F students and 36.05 ( $SD = 9.2$ ) for OL students. Again, Cohen's effect size suggested only a small practical significance ( $d = 0.07$ ). These results indicate that fluency skills are not subject to deleterious effects from the OL classroom.

### True Beginners

As a last area to investigate, especially considering Saba's (2002) critique, true L2 beginners ( $n = 22$ ) were analyzed. These students self-reported having had no prior experience in the L2. The beginners were, therefore, a controlled group with no experience at the onset of Introductory Spanish and, as such, were a useful cohort to examine. Because of the low number of true beginners these results should be considered preliminary; however, when taken as an appendix to the other findings in this study, they can provide useful information. Based on end of

the first year of Introductory Spanish Versant scores, true beginners were compared to students who reported prior L2 experience. As previously mentioned, Independent sample t-test revealed no significant difference between the experienced and inexperienced cohorts at the end of the year. Analyzing only the true beginner cohort showed that those who enrolled in the first semester OL ( $n=13$ ) did not produce significantly different Versant scores than those who enrolled in the F2F course ( $n=9$ ),  $t(20)=-.312$ ,  $p=.758$ . However, in this case, the true beginners who enrolled in semester one F2F had a slightly higher mean, ( $M=35.89$ ,  $SD =15.3$ ) than those in the OL ( $M=34.23$ ,  $SD=9.7$ ). As with the other comparisons, Cohen’s effect size ( $d = .13$ ) showed only a small practical significance. This pattern of the beginner cohort continued into second semester. An independent sample t-test showed no significant difference between the two modes of instruction (F2F  $n=11$ , OL  $n=11$ ),  $t(20)=-.139$ ,  $p=.472$ , with means of 35.27 ( $SD=13.8$ ) for F2F and 34.55 ( $SD=10.5$ ) for OL for the overall Versant exam score. Further, Cohen’s effect size ( $d = 0.06$ ) suggested only a very small practical significance.

As tables 3 and 4 indicate, the patterns continued for the Versant subcategories. At the end of the first year, when tested on vocabulary, sentence formation, fluency, and pronunciation, there are no significant differences between true beginners who take OL courses and those who take F2F courses to fulfill their Introductory Spanish coursework.

Table 3. True Beginner Versant Test based on Completion Mode of Semester 1

	Instruction mode	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Vocabulary	OL	29.08	11.8	$t(20)=-.07$	.94
	F2F	29.56	19.8		
Sentence Formation	OL	32.54	10.7	$t(20)=-.02$	.99
	F2F	32.67	21		
Fluency	OL	37.15	17.2	$t(20)=-.6$	.56
	F2F	40.78	7.2		
Pronunciation	OL	40.31	10.3	$t(20)=-.76$	.46

	F2F	43.78	10.9		
--	-----	-------	------	--	--

Table 4. True Beginner Versant Test based on Completion Mode of Semester 2

	Instruction mode	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Vocabulary	OL	28.45	11.6	$t(20)=-.25$	.81
	F2F	30.09	18.9		
Sentence Formation	OL	32.82	11.08	$t(20)=-.07$	.95
	F2F	32.36	19.1		
Fluency	OL	38.18	18.5	$t(20)=-.15$	.88
	F2F	39.09	7.9		
Pronunciation	OL	40.64	11.3	$t(20)=-.48$	.64
	F2F	42.82	10		

## Discussion

The goal of this study was to assess OL and F2F oral fluency to ascertain if there were significant differences in oral skills for OL students. To reach this goal, a Versant Spanish test was administered and compared to language learning format. Across the areas of pronunciation, vocabulary, sentence formation, oral fluency, and overall oral proficiency, no significant differences were revealed. Similarly to Blake et al. (2008) we are not testing language gains, but these findings allow us to conclude that overall proficiency is not affected by course mode, OL or F2F, for the first year of FL instruction. Volle (2005) tested oral proficiency gains in OL students. The current study's finding that OL and F2F formats produce similar results suggests that students in either course format would have comparable gains. In order to assess language gains in the future, a pretest at the onset of the first semester would produce interesting data regarding students' initial L2 knowledge. It would also be a manner to measure a different indicator of the quality of instruction in the OL and F2F classrooms" language gains over the first year of courses. Conversely, assessing true language beginners using native speaker speech

would certainly raise student anxiety and possible resistance to the course material and, in this study, a preliminary control for true L2 beginners revealed no significant differences based on F2F or OL modes of instruction. Additionally, the purpose of this study was not to necessarily measure oral proficiency gains, but to conduct a comparative analysis of OL and F2F course methodologies and their effects on oral proficiency. Finally, students self-reported their language experience as part of the study. This information revealed that increased experience in the language (i.e., in high school) was not tied to high Versant scores in a statistically significant way.

Overall, the results suggest that OL L2 instruction, even at introductory levels, is a valid form of L2 instruction for oral proficiency, which reaffirms Blake et al.'s 2008 study of oral proficiency in online and traditional classrooms. At the introductory level the higher average score for OL students cannot be predicted with statistical significance. This finding indicates that OL and F2F courses can be equivalent experiences with regard to how they foster oral proficiency, an essential component of communicative competence. Certainly, with this analysis, the results can be taken to indicate that OL classes can function in facilitating acquisition of oral skills, at least using the pedagogy employed in the online L2 classes studied.

In this study, course design was guided by pedagogical techniques and theories of language. Courses were designed with 's Don (2005) five fundamental considerations for OL FL courses, as identified by instructors and students, to the traditional constructs of fluency mentioned earlier, (hearing, variety of input, creation of speech, relevant feedback, significant context). These included: clear instructions, student-instructor contact, audio components, emphasis of four language skills, and student-student interaction. Eskenazi (1999) proposed two additions to this construct, 1. Student comfort and 2. Frequent teacher feedback. Finally,

instruction was guided by Hauck (2006), who postulates that an ideal online L2 teacher must 1. Combine and adapt to different roles, 2. Use different styles of teaching, and 3. Develop techniques specific to the OL environment.

Additionally, to strive for an equivalent educational experience to a F2F classroom, oral output was emphasized in the OL classroom through a variety of asynchronous and synchronous activities. Providing synchronous oral output in the OL classroom can present a challenge to the instructor. However, one of the most consistent offerings in the OL classrooms studied were required weekly conversation hours, which can “make a major contribution to the level of individual practice and the extent of instructor attention, which might even exceed what can be found in traditional classrooms given their burden of 25 to 30 students in a 50-minute period” (Blake, 2008, p. 123). In the courses studied, to reach all students, schedules, and to ensure smaller session sizes, five sessions per week were led by a Teaching Assistant. In a semester Introductory Spanish students were required to attend five to seven hours of synchronous small group conversation. Heiser and Stickler (2014) noted that Open University offers 20 hours per semester, but they are completely optional; the authors recommend requiring attendance of a minimum number of sessions. Although the sessions utilized in this study were graded based on attendance-only, the conversation leader gave implicit and explicit oral redirection based on pronunciation or grammar throughout the session when appropriate. This formed one of the mediums for frequent teacher feedback suggested by Eskenazi (1999). Recorded live conversations with students were also considered a useful tactic to ensure oral output; these occur synchronously but are graded asynchronously. Last, once-per-semester one-on-one oral interviews with the instructor, who assessed the interview based on fluency, pronunciation, content, and vocabulary, were required.

The larger implications of this study suggests OL courses that emphasize oral output are indeed a viable means for students to obtain oral proficiency in another language, in spite of OL language teaching detractors. In lieu of an immediate rejection of teaching languages online, FL professionals and universities may need to broaden their methods of teaching language. Besides the possible increase in university service area (i.e., allowing universities to reach students who do not live on or near campus), offering L2 courses online can also help engage nontraditional or working students whose schedules do not permit them to regularly attend classes on campus.

This study examined Spanish, but the results may hold true for any language, including those with lower enrollments. Perhaps offering online L2 programs can boost numbers in less commonly taught languages in the U.S. higher education system and ensure that they continue to be taught. In the recent past, colleges like SUNY gained negative press by suspending foreign language programs in French, Russian, and Italian (Foderaro, 2010). Innovating instruction via OL courses may help keep languages relevant and, to appease college administrations, more highly enrolled.

Geographic and temporal flexibility are inherent in online courses. But there are other benefits to diversifying course modes, such as searching out innovative instructional techniques that teaching OL courses can promote. While not all FL teachers' fears will be assuaged enough to enter the world of OL instruction, at the very minimum, this study should encourage an interesting conversation for language professionals to consider how online spaces can enhance their F2F classroom experiences.

Possible limitations of this study include the small sample size ( $n=90$ ) and language learning beyond the introductory levels. Continued research is needed and planned for spring 2015 and summer 2015 to add to the introductory analysis. Research will also be conducted to

assess oral skills at the intermediate level (up to fourth semester) via the same procedures as the introductory analysis.

Another way to bolster this study would be to assess and verify results using different assessment tools, such as Oral Proficiency Interviews via ACTFL although Blake (2009) noted that the ACTFL scale is not designed to measure small increments of proficiency improvement in beginners and the Versant test has been validated against OPI, as discussed earlier.

Administering other types of oral proficiency testing, like ACTFL's, would, however, be a worthwhile pursuit in order to employ and compare test results, particularly as students move up the curriculum. Efforts in this area should be encouraged.

## CONCLUSION

In the field of foreign languages, online instruction models are a contentious topic. Online teaching is not identical to face-to-face teaching; it presents unique challenges to both the instructor and the student. Nevertheless, the purpose of this study was to pay particular attention to oral proficiency as an important component of communicative competence. In accord with previous research in the field, the results of this study support the idea that L2 instruction, with regard to oral proficiency, can be successful in an online format if required oral output forms a key component. This study supports the idea that students in OL L2 classes can achieve equal proficiency skills compared to those students who take F2F only L2 classes. With every new wave of advancement in language technology, assimilating data driven information on the best practices for teaching well with this new tool can further ensure a rich learning experience for language learners and resolve challenges, no matter the class format.

## REFERENCES

- Abrams, Z. I. (2003). The effect of synchronous and asynchronous CMC on oral performance in German. *Modern Language Journal*, 87(2), 157-167. doi: 10.1111/1540-4781.00184
- Bayle, A., & Youngs, B. (2013) Patterns of interaction between moderators and learners during synchronous oral discussions online. *CALICO Journal*, 30, 66-91.
- Blake, R. (2000). Computer mediated communication: A window on L2 Spanish interlanguage. *Language Learning and Technology* 4(1), 120–136.
- Blake, R. (2009). The use of technology for second language distance learning. *Modern Language Journal*, 93, 822-825. doi: 10.1111/j.1540-4781.2009.00975.x
- Blake, R. (2012). Best practices in online learning: Is it for everyone? In: F. Rubio, J. J. Thomas, & S. K. Bourns (Eds.), *Hybrid language teaching and learning: Exploring theoretical, pedagogical and curricular issues* (pp. 10-26). Boston, MA: Heinle Cengage Learning.
- Blake, R., Wilson, N., Cetto M., & Pardo-Ballester, C. (2008). Measuring oral proficiency in distance, face-to-face, and blended classrooms. *Language Learning & Technology*, 12, 114-127.
- Cahill, D., & Catanzaro, D. (1997). Teaching first-year Spanish on-line. *CALICO Journal*, 14(2-4), 97-114.
- Carey, M. (2004). CALL visual feedback for pronunciation of vowels: Kays Sona-Match. *CALICO Journal*, 21, 571-601.
- Chapelle, C. (1998). Multimedia CALL: Lessons to be learned from research on instructed SLA. *Language Learning & Technology*, 2(1), 22-34.
- Chenoweth, N. A., & Murday, K. (2003). Measuring student learning in an online French course. *CALICO Journal*, 20(2), 284-314.

- Chun, D. (2011). Developing intercultural communicative competence through online exchanges. *CALICO Journal*, 28(2), 392-419.
- Colpaert, J. (2006). Pedagogy-driven design for online language teaching and learning. *CALICO Journal*, 23(3), 477-497.
- Cutler, A. (2003). Lexical access. In L. Nadel (Ed.), *Encyclopedia of cognitive science* (Vol. 2), *Epilepsy – Mental imagery, philosophical issues about* (pp. 858-864). London: Nature Publishing Group.
- Darhower, M. (2002). Interactional features of synchronous computer-mediated communication in the intermediate L2 class: A sociocultural case study. *CALICO Journal*, 19(2), 249-277.
- Dodigovic, M. (2005). *Artificial intelligence in second language learning: Raising error awareness*. Buffalo, NY: Multilingual Matters.
- Don, M. (2005). An investigation of the fundamental characteristics in quality online Spanish instruction. *CALICO Journal*, 22(2), 285-306.
- Ehsani, F., & Knodt, E. (1998). Speech technology in computer-aided language learning: Strengths and limitations of a new call paradigm. *Language Learning & Technology*, 2(1), 45-60.
- Egan, K. (1999) Speaking: A critical skill and a challenge. *CALICO Journal*, 16(3), 277-293.
- Eskenazi, M. (1999). Using a computer in foreign language pronunciation training: What advantages? *CALICO Journal*, 16(3), 447-469.
- Fiori, M. L. (2005). The development of grammatical competence through synchronous computer-mediated communication. *CALICO Journal*, 22 (3), 567-602.

- Foderaro, L. W. (2010, December 3rd). Budget-cutting colleges bid some languages adieu. *The New York Times*. Retrieved from [http://www.nytimes.com/2010/12/05/education/05languages.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2010/12/05/education/05languages.html?pagewanted=all&_r=0)
- Hauck, M., & Stickler, U. (2006). What does it take to teach online. *CALICO Journal*, 23(3), 463-475.
- Healy-Beauvois, M. (1997). Computer-mediated communication: Technology for improving speaking and writing. In M. D. Bush (Ed.), *Technology-enhanced language learning*. (pp. 165-184). Lincolnwood, IL: National Textbook Company.
- Heiser, S., & Stickler, U. (2013). Ready, steady, speak-online: Student training in the use of an online synchronous conferencing tool. *CALICO Journal*, 30(2), 226-251.
- Hampel, Regine and Stickler, Ursula (2012). The use of videoconferencing to support multimodal interaction in an online language classroom. *ReCALL*, 24(2) pp. 116–137.
- Higgins, S., Beauchamp, D. & Miller G. (2007). Reviewing the literature on interactive whiteboards. *Learning Media and Technology*, 32, 213-225. doi: 10.1080/17439880701511040
- Hubbard, P. (Eds.). (2009). *Computer assisted language learning*. London: Routledge.
- Kenworthy, J. (1987). *Teaching English pronunciation*. Harlow: Longman.
- Kern, R. (1995). Restructuring classroom interaction with networked computers: Effects on quantity and characteristics of language production. *Modern Language Journal*, 79, 457–476. doi: 10.1111/j.1540-4781.1995.tb05445.x
- Kötter, M. (2001). Developing distance language learners' interactive competence –

Can synchronous audio do the trick? *International Journal of Educational Telecommunications*, 7(4), 327 - 353.

Laroy, C. (1995). *Pronunciation*. Oxford: Oxford University Press.

Levelt, W. (1989). *Speaking: From intention to articulation*. Cambridge, MA: MIT Press.

Moore, M. (1989). Three types of interaction. *The American Journal of Distance Education*, 3(2), 1-6.

Payne, J. S., & Whitney, P. J. (2002). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. *CALICO Journal*, 20(1), 7-32.

Pellettieri, J. (2000). Negotiation in cyberspace: The role of chatting in the development of grammatical competence. In M. Warschauer, & R. Kern (Eds.), *Network-based language teaching: concepts and practice* (pp.59-86). New York: Cambridge.

Richards, J., & Rodgers, T. S. (1986). *Approaches and methods in language teaching: A description and analysis*. Cambridge: Cambridge University Press.

Rubio, F., & Thomas J. J. (Eds.). (2012). *Issues in language program direction: Hybrid language teaching and learning: Exploring theoretical, pedagogical and curricular issues*. Boston, MA: Cengage Learning.

Russel, T. (2001). *The no significant difference phenomenon: A comparative research annotated bibliography on technology for distance education*, Montgomery, AL: International Distance Education Certification Center.

Salaberry, M. R. (1996). A theoretical foundation for the development of pedagogical tasks in computer mediated communication. *CALICO Journal*, 14(1), 5-34.

- Son, J. (2002). Online discussions in a CALL course for distance language teachers, *CALICO Journal*, 20(1), 127-144.
- Sun, S. (2014). Learner perspectives on fully online language learning. *Distance Education*, 35(1), 18-42. doi: 10.1080/01587919.2014.891428
- Spodark, E. (2004) French in cyberspace: An online French course for undergraduates. *CALICO Journal*, 22(1), 83-101.
- Sykes, J. (2005). Synchronous CMC and pragmatic development: Effects of oral and written chat. *CALICO Journal*, 22(3), 399–431.
- Tanner, M. W., & Landing, M. L. (2009). The effects of computer-assisted pronunciation readings on ESL learners' use of pausing, stress, intonation, and overall comprehensibility. *Language Learning & Technology*, 13, 51-65.
- Versant for Spanish [Computer software]. Available at <http://www.ordinate.com/versant/business/professional/samples.jsp>
- Volle, L. M. (2005). Analyzing oral skills in voice e-mail and online interviews. *Language Learning & Technology*, 9(3), 146-163.
- Warschauer, M. (1995). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal*, 13(2&3), 7-20.
- Yanguas, I. (2010). Oral computer-mediated interaction between L2 learners: It's about time. *Language Learning & Technology* 14, 72-79.
- Zayas-Bazan, E. J., Bacon, S., & Nibert, H. J. (2012). *Arriba!: Comunicación y Cultura* (6<sup>th</sup> ed.). Prentice Hall.