Measuring Student Learning in an Online French Course[1]

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ABSTRACT

This paper reports the results of the assessment of Elementary French I Online, the first course to be offered under the Language Online project at Carnegie Mellon University. The purpose of the assessment was to determine if there were significant differences in achievement, satisfaction, and time spent on the course between the students in the online course and those in a conventional (offline) course. Multiple measures were taken of student background, including language and technology experience, and individual differences in learning styles. Students were compared on measures of grammatical knowledge, written production, oral production, listening comprehension, and reading comprehension; in addition, measures of satisfaction and time spent learning French were determined through course evaluations and interviews. The only statistically significant difference on the learning measures occurred in the written production task in which the online students outperformed the offline students; however, results should be carefully interpreted due to the sample size and use of intact classes. Student satisfaction was generally positive, but students in the online course voiced some frustrations. Students in the online course also reported spending less time studying French than did their counterparts in the conventional course.

KEYWORDS

Online Courses, Computer-assisted Language Instruction, Assessment, Online Learning, Evaluation

INTRODUCTION

The Language Online project at Carnegie Mellon University originated because scheduling problems prevented many students from taking beginning level language courses. Conventional elementary level courses meet four or five days per week for one hour each day. While language classes are not a requirement per se at Carnegie Mellon, they can be used to fill certain distribution requirements. Many students with required laboratory, seminars, or other courses in disciplines such as architecture or the sciences often have trouble taking language classes despite a desire to do so.

To address this problem, four semesters of elementary and intermediate level French and Spanish courses are currently under development to be delivered primarily via the web. Students in the online courses meet face-to-face as a class for only one hour per week in the evening to avoid the conflicts that previously had prevented them from taking beginning language courses. They also meet weekly in groups or one-on-one with the instructor or a language assistant for 20 minutes and chat online one hour per week with classmates and the language assistant. The rest of the course is carried out online at the students' own pace (provided they keep current for the weekly class meeting). The course is organized in modules, each with five sections: *Communication, Univers culturel* 'culture,' *Outils linguistiques* 'linguistic tools,' *Activités de synthèse* 'synthesis activities,' and *Suppléments* 'supplemental material.' Subsections listed on the left side of the window allow students to organize their studies and review course components as needed (see Figure 1).

Figure 1
French Online Window

In Elementary French I Online, the communication section introduces the topics to be learned in the module and illustrates the contexts in which they can be used. The culture section gives the students an opportunity to learn about the Francophone world. The linguistic tools section provides details on the grammar points for the module, as well as a vocabulary list; and also generally include practice exercises (created with *Hot Potatoes* [see web.uvic.ca/hrd/halfbaked]) that allow students to test their own progress. Additional home-

work assignments, designed to allow students to apply the material learned in the module, are provided in the synthesis section. These assignments include email messages, bulletin board postings, discussion topics for the individual 20-minute meetings, and assignments to be recorded and submitted to the instructor as email attachments. Email, the bulletin board, synchronous chat sessions, and testing are all managed by *WebCT* course management software. Finally, the supplemental materials section includes additional material (e.g., pronunciation guides) to help all students in their studies or to provide optional opportunities for motivated students to learn more about the language and the culture.

As required by the grant from the Mellon Foundation, an on-going evaluation of the online courses is being conducted. We are comparing student learning, satisfaction, and time spent learning the target language in the online course versus the conventional face-to-face course. This paper details the evaluation of the first iteration of the course, Elementary French I Online, offered during Spring 2000.

LITERATURE REVIEW

The evaluation of student learning using computer-assisted language learning (CALL) environments remains relatively rare, while the rapid pace of technological development often renders previous conclusions about specific systems or applications irrelevant for current practice (Warschauer & Healey, 1998). Research in the area has largely dealt with descriptions of activities carried out by groups of students working together at a computer (Hara & Kling, 2000; Windschitl, 1998). Many SLA researchers (e.g., Gass, 1997; Long, 1996; Mackey, 1999; Pica, 1996) view interaction as essential for language learning; however, until recently, providing interaction in a distance education context was too cumbersome or too expensive to be of practical use. The development of computer-mediated communication (CMC) has allowed for interaction to be integrated into online courses, making it possible to offer foreign language courses at a distance. The literature on CMC and distance learning provides additional perspectives which complement the literature on CALL and help us understand the various issues which must be taken into account in designing viable online foreign language courses.

Computer-assisted Language Learning

Warschauer and Healey (1998), in their history of CALL, distinguish three stages of CALL and CALL research. The first, dating from the 1950s, followed a behaviorist model and led to the creation of many drill-and-practice programs. The second stage began in the late 1970s and early 1980s and involved a communicative approach. Learning was characterized by a process of development, discovery, and expression. The focus in many cases was not on what students did while working with the computer but on how students interacted with each

other while working at the computer in pairs or small groups. Warschauer and Healey identify the third and current stage as integrative CALL, which involves integrating language skills (such as listening, speaking, reading, and writing) as well as integrating the technology with the language learning process.

Several variables should be taken into account in conducting research in this area. Dunkel (1991), in her review of computer-assisted instruction (CAI) and computer-assisted language learning (CALL) effectiveness research, identifies amount of student learning time, student attitudes, specific content areas, types of CAI, and levels of student ability as key variables. Chapelle and Jamieson (1986) argue that CALL effectiveness research must take learner variables (e.g., field independence, ambiguity tolerance, motivational intensity, and English-class anxiety) into account, in addition to time spent using the CALL lessons and student attitudes toward the lessons. Their study suggests that learner success could be related to how well the method in a learning task matches the student's cognitive style.

While calling for experimental and ethnographic studies, and a need for "non-technocentric" approaches to cognitive and social effects of CALL, Dunkel (1991) calls our attention to the problem of attributing learning to the medium itself rather than the way in which the medium is utilized and manipulated. This last point is echoed by Johnson (1991), who also argues against treating the use of computers as an independent variable with effects on the classroom. It is not the computer itself, but how it is used, that should be the focus.

There is a need for effectiveness research in CALL, and, although some studies have begun to appear, most focus on the learning and interaction that occurs during specific tasks rather than learning which occurs throughout a course. Under Warschauer and Healey's (1998) rubric of communicative approach research, Chang and Smith (1991) and Evans (1992) consider the effectiveness of CALL applications to promote interaction. Chang and Smith looked at the interaction of students in an accelerated beginning Spanish class who worked either in pairs or individually at a CALL/IVD (interactive videodisc) task. They found that the CALL/IVD task did not seem particularly effective at promoting interaction in the L2; interaction among the pairs was conducted mostly in the L1.

Evans (1992) looked at the number and types of exchanges between students who worked on a paper cloze task and those who completed a similar task using a computer. She found that the students spoke in the target language for a larger percentage of the allotted time during the CALL task, but with shorter turns. Although student attitude was positive towards both tasks, she argues that while students may perceive a task as useful and productive, that alone does not provide evidence that language learning was stimulated during the process. Since there was no empirical comparison of language gain during or after the task, no conclusions can be drawn as to the effectiveness of the task for language learning. In addition, the investigation focused simply on whether using a computer promoted communication among co-located group members.

Computer-Mediated Communication

An increasing number of studies in the CMC literature address the use of computers as the medium of communication when students are communicating from distant locations. The language used in CMC has characteristics of both oral and written communication (Werry, 1996; Yates, 1996). Particularly in synchronous CMC, such as chat (e.g., AOL Instant Messenger and ICQ), students are participating in what Beauvois (1998a) characterizes as "conversations in slow motion." This low speed conversation, which is generally more personal and complex (lexically and syntactically) than class discussions (Warschauer, 1996), provides a bridge between oral and written communication that may lead students to benefit more fully from the interface by giving them time to review the discourse visually (Kern, 1998).

The writing practice in CMC may help students' written production skills and may extend to other skills. Beauvois (1998b) conducted a pilot study which showed that students who participate in computer-assisted classroom discussions make significantly higher improvements in *oral* production. She suggests several possible explanations for the experimental group's higher scores, including the lower-stress atmosphere that encourages experimentation with the language and the social bonding associated with increased interaction with otherwise reticent students.

Beauvois (1997) observes that utterances in computer-mediated environments are generally longer, more complex, and more expressive than utterances generally produced in oral face-to-face class discussions. Payne and Whitney (2002) also found that working in a CMC environment aided development of oral proficiency. In their study, the online discussion groups showed statistically significant gains in oral proficiency when compared to the face-to-face discussion groups. They report that participants in the experimental group were conscious of subvocalization of the language they produced in the chat room. Payne and Whitney also argue that conversation in chat rooms may help students with lower working memory capacities because the text of the exchange remains available for review during chat sessions.

In several studies student participation is found to be greater in CMC than in face-to-face class discussions. Kern (1995) observed higher participation by students in the chat session (compared to a subsequent classroom discussion of the same topic by the same class), particularly by shyer students who are less likely to speak up in an oral discussion. It should be noted that the reduced participation in the face-to-face discussion could have resulted from the fact that the students had already conducted a discussion on the same topic the previous week via CMC. However, Warschauer (1996) also observed increased participation by shyer students, in both number and length of turns. The students who would generally dominate face-to-face interactions still dominated in the CMC format but to a much lesser degree. CMC participants also seemed more likely to respond to their classmates' comments rather than to the

instructor's remarks, as often happens in the classroom when the instructor dominates, willingly or not (Sullivan & Pratt, 1996).

Students may additionally benefit from CMC interchanges on cultural levels. CMC can facilitate contact with native speakers of the target language which previously was prohibitively cumbersome or expensive (Kern, 1996). Kern (1998) reports that an exchange of email correspondence between his second semester French class and a group of students at a school in France supported both linguistic and cultural understanding. Students' email correspondence related not only to the immediate interchange of messages but also to essays written about their families. The exchange of more carefully written and edited essays as well as casual messages fostered dialog about deeper and more meaningful issues than an exchange limited to simple email messages might have encouraged. Kern also provides examples of cultural development on the part of both American and French students as they discussed their mutual impressions and asked each other for more historical and personal information.

Early CMC studies focused on students participating in Computer-Assisted Classroom Discussions (CACD), that is, discussions mediated by computer but conducted by students located at terminals in the same room. However, an increasing number of CMC studies (e.g., Gray & Stockwell, 1998; Kern, 1998; Payne & Whitney, 2002) focus on students who participate from different physical locations in order to limit their exchanges to those conducted exclusively online. Such studies are important if we are to extend the positive findings in CMC research to distance learning environments.

Distance Learning

Unfortunately, studies of distance learning generally show many weaknesses in reliability and validity (Institute for Higher Education Policy, 1999). IHEP cites general problems with instruments used to measure student gain, and a specific failure to control for reactive effects such as the novelty effect and the John Henry effect. The novelty effect is a common potential problem with new implementation of technology because interest, motivation, and participation can all increase by virtue of doing something out of the ordinary. The John Henry effect, on the other hand, refers to the reaction among control groups or their teachers who might feel threatened or merely challenged by comparisons with new technology. As a result they may outperform themselves.

Other problems found in distance learning research include a failure to control for extraneous variables and subjects who are not randomly assigned (IHEP, 1999). For practical reasons, since course schedules are often beyond the control of the researchers, the best practice seems to be to gather as much information as possible about the subjects and to remain cautious in drawing conclusions. The IHEP review raises many concerns that should be carefully considered both in the design and in the interpretation of distance learning research.

Studies that explore language learning in the context of distance learning are only beginning to appear. Soo and Ngeow (1998), for example, address the

alternative delivery of English classes to students in Malaysia. The multimedia computer-assisted language learning program was specifically designed to overcome the bottlenecks typically encountered in conventional English language proficiency programs in a cost-effective manner. The Test of English as a Foreign Language (TOEFL) was used as a pre- and posttest. Students met with instructors at the beginning of the semester and, based on their personal goals, were assigned between 1 to 8 hours of learning time per week. Data gathered on students' preferred learning styles, race, and gender indicated no significant relationship to student achievement. The students using the multimedia program outperformed their counterparts in achievement and time on task. Soo and Ngeow suggest that one element in the students' success may be cultural in that Asian students are typically averse to risk and might find computer simulation to be less threatening than face-to-face interaction.

In another study, Cahill and Catanzaro (1997) evaluated the principle iteration of a first-year online Spanish course at Christopher Newport University, which offers an undergraduate degree entirely through online course delivery. The online students exchanged pen pal letters via email, participated in conference calls with the instructor and a fellow student, chatted online three times during the semester, and completed web-based activities, in addition to the textbook, workbook, and lab (audiotape) exercises. Cahill and Catanzaro compared the writing performance of students enrolled in a conventional second-semester Spanish course to that of students enrolled in an online version of the same course. Both sections were taught by the same instructor and used the same textbook. Student performance on essays from the final exam were compared using scores on a five-point scale for overall quality and percentage of errors in the essays. The students in the online class outperformed their counterparts on both measures, despite having a lower average amount of previous instruction (1.15 years for students in the online course vs. 2.07 years for those in the conventional course).

Online language courses offer a unique combination of CALL, CMC, and distance learning environments. Students use the computer to learn course content, as in CALL; communicate with one another and with the instructor both asynchronously and synchronously—a wide range of CMC activities; and participate from independent locations, as in distance learning environments. All three elements must be considered to get a full and accurate view of the process of learning that takes place. The present study, and the ongoing evaluation of the online language courses at Carnegie Mellon University, addresses issues in this area of study which are only beginning to be explored. These studies will fill a gap in the literature and have potential implications for language learning, teaching practices, and future uses of technology in the learning of foreign languages. As a first step to determine whether the online students in this study made comparable progress in language learning as their counterparts in a conventional classroom, the study described here addresses the following research questions:

1. Are there differences in student gains in language skills between the two instructional formats (specifically, differences in listening comprehension, reading comprehension, grammar knowledge, oral production, and written production)?
2. Are there differences in student satisfaction between the two formats?
3. Are there differences in time spent by the students between the two formats?

RESEARCH METHODS

Participants

The participants in this study for the Spring 2000 semester were the students enrolled in the conventional Elementary French I (101) and in Elementary French I Online (103). Twelve students completed 101, and eight completed 103. The majority of the participants were undergraduate students, with three graduate students in 101 and one graduate student and one staff member in 103. Although different instructors taught the two courses and different instructional materials were used, the same syllabus was followed in both courses, and common sections of the final exam were administered in both.

The conventional course met four days per week, for 50 minutes each class period. In place of a textbook, they used photocopied materials and worksheets created by the instructor. A small grammar reference was recommended but not required. In contrast, the online course met as a class only once per week for 1 hour. In addition, students were required to meet with their professor, the language assistant, or a small group of classmates for 20 minutes each week on a rotating basis. The online students were also assigned a weekly hour-long online chat session. In addition to this synchronous chat session, students were also given email and electronic bulletin board assignments on a regular basis. All course materials, including practice exercises, were delivered online; no separate textbook was provided.

Participant Characteristics and Background

Students' SAT verbal scores were obtained from the registrar as a measure of their general language ability. Students in the online course had a slightly higher average score (581) than their counterparts in the conventional course (556), but the difference was not statistically significant. In addition, students in both courses were asked to fill out two background questionnaires: a General Background Questionnaire (GBQ) and a Technology Background Questionnaire (TBQ). The GBQ gathered demographic information such as age, major, country of birth, native language, and other language knowledge and exposure (see questionnaire in Appendix A). The TBQ gathered information concerning the participants' experience using technology such as email, chat, and games (see questionnaire in Appendix B). In addition, students were asked to rate the percentage of time they spent on the computer doing work versus recreation and to

describe any other experience they may have had with nontraditional learning formats such as distance learning.

The GBQ results indicated that the background of students in the two classes was quite similar. Most students in both courses had experience or exposure to multiple languages; in particular, a similar percentage of students from both courses had previous experience with one or more romance languages. The average age of the online students, 24, was slightly higher than the average age of the offline students, 20.

The TBQ results also indicated that students in both courses had similar backgrounds, in terms of experience and comfort with technology and access to computers. When taken together, the total hours spent per day using computers was similar for students of both groups: 5.6 hours per day for the offline students and 5.1 hours per day for the online students. However, the amount of time spent using the web per week was significantly higher for the students in the online course: 8 hours per week versus 2.4 ($t = 2.935$, $df = 16$, $p = 0.01$). It is not likely that this result is due to time spent on the class web site itself since the questionnaires were administered in the first weeks of class, before students would have significantly changed their usage habits. When asked whether they felt that the use of computers (e.g., for chat, electronic bulletin boards, and email) brings people together or makes them more isolated, an additional difference was noted. The students in the online course were more likely to feel that the use of computers brought people together than did their counterparts ($t = 3.424$, $df = 16$, $p < 0.01$).

Students in all elementary level language courses at Carnegie Mellon University are asked to fill out a series of individual differences questionnaires (Ehrman, 1996) as part of their course work. This material was collected for both courses during the second month of classes. Included in these questionnaires are short measurements of introversion versus extroversion, tolerance for ambiguity (both in general and in language learning situations), right brain versus left brain dominance, visual versus auditory learning preferences, motivation, anxiety, and language aptitude. Because the results of the surveys are based on student self-reports, the question of validity of the survey should be taken into account when drawing conclusions.

Individual differences in scores were also very similar for the two groups of students. A typical elementary French I student reported motivation stemming from enjoying learning languages or learning something new; having positive feelings towards the countries where the target language is used; or filling a program requirement. Anxiety about learning French in general was low, although a little higher when considering activities in the classroom. In general, the students were moderately extroverted, with moderate tolerance for ambiguity, both in general and for language learning in particular. The tendency was for mild right brain dominance and to be slightly more inclined towards learning visually.

Assessment Measures

In addition to the background surveys, several types of data were collected to measure language gains. Students' oral production abilities were measured by interviews conducted at week 5 and at the end of the semester. A final exam with common sections measuring listening comprehension, reading comprehension, grammar knowledge, and written production was also given to students in both courses (see sections in Appendix C). The instructors for both courses worked together to create these sections and wrote test items that would show their students' capabilities at the end of the course.

Students in all Carnegie Mellon classes anonymously fill out Faculty Course Evaluations (FCEs), which were made available from both courses. Two of the questions ask students to give overall ratings of the instructor's teaching and the quality of the course. Other questions are more specific and ask students to rate aspects such as how well the course is planned, how clearly course goals are stated, and how clear the grading criteria are. They are also asked to estimate how much time they spent on the course. In addition, the Department of Modern Languages provides a more detailed, open-ended supplementary FCE, which was slightly modified for the online and offline French classes. Students were asked to comment on all aspects of the course, including their interactions with the instructors and the assistants, the quality of the course materials, whether their study habits changed as a result of the course, and whether they would recommend this course to a friend.

Several types of more qualitative data were also collected for this study. Focus groups were conducted separately for both classes at the end of the semester, and a student from the online course was interviewed at midsemester as well. Other interview subjects included the language assistant (an undergraduate student, proficient in the target language, who participated in the weekly chat sessions and met with each of the online students for 20 minutes every three weeks), and the instructors of the two courses. The substitute teacher for the online class, who took over for 6 weeks when the primary instructor went on maternity leave, was also interviewed. One session of both courses was videotaped, and the transcripts of the chat sessions and the bulletin board postings from the online course were collected from *WebCT*. The chat sessions, the bulletin board postings, the videotaped classes, and the focus groups provided rich data which will be analyzed separately in more detail.

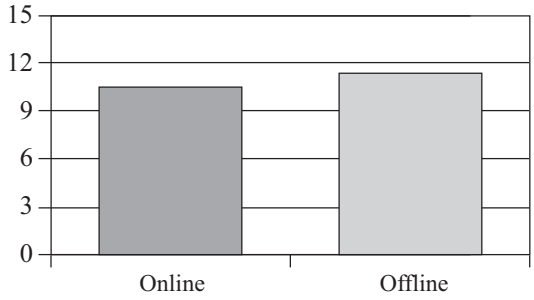
DATA ANALYSIS

The data from the common parts of the final exam and the taped oral interviews were compared across the two Elementary French I courses. All tests were re-graded for the purposes of this study so that the same criteria were used for all scoring.

Listening and Reading Comprehension, Grammar

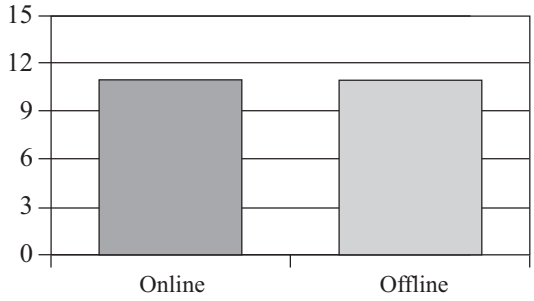
For listening comprehension, students in both courses listened to the same recorded passage, which was played twice during the final exam. Students answered 15 multiple-choice questions in which each correct answer was worth one point. As shown in Figure 2, the mean score for students in the online group was 10.375; for those in the offline group, 11.25. The difference was not statistically significant.

Figure 2
Mean Scores by Group for the Listening Comprehension Section



For reading comprehension, students read two short passages in French and answered questions in English to verify their comprehension of the passages. Thus, students could not take phrases directly from the text to answer the question without actually understanding the content (see Bernhardt, 1983 for a similar approach). Included in the questions were some short-answer items and some open-ended items, with a total of 15 points possible. The mean score for the online students was 10.875 and 10.75 for the offline students (see Figure 3). The difference was not statistically significant.

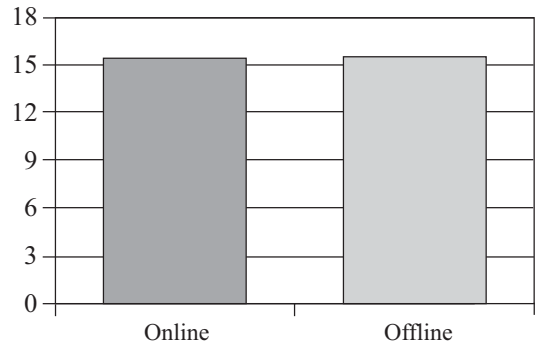
Figure 3
Mean Scores by Group for the Reading Comprehension Section



Grammar was tested with 19 discrete-point, sentence-level items focusing on verb conjugation, negation, and question formation. The mean score for the

online group was 15.612, and for the offline group, the mean score was 15.775 (see Figure 4). The difference was not statistically significant.

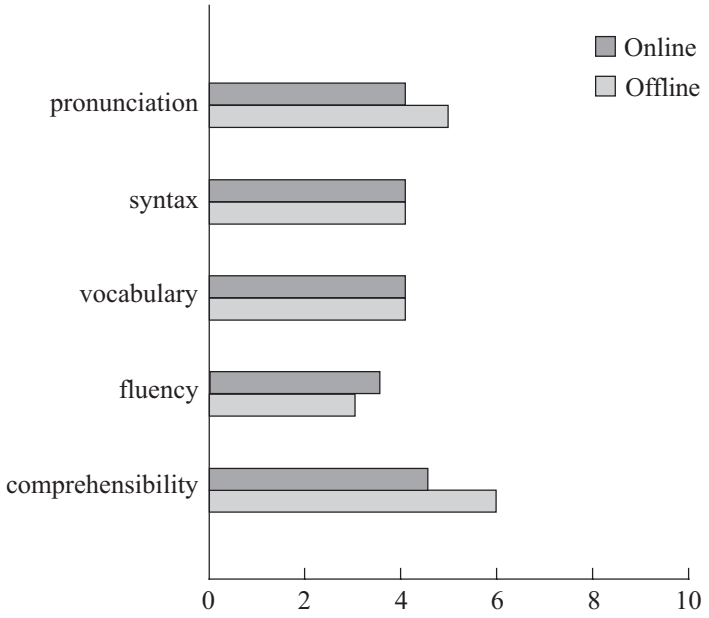
Figure 4
Mean Scores by Group for the Grammar Section



Oral Production

To gather data on oral production ability, students from both courses met in pairs with a French instructor (the instructor of the conventional course conducted the oral protocol for all students). The students performed a role-play activity, described a single picture, and then described a series of pictures that followed a narrative. Although there was no set time limit, each pair took about 15 minutes. An outside rater who was unaware of the experimental condition of the pairs evaluated the tape recordings using a series of 10-point scales for comprehensibility, fluency, vocabulary usage, syntax and grammar, and pronunciation (see the Oral Production interview scale [from Payne & Whitney, 2002] in Appendix D). Due to the small sample size and because we could not assume a normal distribution, the data were analyzed using Mann-Whitney U. The median score for the offline course was 21.0, compared to 19.5 for the online group (see Figure 5). Although the slight difference in the overall ratings, driven by the scores on pronunciation and comprehensibility, favor the offline course, the difference was not statistically significant.

Figure 5
Oral Production Profile

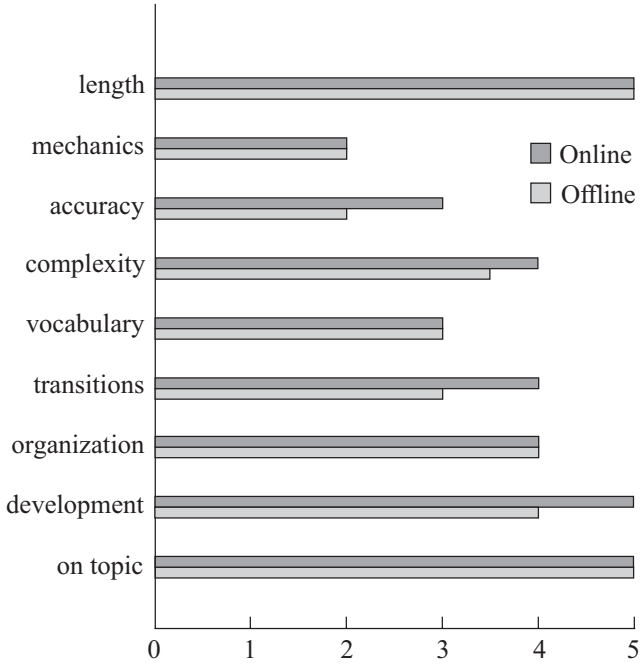


Written Production

Written production was assessed using a 10-sentence essay on the topic of plans for summer vacation. Essays were evaluated by an outside rater unaware of the experimental condition, using a series of 5-point scales. The features evaluated were topical relevance, overall development, organization/ordering principle, the use of transitions/cohesive devices, vocabulary, syntactic complexity/variety, grammatical accuracy, mechanics (e.g., spelling, punctuation, accents, and capitalization), and length (see the evaluation rubric for the essays in Appendix E).

A Mann-Whitney U test showed that the median total score of the students in the online group was significantly higher than that of the students in the offline group, 34.5 versus 31.5 ($p < .05$).[2] When the total score is broken down into subscores, shown in Figure 6, the difference can be attributed to higher ratings in accuracy, use of transitions, development, and, to a lesser degree, complexity.

Figure 6
Written Production Profile



Student Satisfaction and Time Spent

One student from the online course was interviewed during the fifth week of the semester. At that point, she seemed satisfied with the course and her progress. She confirmed the fact that students in the online course seemed particularly busy and that the perception among students was that this class was meant for very busy students. When asked how she interacted with the course materials, she mentioned that in addition to using a dictionary as she worked on the materials, she would also make notes in a notebook and confer with a friend who knew French. She also expressed some concern about her oral skills, both with comprehension and production, although she had noticed improvement from the beginning of the semester.

At the end of the semester, an interview was conducted with two online students (neither of whom participated in the fifth week interview). These students had generally positive reactions to the course and seemed satisfied with their progress in learning French; however, they did have several reservations. They had initially expected the online course to be truly self-paced, in which week-to-week progress was not monitored. They were disappointed that the online course required weekly preparation for the class meetings, in addition to the

weekly chat sessions and the weekly individual meetings. They were also surprised by the chat sessions, which they felt they had not been notified of in advance. They pointed out the difficulties of chatting in a second language during the first semester of study, when their vocabulary knowledge was particularly limited. However, in spite of (or perhaps because of) the difficulties of chatting, they reported that they would often multitask during chat sessions, checking email, watching TV, eating, or even talking on the phone.

They also mentioned some frustration with the strict grading on tests and practice exercises, which had not always been programmed for alternate responses (or differences in punctuation and sometimes upper- versus lowercase characters), due in part to the time required for such programming. Even though the instructor was able to adjust the computer's strict grading process when necessary by reviewing the test results, the students were disappointed to see initially low test scores.

Another topic that came up in the interviews related to unusual instructor circumstances. The original instructor took six weeks off in the middle of the semester for maternity leave, and one of the developers of the course substituted during that time. The students found the change in instructor to be somewhat disruptive, although they were generally happy with the teaching of both the instructor and the substitute teacher. Their interactions with the language assistant were universally positive. Students felt comfortable conversing with her and asking her questions.

In the open-ended sections of the university's and the department's FCEs, those students who responded to the items in the FCE reported being happy with their instructors in both courses, finding them to be enthusiastic, patient, and organized. However, the Likert-style questions on the university FCE showed a difference in general satisfaction in several areas, in which the offline course received more positive evaluations. The instructor rating for the offline course was 4.8 (scale of 1-5, with 5 being excellent), while the online instructor average rating was 4.33. The course received an overall mean rating of 4.8 from the offline students but 3.83 from the online students. When asked if the course was well planned, the mean of the offline students' response was 4.5 compared to 3.8 for the online students. The grading criteria also seemed clearer to the offline group (4.7 vs. 4.0).

The general lack of negative statements in the open-ended sections of the evaluations may reflect a reluctance of less satisfied students to write negative comments. The lower numerical ratings for the online course may be a reflection of the fact that this was the first semester in which the course was offered. Problems encountered the first time a course is offered of course need to be resolved for future semesters.

Online course students expressed concerns about their progress in oral skills, both in comprehension and production, in the final course evaluations. They felt they would have benefited from additional practice, although their end-of-semester scores indicated that their progress was comparable to that of their

offline counterparts. The majority of the students (four out of the six who filled out the departmental FCEs) would recommend the class to a friend; and one of the two remaining would recommend it, provided oral skills were not a priority. Most reported no change in study habits, although some felt they studied more in this course than they had in previous courses. In the offline group, the majority of the students said they would also recommend their course to a friend.

The researchers found unexpected differences in the amount of time students reported studying for the course outside of class. The offline students reported spending 6 hours per week, while the online students reported spending only 5 hours per week. This difference is even more remarkable considering the fact that the offline students had an additional 4 hours per week of class time, whereas the online students only had 1 hour of class per week (2 hours if the online chat sessions are also counted). Whether all of the online students counted the chat sessions as part of in-class time is difficult to determine. The wording of the question on the university FCE, "On average, how many hours did you spend each week working on this course outside of class (on homework, papers, studying, projects, etc.)?" allows for either possibility.

DISCUSSION

The purpose of this study was to evaluate the progress of students taking the online version of Elementary French I compared to their counterparts in a conventional, face-to-face class. The results indicate that the online students did indeed appear to make sufficient and comparable progress as reflected by their performance on the measures used for this study. In fact, in written production, the online students scored higher than the offline students. Naturally, with the small numbers involved, true differences are difficult to detect. In addition, due to practical constraints, students could not be randomly assigned to the two groups, and two different instructors taught the courses. However, the main purpose of the study was to determine whether an online format would allow those students who could not take the conventional course a chance to begin learning French, and, from these results presented here, it would seem that they made adequate progress to proceed to the following course in the next semester. It should be noted that it is also possible that differences may surface during later semesters for those students who pursue their study of the language.

The difference in written production between the two groups could be due to several factors. As Beauvois (1998a) and Sullivan and Pratt (1996) suggest, while the exchanges in chat sessions have many characteristics similar to spoken language, they do provide practice in writing as well. Students may have gained skills in writing under time pressure because they need to type quickly during chat sessions in order for their comments to remain relevant to the ongoing conversation. Online students also completed weekly assignments via email and postings to their electronic bulletin board. While the offline students did have daily written homework, it is possible that the nature of the email and

bulletin board assignments provided the online students with the kind of practice that could give them an additional boost in the development of their writing skills.

Most online students reported being satisfied with the course and their progress in learning the language. Even though some students expressed concern about oral skills development, end-of-semester measurements indicated that their skills were comparable to those of the offline students. The FCE responses showed a notable difference, however, especially with general course satisfaction. Some of the frustrations expressed by the online students are understandable in the first offering of a course, especially in a new format, and others simply reflect unrealistic or erroneous expectations (e.g., the course being truly self paced). The unique situation requiring a long-term substitution of instructor may have also affected general satisfaction with the online course. It can be anticipated that student expectations will adjust as the campus community becomes familiar with the online language offerings. In addition, instructors and course developers will also learn from experience and information gathered in the ongoing evaluation how to better implement the course in future iterations. Student responses to questions about the amount of time spent studying are similar, although the ambiguity of the question in the FCE (specifically, whether or not the chat sessions were considered in-class time or out-of-class time) makes drawing conclusions about this point difficult.

This study is just the beginning of the assessment of the Language Online project, which will continue as additional levels are provided in both French and Spanish. This assessment will continue to measure student progress and satisfaction in future course iterations. Further studies in the area of online language learning courses will help us determine best practices and adjust for frustrations that naturally arise from the use of technology in new ways. More studies that look at the interaction between students who communicate online are also crucial for adapting language learning practices to an online and distance education environment.

NOTES

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[2] The statistical levels reported here may not be accurate because we are dealing with intact classes.

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APPENDIX A

General Background Questionnaire

Name_____ Email_____

Sex _____ Age _____ Country of birth _____

Academic Year at CMU: FR SO JR SR 5th-yr.SR GRAD Other _____

Major(s) _____ Minor(s) _____

1. What do you consider to be your native language(s)?

2. What language did you speak while you were growing up?

3. What other language(s) did people close to you speak while you were growing up?

4. What other language(s) can you use? Please list and comment on your fluency in each (for speaking, listening, reading, and writing). How many years of experience have you had with each language?

5. What language courses have you taken at CMU? Begin with the one(s) you are currently enrolled in.

6. What other second language learning experiences have you had? (residence in a non-English speaking country, study abroad, vacations, etc.)

7. Why are you taking Elementary French I? Please check all that apply.

❑ To fill a requirement
❑ Because I like learning languages
❑ To go abroad
❑ For my career
❑ Because my family speaks it
❑ Because of my family history
❑ To be able to read menus
❑ To be able to read literature in French
❑ To sound sophisticated
❑ Other (please specify): _____

8. Why did you choose to take *this section* of the course? Please check all that apply (in both parts).

All Students:
- ❑ Because of conflicts with my other courses
- ❑ Because I prefer the time that this section is offered
- ❑ Because I know someone in this section
- ❑ Because of the instructor

82-103 Students only:
- ❑ Because I enjoy using computers
- ❑ Because I wanted to try a new way to take a course
- ❑ Because I don't want to attend class 4 days per week
- ❑ Because I don't like being called on in class
- ❑ Because I think I can practice French more on the computer
- ❑ Other (please specify): _____

82-101 Students only:
- ❑ Because I don't enjoy sitting in front of a computer screen
- ❑ Because I want more guidance from my instructor
- ❑ Because I like talking with people in class
- ❑ Other (please specify): _____

9. What do you expect to get out of this course? What are your goals? Be as specific as possible.

APPENDIX B

Technology Background Questionnaire

Name _____ Email _____

1. Do you own a computer? ❑ YES ❑ NO

2. In what one location do you generally use a computer? (in your room, in a cluster)_____

3. Are you generally comfortable using a computer? ❑ YES ❑ NO

4. How long have you been using a computer?

❑ Less than 1yr. ❑ 3-4 years ❑ 7-8 years ❑ 11+ years
❑ 1-2 years ❑ 5-6 years ❑ 9-10 years

5. How many hours do you use a computer in a typical day?

❑ 1-2 hrs/day ❑ 5-6 hrs/day ❑ 9-10 hrs/day ❑ 13+ hrs/day
❑ 3-4 hrs/day ❑ 7-8 hrs/day ❑ 11-12 hrs/day

6. How much of your time using a computer is for schoolwork/job, and how much just for fun?

❑ 100% work ❑ 75% work 25% fun ❑ 50% work 50% fun ❑ 25% work 75% fun ❑ 100% fun

7. How often do you use the computer for the following activities? (choose all that apply)

	Just tried it	On occasion	1-3 hrs/wk	4-6 hrs/wk	7-9 hrs/wk	10-12 hrs/wk	13+ hrs/wk
Email							
Web/internet (searching, surfing, shopping, etc.)							
Bboards or newsgroups							
Web chat							
Games							
CD-ROMs							
Listservs							
Word processing							
Programming (including web page design)							
Other schoolwork							
Other (please specify): _____ _____							

8. Do you think using computers for email, b-boards, chat, etc., brings people closer together, or makes them more isolated?

❑ Extremely isolated ❑ very isolated ❑ somewhat isolated ❑ no difference ❑ somewhat closer ❑ a lot closer ❑ extremely close

9. Do you regularly get together with a group of people online?
   ❑ YES ❑ NO

   If yes, based on what common factor?
   ❑ students
   ❑ family members
   ❑ hobbies
   ❑ fan clubs
   ❑ friends
   ❑ games
   ❑ other (please describe): _____

10. How does this online community function? (how do you maintain contact with one another, how are new members recruited, what sort of activities do you participate in together (online)?)

11. Do you have any experience with non-traditional learning formats (like a correspondence course, teleconferencing, video lectures, web-based classes)?
❑ YES ❑ NO

12. If yes, estimate how many months of these experiences altogether: ____

13. What did you like about the experience? What did you dislike?

APPENDIX C

Common Final Exam Questions

I. Listening comprehension: Arthur arrive en France pour rendre visite à la famille de Paul à Bordeaux. Choisissez la bonne réponse. (N.B. if more than one answer is possible, circle all that apply.)

1. Quand est-ce qu'Arthur arrive en France?
   a. aujourd'hui
   b. demain
   c. la semaine prochaine

2. Comment est-ce qu'il voyage?
   a. en train
   b. en avion
   c. en bateau

3. Dans quelle ville est-ce que Paul habite?
   a. Paris
   b. Bordeaux
   c. Marseille

4. Quelles activités est-ce qu'Arthur va faire pendant sa visite?
   a. la natation
   b. se promener
   c. danser en discothèque
   d. le théâtre
   e. le cinéma
   f. visiter la mairie
   g. aller en classe d'anglais
   h. la bicyclette
   i. l'opéra

5. Où est-ce qu'ils vont dîner?
   a. au restaurant
   b. à la maison
   c. au restau-U

6. Quelle est la profession de la mère de Paul?
   a. professeur d'anglais
   b. maire
   c. médecin

7. Dans sa famille, Paul a
   a. deux frères
   b. trois frères
   c. deux sœurs

II. **La Lecture**: Lisez les textes suivants et répondez aux questions en anglais.

A. « Le Père Lachaise »

Quand il fait beau, les femmes y font une promenade avec leurs enfants. Après la pluie, les gens viennent y prendre des escargots. Des jeunes couples qui n'ont pas d'autres lieux pour se donner rendez-vous s'y retrouvent sous les arbres magnifiques. Un parc public ? Non, c'est un cimetière différent des autres et peut-être l'un des plus intéressants du monde.

Le Père Lachaise se trouve à l'Est de Paris. Il est célèbre pour ses monuments magnifiques qui rendent hommage à des personnages célèbres, français ou étrangers de tous pays. Parmi tant d'autres, on peut voir les tombes de Frédéric Chopin, Gertrude Stein, Jim Morrison, Delacroix, Sarah Bernhardt, et Honoré de Balzac. Toute l'année de fidèles admirateurs viennent y déposer des fleurs.

Questions :

1. Qu'est-ce que le « Père Lachaise » ? Que fait-on là-bas ?

2. Décrivez le « Père Lachaise ».

B. « Paris-Lyon-Paris »

7h10 : je marche pendant cinq minutes jusqu'au métro. Il fait froid. Il y a beaucoup de personnes dans le métro. Je prends mon train à la gare.

7h45 le train part pour Lyon. Bien installée dans mon compartiment de première classe, j'ai quatre heures de voyage devant moi. Je commence à faire mon travail. Bientôt je quitte le compartiment pour aller au wagon-restaurant pour prendre un petit-déjeuner.

11h45 : nous arrivons à Lyon, gare Perrache. Je prends un taxi et j'arrive au bureau à midi.

15h30 : après le déjeuner, je prends un taxi à la gare pour prendre le train encore une fois. Pendant le voyage, je fume quelques cigarettes.

20h10 : le train arrive, avec dix minutes de retard. Je marche rapidement vers le métro, où il y a beaucoup de personnes.

20h50 : j'arrive au bureau de l'Express. Le temps total pour le voyage : 10h10.

Questions :
1. Quelles différentes sortes de transportation la femme utilise-t-elle pendant son voyage ?

2. Quelles activités fait-elle dans le train ?

III. **Grammaire** : Complétez les exercices suivants.

A. Complétez les phrases suivantes avec les verbes donnés au présent.

Modèle : Nous _____ voyager. (aimer)
Nous aimons voyager.

1. Je _____ parler français. (préférer)
2. Vous _____ partir demain ? (vouloir)
3. Nous _____ des légumes chaque jour ? (manger)
4. Tu _____ la voir cet après-midi ? (aller)
5. Ils _____ étudiants à cette université. (être)
6. Elle et moi, nous _____ mettre nos imperméables. (devoir)

B. Transformez les phrases suivantes au futur immédiat.

Modèle : Nous voyageons en France.
Nous allons voyager en France.

1. Tu étudies ce soir. _____
2. Vous parlez à votre professeur au bureau. _____
3. Je range ma chambre tous les jours. _____
4. Elles travaillent le matin. _____
5. On se couche tard la nuit. _____

C. Donnez les formes négatives des phrases suivantes, en utilisant le mot donné entre parenthèses. Attention aux changements logiques nécessaires.

Modèle : Nous voyageons en France. (pas)
Nous ne voyageons pas en France.

1. Je vois mes amis. (pas) _____
2. Vous voulez travailler avec moi ? (personne) _____
3. Elle déteste parler français. (pas) _____
4. Nous faisons nos devoirs. (rien) _____

D. Transformez les phrases suivantes en questions, en utilisant le mot donné entre parenthèses.

Modèle : Nous aimons voyager. (où)
Où est-ce que nous aimons voyager?

1. Tu vas quitter l'université. (quand) _____
2. Vous habitez un studio. (pourquoi) _____
3. On joue au sport. (où) _____
4. Elles vont aller au Cameroun. (comment) _____

IV. Composition :

Qu'est-ce que vous allez faire cet été : des voyages, des études, travailler, un stage… ? Est-ce que vos amis ou des membres de votre famille vont être avec vous ? Donnez autant d'informations que possible. (10 phrases minimum)

APPENDIX D

Oral Production Interview Scale

Student Name: _____

Comprehensibility

____ 10-9: for a native speaker: easy to understand without any confusion or difficulty.
____ 8-6: for a native speaker: can understand with minimal difficulty.
____ 5-3: for a native speaker: can understand with some difficulty.
____ 2-1: for a native speaker: can understand with great difficulty.

Fluency

____ 10-9: native-like fluency; hesitations only when appropriate.
____ 8-7: near native fluency; very few hesitations or pauses.
____ 6-5: some hesitations, pauses, but fairly continuous speech.
____ 4-3: frequent hesitations and pausing, speech is more disjointed.
____ 2-1: very disjointed speech with many hesitations and pauses.

Vocabulary Usage

____ 10-9: very extensive vocabulary usage.
____ 8-7: good vocabulary usage, very few inappropriate terms.
____ 6-5: moderate vocabulary, a few inappropriate terms.
____ 4-3: limited vocabulary, some inappropriate terms used.
____ 2-1: very limited vocabulary, frequent use of inappropriate terms.

Syntax and Grammar

____ 10-9: native-like grammar and syntax; used a variety of syntax and tenses.
____ 8-7: near-native grammar and syntax; few mistakes.
____ 6-5: used few syntax structures, some grammar and syntax mistakes.
____ 4-3: very limited in syntax and grammar usage with frequent mistakes.
____ 2-1: no systematic use of grammar and syntax rules.

Pronunciation

____ 10-9: native-like pronunciation, virtually no discernable accent, no errors.
____ 8-7: near-native pronunciation, slight accent, few errors.
____ 6-5: some errors; obvious accent, but doesn't interfere with comprehension.
____ 4-3: frequent errors; strong accent; some comprehension difficulties.
____ 2-1: little effort to use French pronunciation; comprehension impeded.

APPENDIX E

Written Production Rating Scale

Relevant to topic	1: not on topic	2	3	4	5: all on topic
Overall development	1: list-like	2	3	4	5: sense of completeness
Organization/ordering principle (chronological, interest, etc.)	1: seems random	2	3	4	5: well organized
Use of transitions, cohesive devices	1: choppy	2	3	4	5: flows well
Vocabulary	1: impedes comprehension (or relies on English)	2	3	4	5: appropriate and varied
Syntactic complexity and variety	1: monotonous, simple sentence structure	2	3	4	5: sentences vary effectively in length and structure
Grammatical accuracy	1: so frequent or severe that impedes comprehension	2	3	4	5: errors are not very frequent and not very serious
Mechanics (spelling, punctuation, accents, capitalization)	1: so frequent or severe that impedes comprehension	2	3	4	5: errors are not very frequent and not very serious
Length	1: insufficient	2	3	4	5: 10 sentences or more

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