

# E-Learning technology and digital ethnography for language learning in the modern classroom

Simone SCHLICHTING-ARTUR<sup>a,28</sup>  
<sup>a</sup>*Drexel University, U.S.A.*

**Abstract.** A pilot course was developed for foreign language students with the aim to enhance their ability to practice their listening, speaking and writing skills outside of regular classroom settings. The course engages students in cooperative learning and involves online learning pedagogies. Furthermore, students as well as faculty apply ethnographic methods to observe and learn from each other. This method affords the teacher the opportunity to access the learning progress of the group as well as the individual student. Methodologies are reviewed and logistical obstacles encountered are acknowledged.

**Keywords.** Digital ethnography foreign language learning

## 1. Introduction

### 1.1. Challenges to creating an unorthodox curriculum

Many constraints are placed on foreign language departments due to a lack of resources. In recent years, course offerings and hours have been decreased and fewer new faculty members have been hired to teach courses at the intermediate and higher levels. As a result, instructors are attempting to develop new pedagogies and employ teaching tools in order to maintain student progress in spite of these impediments to teaching and learning. The research discussed in this paper concentrates on such an attempt, namely a pilot project in a German classroom setting at a university in Philadelphia. This project capitalizes on the unique opportunities afforded by e-learning technologies and ethnography in the creation of meaningful language learning.

Given the heavy reliance on e-learning technologies in the structure of this course, important insights into pedagogical best practices for foreign language and online learning are emerging. Methodologically competent guidance from an instructor and cooperative learning can enable students to target specific educational goals outside of the classroom and to take advantage of technology in order to maximize their foreign language production.

Prior to the implementation of this project, a review of students' course evaluations indicated a strong dissatisfaction with the limited time students had to hone their language skills and to gain an in-depth understanding of the culture under study. Consequently, careful attention was given to ensuring student participation and

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<sup>28</sup> Corresponding Author. Simone Schlichting-Artur Drexel University, USA. E-mail: schlichs@drexel.edu

collaboration as there was a lack of classroom face-to-face interaction while employing e-learning technologies as a means of learning and practicing. The question arose as to what was the most effective method to guarantee interactive engagement in the foreign language learning process when discussions were not steered directly by the instructor. How could students be involved in cooperative learning outside of the classroom? Online ethnography and peer review were implemented as cooperative-learning techniques to enhance and to assess performance.

### *1.2. Course structure*

For the last nine months, students at the intermediate level have been given the task to record themselves speaking in the target language for one hour per week via smart phone or computer. Then the students have had to send the recording to a peer who, in turn, has had to transcribe the words to which they have listened. Finally, students have reported on the listening exercise in the classroom and have posted the transcript on an online course content page.

These exercises have given students opportunities to practice their listening skills, to reinforce their writing and structural skills, and to enhance their speaking skills. By employing these e-learning technologies and redefining the classroom in an elastic context, this curriculum has better served students who have been given insufficient time in class to improve their language skills.

In this particular research, the role of the subjects, namely the German students, has been that of knowledge co-producers. The students have provided information by speaking, they have analyzed the data by transcribing the listening task, and at the same time have written reports on the given exercise. In addition, the use of e-technology has afforded the instructor an opportunity to enhance, observe and assess language production for the individual student as well as the group. Successes and failures with this course task are discussed in the hope that best practices can be established to inform future development of similar curricula in the academic community.

Empirically-based pedagogical tools must support academic enthusiasm for language learning if students are to realize their potential for foreign language competence. Empowering students as co-producers of knowledge in this context is essential for students to become confident and efficient speakers of foreign languages, further encouraging global citizenship as they cross cultural boundaries through language learning.

## **2. Methods of teaching and learning**

Research suggests that cooperative learning has positive effects on foreign language learners. It can positively increase self-esteem, long-term retention or depth of course material (Johnson & Johnson 1991; Slavin 1995; Kagan 1999). Students operating in a cooperative learning activity attain higher achievement levels than those who function within competitive and individualistic learning structures (Zhang 2010). Cooperative learning occurs when small groups collaborate in order to maximize their learning as well as that of their group members (D.W. Johnson, Johnson and Smith 1991a). The following five elements are crucial for increasing the successful outcome of the cooperative learning endeavor: (a) positive interdependence, (b) face-to-face “promotive” interaction, (c) individual accountability, (d) social skills, and (e) group

processing. Based upon this theory, the restructuring of German 201 language course aimed to incorporate all five elements into the learning process with the aid of e-learning technology and the online ethnographic method.

The first element, *positive interdependence*, requires that all members of the group gain the understanding that their work is essential for the success of the group and, in turn, the group's success impacts the individual student's progress. Hence, positive interdependence makes the sharing of resources, the provision of mutual support and encouragement, and the acknowledgement of success necessary (D.W. Johnson et al., 1991a). According to D.W. Johnson et al. (D.W. Johnson et al. 1991a), positive interdependence can be achieved in multiple ways, i.e. through the promotion of mutual goals, the establishment of joint rewards and the assignment of complementary roles.

At the beginning of the German 201 course, the instructor clearly outlined the goal of the exercise, namely the improvement of the language skills of the individual as well as the group. Students were assigned new partners each week. By rotating partners, it was hoped to create not only small group but also larger group interdependence, thereby positively enforcing the relationship of the learning community as a whole. The students were given the task to send their partner a recorded spoken assignment, who in turn was to listen and transcribe it. This assignment created strong interdependence between students, as the pair's homework could not be delivered if one of the students failed to complete his or her part of the homework assignment. Consequently, this created a strong incentive for students to collaborate as it resulted in joint production and reward in the form of a shared grade.

A multitude of studies (Johnson Johnson, Stanne and Garibaldi 1990; Mesch D.W. Johnson & Johnson, 1988; Mesch, Lew, D.W. Johnson & Johnson, 1986) have indicated that positive interdependence provides the impetus for some of the other elements and can be effective for increasing achievement. The second element of cooperative learning, *face-to-face promotive interaction*, takes place when individuals encourage and facilitate each other's actions in order to achieve group goals (Onwuegbuzie, 2001). In the case of German 201, students pursued a common goal in a collaborative fashion, by posting transcripts and other documents in an online learning management system. Students provided feedback on the assignments their peers posted, including reactions to written documentation and to an in-class oral presentation. The goal of providing this open forum for critique was to improve future performances by encouraging students to evaluate their language ability critically. In addition, the third element, *individual accountability*, was maintained continuously as the performance of each individual student relied on that of another student, and as each student was evaluated continuously either through the ethnographic work or class performance.

The fourth element of cooperative learning is *social skills*, which asks students to demonstrate the appropriate use of small group and interpersonal skills. In order to promote social skills, students must gain mutual understanding, establish trust, communicate effectively and be able to solve conflicts. This element was much more difficult to integrate as many of the students did not know each other and wondered as to whether they could rely on their group partners to be accountable and to do their work.

Hence, in the beginning of German 201, it was the role of the instructor to decide which students had the necessary skills to work effectively, to teach them the appropriate use of the skills and to reward them accordingly. As the group moved through German 201, 202 and 203, group familiarity emerged and the instructor's

active role to promote and ensure collaboration diminished. However, this outcome was also strongly influenced by encouraging interaction through online ethnography, which not only enforced strong collaboration but evoked familiarity, arousing interest in each other's lives and ultimately causing bonding. This development resulted in extracurricular activities such as the founding of a German club which, in turn, reinforced positive learning outcomes outside the context of the classroom.

The last element of the five-element cooperative learning theory focuses on *group processing* and reflection in order to discuss the effectiveness of a given action, and to decide whether to keep, modify or discard the learning activity. As D.W. Johnson (Johnson 1991a) recommends, instructors should systematically monitor groups to evaluate group processing. This was done in two ways in German 201. First, class discussions were initiated and students gave positive feedback on the task. They stated that the assignment exposed them to more culture, challenged their listening skills and encouraged them to increase their written production in the target language. Students also commented positively on getting to know their classmates better. Secondly, at the end of each term students were asked for a written evaluation on the newly integrated assignment, to inform practice in future offerings of the course.

### 3. Outcomes

The cooperative learning approach in used in this course was successful in terms of both student performance and student feedback provided for the course evaluation at the end of the semester. In particular, one student highlighted the benefits of creative assignments improving the ability to express opinions confidently:

I enjoyed the media assignments and thought they were effective in exposing us further to German culture and etiquette. They were challenging, and they motivated me to listen closely in order to understand the main ideas and conversations in each film. The speaking reports allowed for creativity, which made them fun and engaging. They were a nice contrast to the media assignments, as I was able to spend some time listening to native German speakers and some time listening to classmates.

I think my listening skills improved greatly from both assignments. Watching German media allowed me to become accustomed to specific pronunciations and colloquial speech. Although not as challenging as listening to native speakers, the speaking reports were an excellent supplement in developing my listening skills. Both assignments helped me to learn more vocabulary and hone my writing and grammar skills. The speaking reports also provided good practice with oral skills, and by the end of the course, I truly felt more comfortable with speaking.

For the media assignments, it would be fun to share in class a short summary of our favorite videos so that classmates can watch them if they are interested. For the speaking reports, I liked the idea of having improvised conversations with our classmates. Perhaps, after listening to the recording, we could meet with our partners in class and ask questions/converse about the topic of the recording.

The student's comments clearly show an appreciation for the assignment, as it not only improved her language abilities, but also exposed her to more cultural learning. The instructor benefitted from the comments and implemented the suggested changes. Another student expressed the value of learning culture through a different medium and emphasized that the exercise boosted her self-confidence while speaking German:

I thoroughly enjoyed the media-assignment and speaking reports. The engaging aspect of the assignments, and the peer sharing to hold me accountable, made for very interesting work. I feel as though I put forth more effort with the speaking reports, knowing that one of my classmates would need to understand and be entertained by it. The media assignments allowed me to view German culture from a different vantage, rather than only gleaning an understanding by reading a textbook. I watched many different kinds of television shows from cabarets to travel videos to "reality tv."

I developed more confidence with speaking, especially since I was able to play them back to hear myself. Listening to myself and to my peer's report showed me what could be said more clearly, showed me common pronunciation errors, and showed me that I was doing better than I thought. With the media assignments my comprehension absolutely soared. With 9 months of weekly or bi-weekly television, I found myself comprehending situations I would have never imagined. I also found myself better understanding music I had been listening to for months, and was very excited to be able to listen to news broadcasts with confidence.

Another student also commented on the improvement of her skills but also on the fact that it helped to build her self-confidence. Her performance anxiety decreased because she no longer had an immediate audience, which would evaluate her skills:

My language skills improved greatly in speaking and pronunciation. When recording myself to speak for a classmate, it was important that I enunciated properly and could speak to them in a way they could understand. In class, it's easier to hide and not speak as much, but in this assignment you were forced to spend time speaking to your partner.

Foreign language speaking anxiety is a common phenomenon, although it is not always easy to identify as non-participation can also be attributed to a lack of motivation. Components of foreign language anxiety are identified as communication apprehension, fear of negative evaluation and test anxiety (Horwitz, Horwitz and Cope, 1986). By creating a private learning and performance environment, some of this anxiety has been removed and students take more time in honing their skills. They cannot immediately gauge the reactions of their instructor or peers, and do not have to fear negative evaluation. Most importantly, this student focused effort on improving language skills, rather than spending energy on evading evaluation in a traditional classroom context.

## 4. Conclusion

### 4.1. Ethnography as a means of assessment

In a conventional classroom setting, the instructor can “collect data” or assess his or her students through direct observation, interaction and testing. Moving teaching and learning into cyberspace complemented the regular methods of assessment and aided in the critical analysis of student learning difficulties and progress. With the use of e-technology, namely smartphone recordings and courseware postings, the instructor was able to listen more closely to students’ oral production and give more attention to individual student language competencies. An electronic record afforded the teacher the possibility to repetitiously listen to the oral production, to document the mistakes and to gain a better and more nuanced understanding of the challenges each individual faced in the learning process.

Digital ethnography gives the opportunity to enhance the teaching of language in the context of culture. At most universities, there is a compartmentalized notion of the target language as separate from its speakers. Robinson-Stuart and Nocon (Robinson-Stuart and Nocon 2011) express this problem eloquently:

The tendency of students to separate language from the culture of the people who use it, and by extension from the people, is less surprising when viewed in the context of the history of language pedagogy, which has for the last 50 years focused on the four language skills, that is reading, writing, listening and speaking. When culture was addressed, it was a body of facts that frequently dealt with food, festivals, buildings, and other cultural institutions (p. 437).

Although restructuring a curriculum, or even a single course, is never a trivial exercise, any measures that can both improve student learning and student engagement should be seriously considered.

The role of new technologies and pedagogies alike must be scrutinized before, during, and after adoption. As Bahrani (Bahrani 2011) asserts, “any methods to be used for language testing with the employment of any technologies including mobile phones should be authentic, valid, and reliable” (p. 298). The use of technology in this course enabled the instructor to observe the students in their natural habitat as students often spoke about mundane topics such as their evening routines, their weekend activities or anything unusual, which they experienced outside of college life. These narratives contained much information and presented the instructor with knowledge not just concerning language ability but also concerning family, daily routines habits and personal interests. Furthermore, some of the oral narratives focused on cultural topics and the choices, again, were an indicator of the student’s cultural understanding and interests. These observations support Bahrani’s further assertion that learning activities “should also be based on the students’ interest. By using the technology, teachers can make a connection between language assessment and real world communication” (p. 298).

While the instructor was no longer a participant observer in the learning process, she was able to collect data through e-learning technology methods and assess student progress. Furthermore, it informed her teaching as it allowed her to design the curriculum around student interest, which in turn seemed to create stronger enthusiasm for the topics under discussion and better student participation. By using e-learning

technology to perform ethnography, the instructor became more familiar with her students' abilities and lives, which greatly improved group interdependence.

Although there was no immediate contact as in conventional classroom environments, this assignment seemed to break down barriers which are often erected in face-to-face foreign language classes as students are intimidated by their instructor's and peers' observations of their abilities. This indirect interaction between peers and with the instructor evoked a sense of comfort and allowed the establishment of familiarity and trust. Furthermore, the indirect transmission of student output and feedback was complemented by the more direct communication required as part of ethnographic interviews:

The process of conducting person-to-person interviews further diminishes distance in a very real and human way. The metacultural third space becomes a material space of interpersonal, intercultural contact that informs learners' knowledge of cultural boundaries in a process of joint production of meaning and acquisition of living culture (Robinson-Stuart & Nocon, p. 437).

The shared learning environment of the online course discussions helped to create a learning community that was both supportive and effective for students. By exploring the use of digital ethnography, students were able to incorporate their own identities in a meaningful and effective manner that contributed to their language learning.

#### *4.2. Recommendations for future action and research*

While feedback from students and the instructor has been extremely positive, it will take a longer application of this method and more data collection to determine whether interdependent peer-learning and the use of e-learning technology has a positive effect on student progress in the foreign language classroom. The results of this research were taken from a small sample of students and hence, the results cannot be generalized at this point. In addition, there are also several logistical and pedagogical aspects of the integration of the learning method that deserve closer attention. These challenges include organizing participation, improving students' willingness to engage with peers, and general familiarity with online learning technologies. Much research remains to be done on best practices for curriculum design in this area.

Whereas this first cohort of students has been very responsive and engaged over the course of three terms, future students might not be as committed to performing well on this particular assignment. The implementation of this assignment demands that students have to rely heavily on their partners to complete the task effectively. If teamwork does not function, the pedagogical goals of the task cannot be achieved in their entirety. Due to the university's quarter system, student bodies change constantly. This fact might negatively impact the cooperative learning process as social skills such as mutual knowledge and trust need to be developed over time. In addition, not all students have smartphones with which they can easily record themselves, and some students do not possess the technological know-how to do so, even if they have ready access to the hardware. The same can be said for faculty members, who might be not be as familiar with e-learning technology as the instructor who taught the previous courses.

It is anticipated that some instructors might balk at integrating this new assignment, as it is time-consuming to listen to the weekly recordings, documenting and assessing the performance of each student. If changes to the curriculum will be made for

subsequent runs of the course, the department needs to be truly committed to allocating resources for the purchase of e-learning technology and training faculty as how to employ them effectively.

However, in spite of all these challenges, the methods of e-technology and digital ethnography have the potential to play an important role in the acquisition of language as well as intercultural skills. Garrett (Garrett 1991) viewed language as a dynamic interactive system for conveying meaning and language learning as the acquisition of the ability to construct communicative meaning in a new system. The implication, according to Garrett, is that because “so complex an ability can hardly be ‘taught,’ our job is to create such an environment—in class or in our materials—in which students can work on acquiring that ability” (p. 92). If conventional learning environments can no longer provide sufficient learning time or evoke motivation among students, it should be the goal of instructors to make use new methods to create an effective, integrative, and supportive atmosphere for language learners.

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