

Using Asynchronous Instructional Audio Feedback in Online Environments: A Mixed Methods Study

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Abstract

This study explored how instructional audio feedback was perceived by English as a Foreign Language (EFL) and English as Second Language (ESL) students who participated in a collaborative online project involving two classes, one in Russia and the other in the US. Specifically, it examined: 1) the possible differences between EFL and ESL students' perceptions of audio and text feedback when receiving audio feedback from a non-native speaker (NNS) and 2) the possible differences in their perceptions of the sense of presence (teaching, social, and cognitive) as determined by the Community of Inquiry (CoI) framework when receiving audio feedback from the NNS instructor. A mixed methods research design was utilized. The two groups preferred receiving both written and audio feedback, but their perceptions of teaching presence differed. This study has broad implications not only for online learning environments but any learning environment that includes EFL/ESL students.

Keywords: e-learning, instructional audio feedback, teaching, social and cognitive presence, distance education, online asynchronous environment

Introduction

As online courses continue to gain popularity, instructors are increasingly looking for new and more effective techniques to promote a sense of presence among their students. One technique, audio feedback, promises to strengthen the sense of presence and an instructor's ability to establish more personalized communication with students (Ice, Curtis, Phillips, & Wells, 2007). Audio feedback provided online is a technique by which instructors record their comments in digital audible form and attach them to students' assignments. Students can listen to these recorded comments as they read the written comments also added to their assignments (Ice, 2008). Sense of presence is considered an important component of any online environment in that it can remove the sense of perceived isolation or *transactional distance* (Moore, 1991). This sense of isolation can leave learners in online courses feeling disconnected because of a lack of interaction or verbal clues which are normally a part of face to face classrooms. This can have detrimental effects on students' learning.

Sense of presence is still a complex concept to define. But the Community of Inquiry (CoI) framework developed by Garrison, Anderson, and Archer (2000) is a widely accepted model that describes the concept of presence for effective online teaching and learning. The CoI model consists of three overlapping elements:

Social presence is defined as "the ability of participants in a community of inquiry to project themselves socially and emotionally, as "real" people (i.e., their full personality), through the medium of communication being used" (p. 94).

Cognitive presence is the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse.

Teaching presence is the design, facilitation, and direction of cognitive social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes (Garrison et al, 2000).

Overall, research results show that students receiving instructional audio feedback describe their experience as personal, enjoyable, and complete (Kirschner, van den Brink, & Meester, 2004). The majority of studies exploring audio feedback in online courses indicate that it increases the retention of content and promotes “students’ high satisfaction with asynchronous audio feedback as compared to asynchronous text only feedback” (Ice, Swan, Kupczynski, & Richardson, 2008, Analysis and Conclusions ¶).

Research related more specifically to audio feedback used with English as a Second Language (ESL) students, however, is limited. Hyland and Hyland (2006) argued that “ESL students greatly value teacher written feedback and consistently rate it more highly than alternative forms such as peer and oral feedback” (p.87). However, the majority of studies of audio feedback in traditional ESL classrooms found it is effective but mainly when the audio feedback is provided by a native speaker of English (Hsu, Wang, & Comac, 2008).

One experimental study, conducted by Huang (2000), examined the use of audio feedback provided by a NNS instructor (a native speaker of Chinese) in a traditional writing course which found that audio feedback allowed the teacher to produce approximately twice as much feedback as the written comments. Huang (2000) concluded that the quantity of feedback was an important consideration for extended explanations of writing problems since some students fail to understand brief teacher comments. However, it is not clear how effective audio feedback can be as a tool in distance education to promote learning and whether it can promote a sense of presence in an asynchronous online environment with students whose native language is not English. No empirical research has been done yet to investigate the role of language status (first versus second language) in determining the effectiveness of audio feedback (Ice, Swan, Diaz, Kupczynski, & Swan-Dagen, in press). This mixed methods study is the first exploration of the effectiveness of instructional audio feedback provided by a non-native speaker of English to ESL/EFL students and the impact this technique has on the sense of presence in online environments.

Literature Review

Interest in the effectiveness of using audio feedback in teaching started in the early 1960’s (Tanner, 1962; McGrew, 1969). The first empirical studies of the uses of audio feedback were conducted with native speakers of English (NSs) in the field of English Composition in high school and revealed that audio feedback is an effective technique to improve students’ writing and to save teachers time (Coleman, 1972). More recent studies with NSs (Jelfs & Whitelock, 2000) have also found that audio feedback positively affects students’ perception of their motivation and self-confidence.

Farnsworth (1974), one of the first investigations of audio feedback with NNSs, explored the advantages of the use of audio feedback in the correction of ESL compositions at the intermediate to advanced levels. The researcher received positive feedback from the ESL students after the experiment. All students in the study preferred audio feedback because they felt they were receiving individual, personal attention and gained a better understanding of why particular comments were given. Later, Boswood, and Dwyer (1995) found that ESL/EFL students did not have difficulty in understanding audio feedback. Syncox (2003) found that audio feedback promotes students’ coherent understanding of multiple revisions of a text, improves students’ perception of instructor feedback, and clarifies the intended meaning of the writing to students and instructors. The researcher also found that audio feedback “allows the instructor to expand on the problem of understanding meaning from a variety of different angles in the form of models and prompts” (p. 75). Research on the effectiveness of audio feedback for ESL/EFL students in *online* courses has found evidence that audio feedback helped ESL/EFL students improve their speaking and listening skills (Hsu, Wang, & Comac, 2008). Listening to the audio feedback helped the ESL/EFL students understand the mistakes that they made in their assignment (Hsu et al., 2008).

Overall, studies of the use of audio feedback in traditional and online ESL/EFL classrooms reveal that the technique allows teachers “to offer more comprehensive and clearer explanations about the function of the text in its social context, the relationship it crystallizes between the writer and audience, the effectiveness of its thematic development, and its overall impact on the reader” (Boswood & Dwyer, 1995, p. 54). Given the effectiveness of audio feedback in traditional classes, one might expect it to be instructionally beneficial in online classes also although the feedback is asynchronous.

Hyland (1990) notes that ESL/EFL teachers need to provide constructive feedback on ESL/EFL students' work, both about the substance and linguistic form of the work. In order to provide this type of constructive feedback, both for language accuracy and the content, ESL/EFL teachers usually have to provide a great amount of input (Patrie, 1989). It is believed that audio feedback can solve this problem because it gives "assistance in the correction and improvement of content-related problems, in organization of students' papers, their use of appropriate style in choice of words and phrasing, and their clarity and coherence" (Boswood & Dwyer, 1995; Farnsworth, 1974, p. 289).

Since ESL/EFL students require different instructional feedback strategies or commentary approaches than native speakers do (Johanson, 1999), audio feedback should be considered as a vehicle for such commentary since it has the potential to provide the type of feedback essential for ESL/EFL students. Though providing feedback for ESL/EFL learners is one of the core principles for successful instruction and learning, second language students still struggle, as noted by Johanson (1999), to compete adequately in U.S. universities. The present study is an attempt to investigate the effectiveness of instructional audio feedback in online environments and the impact of the technique on the sense of presence among ESL/EFL students. The following research questions were proposed: (1) Is there a significant difference between EFL and ESL students' perceptions of audio and text feedback when receiving audio feedback from a NNS? (2) Is there a difference between EFL and ESL students' perceptions of their sense of presence when receiving audio feedback from a NNS?

Method

Research Design

A mixed methods research design was selected for this study, utilizing both quantitative and qualitative data in order to examine the use of audio feedback in an online environment (Cherryholmes, 1992; Creswell & Plano Clark, 2007). For the quantitative part of the study, two instruments and statistical procedures were used: 1) an independent-samples *t* test and a Mann-Whitney Test with Wilcoxon matched pairs signed rank test, and 2) multiple regression analyses. The qualitative data were collected from eight open-ended items in a post course survey developed by the researchers to analyze students' perceptions of audio feedback. The qualitative items enabled researchers to describe students' perspectives on and feelings about the study topic and revealed a complex picture of the situation (Miles & Huberman, 1994).

For the first research question, the independent variables of this study were the students' age, gender, previous online learning experience, and educational environment; some students were in Russia (EFL) and the others in the US (ESL). The dependent variable was students' perceptions of audio and text feedback as measured by the survey (Ice, 2008) as well as the eight open qualitative items developed by the researchers for this study. For the second research question, the independent variable was educational environment. The dependent variable was the sense of presence with three overlapping core elements: teaching presence, social presence, and cognitive presence as measured by the Col survey (Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, & Swan, 2008).

Participants

The participants for this study (n=39) were students from Russia (n=25) and students from the US (n=14) in the spring of 2010 who voluntarily agreed to complete the online post course survey. All participants were non-native speakers of English. The EFL participants were students of Russian origin studying in content-based English classes at a state university in the Russian Far East. The ESL students were of different cultural origins including countries of South America and Asia and were attending an ESL reading class at an urban community college in the United States. Participants were assigned to groups based on the instructors' knowledge of the students' language proficiency and other student characteristics. Demographic data were collected online from all participants. The 39 students ranged in age from 18 to 45, and 31 of them were female.

Materials

The first instrument, the Likert-type survey (Ice, 2008), addressed students' perceptions about the types of feedback provided during the course. The survey was administered at fifteen institutions in order to support previous research findings. The second instrument was the Col survey (Arbaugh et al., 2008)

used to measure the sense of presence. The Col framework (Garrison, Anderson, & Archer, 2000) consists of three overlapping core elements: teaching presence, social presence, and cognitive presence, each of which is integral to the instrument. This survey was designed to provide a reliable measure of the existence of a community of inquiry in online learning environments (Arbaugh et al., 2008).

In addition, the researchers developed eight open-ended items for the post course survey to get a more in-depth understanding of students' preferences for audio versus text comments, their assessment of their involvement in the online course, their perceived increased/decreased motivation, effectiveness of the technique, and perceptions of the instructor's care about the students.

Procedures

In the spring semester of 2010, a five-week online reading project was conducted with the two classes. The instructors who facilitated the project included a graduate research assistant in Russia who is a non-native speaker of English and a full-time faculty member in the US who is a native speaker of English. During the online project, both instructors provided text-based feedback, and the non-native instructor provided audio feedback. As a part of the project, all students from both classes discussed global warming topics and posted their discussions online at <http://pbwiki.com>. The instructors helped students generate ideas for the discussion and facilitated students' participation in the course. Students worked in virtual teams with four students from each institution. During the first two weeks, the students received individual text-based feedback from their own instructor. During the last two weeks, all students received individual audio feedback from the non-native instructor.

The audio feedback was produced by copying the weekly discussions into a Word Document converted to a PDF file in which the instructor underlined language errors with marginal comments and highlighted the content issues to which an audio file was attached. In this study, audio feedback was provided by using Vocaroo, a web-based program designed to record audio feedback.

At the end of the semester, the graduate assistant conducted an online post-course survey asking the students voluntarily to complete the survey. Twenty-five (100%) EFL and fourteen (100%) ESL students responded to the post course survey about their perceptions of using audio feedback to improve their English language skills. Twenty-two (88%) EFL students and eleven (78.6%) ESL students responded to the eight qualitative items about their perceptions of receiving audio feedback. Finally, twenty-three (92%) EFL students and eleven (78.6%) ESL students answered the questions about their perceptions on the sense of presence.

Results

In order to compare the means of the two groups of subjects on the post course survey measures of perceptions of audio versus text feedback and their sense of presence, an independent-samples t-test (for parametric samples) with its non-parametric equivalent (Mann-Whitney Test with Wilcoxon matched pairs signed rank test) was carried out to see if one group was significantly different from the other ("between-subjects" analysis). The purpose of using a non-parametric statistic was to check the results drawn from the independent-samples t-test because of the small sample size ($n=39$). Prior to the analysis, the homogeneity ($p>0.05$) of variances was checked on the results obtained by Levene's test to determine if the post course survey data were suitable for using parametric inferential statistics, in this case, an independent-samples t-test. The researchers hypothesized that the two groups would be different in their perceptions of audio feedback versus text comments and their perceptions of teacher presence, social presence and cognitive presence in the asynchronous online environment. The differences were accepted if the p value in the means scores for the post course survey across the two groups was less than or equal to 0.05 (i.e., at a 95% or higher level of confidence).

In addition to the comparison of the two groups, a multiple regression analysis was used to predict EFL and ESL students' relative preferences for audio feedback over written feedback based on students' age, gender and previous online learning experience.

EFL/ESL Students' Perceptions about Audio Feedback

Quantitative Analyses. The first research question focused on whether there was a significant difference between EFL and ESL students' perceptions of audio and text feedback when receiving audio feedback

from a NNS. The results for each survey item about audio feedback are provided in Table 1. Overall, the group of EFL students reported that they were more satisfied receiving audio feedback during the online course ($m = 3.65$) than the ESL students ($m = 3.39$). Table 1 shows that both groups were not statistically different in their perceptions of audio over text comments as confirmed by running both the independent t-test and Mann-Whitney Test with Wilcoxon matched pairs signed rank test. The independent-samples t-tests did not reveal any significant differences in the compared means between the groups in their perceptions of audio feedback over written comments [$t(37)=-.09$; $t(37)=-.96$; $t(37)=.71$; $t(37)=-.02$; $t(37)=1.44$; $t(37)=1.20$; $p \geq .05$]. However, the independent t-test did reveal that the two groups were different in their perceptions that inflection in the instructor's voice made her intent clear when providing audio feedback. The significance value p was less than 0.05 (i.e., above the 95% confidence level). The findings were confirmed by running a Mann-Whitney Test with Wilcoxon matched pairs signed rank test ($p = .006$). The EFL students ($n=25$) believed that the intent in the instructor's voice was clear when using audio feedback ($m = 4.00$) while the ESL students ($n=14$) were more neutral in their perceptions ($m = 3.29$).

Multiple Regression Analyses. Further, a standard multiple regression was calculated to predict EFL and ESL students' perceptions of audio feedback and written feedback based on students' age, gender and previous online learning experience. A preliminary analysis was run and indicated that there were no violations of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Tables 2, 3 and 4 demonstrate the results of the multiple regression analyses.

The regression equation for each survey item and students' age, gender, and previous online learning experience was not significant at $\alpha=0.05$; however, almost 24% of the variance for the question about whether inflection in the instructor's voice made her intent clear when using audio feedback was attributed to variations in students' age, gender and previous online learning experience, $R^2 = .237$, $F(3, 31) = 3.21$, $p = 0.036$.

The analysis for the contribution of each independent variable revealed that students' previous online learning experience makes the strongest unique contribution to explaining students' preferences for audio feedback over written feedback. However, students' age makes a unique contribution to explaining students' preferences for audio feedback over text comments in relation to retention ($\beta = .308$). In addition, there was a statistically significant difference between students' previous online learning experience and their preferences of audio feedback over text comments in relation to clarity ($\beta = .452$, $p < 0.05$) and motivation ($\beta = .308$, $p < 0.05$).

Qualitative Analyses. In addition to the quantitative items in the post course survey, the researchers analyzed students' answers to the open-ended questions in order to corroborate both groups' perceptions of receiving audio feedback. The results for each open-ended question are provided in Appendix A. Results of the qualitative items revealed that 54.5% of the EFL students and 85.7% of the ESL students preferred receiving both types of feedback; they said that they liked receiving both audio feedback and written comments during the online course. In addition, 68.2% of the EFL students and 57.1% of the ESL students reported that audio comments made them feel more involved in the course than did written comments. Finally, 82% of the EFL students and 57.1% of the ESL agreed that receiving audio comments made them feel as if the instructor cared more about them and their work than when they received written comments.

However, 47.6% of the EFL students found written comments more effective while 42.9% of the ESL students considered written or both types of feedback more effective during the course. When the students were asked to think about the audio feedback that was used and how they would describe their reaction to the instructor's comments as opposed to written feedback they may have received in this course or previous courses, 59.1% of the EFL students described their reactions as very positive while 42.8% of the ESL students did not find any differences between the two types of feedback. Moreover, when asked about which types of comments influenced their motivation more, 36.4% EFL students stated that audio feedback had more impact on their motivation during their participation in the course, but 42.8% of the ESL students found written comments motivated them more. Finally, when asked if audio comments were more or less personal than written comments, 77.3% EFL students reported having preferences for audio feedback, while 57.1% of the ESL students chose written comments as more personal than audio comments.

Table 1. Results for Audio Feedback Survey between Two Groups

Variable	EFL		ESL		<i>t</i> (37)	<i>p</i>	95%CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
When using audio feedback, inflection in the instructor's voice made his/her intent clear.	4.00	0.65	3.29	0.73	3.17	<.003	0.26	1.17	1.04
The instructor's intent was clearer when using audio than when using text.	3.24	0.93	3.21	0.80	0.09	.93	-0.57	0.62	0.03
Audio comments made me feel more involved in the course than did text based comments.	3.68	0.85	3.43	0.65	0.96	.34	-.028	0.78	0.32
Audio comments motivated me more than did text based comments.	3.48	0.92	3.29	0.61	0.71	.48	-0.36	0.75	0.23
I retained audio comments better than text based comments.	3.28	0.79	3.29	0.73	-0.02	.98	-0.53	0.52	-0.007
Audio comments are more personal than text based comments.	3.96	0.61	3.64	0.74	1.44	.16	-0.13	0.76	0.47
Receiving audio comments made me feel as if the instructor cared more about me and my work than when I received text based comments	3.88	0.83	3.57	0.65	1.20	.24	-0.21	0.83	0.39

Following Oomen-Early, Bold, Gallen, Wiginton, and Andersen (2008), this study also used a five-step method for analyzing qualitative data by Taylor-Powell and Renner (2003) that involved: 1) becoming familiar with the data; 2) finding a focus for the analysis; 3) categorizing the material; 4) finding patterns; and 5) bringing the data all together. Similar to Oomen-Early et al. (2008), the following positive themes emerged:

- audio feedback was more personal, understandable and clear because of the instructor's voice and intonation;
- students feel the instructor feels closer to them as if it had an in-class effect; the instructor appeared caring and seemed to pay more attention to the students;
- students felt more involved;
- students were able to get more information; and
- audio feedback increased students' sense of responsibility to work more effectively on the assignments that followed.

The following responses addressed audio feedback and the instructor's voice and intonation. An EFL student responded, "I think written comments are very clear, but audio is better, because you can hear intonations." Conversely, an ESL student did not find the instructor's voice made a difference, "The fact that is the instructor voice does not make any different."

Table 2. Results from the Multiple Regression Analyses for Age (n=35)

Variable	EFL		ESL		<i>t</i> (37)	<i>p</i>	95%CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
When using audio feedback, inflection in the instructor's voice made his/her intent clear.	4.00	0.65	3.29	0.73	3.17	<.003	0.26	1.17	1.04
The instructor's intent was clearer when using audio than when using text.	3.24	0.93	3.21	0.80	0.09	.93	-0.57	0.62	0.03
Audio comments made me feel more involved in the course than did text based comments.	3.68	0.85	3.43	0.65	0.96	.34	-.028	0.78	0.32
Audio comments motivated me more than did text based comments.	3.48	0.92	3.29	0.61	0.71	.48	-0.36	0.75	0.23
I retained audio comments better than text based comments.	3.28	0.79	3.29	0.73	-0.02	.98	-0.53	0.52	-0.007
Audio comments are more personal than text based comments.	3.96	0.61	3.64	0.74	1.44	.16	-0.13	0.76	0.47
Receiving audio comments made me feel as if the instructor cared more about me and my work than when I received text based comments	3.88	0.83	3.57	0.65	1.20	.24	-0.21	0.83	0.39

Two EFL/ESL students spoke to their feelings of being close to their instructor when they received audio feedback, "It feel me more involved because it seems like I have real conversation with my instructor," and "I think it is because you are listening to the teacher, so in a way you feel as if you were in a classroom."

Two responses addressed the instructor's care about students' work. From an EFL student, "Recording audio feedback means that the instructor does care about me, there is just a such feeling, it means that she knows how is my name and what do I do here in this project." From an ESL student, "As the point above, being able to listen to someone is making the whole thing a caring situation."

Two comments addressed students' involvement and ability to get more information when they received audio feedback. From an EFL student, "Audio comments made me feel more involved into the process, so on receiving such an audio feedback you start to think that your work is needful and your opinion is valuable." From an ESL student, "It is true that we listen to someone who talks to us more than a silent paper, so we get more from audio."

Table 3. *Results from the Multiple Regression Analyses for Gender (n=35)*

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i> (33)	<i>p</i>
When using audio feedback, inflection in the instructor's voice made his / her intent clear	.277	.303	.153	.92	.366
The instructor's intent was clearer when using audio than text.	-.186	.395	-.088	-.47	.641
Audio comments made me feel more involved in the course than text based comments.	-.004	.343	-.002	-.01	.992
Audio comments motivated me more than text based comments.	-.139	.357	-.070	-.39	.700
I retained audio comments better than text based comments.	.043	.342	.023	.13	.900
Audio comments are more personal than text based comments.	.403	.270	.254	1.49	.146
Receiving audio comments made me feel as if the instructor cared more about me and my work than when I received text based comments.	-.147	.341	-.080	-.43	.670

Table 4. *Results from the Multiple Regression Analyses for Online Experience (n=35)*

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i> (33)	<i>p</i>
When using audio feedback, inflection in the instructor's voice made his / her intent clear	.277	.303	.153	.92	.366
The instructor's intent was clearer when using audio than text.	-.186	.395	-.088	-.47	.641
Audio comments made me feel more involved in the course than text based comments.	-.004	.343	-.002	-.01	.992
Audio comments motivated me more than text based comments.	-.139	.357	-.070	-.39	.700
I retained audio comments better than text based comments.	.043	.342	.023	.13	.900
Audio comments are more personal than text based comments.	.403	.270	.254	1.49	.146
Receiving audio comments made me feel as if the instructor cared more about me and my work than when I received text based comments.	-.147	.341	-.080	-.43	.670

Two students spoke about receiving audio feedback and feelings of responsibility for their work. From an EFL student, "I think that both types are very important, but audio comments influenced my motivation more." Conversely, an ESL student said, "I think both are effective. For me the difference is the kind of student that we are."

The negative theme that emerged related to technical difficulties related to downloading and controlling audio feedback as well as the presence of background noise. Two EFL/ESL students spoke about technical problems and audio feedback: "I like that it is making work interesting and gives feel that instructor is taking care about me. But on the other side, it is much harder to work with audio file, because sometimes there are some technical troubles, such as connection problems," and "Just sometime the computer was not working fine so I had problem with the audio feedback. Other than that I think everything was ok."

EFL/ESL Students' Perceptions of the Sense of Presence

The second research question was whether there was a significant difference between EFL and ESL students' perceptions of their sense of presence when receiving audio feedback from a NNS. To answer this research question, responses to the Col survey (Arbaugh et al., 2008) were analyzed. The results for each survey question about audio feedback are reported in Appendix B. In this study, the Col framework survey was run to determine the impact of audio feedback on teaching presence, social presence, and cognitive presence. Overall, the results reported in Appendix C indicate that the EFL students ($n=23$) rated the identified Col items higher ($m=4.05$) than did the ESL students ($n=11$) ($m=3.66$). Appendix B shows that the two groups did not differ in their perceptions of all items in social presence in the online environment as supported by running both the independent t-test and Mann-Whitney Test with Wilcoxon matched pairs signed rank test. The independent-samples t-tests did not find any significant differences in the compared means between the groups in their perceptions of social presence [$t(32)=1.02$; $t(32)=1.05$; $t(32)=1.30$; $t(32)=.46$; $t(32)=.81$; $t(32)=.72$; $t(32)=1.25$; $t(32)=1.16$; $t(32)=1.35$; $p \geq .05$]. Furthermore, the independent t-tests did not find any significant difference in the following items of teaching presence: the instructor clearly communicated important course goals, the instructor was helpful in identifying areas of agreement and disagreement on course topics that helped them to learn, the instructor was helpful in guiding towards understanding course topics in a way that helped them clarify their thinking, and instructor's actions reinforced the development of a sense of presence among course participants [$t(32)=2.35$; $t(32)=1.78$; $t(32)=1.94$; $t(32)=1.75$; $p \geq .05$]. Finally, the students did not differ in their responses to the following items of cognitive presence: course activities piqued their curiosity, they felt motivated to explore content related questions, they utilized a variety of information sources to explore problems posed in this course, discussing course content with their classmates was valuable in helping them appreciate different perspectives, learning activities helped them construct explanations/solutions, reflection on course content and discussions helped them understand fundamental concepts in this class, they can describe ways to test and apply the knowledge created in this course, they have developed solutions to course problems that can be applied in practice, and they can apply the knowledge created in this course to their work or other non-class related activities [$t(32)=.82$; $t(32)=.81$; $t(32)=1.25$; $t(32)=.60$; $t(32)=1.80$; $t(32)=1.58$; $t(32)=-.34$; $t(32)=.55$; $t(32)=.50$; $p \geq .05$].

However, the independent t-test found that the two groups were different in their perceptions of some items of teaching presence and cognitive presence. The significance value p was less than 0.05 (i.e., above the 95% confidence level) for these items. The findings were supported by a Mann-Whitney Test with Wilcoxon matched pairs signed rank test. The EFL students ($n=23$) rated the following items of teaching presence higher ($m=4.34$) than did the ESL students ($n=11$) ($m=3.71$): the instructor clearly communicated important course topics, the instructor provided clear instructions on how to participate in course learning activities, the instructor clearly communicated important due dates/time frames for learning activities, the instructor helped to keep course participants engaged and participating in productive dialogue, the instructor helped keep the course participants on task in a way that helped them to learn, the instructor encouraged course participants to explore new concepts in the course, the instructor helped to focus discussion on relevant issues in a way that helped them to learn, the instructor provided feedback that helped them understand their strengths and weaknesses, and the instructor provided feedback in a timely fashion.

In addition, the EFL students ($n=23$) believed that the problems posed increased their interest in course discussion issues, brainstorming and finding relevant information helped them resolve content related questions, and combining new information helped them answer questions raised in course activities ($m = 3.93$) while the students in the US ($n=11$) were more neutral in their perceptions ($m = 3.62$).

Discussion

Preferences of ESL and EFL Students

This study used a post course survey to examine relative preference of students for audio feedback and written comments. The survey was also used to investigate the impact of using audio feedback provided by the NNS instructor on the students' sense of presence in the online environment. The study investigated the perceptions of two groups of students, non-native speakers of English in an English-speaking environment (ESL in the US) and non-native speakers of English in a non-English speaking environment (EFL in Russia). The overall results of this study revealed that both the EFL and ESL students preferred receiving both types of feedback.

It should be noted that students seemed generally positively inclined toward the use of audio feedback. Very few negative comments, other than those about the technology, were given in the surveys. This included a lack of student concern about the non-native English in the feedback. This lack of concern may be due to the rapport created between the Russian instructor and the students, the briefness of the feedback, and the fact that the instructor has a highly proficient command of spoken English although her English is accented.

Audio Feedback versus Written Feedback

EFL students considered written feedback more effective than audio feedback because of the visual support it provides (i.e. the ability to re-read comments for better understanding) which helped them revise their writing. These findings support previous findings in which EFL/ESL students rated written feedback more highly than oral feedback (Boswood & Dwyer 1995; Zhang, 1995). Similar to the findings of this study, Ice et al. (2010) and Oomen-Early et al. (2008) found that their students preferred to receive "a blending of both audio and text-based feedback rather than just audio by itself" (Oomen-Early et al., 2008, Discussion ¶). As one of the students in this study reported, "I really enjoyed audio comments accompanied with comments because it makes the question or feedback clear and understandable."

However, this study found that students agreed that audio feedback made them feel more involved in the course than written comments did. They also agreed that they retained information in audio comments better than that in written comments. The students in both groups found audio feedback personal, interesting, and motivating when they participated in the online course. These results are consistent with previous research findings (Ice, Curtis, Phillips, & Wells, 2007; Oomen-Early et al., 2008).

Audio Feedback and Sense of Presence

In addition, the findings revealed that using audio feedback had an impact on the sense of presence (Garrison et al., 2000). Both groups agreed that they had a sense of presence during the online course when audio feedback was used. They rated teaching presence, social presence and cognitive presence high; the EFL group ($m=4.05$) and the ESL group ($m=3.66$) averages ranked higher on the five point Likert-scale than did the averages associated with written feedback. These results supported what Ice (2008) found when administering the audio feedback survey in relation to the Col instrument (Arbaugh et al., 2008). Ice (2008) compared students enrolled in a course that utilized audio feedback with students in a course without audio feedback. His results indicated that the use of audio feedback in online courses can increase a sense of presence as well as their understanding of course content (Richardson & Ice 2009, Section II ¶).

However, the two groups were different in their perceptions of the instructor's voice when asked whether inflection in the instructor's voice made her intent clear when using audio feedback. Interestingly, the EFL students rated this question very high ($m=4.00$) compared to the ESL students ($m=3.29$). In addition, the Col items revealed that the EFL students found teaching presence ($m=4.34$) higher than did the ESL students ($m=3.71$). One of the EFL students corroborated this finding by reporting, "I think that audio comments make the instructor's intent more clear and understandable than written comments because there you can feel tone and intonation of instructor's voice." These findings might be explained by the same ethnicity and native language of the EFL students and the instructor who delivered audio feedback. It is possible that the EFL students could more easily understand and comprehend what their instructor said when they listened to audio feedback, whereas the ESL students found the Russian instructor's feedback less comprehensible. The lower ratings by the ESL students may also be due to the fact that

the Russian instructor was not their instructor. Not only would they be less familiar with her discourse, but they may have had less incentive to attend to her feedback. This difference is corroborated by similar findings in the study done by Huang (2000) who found that non-native speakers of English viewed audio feedback more favorably than written feedback. Audio feedback in Huang's (2000) study was also provided by a non-native speaker (Chinese) for Chinese students in Taiwan in an EFL class.

One of the advantages of utilizing audio feedback in the online course was that the technique had an impact on students' cognition and engagement. The instructor was able to use voice and intonation to express different nuances. Both groups mentioned that hearing the instructor's voice and intonation helped them understand the course. For example, the ESL students found that receiving feedback from an online instructor made them feel as if they were in a face-to-face classroom environment. They said that the voice made them feel that the instructor was closer, or as one of the EFL students commented, "Audio feedback made me feel like if I were in a class."

Conclusion

This study illustrates the effectiveness of using audio feedback in online environments including increased student engagement and greater understanding of the instructor's intent because of the availability of tone and intonation. Students perceive audio feedback as personal and enjoyable, and it helps increase their interest and feel the instructor's care. The researchers recommend that those planning to implement asynchronous audio feedback provide both types of feedback.

Audio feedback is an effective medium for providing instructional feedback, one of the keys to improving teaching and learning online. Since constructive feedback is essential to learning, the results of this study are relevant to all academic ESL and EFL contexts.

A larger sample size is needed to validate the results of the study. In addition, more research is needed to examine the differences in students' perceptions when audio feedback is provided by a native speaker of English versus a non-native speaker. More research is also needed to look at differences between ESL students and EFL students, both in perceiving the NNS teacher's intent as reflected in his/her intonation and in experiencing teacher presence.

Future research should explore the relationships between EFL/ESL students' language proficiency levels and the impact of audio feedback on their learning outcomes. Moreover, an examination of the impact of audio feedback on EFL/ESL students' second language development would provide additional insight into the instructional effectiveness of the technique.

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