Adding Audio Feedback Using Vocaroo in Online Courses: Does It Add Value?

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Abstract
Andree Swanson, Maja Zelihic, Paula Zobisch, Renee Hill, Diane Hamilton, Brenda Forde, and Bill Davis conducted a qualitative study to identify the student perceptions of connection and engagement (e-connectivity) when listening to audio feedback provided through the free software, Vocaroo (a web-based service for sending voice messages). The working hypothesis was that providing audio feedback via Vocaroo would result in increased e-connectivity (social connection-engagement). The team of researchers used this in a variety of management, marketing, and accounting courses at the undergraduate and graduate level. The results were positive and further strengthened the desire for students’ e-connectivity and engagement.

Keywords: Audio feedback, E-connectivity, Student engagement, Vocaroo

Introduction
As the educational arena goes through many major changes at a rate unsurpassed in the prior decades, a significant pressure for educators to use and pursue the latest technological tools which can enhance their teaching models and help their students succeed exists. While many schools of thought exist as to what makes students successful in a particular course, all other variables aside, providing a substantial and meaningful feedback always appears to be of the utmost value. One may wonder what, if anything, can be done accomplished in the feedback area that has not been attempted in the prior years. After all, how much innovation and change was possible in the process that was quite clear: address content points, correct grammar and formatting errors, work through students’ writing style, address paragraph organization, and overall assignment flow. Surprisingly enough, even in this arena, a potential for creativity on behalf of the instructors exists. Implementation of audio and video feedback was just one of the ways to provide different feedback venue (in comparison to a traditional written feedback) enabling faculty to connect with students in a manner which enhances their learning and hopefully correlates with a higher level of achievement of course objectives.

“Tell me and I forget. Teach me and I remember. Involve me and I learn”

Benjamin Franklin
Online educators strive for student engagement in higher education. Although the traditional delivery of an online course may previously have been text only, today’s online students demand other forms of course delivery. One way to achieve a higher level of student engagement was the use of technology in the online classroom. The use of audio files within the online classroom can bring the instructor’s presence to life beyond text communication. The instructor can record a lecture, helpful hints regarding a specific assignment, or course announcements (Bolliger, Armier, 2013). Using this active learning instrument may increase overall student satisfaction in addition to aiding in student engagement.

**RESEARCH SUMMARY**

**Purpose/Significance**

The purpose of this qualitative study was to identify the student perceptions of connection and engagement (e-connectivity) when listening to audio feedback provided through the free software, Vocaroo (a web-based service for sending voice messages). The working hypothesis was that providing audio feedback via Vocaroo will result in increased e-connectivity (social connection-engagement). The proposed study will seek the opinions of online graduate and undergraduate students in the Forbes School of Business and Technology, Ashford University.

\[ H_0 = \text{The use of vocal feedback does not increase e-connectivity.} \]

\[ H_1 = \text{The use of vocal feedback does increase e-connectivity.} \]

**Significance Statement**

The significance of this study was that faculty want to ensure students are engaged in the online classroom. Studies have been completed that identified the need for:

1. Achieving a social connection (e-connectivity) with their students (Muirhead, 2000; Slagter van Tryon, Bishop, 2006)
2. Increasing interactivity that “will help the students’ with their understanding” (Swanson, 2010)

Swanson et al. stated:

> Participants in a study agreed that faculty should be warm, available to answer questions; hold students to a high standard, remain flexible to adult learners; honest in all of their interactions, and demonstrate a caring nature in the online classroom (Swanson et al., 2010, p. 119).

Slagter van Tryon and Bishop, as cited in Swanson et al., defined the unique term, “e-immediacy” as the feeling of social connectivity between two online individuals (whether instructors or classmates). Engagement and the feelings of social connectedness are what the students’ desire. Student engagement can be increased by including vocal feedback.

**LITERATURE REVIEW**

**The Flaws in Traditional Feedback**

Rediehs felt traditional grading patterns can negatively impact students’ self-motivation and lead to a potential conflict situation when it comes to students’ perception of the professors’ judgment. Traditional grading appears impersonal, template driven, and too “objective” without accounting for students’ personal differences and writing styles. Due to that, the pursuit towards a more personalized grading feedback unfolded amongst the wide ranks of educators opening a path to a feedback venue which was not only outlining students’ future opportunities and challenges but it also establishing teacher-student relationships while creating a true value, especially in an online setting (Rediehs, 2001).

**The Value of Audio or Video Feedback**

Audio feedback was perceived as more meaningful due to its potential to engage students with the speaker’s tone and additional in-depth explanation of certainly written entries (Nortcliffe, Middleton, 2011). The engaging and subjective nature of audio feedback may end up being pointless if not accessed by students who generally lack interest in reviewing another feedback venue failing to see its clear benefits. Another interesting concept was the perception of care noted by the students who received audio feedback (Cuthrell, Fogarty, Smith, Ledford, 2013). Cavanaugh and Song examined students’ and instructors’ perceptions of audio feedback and written feedback for student papers in online composition classes. This study focused on composition classes only.

> The results show that instructors had mixed feelings about the use of audio, while students tended to have positive feelings toward it. The findings also reveal that teachers tended to give more global commentary when using audio comments and more local commentary when using written comments (Cavanaugh, Song, 2014).

Another interesting perspective was that audio feedback should be positioned as a “feed-forward” engine engaging students in a manner that encourages them to do better on the next assignment focusing on the areas of improvement more so than written feedback was able to do (Rodway-Dyer, Knight, Dunne, 2011). The key was to provide a variety of feedback combining the written with audio elements in order to adjust feedback model to different students’ learning styles (Wolff-Hilliard, Baethe, 2013). Some researchers take the alternative
feedback one step further suggesting the use of video feedback, such as Jing which adds another communication layer – visual aspect which by its very nature should provide higher levels of connectivity and engagement in an online setting (Sekyere, 2010).

Online instruction has incorporated different types of technology to improve student feedback. Denton (2014) explained that it may be important to understand how different types of feedback could improve performance. Online courses may include written feedback provided by the instructor. However, there may be other options such as audio, screen capture, or video. Denton studied 36 undergraduate students and found that screen capture was an effective tool. Although instructors may embrace the importance of feedback, there may be room for growth in terms of the methods used to provide that feedback. Formative assessment or diagnostic testing was just one way of providing effective feedback. Doing things the way they have always been done has become questioned due to the popularity of distance learning. Students perceived audio feedback as effective. Video feedback through the use of screen capture was used; Denton found video feedback actually took less time than traditional written feedback. One of the most significant findings from Denton’s work was that students more easily understood goals and found that audio feedback led to more positive perceptions of that feedback.

Formative feedback may be provided in different ways in an online classroom. The form of assessment feedback was based on using audio technology. Macgregor, Spiers, and Taylor evaluated audio technology in the form of email to provide feedback to students to help them understand how to improve their performance. The authors believed higher education could improve in terms of time spent with formative feedback; they believe that time spent on feedback may be limited due to other university responsibilities such as research requirements (Macgregor et al., 2011). Audio has been found to be an effective feedback tool due to removing the cryptic interpretation perceived by some students. Some advantages of audio feedback also include that it may take less time and provide more detail. The use of audio feedback was used to determine if it was more effective than written feedback. Twenty-six Business Management students were given feedback via audio email utilizing Wimba Voice 6.0. Students were able to respond to the voice emails with their own voice emails, to create more of a dialogue; however, none of the students chose to utilize that option. Students liked the ability to audio because “it was easier to understand, more detailed and personal” (p. 54).

Audio feedback can be more efficient and better meets existing models of ‘quality’ or ‘good’ formative feedback, as posited by the literature, thus enhancing the student learning experience and better informing strategic policy with respect to assessment practice at higher education (Macgregor et al. 2011, p. 58).

Gormley and McDermott posited that many students have issues with digital literacies creating issues in learning. The use of three to five-second screencasts has been effective in education kindergarten through grad school. “Screencasting presents information in both audio and visual form, and its multimodal framework may be particularly helpful at motivating and engaging students with learning difficulties” (Gormley, McDermott, 2011, p. 18).

Gould and Day (2013) conducted a study using full-time nursing students at a community college to determine if the use of audio feedback was valuable. “Questionnaires and a focus group were used to capture student opinion of this pilot project. The majority of students valued audio feedback as more detailed, personalised and supportive than written feedback” (Gould, Day, 2013).

Graves, Goodman, Herzing, Minnich, Murcek, Parks, and Shirley conducted a study to determine if students preferred audio versus written feedback. The results of the study were mixed. Students stated that the feedback seemed more personalized when using audio feedback. Students felt negative regarding using an additional technology (Graves et al., 2014). Hope (2011) found that students reacted positively to the use of Jing for audio feedback. Students reported feeling more engaged and a better understanding of the feedback. Hope also found that audio feedback reduced grading time for faculty.

Ice, Curtis, Phillips, and Wells conducted a study regarding replacing text feedback with audio feedback. “Our findings revealed extremely high student satisfaction with embedded asynchronous audio feedback as compared to asynchronous text only feedback” (Ice et al., 2007, abstract). The result of the study demonstrated four themes: 1) Audio feedback was perceived to be more effective for conveying nuances; 2) Audio feedback was related to feelings of increased participation and improved learning community collaborations; 3) Audio feedback was positively correlated with increased retention of content; and, 4) Audio feedback was related to the belief that the instructor cared more about the student (Ice et al., 2007).

Several studies have been conducted that have examined the use of audio feedback in online classes. Ice et al. conducted a study of online graduate courses in which instructors embedded audio comments into the students’ documents using Adobe Acrobat Pro. The findings indicated that students were able to detect nuances more effectively, understand content more thoroughly, and engage with the instructor at a more personal level through audio feedback than through written feedback. Moreover, Ice, Swan, Diaz, Kupczynski, and Swan Dagen (2010) conducted a study in which 196 students in graduate level education courses in three different universities were given both audio and written feedback in Portable Document Format. They found that students preferred audio feedback over written feedback at global levels of commentary (i.e., for overall quality, structure, and organization), while students tended to prefer written feedback over audio feedback for more specific commentary on issues such as arguments supported or grammatical and mechanical issues that had emerged.

Assessments are used over time to help students improve their writing and comprehension skills (Stiggins, 2007). Audio feedback on written assignments may offer a more in-depth analysis of a student’s strengths and weaknesses (Cavanaugh, Song, 2014), whereas written feedback was often time-consuming and may not include the detail audio feedback can offer in a very short audio file. Using a digital audio file for feedback can appeal to visual as well as auditory learners (Wolff-Hilliard, Baethe, 2013). Hearing the instructor’s voice might also fill a need for the student to feel connected to a real person behind the
text and contribute to forming a learning community (Zhao, Kuh, 2004) where the student feels more comfortable within the learning environment.

Digital audio technology has created a format the instructor can use in order to provide a more personalized, individualized approach to feedback (Sull, Cavanah, 2014). The MP3 format reduces the file so that the information can easily be transferred. An audio file can be made with a free software program such as Vocaroo, which was easy to use and transfer the files.

Lunt and Curran conducted a study examining the “benefits of using audio” feedback versus presenting written feedback. “Students are at least 10 times more likely to open audio files compared to collection written feedback” (Lunt, Curran, 2010). There appears to be a correlation between audio feedback and retention of students.

E-learning Trends Focus on Connectivism

E-learning trends have focused on connectivism. Dräsil and Pitner (2006) explained that this means having the ability to link important resources with students. Different platforms are used to deliver online classes. Each of these platforms offers a variety of ways to connect with students. In Drasil and Pitner’s study, the authors researched E-Learning 2.0 which was a tool aimed at personalizing the Learning Management System. Some of the resources in e-Learning 2.0 included different ways to interact with the students including blogs and the ability to insert personalized content. The importance of examining different platforms may be to determine a tool that helps integrate feedback in ways that allow students to better communicate with instructors.

Top Strategies for Promoting Interaction

Online courses may use a variety of ways to instruct students. Gaytan and McEwen sought to better understand some online instructional strategies including the importance of immediate feedback. Some universities have focused on promoting interaction within online courses to build a sense of community that may often be associated with traditional education. In this study, the authors sought to understand some effective ways to engage students as well as determine effective assessment tools. They listed the top strategies for providing quality instruction in online courses as

...requiring continual, immediate, and detailed feedback regarding student understanding of course materials; making online courses at least as rigorous as conventional courses; using e-mail appropriately to aid in the instructional process; using a variety of instructional strategies to address students’ learning styles; establishing a good rapport and collaboration with students; and using thought-provoking questions in threaded discussions (Gaytan, McEwen, 2007, p. 125).

Students ranked what they found important and listed email as number one, rigor as number two, rapport as number three, thought-provoking questions as number four, and dynamic interaction as number five. Students did not mention feedback as one of their top five concerns.

The authors determined that understanding diverse learning styles and using multiple ways of assessing student’s work may be important when delivering online courses. “Online instruction and assessment must balance the requirements of technology, delivery, pedagogy, learning styles, and learning outcomes” (Gaytan, McEwen, 2007, p. 130).

Methodology

Research Methodology

In addition to written feedback presented in Waypoint, the researchers provided a link to audio feedback for the students. Vocaroo will be used to record and store the 5-minute or less audio feedback. A unique link, known only to the faculty and the student, was created and inserted into the Waypoint feedback. After listening to the feedback for the first four weeks, the students had an opportunity to take a survey in Week 5 of the course.

The study was conducted using an Internet survey tool called Qualtrics. “Survey research is one of the most important areas of measurement in applied social research” (Trochim, 2006). There was no control group as the survey was designed for students who had been provided with audio feedback. All students who agreed to participate by returning the Informed Consent emailed to them during the first week of class will be provided the audio feedback each week whether or not they actually listen.

There was no way of knowing if a student would follow through and complete the survey, but a response rate of 100% was not expected. One of the important descriptive statistics the researchers expected to obtain was the percentage of students who will take the time to listen to the audio feedback. Students who did not wish to participate in the study but requested audio feedback anyway were accommodated. Their impressions were still captured by the end of course survey.

The survey method led to unbiased responses. One of the benefits of the survey methodology was the ability to create anonymity and reduce the chances of participants to influence other participants. Communication noise was reduced using the survey method. The survey yielded descriptive statistics that may or may not suggest further study. In addition, the researchers collected anecdotal information in the form of survey comments, observations during class, and the end of course survey. Braidfoot and Swanson (2013), Swanson and Zobisch (2014), and Swanson, Hamilton, and Zobisch (2015) had previously used this research question methodology with success; thus, a pilot study was not completed.

Risks

Participants of this study did not have any physical nor mental risks as they answer the 13 questions (2 yes/no, 2 demographic, 1 open-ended, and 8 Likert-scale). There were no known risks associated with this study. There was no compensation for participation in this research study.
Benefits

The results from this survey may present significant data to conduct further research on the addition of audio feedback in the online classroom. In addition, if the results were positive, the researchers may look into future applications of adding voice into the classroom.

Subject Recruitment / Population and Geographic Location

The study’s population included undergraduate and graduate students at the Forbes School of Business and Technology at Ashford University. All participants resided anywhere in the world and were students in the researchers’ classrooms.

RESULTS

Although the study led to positive results, the researchers had difficulty finding students willing to participate. One student expressed that it would take too much time for him or her to review the written feedback and listen to the audio file (although the file would have been less than 5 minutes and could be listened to while reviewing the feedback).

Most students responded that this was an effective method for receiving constructive feedback. Most of the instructors felt that this was effective, but it involved much more time than it would have for them to read and grade the feedback.

Here are some examples of feedback that the researchers received:

- Thank you for the audio comments! After ten years of not being in school, I was starving for feedback on my writing and this was the first time I got something concrete I could work on. I want to have an A in the class so knowing how I can improve goes a long way for my grade and for me personally. Thank you again!
- Thank you again for the audio feedback. I continue to get so much out of it. I addressed the points you mentioned from the last assignment except I thought you said paragraphs had to be 48 sentences which seemed long but I didn’t question and purposefully tried to make my paragraphs longer. Now this week, I heard that you said 4 to 8 sentences. Haha! That makes WAY more sense. Now I feel silly for not asking. Regardless, I am happy my grade improved significantly thanks to your notes. I am aiming for a perfect paper this week :-)
- I think the Vocaroo pilot is a fantastic idea, and really works to bridge the disconnect that students may feel in an online course. Having the verbal review of an assignment, along with the Waypoint markup creates more of a holistic experience and I can honestly say I would have enjoyed having this opportunity throughout the duration of my program. I sincerely hope the finding prove useful and that the audio tool is employed across all programs.

The researchers recommend future studies on the implementation of audio feedback.

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