

Is there potential to use embedded digitally recorded comments as a form of feed forward, enabling greater flexibility and enhancement to the assessment and feedback process within Higher Education?

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Abstract

The effectiveness of feedback within traditional educational environments has prompted much debate. With the arrival of social software and Web 2.0 technologies for learning, digital audio is now being considered as a way to improve the quality of feedback and enhance the students learning experience. Supported by the body of work written by educationalists, a multi-faceted environmental scan that consisted of assessment, the use of embedded digital audio as a feed forward tool and associated technology, was conducted to ascertain if there is a potential to embed recorded auditory feed forward comments within students electronically submitted formative and summative course work. A multiple research methodology that incorporated techniques from qualitative and quantitative methods was used for the empirical data collection and to facilitate triangulation, thus reducing bias in the analysis. Participants were students and tutors from Edge Hill University in Ormskirk, West Lancashire. This paper focuses on student and tutor responsiveness. It describes how there is a potential to use embedded digital sound files in HE, and that its use seems to enable greater flexibility in the feed forward process, whilst being a technology that tutors are prepared to use and students find easy to understand. Any problems encountered are discussed and suggestions for improvement in the feed forward process included.

Introduction

Following the work of IMPALA(n.d), and The Sounds Good Project led by Leeds Metropolitan University (JISC, n.d), the general purpose of this study was to evaluate the effectiveness and the effects of digital audio feedback and how it could be delivered to students, with an emphasis on the enhancement of their learning experience.

A small-scale research project was conducted with a cross representation of student cohorts and subject tutors. Participants were students (33) and tutors (17) from Edge Hill University in Ormskirk, West Lancashire.

Methodology

The study was broken down into six distinct phases, each with its own individual aims and objectives. A methodology that incorporated techniques from qualitative and quantitative methods was used for empirical data collection. Research questions measured both tutor and students views of audio feedback and sought to explore the cause and effect audio feedback had on them.

This report considers the findings based on the following two questions.

Will using audio enable greater flexibility in the feedback process?
Can feedback be enhanced using audio?

Feedback was embedded into students' electronic submissions, its purpose to enhance and expand any written notation or commenting. Hand-held digital MP3 recorders were considered the most appropriate form of recording media for this project. However, due to lack of availability, two different recording formats were used.

Hand-held digital MP3 recorder
 Hand-held digital WMA recorder

Findings

Participants thought that the use of audio would help develop future learning and did enhance the quality of feedback, although a few students and tutors felt it was not a method that encouraged interaction.

Table 1 Learning for the future (student)

Strongly agree:	39.3%	11
Agree:	50.0%	14
Don't Agree:	10.7%	3
Strongly Disagree:	0.0%	0

Overall, findings show that students would like to receive audio feedback regularly, with the majority of the students stating they would listen to it more than once.

Table 2 Audio as a regular feedback mechanism

	BSc/Ba Business	BSc Computing	Fast Forward (any subject)	Totals
Yes	11	12	2	25 (89.2%)
No	1	2	0	3 (10%)
Totals	12	14	2	28

Findings show the use of audio is not subject-specific and despite an overwhelming liking for audio feedback and evidence to suggest that the use of audio can enhance the feedback process, a small number of students indicated a need for both written and verbal feedback. Furthermore, some tutors also felt that auditory feedback should be delivered in conjunction with written comments.

"it would be nice to have both formats, written and audio"

“if using audio feedback, also use written feedback to complement it”

“need to [be] back[ed] up with writing, comments on essay or assignments”

Therefore, careful consideration must be given as to the suitability of the feedback for individual students and a certain amount of flexibility in the method of delivery must be allowed for. Both tutors and students felt there was no interaction with audio feedback as it is a one-way communication tool, although it could be argued, that written feedback is also a one-way communication tool and does not engage the teacher in discussion about that feedback.

The implementation of embedded audio feedback was received very well overall and students stated they were likely to listen to the feedback again, helping them process the suggested comments and encouraging them to become active learners.

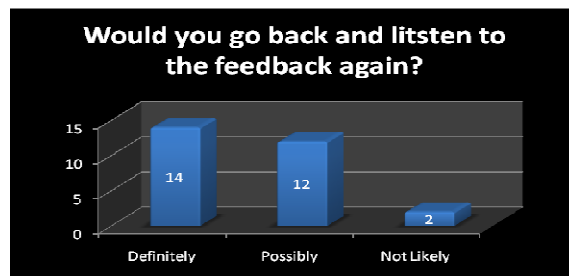


Figure 1 Listen to feedback again (student)

Findings show that whilst a few students were unsure how to access the recorded feedback, others had no such concerns.

It is, worth considering however, that students had not received audio feedback before and this could account towards the overwhelming preference for its use. In fact, several students referred to its uniqueness. What is cause for concern, due to the limitations of the study, is whether the novelty of audio feedback impacted on student responsiveness.

Although results show a small number of areas that could be considered problematic and illustrate how when using audio as a single method of feedback, its appropriateness must be considered, it is apparent, based on the outcomes of this study, that there is a potential in higher education to use audio as a form of feedback and that it can add greater flexibility to the feedback process

There was no evidence to suggest that the use of different recording mechanisms had any impact on the sound quality, embedding, delivery or upload times and the results of this study and existing literature around the use of audio feedback in HE have concluded that it is a medium that students respond to and tutors can use.

Conclusion

Although, this was a single case study of restricted scope, it suggests a number of points that professionals should consider before embarking on the delivery of audio feedback:

- Follow normal principles of feedback practice - audio should not replace but enhance;
- Ascertain what communication tool students are using to receive the feedback as not all PC operating systems allow an embedded sound file to be opened;
- Ensure students know where to access the sound file;
- Check the quality of the sound;
- Check that the method of delivery is suitable;

And finally:

Do not use audio feedback just because it is available – it should be used for reasons of pedagogy and thought must be given as to the suitability of the feedback for certain students and whether they would benefit from verbal, written or both written and verbal commentary.

Further Research

Although this project has achieved its aims, it has also highlighted a need for further exploration and a clearer picture needs to be developed so an understanding is gained as to how the students use audio feedback and what part of the feedback increases student learning. Furthermore, the majority of the students said they would listen to feedback again; additional research is needed to ascertain whether or not this is really the case, or if the novelty factor surrounding the use of audio has led to this hypothesis. What impact audio feedback has on students' progression and learning should also be further researched as should whether or not the lack of interactivity, surrounding the use of digital audio as a feedback tool has any negative consequences. In addition, more research is needed to determine which technologies students are prepared to use to receive digital audio feedback and whether they are suitable to retrieve embedded sound files in word-processed documents.

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