Let's talk assessment: An exploration of student perceptions of audio feedback for assessment

This paper reports the findings of a three-year descriptive research investigation into postgraduate level students' perceptions of the strengths and weaknesses of audio feedback for assessment. Overall, results indicated that students positively received audio feedback. Particular strengths of audio feedback included it being more personalised and detailed than traditional written feedback. Limitations identified included issues in reviewing the audio feedback given and the time taking to listen to the feedback provided. Using thematic analysis four major themes emerged from the data: the affordances of audio feedback, the utility of audio feedback, the personalised nature of audio feedback and affective factors.

Introduction

In Higher Education, written feedback for student assignments is considered a central feature of the feedback process (Nicol, 2010). However, with the growing demand for online learning, burgeoning class sizes and the associated increase in written communication typical with online learning, such as responding to student enquiries (Gallien & Oomen-Early, 2008), the provision of timely and detailed written feedback has become a challenge for instructors. Advances in technology and network bandwidth have enabled innovative options in the delivery of assessment feedback that may address these issues. One such innovation in delivery is recorded audio feedback (Marriot & Teoh, 2012).

This paper reports the results of a three-year descriptive research investigation into postgraduate student attitudes towards audio feedback for assessment. The study site was a large regional university in New South Wales, Australia. The university is one of the largest providers of distance education in Australia with approximately 80% of enrolled students undertaking online (off-campus) learning. The paper draws on the open survey responses of education students about the recorded audio feedback that they received on their assessment.

Background

Previous studies have shown audio feedback being positively received by students (Cann, 2014; Hennessy & Forrester, 2014; Ice, Curtis, Phillips & Wells, 2007; King, McGugan & Bunyan, 2008; Lunt & Curran, 2010; Merry & Orsmond, 2008; Morris & Chikwa, 2016). One of the key reasons for the popularity of audio feedback is that it is perceived to be a more personal form of feedback than written feedback (Moore & Wallace, 2012; Oomen-Early et. al., 2008). Accordingly, audio feedback has the potential to strengthen the relationship between students and instructors (Knauf, 2016). This personal touch potentially allows connections to be made remotely across time and space. This is particularly important as it can help reduce the isolation felt by distance education students (Ryder & Davis, 2016).

It is the nature of the medium that allows audio feedback to contribute to a greater sense of instructor 'social presence' (Moore & Wallace, 2012; Oomen-Early et al., 2008). Being able to express the voice and tone provides a personalised touch to assessment feedback (Issa, 2014) which is able to convey to students that instructors care about both them and the work they present (Merry & Osmond, 2008). There is also a pastoral care element associated with the provision of audio feedback. Perceived as more informal, audio feedback can mirror student preferences for accessing informal support over more centralised student services (Dixon, 2015).

The personalised nature of audio feedback has also been associated with higher levels of student engagement. Even after taking the novelty element of receiving audio feedback into account, Ice et al., (2007) found audio feedback to be associated with feelings of increased involvement and enhanced interaction in students. Perhaps just as important, audio feedback has the potential to "engage, motivate and nurture busy academics" (Ryder & Davis, 2016, p. 8). According to Ice et al (2007), even if there were no other positive factors, the role audio feedback can play in developing interpersonal relations with students would be sufficient reason for its continued use.

It is acknowledged all forms of assessment feedback need to be timely in delivery and sufficient in detail to be effective (Gibbs & Simpson, 2004). On both counts, audio feedback performs well. Despite the question as to whether audio feedback is quicker to provide than written feedback (see, Morris & Chikwa, 2016), there is general consensus that audio feedback is both quicker and more detailed in its delivery. For example, King et al. (2008), investigating the quantity and quality of audio feedback against the standard written comment sheets, found that in all cases students received longer, more detailed feedback via the audio format. It was estimated the equivalent of 100 words of written text could be provided in one minute of audio. In terms of detail, when the quality of audio feedback was contrasted with feedback provided on the standard feedback form, the authors concluded, "the audio format does lend itself to a 'richer', more comprehensive form of comment" (King et al., 2008, p. 154). Lunt and Curran (2010), who also compared and contrasted audio feedback with written feedback, found that audio feedback took less time to deliver than written feedback. Lunt and Curran estimated that one minute of audio feedback equated to six minutes of written feedback. However, even timely and detailed feedback is of little use if it is not accessed and retained. Ice et al, 2007, reported that audio feedback was associated with increased retention and understanding of content to a deeper level. Hennessy and Forrester (2014) found that students were more likely to listen to audio feedback more than once as opposed to written feedback, which was often not re-examined after the initial look at the mark or feedback.

Despite the positive reception by students a number of negative aspects of audio feedback have been identified. The most obvious aspect is that audio feedback is unsuitable for students who are hearing impaired (Lunt & Curran, 2010). In relation to access, students reported difficulty in finding the points in their assignments to which the audio feedback was referring (Brearley & Cullen, 2012; Morris & Chikwa, 2016; Rodway-Dyer, Knight & Dunne, 2011). For some students, listening to the audio feedback can be a time-consuming process (Rodway-Dye et al., 2011). Gould and Day (2013) reported that while students positively received audio feedback, the quality of feedback from some instructors was perceived as being more helpful than others.

Dixon (2015) notes the apparent contradiction that the largely quantitative nature of the audio feedback literature to date represents a shift from the dialogic process audio feedback might well afford. According to Dixon, there is the need to move away from discussion of the technological affordances of audio feedback to a focus on the "lived experience of students" (p. 101). As a means of approaching this goal and addressing this identified gap in the audio feedback literature, this qualitative study sought to explore and present perspectives of the relative strengths and weaknesses of audio feedback as conveyed through the students' own voices. To achieve this, students were simply asked two open-ended questions: 'What do you perceive to be the strengths of receiving audio feedback?' and 'What do you perceive to be the weaknesses of receiving audio feedback?' Open-ended questions give participants the opportunity to talk about their lived experiences in their own terms (Low, as cited in Liamputtong, 2009). Identifying potential weaknesses is a valuable exercise because while the literature reports numerous strengths of audio feedback, perceived limitations remain largely under-reported. Furthermore, identifying weaknesses presents the possibility of these being addressed in the future delivery of audio feedback with the aim of improving the utility and student experience of audio feedback. Identifying strengths provides the opportunity of confirming the results of previous studies and determining whether any new strengths might be identified.

Methodology

Study context

Audio feedback was provided over a three-year period across five teaching sessions to students in nine postgraduate ICT Education units of study at a university in regional New South Wales, Australia. Each unit was the equivalent of 150 hours of study. All students enrolled in these units studied externally (off campus) via online delivery through the Moodle Learning Management System. In all nine units, students had to complete two assessment tasks. Tasks comprised a range of assessment activities; both practical and theoretical in nature. Audio feedback was provided for each assessment task across the nine units. Over the five teaching periods, two sets of audio feedback for each of 752 students were recorded giving a total of 1504 audio feedback files typically ranging in duration from 5 to 25 minutes. This equated to approximately 350 hours of recordings. The audio feedback was recorded and distributed as mp3 files because of the small file size and universality of the mp3 format.

Procedure

The study employed a convenience sampling strategy with all students enrolled across the five teaching sessions in nine postgraduate ICT Education units of study being eligible to participate in the research. After institutional ethics approval had been given, students were sent an email inviting them to participate in the study. In this email, it was explained to students that their participation in the study was entirely voluntary and they could cease participation at any time. Students who accepted this invitation were asked via a web-based survey in the form of two open response questions to identify what they perceived to be the strengths and weaknesses of audio feedback for assessment.

Data analysis

Thematic analysis was applied to the data from the two open response questions to identify and code the emergent themes. Thematic analysis is a method for identifying and analysing patterns in qualitative data (Clark & Braun, 2013). While there are a number different versions of thematic analysis available to researchers (Clark & Braun, 2013), the six-phase model of Braun and Clarke (2006, p. 87) was used as it is one of most widespread version of thematic analysis applied in the literature. The six phases are: 1) Familiarising yourself with your data; 2) Generating initial codes; 3) Searching for themes; 4) Reviewing themes; 5) Defining and naming themes; and 6) Producing the report.

Student responses were downloaded into Microsoft Excel to allow the two authors to familiarise themselves with the data and generate initial codes. Following the advice of Braun and Clarke (2006), both authors, read and re-read the open responses to familiarize themselves with both the depth and breadth of the content. Once thoroughly familiar with the content, the two authors manually generated the initial codes independently of each other. Working systematically through the data set, interesting aspects of the data that had the potential to form the basis of repeated patterns (i.e., themes) were highlighted (Braun & Clarke, 2006). The two authors then came together to compare their initial coding and develop a set of agreed code descriptions. Next, the authors individually re-coded the data using the set of agreed code descriptions and through an iterative process of discussion and consensus developed the final codings. Having completed the re-coding process, the two authors independently looked for emergent themes from amongst the final codings. This was achieved by reviewing the codes seeing how the different codes might be gathered together under an overarching theme (Braun & Clarke, 2006). The two authors then came together to compare to review the generated themes and develop a set of theme descriptions. Hence, the identification and description of the emergent themes employed the same iterative process of discussion consensus as undertaken to develop the codes. This use of 'investigator triangulation' was done as a means of maximising the validity of the research. Such a strategy helps generate qualitative research that is "plausible, credible, trustworthy and therefore defensible" (Johnson, 1997, p. 282).

Results

There were 225 valid student survey responses out of a study population of 752 students. This gave a response rate of 30%. Preliminary analysis of the two open response items identified 562 strengths and weaknesses of audio feedback from the 225 valid student responses. Overall, of the 562 individual data elements analysed, 370 (66%) of these elements were related to audio feedback strengths and 192 (34%) were related to weaknesses. Coding of the data elements yielded 28 codes related to the strengths and weaknesses of audio feedback from a student perspective (see, Appendix 1). When related codes were grouped into themes, four broad themes emerged: *affordances of audio feedback*, *utility of audio feedback*, *personalised nature of audio feedback* and *affective factors*.

Affordances of audio feedback

The ability for instructors to provide a greater level of detail of assessment feedback was frequently mentioned as a strength of audio feedback. This may be due to the nature of the medium, for as one student observed, 'the marker can provide more detail than they would be inclined to write'. Similarly, another student commented, 'I find that it allows for more feedback as it doesn't take as long to type'. For several students another strength of audio feedback was its clarity. For one student receiving audio feedback made it 'easier to gauge [the] marker's opinion of your work'. The opportunity to provide more detailed feedback also helped improve clarity, as one student noted:

> It was easy to understand. [the instructor] walked me through the assignment step by step and I knew exactly where I had done the task correctly and where I needed to improve.

For some students, a lack of clarity was seen as a weakness of audio feedback. For example:

> I think that there is a greater chance of misunderstanding with audio feedback. It needs to be clearly structured so that the student knows exactly what the teacher is referring to and language needs to be clear and unambiguous.

Several students felt the feedback they received via audio was more memorable - 'I find audio feedback much easier to recall than written feedback'. Another student commented, 'I feel as though I am more likely to remember and use the feedback provided'

Audio feedback was perceived by some students to be more informal than traditional written feedback. This informality was seen as both a strength and weakness of audio feedback. For example, one student liked, 'the conversational and friendly nature of it [audio feedback], while another student thought the '[c]omments seem to be less thought out and more like an informal chat about the assignment'. For one student the informality was perceived as a lack of rigor: '[t]he nature of auditory feedback has the feeling of being less rigorous than formal written feedback'.

Another perceived strength was the provision of formative feedback:

> The feedback … focused on minor detail as well as specific areas for improvement so I was provided with a clear understanding of how I could improve.

One student felt that audio feedback was easier than written feedback in allowing them to see where improvement was necessary:

> It actually walked you through your assignment pointing out its strengths and weaknesses - much easier to see where you need to improve and what you did well than a [comment] written in a margin in an essay.

The ability of audio feedback to convey nuance was noted by several students. For example, one student felt they were 'able to get a better understanding of marker's views through their tone of voice'. For another student '[w]eaknesses could be highlighted in a constructive way using voice tone and empathetic language.' Another student observed that through nuance there was the ability to provide an added layer of detail to audio feedback:

> Verbal feedback enables the marker to convey more information to the student through the tone of voice and other verbal cues.

However, for some students, audio feedback lacked sufficient nuance. For instance: 'Sometimes it was hard to determine the tone of the instructor's comments (as with all verbal, non-visual interactions)'. Finally, the ability of audio feedback to provide insight into the marking process was also commented upon by students. For one student it was 'good to hear [the instructor's] thought process'. For another student this added another dimension of understanding that probably would not have been possible with written feedback:

> As the [instructor] was speaking as he was thinking and exploring my assignment, I was able to see where he struggled to understand what I meant.

For at least one student gaining insight into the marking process was not a positive experience:

> After spending endless hours on an assignment, it was a little disheartening at times to hear how quickly the marker accepted/dismissed work and made judgments. I know this is what happens when markers mark, of course, but to actually hear it was a little bit confronting at times! I wanted to shout back "Yes, but I spent hours on that section. Please don't dismiss it so heartlessly!!"

Utility of audio feedback

The two biggest factors identified by students as impacting on the usefulness of audio feedback were difficulties in reviewing audio feedback and the duration of time it took to listen to the feedback provided. Several students noted the difficulty in returning to a particular point of the feedback. As one student explained:

> In the format provided reviewing any specific subset of the feedback was laborious. No meaningful metadata was provided to allow tagging or earmarking of relevant sections of feedback so you either had to manually record notes or timestamps or sequentially feed through the entire stream.

Another student noted that storage of the audio feedback for later review was problematic: 'Not sure how to save the audio for future reference'. For one student because the audio feedback might be difficult to review, this meant that they would not '…necessarily refer back to it when completing future assignments'.

The length of time required to listen to audio feedback was perceived by a number of students as a weakness. Some students considered the audio feedback they received as 'too long - monotonous' or they felt that it was 'a relatively significant investment of time listening to the feedback'. One student had very little time for audio feedback or feedback in general:

> Not interested in spending 10 minutes listening to audio feedback. Written feedback can be 'consumed' in a minute or less, which is far preferable.

For some students the usefulness of audio feedback was limited because of access issues. A number of students reported being unable to play their audio feedback while others had concerns because of download restrictions or reduced bandwidth:

> I struggled to listen to my feedback all the way through as the recording would stop midway through, 'stream' and then return to the beginning. Wish I knew what was at the end. This is never an issue with written feedback.

Several students noted that audio feedback would be problematic for students with hearing impairments. One student in response to the open response question on the strengths of audio feedback made the comment: 'I am deaf NONE'. This emphasizes the importance of alternative arrangements - such as transcription - being available when audio feedback is being used.

Audio quality was also found to be a factor that could impact on the utility of audio feedback. A number of students commented that the audio was hard to hear. Sometimes technical issues caused these but other times the marker providing the feedback was responsible:

> At some points in the review, the marker mumbled and spoke very quickly, I needed to replay sometimes just to keep up with their comments.

There were a number of factors students identified that made audio feedback useful. For one student, audio feedback was seen as being suitable because of the nature of the discipline - ICT Education - in which it was being provided: 'It seems only too fitting to receive feedback in this format for an ICT subject'. Another student thought audio feedback was suitable because of the nature of the assessment task:

> For this assignment it was suitable because the questions were short and could be marked as the recording was made. Marking was faster and results received faster.

Audio feedback was also perceived as being useful when it was used in a complementary fashion with written feedback: 'Definitely best in combination with written comments (in-text and brief overall) not in its own bubble'. When audio feedback was used in combination with written feedback it was considered to be convenient by one student because it was '[e]asy to listen whilst viewing my work'.

Personalised nature of audio feedback

Almost one-third of students (31%) surveyed considered the personal nature of audio feedback as one of its strengths. As one student described: 'It feels like you're in the room with them [instructors] and they are talking directly to you'. This is particularly important as all of the students who received audio feedback were studying off-campus. Another student comparing audio feedback and written feedback made the comment: 'It feels much more personal - written comments can seem quite distant, even cold if not worded carefully'. However, for some students the personal nature of audio feedback was considered confronting: 'I had to steel myself to listen as it seemed more personal, easier to read bad comments on page than hear then out loud.'

Students considered being provided with individualised feedback as further strength of audio feedback. As one student commented:

> It's the first lot of feedback I've gotten that actually specifically relates to my work - usually there's just an overall feedback for the whole group that I then have to sit and go through, did I do that? Does that relate to me?

Another student commented that the audio feedback provided was 'more tailored to the individual and the assessment task'.

Also included under this theme was the code 'learning style'. One student considered one of the strengths of audio feedback was that it '[s]uits a wider range of learners i.e. auditory and visual'. Similarly, another student commented: 'It… appealed to my learning style'. However, students also noted the possibility of audio feedback being incompatible with particular learning styles. As one student observed: 'students who struggle with audio learning, may also struggle with the lack of visual feedback'. For one student in particular, this was the case:

> I am a visual learner, I find it very hard to listen to a segment and understand/remember it at the end so [I] found myself writing notes to read from.

Affective factors

The final theme identified in the student open response data was affective factors. A number of students believed that audio feedback helped promote a sense of engagement for both themselves and the instructors. Students believed that audio feedback 'has the potential to be a great motivator' and that it 'helped with engagement and rapport particularly for distance-based study'. Students saw the instructor's providing the audio feedback similarly engaged as well. For one student, this level of instructor engagement was particularly rewarding:

> As a student it makes you feel valued and that your work and effort is important because a teacher has taken the time to talk in detail about your individual work.

Similarly, another student commented that it was 'nice to know that the unit instructors go to that effort to give feedback'. However, for one student a perceived lack of instructor engagement had a negative effect: 'My [instructor] was clearly exhausted and disinterested. I didn't need to know that'.

Several students associated audio feedback with feelings of positivity. For one student the audio feedback provided, 'made me feel more positive about studying at a distance'. Another student believed the audio feedback to be 'positive and understanding'. However, a number of students reported that receiving audio feedback could be confronting. For one student it was 'a little scary to hear frank criticism, mostly as you are used to a written comment'. For another, 'it seemed a little creepy to listen to feedback on my assignment'. Being unhappy with the quality of the work submitted could be one explanation why audio feedback could be confronting for students. As one student commented: 'I felt reluctant to listen when I know I submitted work below my usual standard'.

Audio feedback was also associated with a greater sense of connection between students and instructors. For one student, '[a]udio feedback made me feel much more connected to

the instructor'. Another student commented that: 'it made me feel greater inclusion in the subject despite being delivered online'. Audio feedback also helped address the perception that online learning environments can appear depersonalising:

> It makes students feel like they are more than just another paper to
> mark for the marker and makes students feel like they get to know the
> markers in a small way.

Discussion

Thematic analysis of student responses indicated that student perceptions of audio feedback were strongly positive. Of the 562 strengths and weaknesses analyzed, 66% (n=370) were related to strengths while 34% (n=192) were related to weaknesses. Similar to previous studies (e.g. Ice et al., 2007; Knauf, 2016; Merry & Orsmond, 2008; Oomen-Early et al., 2008), student perceptions of audio feedback were positive with the perceived strengths of audio feedback outweighing the weaknesses.

The personalised nature of audio feedback was a major theme that emerged from the thematic analysis. For many students hearing the instructors' voice was a positive experience and helped reduce the sense of isolation students experience from learning online. This supports Oomen-Early et al. (2008) and Moore & Wallace (2012), who argued this personalised nature contributed to a greater sense of 'social presence' and 'teacher immediacy' of the instructor. Mindful of the social presence affordances of audio feedback, instructors have the opportunity to engender a greater sense of connectedness with their students.

As in previous studies (e.g., Knauf, 2016; Lunt & Curran, 2010; Merry & Orsmond, 2008), one of the major affordances of audio feedback - its capacity to provide a greater level of detail, was also recognised as a strength by students. With the added written communication demands associated with online learning, recording audio feedback could be not only a welcome respite for instructors but also a means to provide a greater level of feedback under increasing workload demands.

The affective factors associated with audio feedback emerged as another theme worth noting. Similar to the findings of Ice, et al., (2007), audio feedback was associated with high levels of student satisfaction. Students also indicated that audio feedback helped promote a sense of engagement for both themselves and the instructors. However, for some students, audio feedback was confronting especially for those who believed they had not submitted work to a suitable standard. Given audio feedback can have a greater affective impact than traditional written feedback, it is important that feedback focuses on aspects of performance that were positive and in areas of weakness provides constructive comments for future improved performance.

Although the study found that the overall perceived strengths of audio feedback outweighed the perceived weaknesses, a number of weaknesses were highlighted.

Previous studies had identified the difficulty in reviewing audio feedback comments (Rodway-Dyer et al., 2011). Confirming these results, reviewing audio feedback was identified as a noteworthy weakness in the current study (15% of student responses) and something impacting on the utility of audio feedback. Students found it challenging to return to a specific place in an audio file to review comments. Further work needs to be done in this area examining how this persistent weakness of audio feedback might be best

addressed. The recommendation section that follows offers a number of practical suggestions in this area.

The duration of time required to listen and digest audio feedback was seen as a further weakness of audio feedback (10% of student responses) confirming the results of Rodway-Dyer et al. (2011). Given student complaints are often about not enough feedback being provided, for some students too much feedback appears also to be an issue. As one of the affordances of audio feedback is the capacity to provide a greater level of detail than written comments, care needs to be taken to provide audio feedback that is succinct and precise. As a piece of descriptive research, the current study did not seek to explore what might be the 'ideal' length of audio feedback. However, these results suggest a further avenue for research is to determine what might be the optimum length for audio feedback.

Recommendations and limitations of the study

This study provides further evidence of the positive attitudes held by students towards audio feedback for assessment. Confirming previous studies, the main strength of audio feedback was the personalized nature of the feedback provided. A further strength, also identified by previous studies, was that audio feedback was more detailed than traditional written feedback. The major weaknesses of audio feedback, also identified previously in the literature, were difficulties in reviewing the feedback provided and the time taken to listen to the audio feedback.

The authors have reported practical recommendations elsewhere (Parkes & Fletcher, 2017), however, further recommendations can be made based upon the findings of the current study.

- The current research confirmed the importance of social presence and the personalised nature of audio feedback. Accordingly, when recording audio feedback, instructors should speak naturally and use their voice to convey emotion. However, as evidence from the current study suggests, for some students, audio feedback can be confronting. This can be reinforced by the lack of visual cues. Accordingly, care needs to be taken because audio feedback tends to be more candid and un-tempered than written feedback. For these reasons, it is important to be sensitive to the person to whom the feedback is being directed.
- Although there still remains some debate in the literature whether the provision of audio feedback is more or less time consuming than traditional written feedback, the ability of audio feedback to provide a greater level of detail than traditional feedback means greater feedback can be provided in the same or less time. Furthermore, according to Parkes & Fletcher (2017), concerns of any additional time required in the production and post-production to produce audio feedback of high sound quality and production values can be allayed as audio feedback can be recorded on a range of different devices in different locations and with varying degrees of sophistication, without having to comprise the quality or utility of the audio feedback provided. To this end, audio feedback can be recorded quickly, simply and importantly, without the need of sophisticated recording software or equipment.
- Results showed that audio feedback could have both positive and negative affective impacts. For some students, audio feedback can be confronting. As suggested earlier,

care needs to be taken because audio feedback tends to be more candid and un-tempered than written feedback. Constructive comments should be provided, and any negative comments should be avoided due to the increased emotional intensity of audio feedback over traditional written feedback. It needs to be remembered that being free of visual cues, audio feedback has the potential to be misinterpreted. Accordingly, sarcasm and any statements that may have double meanings should be avoided. Instructors also need to be mindful of students who are not native English speakers; due to the informal nature of audio feedback, it can be easy for colloquialisms and vernacular language to slip into the audio feedback being provided.

- The inability to easily review audio feedback is still considered by students to be a weakness of audio feedback. It is difficult to return to a particular comment in an audio file compared to returning to written comment on an assignment script, for instance. To help mitigate this perceived weakness, students might be encouraged to have a copy of their assessment task with them when they listen to their audio feedback. This would also allow students to annotate their own assignment scripts for later review. Students should be advised to do this at the start of the audio feedback.

- The use of bookmarking and tagging audio files to assist in reviewing feedback, while an option, would add to the time and complexity required to produce audio feedback. As an alternative, students might be encouraged to add their own bookmarks or simply write down the elapsed time to act as a manual timestamp. This would allow students to return to particular point in the audio feedback at a later time. Using audio prompts identifying the page and/or paragraph number being referred can also assist students when reviewing their feedback.

- As another means of making the review of audio feedback easier for students, it may be useful to provide a summary of comments at the end of the audio feedback reiterating key points or making suggestions for future actions. Furthermore, having such comments at the end means that they are more likely to be remembered or can be more easily referred to by students later on.

- It is difficult to provide advice on what might constitute the ideal duration for audio feedback. Like traditional feedback, the amount of audio feedback required is dictated by a number of factors including, the type of feedback provided (formative or summative); the type of assessment task (for example, written report versus digital artefact) the complexity of the assessment task (e.g. straightforward versus complex); the size of the assessment task; and the quality of the presented assessment task. Notwithstanding these factors, instructors need to be mindful that overly long audio feedback may not be well received by students or listened to. Clear and succinct audio feedback is recommended, as this is more likely to be better received by students. Certainly, there is scope for further research in this area.

This study has a number of limitations. The study sample was restricted to postgraduate students studying in the Education discipline. This may affect the generalizability of the results. However, as practitioner research, there is the view that research of this type is more about understanding one's particular context and how practices in it might be

improved rather than it being generalizable to contexts elsewhere (Mills, 2011). Despite this, the current study did support the results of other studies undertaken in a number of other discipline areas such as, Biological Sciences (Merry & Orsmond, 2007); Geography (Rodway-Dyer et al., 2011); Social Work (Knauf, 2016); and Environmental Studies (Brearley & Cullen, 2012). Further exploration of how audio feedback is perceived in other disciplines would be valuable and could give a broader picture of the utility of audio feedback. As mentioned, only the perspectives of postgraduate student were explored in this study. Work needs to be done to determine if undergraduate students, hold similar perspectives of audio feedback.

This study only sought student perceptions of the strengths and weaknesses of audio feedback; it did not attempt to examine how characteristics such as learning styles might influence student perceptions of audio feedback. Future research should be undertaken to determine how student characteristics might impact on student perceptions of audio feedback. Through this it may be possible to gain a better understanding how different feedback might be matched to particular student characteristics. In a similar vein, it would also be helpful to know whether the characteristics of assessment tasks themselves might influence the utility of audio feedback. In general, are some assessment tasks better suited to being provided with audio feedback than others?

Conclusion

Audio feedback remains an alternative and effective means of addressing the 'vexed' issue of providing timely and detailed feedback. Furthermore, audio feedback can promote a greater sense of connectedness between students and their instructors. This can lead to higher levels of student satisfaction and a reduction in the isolation reported by many students studying online. In the case of audio feedback for assessment, our results suggest that 'talking the talk' is a valuable and effective means of providing assessment feedback.

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Citation:

Appendix 1. Codes generated for the open response items

Code	Explanation	Example from transcript	Total (n)	S	W	Total (%)
Personal	Related to students as people	*Makes you feel like you're dealing with a person rather than a website*	78	31%	4%	35%
Clarity	Clear, easy to follow	*The feedback became incredibly clear and helped me greatly*	59	19%	8%	27%
Detail	The amount of information given	*The audio feedback was very comprehensive*	43	19%	0%	19%
Individualized	Tailoring feedback for the individual	*More specific in feedback given*	40	18%	0%	18%
Scope	Allows for extended commentary	*Gave the lecturer opportunity to share their own ideas*	38	12%	4%	16%
Review	Ability to looking back over work	*Audio files can't be reviewed in part*	35	1%	15%	16%
Connection	Feeling of connectedness	*Able to make a connection with the student.*	33	15%	0%	15%
Nuance	Conveying meaning through voice tone	*Allows tone, emphasis*	26	8%	3%	11%
Complementary	Blending of feedback types	*It was used in conjunction with a marking rubric*	25	2%	9%	11%
Duration	Time to access and listen to feedback	*There is a relatively significant investment of time listening to the feedback*	22	0%	10%	10%
Insightfulness	Information on thinking behind marking	*Good to hear lecturer's thought process*	17	5%	2%	7%
Instructor workload	Effort of behalf of the instructor	*Perhaps, the amount of time needed to be taken by the teacher*	15	3%	4%	7%
Audio quality	Issues of the recording process	*It was a little difficult to hear*	13	0%	6%	6%
Access	Ability to access the feedback	*I was unable to work out how to play it*	11	0%	5%	5%
Confronting	Uncomfortable hearing feedback	*Can be intimidating having lecturers dissect each individual part of your assignment*	10	0%	4%	4%
Formative	Information on student improvement	*Really gets across where students should improve*	10	4%	0%	4%
Student engagement	Engagement and motivation of the learner	*You felt engaged*	10	3%	2%	5%
Informality	Related to conversational style	*More informal and easy to relate to*	8	1%	2%	3%
Learning style	Related to learning style/preferences	*Suits a wider range of learners i.e. auditory and visual*	8	1%	3%	4%
Memorability	Feedback able to be remembered	*People retain more of what they hear than what they read*	8	3%	1%	4%
Suitability	Appropriateness of feedback	*It seems only too fitting to receive feedback in this format for an ICT subject*	8	1%	2%	4%
Convenience	Ease of use	*Easy to listen whilst viewing my work*	7	3%	0%	3%
Instructor engagement	Instructor engaging with student work	*You sounded like you actually knew my work*	7	3%	0%	3%
Structure	Issues with way recording was organised	*It requires very precise language use to know exactly what section of the work is being referred to*	7	0%	3%	3%
Helpful	Able to assist the learner	*Helpful for later tasks and teaching*	6	3%	0%	3%
Meaningfulness	Greater meaning conveyed to student	*Allows you to look at work and hear feedback so more meaningful*	6	3%	0%	3%
Positivity	Students having positive feelings	*As a student it makes you feel valued*	6	3%	0%	3%
Quality	Comments related to feedback worth	*Excellent feedback*	6	3%	0%	3%

S - strength, W - weakness, Total (%) = S + W