A qualitative assessment of providing quality electronically mediated feedback for students in higher education

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Abstract: The subject of feedback for students is one of the most important contributors to the student experience and attracts one of the lowest responses within the National Union of Students survey. This paper reports on the feasibility of providing feedback on written assignments by marking electronically using the comments function on Microsoft Word and also providing verbal feedback via use of a hand held digital voice recorder. The students (post graduate part-time business students) were surveyed as to their response to this feedback. The paper reports the feedback from both the tutor and the student perspective and examines the impact on the experience of both groups. The results were positively in favour of the use of audio feedback but are different to results in other studies in that it is concluded that a combination of both typed and verbal feedback was preferred by the students.

Keywords: audio-feedback; feedback; written feedback; electronically mediated feedback; recorded feedback; online submission; assessment; student experience; National Student Survey; NSS.

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1 Introduction

The purpose of this paper is to provide an assessment of the feasibility of electronically mediated marking and feedback for students in higher education (HE) in order to improve the quality of the feedback given. At the same time, both the potential impact on academic workload, academic experience and the means of improving the student experience are assessed through testing an electronically mediated means of providing feedback. A case study approach is taken after reviewing current literature on the subject of the problems associated with conventional feedback and then on how electronically mediated feedback can be used to overcome some of these problems.

The issue of student feedback on assignments in HE is ongoing and requires attention from HE institutions and individual tutors within these institutions. Hounsell (2008) reported a quality assurance agency (QAA) analysis from the 1990s in which HE establishments were criticised for failing to provide adequate feedback for students. Assessment and feedback from a significant section within the National Student Survey (NSS) (HEFCE, 2010) and whilst in the 2010 survey, satisfaction levels had increased to 67% from 65% in 2009 the result, nationally, was still the lowest overall in the survey which suggests that within the HE sector there is some room for improvement. Clearly this shows that the criticism of HE institutions concerning feedback is still prevalent as far as the end users, the students, are concerned. Whilst there are arguments suggesting there is limited empirical evidence for the positive educational outcomes from formative assessment (Dunn and Mulverton, 2009), conventional wisdom advocates the necessity of providing quality formative and summative feedback as part of quality teaching (Black and Wiliam, 1998; Ramsden, 2003). It appears that the majority view favours the need for high quality feedback.

In studying the subject of feedback, the role and workload of the academics in providing feedback is considered. If academics invest more effort into the improvement in quality of feedback, then the issue of workload must be addressed as there is a potential conflict of outcome if the improvement of feedback creates an un-manageable increase in workload. Rust (2001, p.4) argues that with class sizes increasing, assessment is "likely to be done less well – less rigorously and with less and more superficial feedback to the student – and take longer to be returned". Nortcliffe and Middleton (2007), on the other hand, argue the point that feedback provided in a manner that actually reduces workload of academics at the same time as improving quality has potential benefits for both academics and students.

This study quality of feedback directly and refers to academic workload.

2 Literature review

2.1 The role of feedback in the assessment process

In order for the learning process to be effective (that is, in order for a learner to retain the information or skill acquired), the process of receiving/processing/using the learned material needs to end with someone other than the learner checking whether the material has been understood and applied (Piaget's constructivist learning theory remains one of the most significant contributions to this field – see, for example, MacNally, 1974; Demetriou et al., 1992; Biggs, 1993). It has been a long-standing practice in education to

give students feedback on both formative and summative assessments. It has also been agreed by education practitioners that formative feedback is essential for effective learning, and its presence – and, more importantly, the students' understanding and application of the content of feedback – is necessary for the students to progress in their learning (Astin, 1991; Gibbs and Simpson, 2004–2005). According to Harris and Bell (1994, p.88), for example, the absence of feedback reduces the value of assessment because 'communication between the teacher and the learner is an essential part of the learning process and should be on a regular basis'.

In the studies concerned with students' perceptions of HE, much emphasis is placed upon the quality of delivery and feedback, with some studies stressing the importance of timely, constructive and flexible feedback in ensuring that the students progress well through the course (Hill et al., 2003). Other studies support the notion that timely feedback is an important factor in the learning process [Brown et al., (1997), p.7; see also Denton, 2003]. In short, feedback is an integral formative part of the learning process.

2.2 Conventional feedback

Any tutor experiencing the return of uncollected marked work will appreciate how frustrating it can be to surmise that some students do not seem to wish to learn from the comments made to help them in the future. The reasons for students not picking up their work might include a perceived lack of value in the comments they receive on their academic efforts. Hounsell [2007, cited in Hounsell, (2008), p.2] argues that if the feedback on their work is sparse and uninformative, 'student disenchantment' with the feedback from their tutors can be such that they do not bother to pick it up; there is also 'diminishing evidence' that 'feedback makes a difference to the quality of [their] work'. Other reasons include lack of understanding of the comments made on their work (as argued by Chanock, 2000), particularly around the terms 'evaluate', 'analyse' or 'analyse critically', which academic tutors use so often. This view is supported later by Winter and Dye (2004) who researched the reasons for students not picking up work and, in part, conclude that students did not understand their feedback as a result of the academic language used. This would surely mean a negative influence on NSS scores and, conversely, any means by which the value of feedback comments can be improved and any means by which understanding can be improved would be counter-effective.

Students also need quick and timely feedback to optimise support for their learning. Brown (2001) argues for effective feedback to be timely, relevant, meaningful and to help the student improve in the future. Rust (2001) argues that the longer the gap between submission and feedback for students, the less interest in and attention to the feedback is accorded by students. Rowe and Wood (2007) report that student perceptions of feedback at Macquarie University, Sydney, Australia in relation to timeliness feedback was negative with assignments taking 3–4 weeks to be returned. Further, Rotherham (2009, p.176) argues that, "students often complain that they get too little too late". The findings of these authors (Brown, 2001; Rust, 2001; Rowe and Wood, 2007; Rotherham, 2009) are supported by responses to the statement 'Feedback on my work has been prompt' in the NSS, (HEFCE, 2010). The response to this statement attracted the second to lowest score from students at 57% (lowest 56%). Thus anything that increases the gap in time between submission of work for assessment and delivery of marking and feedback could impact negatively on student perception and experience. Increasing class sizes, as Rust

(2001) argues, creates pressure on the production of feedback because of the marking load; similarly, Lunt and Curran (2009) report concern from teachers at the increasing load on marking time due to increased size of courses. Conversely, any action taken which decreases the time gap between submission of work for assessment and receipt of feedback should contribute towards a more positive experience for students. Equally, the same actions could affect marking academics positively by reducing time spent on feedback for them as well as diminishing the stress caused by pressure to turn round marking in as short a time as possible.

Students are also reported as criticising the amount of feedback given, attributing a paucity of feedback to large class sizes (Rowe and Wood, 2007). According to Rowe and Wood (2007), students' view was that the worst feedback was no feedback at all. Improving quantity and quality of feedback given would help to address this issue and so would be likely to contribute positively to NSS scores.

2.3 Electronically mediated written and audio-feedback

The main thrust of this paper is the evaluation of electronically mediated feedback. However, it is apposite to note that in order to maximise the potential of electronic mediation, the original work needs to be received in electronic form. Electronic submission in itself, appears to reduce improve the student experience by making submission more convenient and saving them time in queuing hand in. Bridge and Appleyard (2008) report over 90% of students in their study receiving feedback faster when comparing electronic submission and feedback with paper-based submission and feedback. In this study of 88% of students recorded that electronic submission saved them time. Lunt and Curran (2009) also report a reduction in 'time to receipt' of audio feedback compared to written. One of the recent examples of electronically mediated assessment is electronic feedback 8 – a dedicated assessment programme deployed at the Manchester Metropolitan University. When using it in undergraduate programmes, where large numbers of assessments need to be graded quickly, Denton (2003, n.p.) notes that "the inputting of raw data is the most time consuming aspect of using the software", but recognises that the new version (Version 9) allows the tutor to save relevant data by exporting it to a file. This way, there is no need to re-create the same data when the module is run regularly.

Quality of written feedback may be argued from two perspectives: legibility and perceived value of content. With regard to the legibility of feedback, this is something that a number of authors consider to be a problem for students (Bridge and Appleyard, 2008; Rotherham, 2009; Lunt and Curran, 2009). Typing comments through any medium (paper or electronic) overcomes any legibility issue, although, of course, may not address any doubts about understanding the comments written. Feedback, however, does not have to be typed; modern technology allows for verbal feedback via recording in different ways. Cryer and Kaikumba (1987) report on the use of audio-tape to give verbal feedback to students and make some positive comments as to the acceptability of verbal recorded feedback. However, they make no mention of the practicality of using audio-cassettes which were the recording medium chosen in the study (ibid.). Deploying the numbers of cassettes (or the modern equivalent, USB sticks or recordable CD's) for the size of cohorts nowadays would be prohibitive in terms of handling and cost. The era of digital recording and electronic mail has now arrived and methods of providing recorded feedback are much more easily accessible than they were only 25 years ago when Cryer

and Kaikumba (1987) were researching the subject. Rotherham (2007) mentions WAV files, AAC files and MP3 format as means of recording as well as computer recording via 'Audacity' (http:audacity.sourceforge.net/). It is also now possible to record directly onto Microsoft Word, a commonly available word-processing programme. MP3 is another effective medium for today's environment as it is easily available for the 'i-pod generation'. Rowe and Wood (2007) report that students preferred verbal feedback for generic group-based feedback but written for individual specific comments. Rotherham (2007), on the other hand, reports that students really liked recorded feedback and noted how personal it was and that it engaged them more than written feedback. This latter experience is matched by the work of Ice et al. (2007, p18), who report an "overwhelming student preference for asynchronous audio feedback as compared to traditional text based feedback, with no negative perceptions of the technique". Also, Lunt and Curran (2009) report student response to audio feedback to be positive and that students were ten times more likely to open audio feedback than they were to collect written feedback. Hepplestone et al. (2009) cite a number of authors (for example, Bloxham and Boyd, 2007; Denton, 2003) claiming that feedback sent "electronically by e-mail…, via the internet or virtual learning environment… can enhance the way in which students receive and engage with feedback" (p.4). In the interests of balance, there is some evidence which is less positive towards audio-feedback to this, for example, Nortcliffe and Middleton (2007) report inconclusive results with regard its efficacy. However, the majority of papers studied report a positive support for the technique.

As mentioned earlier in this paper, any assessment process that increases workload for tutors has the potential to affect both quality and quantity of feedback given to students. The subject of tutor workload is therefore considered because to introduce an alternative means of feedback that actually adds to this problem would reduce its potential effectiveness. This is supported by Rotherham (2007, p.1), who argues that those assessing students, "are under pressure to find techniques … that are efficient and effective". Rust (2001, p.22) comments, with regard to audiotape feedback for students, "While reducing the time you spend this may actually increase rather than reduce the amount of feedback given". The minority of members of faculty were reported by Rotherham (2009) as claiming that audio feedback saved them time and the largest group reported that audio feedback took the same time as more conventional methods of written feedback. In the same study (Rotherham, 2009), most members of faculty fed back a feeling of satisfaction about the quality of feedback provided for the student. Lunt and Curran (2009, p.765) conclude that tutors found the method of using audio feedback "to be efficient and effective and the response from students was very positive".

Some hard quantitative data is available from Ice et al. (2007, p.18), showing that from 204 documents containing text-based feedback and 170 containing audio feedback, audio feedback contained nearly three times the volume of words but took less than quarter of the time to deliver: the mean time for reading the documents was 14.13 minutes when text-based feedback was used and 13.94 minutes when audio feedback used. There is no comment as to difference in the quality of feedback but the authors conclude that with a reduction of 75% in time to provide feedback and a 225% increase in quantity of feedback and evidence of increasing retention and understanding, it "makes it hard to argue *against* using audio commenting at this point" (p.19).

3 Methodology

This assessment used a post hoc survey of a group of students requiring feedback on work submitted remotely. Due to circumstances out with the control of students or tutor, electronically mediated feedback to this single cohort appeared to be the most convenient means of communication. This provided a serendipitous, but valid and suitable opportunity to engage in a qualitative assessment of the students' view of these means of feedback. As a result, this study will use a qualitative approach to analysing the collected data from a small sample. We recognise that the sample is indeed small (15 respondents to the survey and one tutor), but we believe it to yield sufficient evidence to support our initial hypothesis and the findings of other researchers.

Whilst a single tutor was involved, as can be seen in the literature review, there is a body of evidence that suggests the electronic means of feedback can save time and workload. So, although this would need further study and investigation, the views and contributions of a single tutor experienced in written feedback add relevant information to this subject. Accordingly, views from the tutor involved contribute to the wider debate on this issue. The marking tutor made a qualitative assessment of the time taken to mark and the perceptions of delivering both quality and quantity of feedback provided to students.

3.1 Details

A cohort of twenty-eight part-time postgraduate students studying two Business modules (Performance Management and Training Learning and Development) concurrently were marked and provided with electronic feedback. The cohort consisted of mature students in full-time employment and therefore studying part-time. The cohort was of a mixed age and gender range in a variety of job roles associated with an HR or Management function. This particular cohort was selected as a result of a unique set of circumstances in which students were asked to attend lectures at a venue away from the normal university facilities. These circumstances meant that they could not submit work easily during normal working hours and the facility for handing in was closed when they were free to attend the university. Students were asked to use Microsoft Word to write an assignment for each module and then submit their work online via Blackboard Grade Centre. These documents were marked by means of reading directly on the computer screen. Formative feedback was provided in two ways: first, via brief written feedback using the 'comments' facility on Word; and, subsequently, by verbal feedback recorded by means of a digital voice recorder (in this case an Olympus VN-5500PC). The recordings were then transferred via USB cable to a folder held on the computer and backed up onto a USB memory stick. Grading was carried out electronically on a prepared form commonly used on masters modules within the university department concerned. Subsequent results for the students were e-mailed back individually, all on the same day, with three attachments to each e-mail comprising the written assignment with comments added, an electronic marking sheet and a recording of the feedback given.

4 Feedback in detail

WORD 2003 and 2010 were used to mark work depending on whether marked at tutors home or workplace. Both versions have the facility to annotate work using the 'comments' function, which automatically and sequentially numbers the comments made. An assignment copy without notation was saved for each student for purposes of keeping a record of original content because when including comments it is possible to inadvertently 'edit' a piece of work.

The work was then graded using a prepared mark sheet in which grades for various elements of the work were given and indicated by an electronically generated symbol (in this case a lightning symbol) pointing to the appropriate grade in a range.

Formative feedback was also, as previously stated, provided via a recorded message. The recording commenced with the student's name, individual number and a statement describing the assignment being marked. Feedback was given by making some general statements by way of introduction, giving instructions how to follow the feedback by listening with the notated assignment open whilst scrolling down following the numbered comments. Each verbal comment made was preceded by giving the number of each comment. Recordings were saved under the student's name and number and transferred to the appropriate computer file.

The time taken to provide feedback was recorded as was the time saved with regard to fetching students' work from the normal point of 'hand-in' when hard copy assignments were submitted.

5 Assessing the student experience

In order to assess what students thought about this process a short questionnaire was sent to students a month after the assessment process by means of SurveyMonkey©, the online survey tool which is freely available on the internet. This not only allowed for anonymous feedback from students, but also meant that they could be surveyed by electronic means and the process did not require face to face interviewing.

6 Results

Twenty eight students were sent links to the SurveyMonkey© survey via e-mail. Of these, 15 responses were obtained, a response rate of 53.6%. This, whilst not being particularly high, is favourable in relation to 39% reported by Nortcliffe and Middleton (2007), and 43% reported by Lunt and Curran (2009). A full list of questions is available in Appendix. For the purposes of reporting results, the responses have been categorised into either 'positive', 'negative' or 'qualified'. A qualified answer is regarded as being an answer which has some sort of provisional rider suggesting that certain conditions need to be met.

6.1 Written feedback using 'comments'

The first question asked was, 'What do you think about receiving your assignment feedback using Word Comments?' and allowed a free text answer. The intent with the question was to explore students' response to typewritten comments of the kind that would normally be written. This question received a 100% response rate (15 out of 15) and results are shown in Table 1.

Table 1 Written feedback – response results

Positive	*Qualified*	*Negative*
9	4	2
60.0%	26.7%	13.3%

Examples of responses:

1 Positive:
- "Was helpful – easy to read."
- "This is helpful as I can print of the document."
- "Really good, idea. Allows for very specific feedback."

2 Qualified:
- "Word comments are useful to a point, but can often read them in a different way in which they were intended. It can lack a personal touch, but I suppose it does give you a visual interpretation of what could be improved."
- "Good although without the recorded message to back it up some of it wouldn't have made sense."

3 Negative:
- "Word Comment provides a statement which can be misinterpreted. Some of the comments made could be construed in different ways."

Thus responses to this question were largely positive and the answers may be interpreted as illustrating some of the findings in the literature (see Bridge and Appleyard, 2008; Rotherham, 2009 on legibility; Hounsell, 2007, 2008; Winter and Dye, 2004 on understanding; and Lunt and Curran (2009) on students responding positively to audio feedback).

6.2 Verbal feedback

Student were asked the question, 'What do you think about receiving feedback via a recorded message?' and allowed a free text answer. This question received a 100% response rate (15 out of 15) and results are shown in Table 2.

Table 2 Verbal feedback – response results

Positive	*Qualified*	*Negative*
12	1	2
80.0%	6.7%	13.3%

Examples of responses:

1 Positive:
   - "Brilliant – wish I'd had this all the way through all my studies. Enables the specific comments to be mentioned and also allows for overall verbal feedback."
   - "… very useful and good for environment. Feedback was more in depth than just written feedback."
   - "Strange at first but very good way of understanding what is meant."
   - "Far better than just written comments, helps to understand the context of the written comments. Feels like a more personal experience."

2 Qualified:
   - "I prefer the electronic version better as it feels more personal, gives it a bit more meaning to the words being said and you can follow what the tutor is saying much easier as it is much clearer. You can also keep it for future assignments and look back on where you went wrong, listen to again thus improving your future work.'

3 Negative:
   - "Prefer written feedback."

The positive feedback is of a similar nature to feedback received in other studies (Rotherham, 2007; Hepplestone et al., 2009). The single negative comment expressed a preference for written feedback with no further details given for the reason behind this preference; this makes it difficult to assess the motivation for the preference and its impact upon the student's learning. The qualified answers expressed a concern about tone of voice without being able to see body language, while indicating that the electronic version enhanced the personalised/individualised approach to assessment. This is something that this cohort has found to be an important part of their learning experience. In the comments on written and verbal feedback, students stress the need for 'a personal touch', or personalisation of the tutor's comments. This appears to be an integral aspect of the assessment process as far as this cohort is concerned. However, there is evidence that this is not an anomaly or an isolated case, as other researchers have remarked upon the personalisation of feedback as part of an effective tutor-student relationship (see, for example, Rowe, 2011).

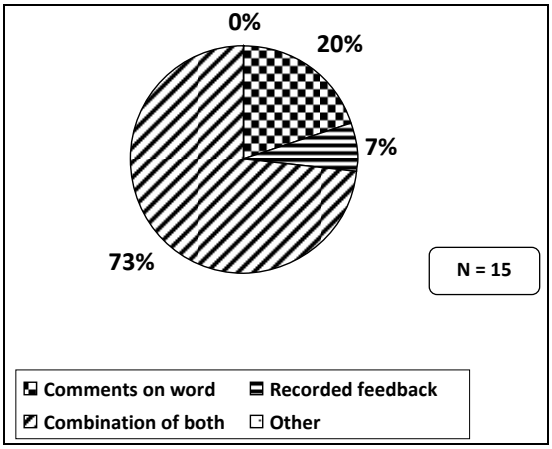
6.3 Preferences

In order to substantiate or repudiate answers to the first two questions students were then asked to express what their preferences were for feedback through the question, 'Which feedback would you prefer?' and then given a choice of comments on word, recorded feedback, both or other. This question received a 100% response rate (15 out of 15). Results are presented in Figure 1.

This shows that despite the answers to the previous questions, students actually had a preference for feedback using a combination of both types of feedback. It is appropriate to note that the subsequent survey question was requesting a free-text response to reasons for 'other'. No respondent indicated 'other' as a choice and whilst this cannot be taken as

having any formal significance, it is interesting in that no respondent included a preference for receiving feedback in the normal manner of hand-written notes!

Figure 1 Student feedback preferences from survey



6.4 Means of improvement

In order to assess whether or not improvements could have been made to the way in which the feedback was given to students the next section of the survey asked, 'Please make any suggestions you have for improving the type of feedback you have received'. The question received a 60% response rate (9 out of 15) and results are shown in Table 3.

Table 3 Improving feedback – response results

No change	*Quicker*	*Face to face*
7	1	1
77.8%	11.1%	11.1%

These responses can be separated very clearly into four categories.

The 'quicker' feedback was the single word and presumed to refer to the length of verbal feedback which will be discussed later. The face to face suggestion was to say that student feedback would work well on a personal basis for some students which is accepted and takes place on an exceptional basis.

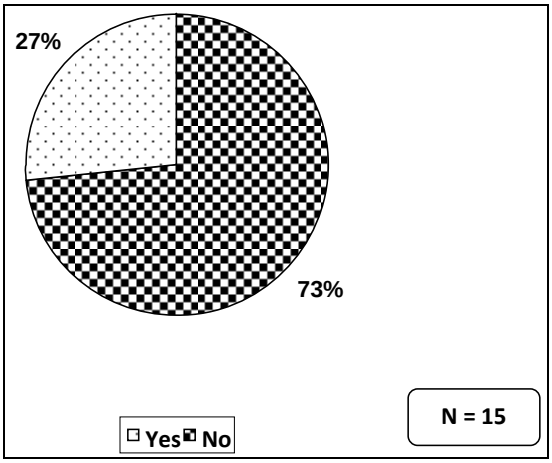
With regard to the lower response rate to this section, it is presumed that students were content with the feedback in the format and manner given.

6.5 Possible simplification

As feedback was supplied via word comments and audio feedback, the survey was designed to check out whether this could be simplified by asking the question, 'Would you think it acceptable to receive verbal feedback based on simple numbered points (no written comment) for comment on your text?, e.g., Comment 1. Comment 2 etc.' This

question received a 100% response rate (15 out of 15). The results are presented in Figure 2.

Figure 2 Percentage responding to audio feedback based on numbered combined with verbal comments



This shows that the majority preferred a combination of audio and written feedback. Representative responses to the next question seeking reasons for the choice included comments such as:

- "I want comments on my work so I feel it has been assessed from all angles in terms of structure/phrasing and as well as concepts and points made."
- "I think it is important to have both methods as it certainly has helped me to understand where I can improve my work."

The depth of assessment and clarity for students was also mentioned. Students see that the tutor has taken time to read their work in detail; this, coupled with the personalisation of feedback, enhances the personal aspect of learning, as stated earlier.

6.6 Free response

The final section of the survey allowed a free response designed to capture any key points respondents wished to make using the statement, 'Please use this space to add any other comments you may wish to make'.

Comments made in this section were all positive and complimentary in nature. Three responses worthy of particular note captured important information:

- "With being a part time student … I also preferred the electronic way of submitting assignments and receiving the feedback in the same way. It was much more logical, a quicker way of doing things (rather than having to print, save to disc, and hand in like we are having to do with a current module) and it benefits the environment! If the technology is available it makes no sense to not use it!!"

- "Really appreciate this level of feedback – I think all lecturers should do this instead of 5 lines written in handwriting you can hardly read!"
- "I think it excellent that you are pursuing this innovative approach to marking. I certainly was grateful for the effort made during the trial."

It should be noted that there are three aspects touched upon by the students' comments: cognitive, affective and pragmatic. From the cognitive perspective, the students noted the overarching organisation of the assessment process and remarked upon the logic behind it. From the affective standpoint, the tutor's efforts to improve the existing assessment practice were juxtaposed with the common practice of oft illegible and brief handwritten notes. The pragmatic approach indicates that the students have noted the time saved with this practice and the environmental benefits of the electronic assessment and feedback. The research concludes that the concatenation of the three domains creates a more favourable environment for effective learning; this conclusion is in agreement with current views of the role of the affective domain in the learning process (see, for example, the Emotional Intelligence body of work; also Shephard, 2008; Clarke, 2010, among others).

6.7 Effects on time

Whilst not a fundamental aspect of this study, time taken to provide written and verbal feedback was considered in the process because of the apparent benefits to the marking tutor. Anecdotally, hand-written feedback for a 2,500 word written assignment takes between 15 and 30 minutes to mark depending upon individual feedback from a number of tutors surveyed. In the this case study, it would normally take a tutor between twenty and thirty minutes from picking up the piece work from a pile through to providing feedback and recording the results in the appropriate place. In this case study, this was estimated to be reduced to between fifteen and twenty five minutes when marking directly on the computer and using 'comments' to provide feedback. It was found to be quicker and easier to type than to write by hand. The provision of verbal feedback was found to take from between three and fifteen minutes to record and save the recording which was experienced as a satisfying process by the tutor because of the potential quality combined with quantity of feedback possible. Also a significant experience to report was that in giving feedback, the poorer quality of submitted work tended to take longer in order to provide the appropriate level of formative feedback.

With online submission, time taken to fetch the submitted work from the point of hand-in was saved – an average of eight minutes per visit and taking, usually two visits to accommodate late submissions.

With electronically mediated means of returning results to students it is estimated that 30–40 minutes were saved in handling hard copy, sorting into alphabetical order, printing and collating mark sheets and photocopying work for the purposes of moderation.

7 Discussion and conclusions

7.1 Assessment

This study was to provide an assessment of the feasibility of electronically mediated marking and feedback for students in HE in order to improve the quality of the feedback given. The results are consistent with the findings of previous studies of a similar nature as presented in the literature review (see, for example, Rotherham, 2009; Lunt and Curran, 2009; Ice et al., 2007). The majority of students expressed a positive view of electronically mediated feedback and liked the verbal feedback provided for them. This suggests that, as a feedback mechanism, this is a viable option from the student perspective.

It is interesting to note that students expressed a preference for both written and audio feedback in combination. The significance of this finding is not easy to assess as the study is neither large enough to draw any conclusions on this aspect nor was set up to do so. It is possible to speculate that, at least, the combination of two means of feedback indicates that more feedback is given in total and also that differing means of feedback may play to a variation of individual preferences for receiving information. This finding is different to any other study reviewed on the subject and thus further research is needed to develop it.

7.2 Impact on academic workload

The electronic feedback process combining computer use and verbal feedback, on balance, took longer when providing the feedback than conventional handwriting on scripts, and required a more complex process involving a computer and a digital recorder. However, as this was the first trial of this nature, the later attempts to record were quicker than at the start because of the increased familiarity through learning. This finding is corroborated by the findings of Nortcliffe and Middleton (2007), Bond (2009) and Ice et al. (2007). It is concluded that the time differential would be minimised or even removed entirely as a result of practice and familiarity.

In addition, the process of providing the feedback for the students was somewhat cumbersome in this study. Feedback by e-mail involved attachment of three items comprising a notated script, a copy of a marking sheet and an audio file. This required a degree of coordination which took time. It is possible to append the marking sheet to the notated assignment and embed the audio file in the same document thus creating only a single attachment and saving time. Even quicker would be the full use of Blackboard Grade Centre to return results and so save time. This needs further exploration.

In this study, to offset any increase in time taken to feedback, there were savings of time in other ways:

- collecting work from a central submission point
- handling the volumes of paper submissions, which includes taking each piece of out of a folder to mark and subsequently putting it back in
- typing instead of handwriting
- time collating the marks, photocopying and sorting hard copy of papers

- returning processed scripts to a centralised collection point.

7.3 Impact on academic experience

The process of providing feedback to students in this manner was very rewarding in terms of both quality and quantity. As found by Ice et al. (2007), Bond (2009) and Lunt and Curran (2009), this study also concluded that the quantity of feedback possible was much greater when using verbal feedback as opposed to written. Whilst greater quantity does not necessarily mean greater quality, the use of this type of feedback was satisfying in that it created a feeling of giving much better value to the students to benefit their future studies. As reported in the previous section, the tutor experience in this study was different to other research in that the combination of audio feedback and written legible feedback was found to be a much more satisfying and rewarding experience.

The conclusion to be drawn from a tutor perspective is that this mode of feedback is a viable option which is worthy of consideration as a means of improving feedback as well as potentially saving time.

7.4 Improving the student experience

The survey responses reflect the positive impact on the tutor experience and show that the quality and quantity of feedback was appreciated. This, combined with their ability to submit work electronically, meant their experience was improved.

Overall, this study has shown potential for audio feedback and typed comments to be combined into a convenient process which provides greater quality from the perspective of both tutor and students. With regard to the student experience, the improvement, were it to be repeated and expanded, could create a positive effect on NSS scores in the future and, more importantly, improve the results of their studies.

8 Limitations

This assessment, in common with much of the published literature on this subject, is limited in view of the small numbers involved so the outcomes should be considered with this fact in mind. The feedback from students, whilst being honestly reported, is the product of a self-selected group in that not all the students opted to respond. The feedback from the whole group, were it to be available, may differ from that reported in this paper. It is, however, consistent with existing literature.

The feedback from the tutor involved is anecdotal and should be taken as such. Further study in this area would be recommended. Also, a larger, pre-designed and dedicated study to this subject area would be useful in view of the lack of large scale studies existing currently.

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Appendix

Questions asked in SurveyMonkey© survey

1 What do you think about receiving your assignment feedback using word comments?

2 What do you think about receiving feedback via a recorded message?

3 Which feedback would you prefer?

4 If 'other' above, please state what. Please give reasons for your selection.

5 Please make any suggestions you have for improving the type of feedback you have received.

6 Would you think it acceptable to receive verbal feedback based on simple numbered points (no written comment) for comment on your text?, e.g., Comment 1. Comment 2, etc.

7 Please give reasons for your answer to Question 6.

8 Please use this space to add any other comments you may wish to make.