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Enhancing Feedback: key Issues and Solutions From the Literature to Help New Lecturers in Higher Education

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Enhancing Feedback: key issues and solutions from the literature to help new lecturers in Higher Education

**A report presented in partial fulfilment of the requirements for the
Postgraduate Diploma in Third Level Learning and Teaching
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INTRODUCTION

This report presents how new lecturers in Higher Education can enhance their feedback practices to promote student learning.

CONTRIBUTION TO PRACTICE

There is an assumption in higher education that assessment is essential to student learning and feedback is a central aspect of that process (Evans, 2013; Nicol & Macfarlane-Dick, 2006). Traditionally feedback is provided by the lecturer to the student to provide them with information about their learning achievements, which can be supportive of student learning (Hattie & Timperly, 2007; Hounsell, 2003). Yet, while research on the *role of feedback* is well documented (Hattie & Timperly, 2007), as indicated by Dowden et al., (2013, p. 349) “the literature on providing feedback to students in higher education is less mature”. Hyland (2000) indicates that around 90% of students believe that feedback could help them identify their strengths and weaknesses, provoke a sense of achievement, and increase their marks on future work. Feedback is accepted as one of the most important aspects of learning (Evans, 2013) and this report underpins the development of a brief guide on feedback practices for new lecturers in higher education.

THE CONTEXT

The National Strategy for Higher Education to 2030 highlights that whilst modularisation has allowed for greater flexibility, it has also produced some problems including fragmentation of programmes with large numbers of modules leaving students feeling over assessed and staff burdened (Hunt, 2011). Nicol & Macfarlane-Dick (2006) have argued that formative assessment can promote better student learning and that assessment can be used more effectively by embedding ‘feedback’ and ‘feedforward’ in curriculum practices. Their studies identify how formative feedback does not have to solely come from the teacher, but can also be provided by peers and even generated by the students themselves. The Irish National Forum for the Enhancement of Teaching and Learning in Higher Education (NFETLHE) has put forward similar arguments to enhance learning if we move away from a purely ‘Assessment OF’ approach and shift towards a more ‘Assessment FOR’ and ‘Assessment AS Learning’ approach, giving the students a more central role (NFETLHE, 2017). Figure 1 below illustrates these concepts and highlights the dynamic relationship between formative assessment and learning (NFETLHE, 2017).

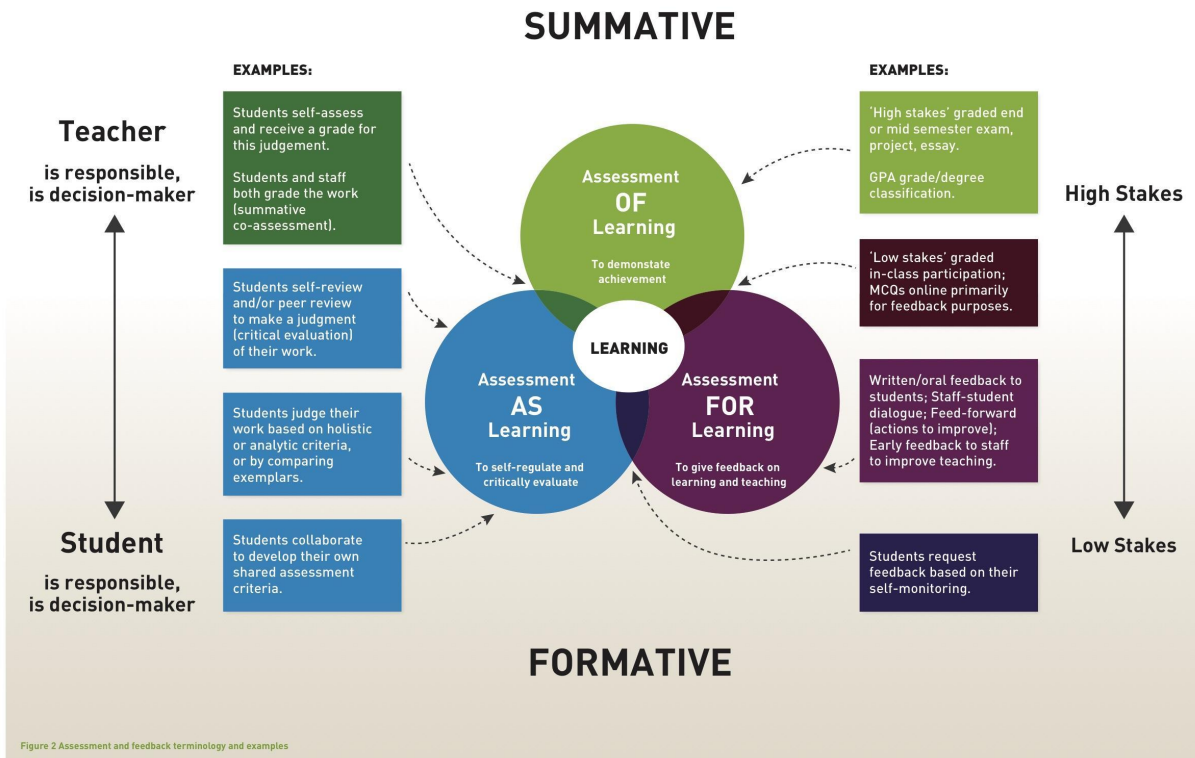


Figure 1: Assessment OF, FOR and AS Learning (NFETLHE, 2017)

PROJECT AIMS & OBJECTIVES

The overall aim of this report is to explore the key issues surrounding feedback and to identify strategies to address these concerns. More specifically:

1. To undertake a literature review to evaluate current thinking on feedback practices to identify key issues and potential solutions.
2. To generate a poster, summarising problems with feedback and contemporary practices and offering potential solutions using case studies as a resource for new lecturers in Higher Education.

WHAT IS FEEDBACK?

In an era when there are calls by some for less teaching and more feedback (Wiggins, 2012), it is critical that there is a shared understanding of this key term. Behaviourist and cognitivist schools

of pedagogy have long acknowledged feedback as a means of regulation of learning (Jordan, Carlile & Stack, 2008); however, it was traditionally predominantly teacher-focused. In more recent times the social constructivist paradigm sees feedback as a mechanism for students to help themselves and others through self-regulation (Bailey & Garner, 2010; Jordan et al., 2008). This student-centred perspective places an emphasis on the lecturer's facilitative role in "linking feedback with curriculum goals and teaching, learning and assessment strategies" (Bailey & Garner, 2010, pp. 187-188). On this basis, feedback relates students' current performance with specific learning goals (Nicol & Macfarlane-Dick, 2006), enabling students to recognise discrepancy and help them "troubleshoot their own performance and self-correct" (Nicol & Macfarlane-Dick, 2006, p. 208). Carless (2015, p. 192) goes a step further, by proposing that "Feedback is a dialogic process in which learners make sense of information from varied sources and use it to enhance the quality of their work or learning strategies", emphasising how feedback can potentially form a dialogic loop between teacher and student, student and student or even within the inner self (Carless, 2015).

However, while social constructivism calls for a greater level of feedback and engagement in enhancing learning; these principles are not regularly applied to the feedback process (O'Donovan et al., 2016), and despite considerable innovation in curriculum, assessment practices and learning technologies, feedback delivery is relatively unchanged (Bailey & Garner, 2010). These shortcomings which have contributed to problems with the facilitation of effective feedback to improve student learning are discussed below.

FEEDBACK - THE CAUSE FOR CONCERN

If feedback is to be effective, it must bridge a gap between staff and students, linking the teachers' educational goals and the students' learning needs (Bailey & Garner, 2010). It is widely accepted that feedback should be given in an easily accessible format and consistent manner (Nicol & Macfarlane-Dick, 2006), and having a standardised format can help to relate the feedback to marking criteria and learning outcomes (Nixon et al., 2017). Nonetheless, such problems as "perception, shared meaning, of impact on learning, of burdensomeness and of being judged" (Boud & Molloy, 2013, p. 3) persist. Next, we discuss these issues in the context of clarity, consistency, engagement and timeliness.

Problems with clarity and consistency

Literature from almost twenty years ago noted that feedback from tutor to student was overwhelmingly in the written form (Hounsell, 1987). Today, the same is largely true despite the aforementioned changes in learning and teaching practices and technological advances (Bailey & Garner, 2010; Nicol, 2010). Specifically, with regards to the issue of insufficient detail, students iterated that the comments made could be vague and did not help them clarify things they did not understand (Bailey and Garner, 2010). Comments left by the teachers were often question marks beside a sentence or underlined words (Bailey & Garner, 2010). Other issues related to how students didn't understand the feedback they had been given, as the sentence structure was too complicated for them or the language too sophisticated (Chanock, 2000; Hyland, 2000; Carver, 2016) and struggled to understand how to use feedback for future actions (Carver, 2016; Lea & Street, 1998). Students said they required more detail if they were to act on feedback highlighted by the teacher (Higgins, Hartley & Skelton, 2001, 2002; Weaver, 2006) with vagueness causing misunderstanding (Carless, 2006; Scoles et al., 2013). Indeed, Adcroft (2011, p. 405) highlights the "problem of shared meaning" and argues that teachers and students often suffer from a "dissonance" in interpretation of feedback and feedback events.

Problems of student engagement

Winstone et al., (2017) have argued for students to play an active rather than passive role in the feedback process, questioning past practices in this regard. Similarly, a UK project (DEFT, 2015) identifies significant issues in respect of how students interact with feedback. Specifically, this report indicates that "focusing resources on delivering increasing quantities of feedback, or even on improving the quality of that feedback, does not necessarily guarantee the desired effects. Students' engagement with feedback can be disappointing, irrespective of how 'optimal' it is" (DEFT, 2015, p.7). Commonly feedback "has no effect because information from teachers is not taken up by students and sometimes it is not even read" (Boud & Molloy, 2013, p. 4).

Hampering efforts to make the feedback process more interactive is the concern that students may have a fear of being judged, which when the judgement is overly critical can be detrimental to learning (Kluger & DeNisi, 1996; Hattie & Timperly, 2007). Critically, students may "resist the views of others that they do not like" which can often lead to lecturers being "mealy mouthed" (Boud & Molloy, 2013, p. 5). As a consequence, the DEFT (2015, p. 11) report concludes that "the students who need most to engage with their feedback may still be those who use these kinds of

support least”, which suggests that new lecturers will need to be creative in the use of tools and techniques to embed this engagement. Hence, the case studies (see Appendices A-E) respond to the idea that students like variety and a range of feedback techniques and reflects evidence that using a blend of visual, aural and written can provide stronger insights rather than just using a single technique (McCarthy, 2015). However, offering such a range of options can be difficult for busy new lecturers juggling heavy workloads and larger more diverse groups (Carless, 2015; Vermeulen, 2011).

Problems of timeliness and burden

While lecturers want students to engage with feedback, often there is a “disconnect between the potential of feedback, and feedback in practice” (Y1Feedback, 2016). Timely feedback is critical for student performance and learning, fostering self-regulation and building competence (Carless et al., 2011; Hattie & Timperley, 2007; Merry et al., 2013; Sadler, 2010). However, teachers can find feedback to be burdensome which can lead to it becoming “routine” and generated merely for grades (Boud & Molloy, 2013). Denny (2015) identifies how the very large lecture based classroom is typical for first years in higher education in Ireland and not conducive to active engagement, dialogue, or feedback. In light of these challenges, new lecturers should consider new methods for feedback, as discussed below.

SOLUTIONS FROM THE LITERATURE

Clarity and consistency

The provision of face-to-face verbal feedback can successfully address issues around clarity and consistency but is not always practical, particularly with larger student cohorts. In order to overcome this issue, e-learning techniques can play a role. For instance, Classroom Response Systems (CRS or Clickers) promote active learning by resolving the problem of providing large class feedback quickly (Liu et al., 2010). Furthermore, enabling feedback to be delivered instantly like this allows feedback delivery to be close to the related content which can help clarify and aid student understanding (see Appendix E).

Virtual Learning Environments (VLEs), such as WebCT, Blackboard, Moodle and Canvas can also help with clarity and consistency. These systems integrate a wide range of pedagogical and course administration tools which permit lecturers to disseminate educational material, asynchronous and synchronous communication, give feedback on assignments, while students can download class materials at their own convenience and submit course assignments, and communicate with each other online (Lonn & Teasley, 2009). Rubrics are another tool which can be very useful in providing transparency, leading to greater clarity about what is expected of students in their assessments. Technology offers the ability to employ rubrics and standardised responses in a timely and consistent manner. The case study discussed in Appendix A illustrates the potential use of rubrics in the provision of consistent (and timely) feedback (White & Donaghy, 2017).

Student engagement

As mentioned previously, students often express dissatisfaction and staff often identify a lack of student engagement with more traditional feedback methods (Cann, 2014). Audio and video have emerged as possible alternatives to effectively engage students with feedback. McCarthy (2015) evaluated three different feedback models (written, audio and video) and identified advantages and disadvantages to all the models. Specifically, audio is often perceived as good quality, easier to understand, has more depth and can be more personalised than written. Some of the main benefits cited include: valuable to explain complex ideas, volume and tone can be adjusted for emphasis; greater understanding can be reached; can generate further discussion between staff and students; can be perceived by students to be more personalised and caring and is faster than written; furthermore, it can increase self-esteem among students (Cann, 2014; Dixon, 2015; McCarthy, 2015). For these reasons, audio feedback could be used to foster student engagement with the process (see Appendix C).

Video can provide an even richer more dynamic experience for the student. As such, audio is often perceived as deficient when compared to video. McCarthy's study (2015) found that students seemed to prefer the visual delivery and found it clear and almost as good as face to face. Both audio and video can be stored online and replayed at a convenient time and place for the student (see Corcoran's 2017 case study discussed in Appendix D).

In practice, a further option to develop the levels of engagement may be to offer a feedback workshop, as recommended in the DEFT (2015) report. This report recognised that students can

play a greater role in self and peer-provided feedback, once supported through the process (as discussed in Appendix B). These authors conclude that “we must also more actively and critically discuss the concept of feedback in general, and the experience of receiving feedback” with students (DEFT, 2015, p.11). In this manner, a better balance might be possible in addressing concerns regarding both student engagement and feedback timeliness and burden.

Timeliness and burden

The literature indicates that students have concerns that feedback is often not timely, as in some cases, feedback was given within a couple of weeks of the assessment but the topic being covered in class had moved on (Brown & Glover, 2006). The topic that was assessed was unlikely to reoccur, so the feedback was not relevant to any future tasks and therefore could not be acted on to improve on future assessments. This explains why some students do not collect feedback after an assessment. Corcoran’s (2017) suggests the use of a video screencast in the provision of whole class group feedback (see Appendix D). This can be done quickly and efficiently and provided in a timely fashion so that students can engage with it, whilst still covering the same material. It is particularly useful for larger groups where individual feedback would be difficult. Furthermore, the video can be saved and reused and re-visited by students many times if necessary.

Bonwel & Eison (1991) indicated that instant feedback from the teacher, is normally difficult to achieve in larger classes, yet is considered as key to successful learning. Notably, one recent technological solution is the use of clickers, which allow students to answer questions electronically using handheld devices, or hybrid systems using Smartphones and tablets. Indeed, probably the greatest advantage from a feedback perspective is that the response can be generated immediately and promptly (Fredericksen & Ames, 2009), which is captured by the lecturer, who can immediately generate analytics in tabular or bar chart form, leading into discussion and clarification of difficult points identified (Bruff, 2014). Blasco-Arcas and colleagues (2013) found that interactivity, active collaboration and engagement are just three of the positive benefits of clickers to student learning (see Appendix E).

With growing student class numbers and pressure on higher education lecturers to offer more regular and useful feedback (Yorke, 2003), some authors have proposed peer assessment (PA) as a possible solution (Topping, 2005; Strijbos & Sluijsmans, 2010). Strijbos and Sluijsmans (2010, p.

2) described PA as “an educational arrangement where students judge a peer’s performance quantitatively and/or qualitatively and which stimulates students to reflect, discuss and collaborate”. Van Zundert, Sluijsmans and van Merriënboer (2010, p. 270) indicated that this evaluation may take many forms “such as grading a peer’s research report, providing qualitative feedback on a classmate’s presentation, or evaluating a fellow trainee’s professional task performance”. A key feature of PA is how the feedback is delivered by someone whose “capabilities are nearer to those of the helped, so that both members of the pair find some cognitive challenge in their joint activities. The helper is intended to be ‘learning by doing’ and also to be a more proximate and credible model” (Topping, 2005, p. 632). In this way, PA represents an opportunity to advance student learning by allowing feedback to be more timely. Liu and Carless (2006) found that PA enhances student engagement, and subsequently helps them to develop self-management and judgement, strengthens the capacity for self-assessment, helps develop subject knowledge, enables students to receive feedback faster and also promotes social interaction. PA can also prepare students for future challenges they might face in the workplace by developing their capacity to evaluate the quality and impact of the work carried out by them or others (Liu & Carless, 2006). Appendix B discusses peer feedback using a recent case study by Seery (2017) who applied software called ‘VoiceThread’. Once applied this enabled first year students to provide and receive peer feedback and it was found that the student presentation skills were enhanced, subsequently meeting the learning outcomes of the module.

CONCLUSION

The aim of this study was to explore contemporary feedback practices in higher education, the key issues surrounding the practice and suggest solutions to address these concerns. Contemporary feedback practices in higher education include: written, verbal/oral face-to-face, technological (including audio and video) and peer. The study highlighted that irrespective of the mode of feedback delivery, there were specific issues common to all. These issues were clarity, consistency, student engagement, timeliness and burden. Table 1 below summarises the recommendations from the literature on feedback to address each of these concerns.

<i>Problems with Feedback</i>	Recommendations for Practice
<i>Clarity & Consistency</i>	In the educational sector rubrics have come to mean “assessment tools which consist of a set of standards and/or directions for assessing students’ outcomes and to guide student learning” (Dickinson & Adams 2017, p. 113). Recently an interesting study was carried out by White, Morin & Donaghy (2017) on forty-eight chemistry students at Dublin City University for the development of an online assessment and feedback strategy. This case study found that students showed an improved record of feedback, an increased understanding of what was expected from assignments and an increased incorporation of feedback into subsequent reports. Furthermore, from the lecturer’s point of view, it found that there was a reduction of time required to deliver feedback and an improved uniformity. See Appendix A
<i>Student engagement</i>	Due to technological advances, audio feedback is seen as an effective alternative to written feedback, and as illustrated in Nemeč and Dintzner’s (2016) study, can create a very positive experience for students. According to McCoy (2014), audio feedback together with other similar technology such as podcasts, facilitates good feedback in a short time, enhances student engagement and can be compared with the feedback students would receive in a face-to-face meeting with their lecturer. Ekinsmyth (2010) believes that students engage with audio feedback as it is usually clear, detailed, personalised, has potential for feed-forward, and the spoken voice conveyed more than written words. Recently an interesting study was carried out by Harney (2017) when he applied Visual Audio Screencasts (ViA’s), i.e. a combination of audio and visual, to facilitate feedback on hand-written physics lab reports. Harney (2017) observed that students benefited from the ViA’s, and furthermore, when the average grades for this cohort were compared with previous years, the students’ average grade after the ViA’s application were improved. See Appendices C (Audio) and D (Video) Other studies have shown that peer feedback can enhance engagement (Liu & Carless, 2006). See Appendix B
<i>Timeliness and burden</i>	O’Brien (2017) performed a study with twelve first year students by employing clickers in a flipped lab session to determine the impact of feedback on levels of student engagement. However, clickers also have the advantage that feedback is instant and therefore can be provided in close proximity to the delivery of the relevant content. This technology therefore can aid both with the problems of engagement and timeliness. Other studies have shown that peer feedback can also help reduce the problem of time. See Appendices B (Peer) and C (Clickers)

Table 1. Summary of feedback issues with practice recommendations.

What has become apparent from this study is that feedback practices are complex and need to be critically reflected upon to ensure appropriate implementation. There is no ‘one size fits all’ in feedback and that “different emphases” are appropriate “at different times for different purposes” (NFETL, 2014). There is a degree of lecturer discretion when it comes to choosing the most appropriate form of feedback for a given class. This is most apparent for those teaching diverse groups and larger classes. This report, through synthesis of the literature, has provided recommendations for new lecturers on feedback practices.

Overall, it is hoped that the information provided from this study will help inform new lecturers’ teaching practice. The related poster illustrates how tools, techniques and technology can assist in the facilitation of feedback to support students’ learning and cater for assessment *for* learning and assessment *as* learning approaches.

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APPENDIX A: RUBRIC FEEDBACK CASE STUDY

The term ‘rubric’ signifies “an established custom or rule of procedure” (Bertaux, 1981). In the educational sector it has come to mean “an assessment tool which consists of a set of standards and/or directions for assessing students outcomes and to guide student learning” (Dickinson & Adams 2017, p. 113). Allen and Tanner (2006) defined rubric as “a type of matrix that provides levels of performance or achievement or understanding for a set of criteria or dimensions of quality for a given type of performance”. Numerous research has supported the use of rubrics in teaching and learning and it is now widely used in academia for student assessment and feedback purposes (Osana & Seymour, 2004; Andrade, 2005; Dickinson & Adams, 2017; Rakedzon & Baram-Tsabari, 2017). In general, a rubric is nothing more than the setting up of a criterion for grading assignments. Boettger (2010), observed that the use of rubrics in assessment promotes objectivity, consistency, reliability, and validity of the work carried out. Use of rubrics facilitates a deeper engagement and understanding for the students, and also helps us to judge student work based on the descriptive facts rather than our assumptions. Furthermore, it also helps students to find out what is expected of them and what they need to achieve to get a particular grade.

Recently an interesting study was carried out by White, Morin and Donaghy (2017) on forty-eight chemistry students at Dublin City University (DCU) for the development of an online assessment and feedback strategy. The authors had three objectives in their mind:

1. Provide the students with personalised feedback.
2. Make available the feedback after practical hours in the lab, so the students can access the feedback, review and improve their performance.
3. Reduce time during practical sessions that are devoted to giving students feedback.

In this case study, the authors incorporated a number of features for effective feedback such as fast-forward to future work, a dialogic process that supports students to become self-regulating, with multi-stage assignments to improve engagement (White et al., 2017). In the introductory laboratory session, students were guided through the rubric (marking criteria), and the students were given feedback online on a weekly basis for the duration of the module using the assessment rubric.

With respect to the students, the following observations were made:

- Improved record of feedback and increased understanding of what is expected from assignment(s).
- Increased incorporation of feedback into subsequent reports.

While from lecturer point of view, the following observations were made:

- Reduction of time required to deliver feedback during the practical sessions (so lecturers were now able to focus on enhancing the students’ knowledge)
- Improved uniformity between lab demonstrators and lecturer marking criteria (when lab demonstrators graded the report).

RECOMMENDATIONS WHEN USING RUBRICS:

It is recommended that when designing a rubric:

1. Tailor the rubric for each experiment, so it will be very personalized information for students (White et al., 2017).
2. Keep the rubric concise and simple.
3. The language of the rubric should be easy to understand. If the students clearly understand what is expected of them, then their performance can improve (Sundeen, 2014).
4. The wording of the rubric feedback should be positive and encouraging to students.

Link to case study:

<http://y1feedback.ie/wp-content/uploads/2017/01/DCU-1-Blanaid-White-2.pdf>

Link to Video interview with author of case study:

<http://y1feedback.ie/assessment-and-feedback-in-chemistry-laboratories/>

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APPENDIX B: PEER FEEDBACK CASE STUDY

Feedback refers to all the response information that informs students about their own performance or understanding to improve their learning in the direction of the learning outcome planned for (Narciss, 2013; Van-Popta, et al., 2017). Feedback can be provided to students by various sources including: teacher, book, parent, self, experience, computer-based trainings and their peers (Hattie & Timperley, 2007). In recent years, peer feedback has attracted considerable attention in academia, in which learners with similar knowledge provide feedback to other classmates. In a general sense, peer feedback is a shared process where students provide written or oral feedback on the work of other students and receive feedback from peers (Topping, 1998).

A study carried by Liu and Carless (2006) found that peer feedback enhances student engagement, and subsequently helps them to develop self-management and judgement, strengthens the capacity for self-assessment, helps develop subject knowledge, enables students to receive feedback faster and also promotes social interaction. It was also observed that it helps students to be ready for future challenges by developing their capacity to evaluate the quality and impact of the work carried out by them or others (Liu & Carless, 2006).

However, the scope and frequency of peer feedback are subject to the specific learning model being selected by the instructor; these may include the Reflect, Inquire, Suggest and Elevate or RISE model (Wray, 2013) or a process model (Van-Popta, et al., 2017). Very recently, Seery (2017) applied software called 'VoiceThread' for peer feedback in a first year computer engineering course of fifty-two students. The students used VoiceThread to create multimedia presentations and conversations, once applied this enabled first year students to provide and receive feedback (peer feedback). It was found that the presentation skills of the student were enhanced, and subsequently met the learning outcome of the module.

Cartney (2010) introduced formative assessment through peer assessment and observed that it engaged students fully in the assessment process. The author also found that, the above process also had potential 'feed-forward' benefits for their further studies. According to Cartney (2010, p. 560) "peer assessment may offer a potential route forward to bridging the gap between 'feedback given' and 'feedback acted upon' particularly if integrated within a broader assessment dialogue between students and tutors and promoted at programme level".

RECOMMENDATIONS WHEN USING PEER FEEDBACK:

Serry (2017) makes the following recommendations:

1. If software is used for the peer feedback process, ensure complete familiarity with the software before organizing any activity.
2. Make available assignment guidelines to the students.
3. Create an example of the assignment and make this available to the students.
4. Allow adequate time for the activity to be undertaken.
5. Support the students in the practice of giving and receiving feedback.

Link to Case Study:

<http://y1feedback.ie/wp-content/uploads/2017/01/AIT-3-Mairead-Seery-2.pdf>

Link to Video interview with author:

<http://y1feedback.ie/voicethread-enabling-peer-feedback-in-first-year-computer-engineering/>

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APPENDIX C: AUDIO FEEDBACK CASE STUDY

Formative assessment and feedback are important aspects of teaching and learning, and recorded audio feedback may be an alternative to traditional written feedback (Nemec & Dintzner, 2016). Due to technological advances, audio feedback is seen as an effective alternative to written feedback, and as illustrated in Nemec and Dintzner's (2016) study, can create a very positive experience for students. According to these authors: "while audio feedback took longer for faculty to complete, it yielded more feedback overall as well as used more language in the affective and cognitive processes" (Nemec & Dintzner, 2016, p. 159).

According to McCoy (2014), audio feedback together with other similar technology such as podcasts, facilitates good feedback in a short time, enhances student engagement and can be compared with the feedback students would receive in a face-to-face meeting with their lecturer. France & Ribchester (2008) reported that a five-minute piece of audio feedback (which is a sensible time for an audio feedback) is the equivalent to approximately 500 written words.

Ekinsmyth (2010) believes that students engage with audio feedback as it is usually clear, detailed, personalised, has potential for feed-forward, and the spoken voice conveyed more than written words. It also solves the problem of a lecturer's poor writing, which is difficult for students to understand. Many students also revealed that they have listened to audio feedback more than once to comprehend the feedback in more detail. Furthermore, all this can be in their own time and at their leisure. Hence, the author advocates that students will be more likely to engage and listen to audio feedback because they have to sit and listen to it, instead of just quickly skimming over written notes on a paper (Ekinsmyth, 2010).

More recently, Harney (2017), applied Visual Audio Screencasts (ViA's), which are a combination of audio and visual, to facilitate feedback on hand-written physics lab reports. The aim of the work was to uncover the effectiveness and practicality of using ViA's to provide feedback and enhance the quality of students' work. Harney (2017) observed that students benefited from the ViA's, and furthermore, when the average grades for this cohort were compared with previous years, the students' average grade after the ViA's application were improved.

RECOMMENDATIONS WHEN USING AUDIO FEEDBACK:

For new lecturers, the recommendations in designing audio/podcast feedback are as follows:

1. Encourage students to open their assignment in front when listening to audio feedback.
2. Decide a sensible time limit for all feedback (such as 5min).
3. Appropriate training should be done before the audio feedback.
4. It is advisable to use rubric to help frame their comments.
5. Technology such ViA's can be used for small class size (< 30 students).

(France & Wheeler, 2007; King, McGugan & Bunyan, 2008; Lunt & Curran, 2010; Savin-Baden 2010).

Link to Case Study:

<http://y1feedback.ie/wp-content/uploads/2017/01/AIT-5-Stephen-Harney-2.pdf>

Link to Video interview with author of the Case Study:

<http://y1feedback.ie/visual-audio-screencasts-to-enrich-feedback-and-learner-engagement/>

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APPENDIX D: VIDEO FEEDBACK CASE STUDY

Corcoran (2017) performed the study on a large class with 490 students, employing feedback approaches such as video feedback, post exam feedback and also the use of technology such as Moodle and PowerPoint. This case study focused on first year students of sociology, with their module “Thinking Sociology”; encompassing twenty-four lectures and a terminal examination at the end for summative assessment. The lecturer prepared the PowerPoint slides with exam questions and provided feedback to students on how to write the correct answers. The lecturer recorded the feedback as a screencast and made this available through Moodle.

This study builds on previous studies, such as the work of Boud and Molloy (2013) who discussed how to improve student learning in large class scenarios with the help of instant and appropriate feedback. In the same vein, O’Donovan, Rust and Price (2016) suggested that the provision of whole class feedback can be more effective, as it is instant feedback, rather than offering each individual feedback which may be slow to be delivered in the context of large class. Notably, the use of technology increases the feedback opportunities in large classes and enhances the learning environment for students (Wright & Lawson, 2005).

From Corcoran’s (2017) case study it is apparent that the students find the screencast feedback very convenient and easy to use in preparation for their exams, and they appreciate that it is available from the start of the semester right through until the end of their exams. The student can access the video from home and watch the video as many times as they wish, with no need for them to come to university for the feedback. Some of the benefits identified in this study are that:

- The student finds the video feedback easier to understand, rather than reading a well written email, because of the visual nature of the video; and
- It helps students identify common exam mistakes and weak areas that need improvement in their own work.

RECOMMENDATIONS WHEN USING VIDEO FEEDBACK:

Based on this case study, the following recommendations for new lecturers may prove useful:

1. Consider the use of a screencast for developing short videos for basic questions like ‘how to prepare for the exam’ and ‘how to take comprehensive lecture notes’.
2. Best practice is to use graphics and videos as a supplement to text-based normal teaching activities.
3. Avoid the use of a lot of text on static PowerPoint slides and put more emphasis on the main key words.
4. Consider employing humour in the screencasts to maintain the student attention.

Link to Case Study:

<http://y1feedback.ie/wp-content/uploads/2017/01/MU-5-Corcoran-2.pdf>

Link to Video Interview with author:

<http://y1feedback.ie/general-feedback-on-exam-performance/>

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APPENDIX E: CLICKERS FEEDBACK CASE STUDY

O'Brien (2017) performed a study with twelve first year students by employing clickers in a flipped lab session to determine the impact of feedback on levels of student engagement. This study adopted different feedback approaches such as: informal feedback and automated feedback in order to improve the interaction of students with pre-lab reading material, made available on the virtual learning environment, Moodle. The lecturer conducted the study by using clickers (Turning Technologies software) to determine the level of student knowledge of lab material. Critically, what this case study indicated was the value of both the student and lecturer receiving instant feedback, and their suitability for use in a small or large class.

The case study builds on previous studies such as Caldwell's (2007) review of different scenarios for the use of clickers in the large-group classroom. Similarly, Johnson & Lillis (2010) performed a study on the nursing discipline and determined their benefits for use in laboratory sessions. Notably, Ludvigsen, Krumsvik and Furnes (2015) conducted their study of clickers with first year students in a large classroom and found that this tool facilitates student monitoring and enhancing their own learning. O'Brien's (2017) study indicated that students appreciated being able to compare their responses and learning with their peers' performance.

This case study revealed how the use of clickers achieved success, as it improves the student engagement with course material and they are well prepared for the lab session. It also helps the lecturer to see the overall performance of the class and identify the weaknesses in student understanding. This ability to get instant feedback helped the lecturer to resolve issues in a timely manner during the semester. The students' response to this study was that they are encouraged to prepare for the lab sessions and that the clicker makes the learning easier and more interactive.

RECOMMENDATIONS WHEN USING CLICKERS:

Based on this case study, in order for new lecturers to make the most of clickers for effective feedback, the following recommendations apply:

1. Use the clickers to link to the flipped classroom content for student interaction and instant feedback.
2. Make the feedback from the quizzes consistent and easy to understand by providing links to the relevant programme content.
3. Consider using automated feedback to reduce the time between questions posed and feedback delivery.
4. Monitor levels of understanding through regular quizzes, so that content delivery can be adapted to resolve issues in understanding.

Link to Case Study:

<http://y1feedback.ie/wp-content/uploads/2017/01/AIT-1-Anne-M-O'Brien-5.pdf>

Link to Video interview with author:

<http://y1feedback.ie/clickers-in-a-flipped-lab-feedback-to-enhance-engagement-in-first-year-science/>

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