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“Check the grade, log out”: Students’ engagement with feedback in Learning Management Systems

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Abstract

There is growing recognition that socio-constructivist representations of feedback processes, where students build their own understanding through engaging with and discussing feedback information, are more appropriate than cognitivist transmission-oriented models. In parallel, practice has developed away from hard-copy handwritten or typed feedback comments, towards the provision of e-feedback in Learning Management Systems (LMS). Through thematic analysis of activity-oriented focus groups with 33 Undergraduate students, the present study aimed to explore 1) students' experience of engaging with feedback in the LMS; 2) barriers to students' engagement; and 3) students' perceptions of the potential for technology to ameliorate these barriers. The data reveal particular barriers to engagement created by the LMS environment; grades and feedback are commonly separated spatially, limiting attention to the latter. Additionally, the distributed location of feedback from different tasks limits synthesis of feedback. Nevertheless, students perceived that the LMS environment affords opportunities for addressing such challenges, particularly in relation to the potential for a LMS tool to synthesise feedback information across modules, and to direct students to resources to develop their skills. The findings are discussed in the context of cycles of engagement with feedback, and implications for the principled use of technology in feedback processes are discussed.

Keywords: Feedback; Learning Management System; Engagement; Higher Education

“Check the grade, log out”: Students’ engagement with feedback in Learning Management Systems

Assessment and feedback are domains of their experience with which students commonly report less-than-optimal levels of satisfaction; a finding that has remained strikingly consistent within the UK for over a decade, and one that is reported internationally (Boud and Molloy 2013; Medland 2016). Many responses to this dilemma have involved greater scrutiny of the work of educators, underpinned by an assumption that effective feedback is constructed by, and is the responsibility of, the assessor. This approach positions students as passive recipients within a transactional process, in a view that Carless (2015) has described as the old paradigm of feedback. In contrast, the new paradigm aligns with a socio-constructivist perspective in which feedback is viewed as a dialogue between students and educators or peers, developmental beyond the task at hand, and for which the development of internal feedback is key (Boud and Soler 2016; Lam 2017). Indeed, within this paradigm, the student’s role as a ‘proactive recipient’ of feedback information is arguably equally as important as the role of the person who produces the comments (Winstone et al. 2017a). However, students’ engagement with feedback processes is often described as limited (e.g. Mulliner and Tucker 2017).

Research into the specific factors that impede students’ engagement with feedback processes demonstrates both cognitive and motivational barriers. Jönsson (2013) conducted a review of the literature and identified that student engagement with feedback may be limited because the feedback may not be useful to students in terms of its timing and potential transfer to future work; the feedback may not be sufficiently detailed and personalised; the feedback may be too authoritative; students may not know which strategies to use to implement feedback effectively; and students may not

understand the academic language used within feedback comments. Some parallels were observed through primary data collected by Winstone et al. (2017b). In focus group discussions where undergraduate students discussed how they might implement exemplar feedback comments, they discussed the barriers they might face in terms of their awareness of what the comments mean and the purpose of feedback; their cognisance of appropriate strategies for implementing feedback; their agency to feel that successful implementation of feedback is achievable; and their volition to put in time and effort to implement the developmental advice contained within their feedback comments.

Whilst studies such as these give us insight into the general barriers that might affect students' engagement with feedback processes, it is important to consider the specific mechanisms through which students submit and receive feedback information on their work. Electronic management of assessment is fast becoming the norm (Vergés Bausili, 2018); it is now rare for students to collect hard copy assignments but instead commonly receive notification when feedback and grades are published via the Learning Management System (LMS), or Virtual Learning Environment as it is commonly termed in UK contexts. Similarly, rather than receiving written comments on paper-copy assignments, many students will be used to receiving comments via electronic annotation systems and rubrics. However, whilst there is mounting evidence concerning how technology could support feedback processes (Hepplestone et al. 2011; Carruthers et al. 2015; Deeley 2018), the role of technology in supporting students' engagement with feedback requires further investigation (Jönsson 2013).

Students' engagement in e-feedback processes

The growth in e-feedback processes, where feedback information is provided to students through the LMS as electronic annotations, typed comments, or recorded

audiovisual files, has led to growing interest in how students engage with feedback within the LMS environment. From the perspective of educators, e-feedback is perceived as faster to produce than hard-copy feedback, thus reducing academic workload associated with assessment (Buckley and Cowap 2013). Educators also report that it is easier to provide targeted comments through e-feedback, whilst students report that comments are more legible in this format (Ambler et al. 2014). Students appear to prefer e-feedback; through a survey of 99 UK undergraduate students, Hast and Healy (2018) report that, in comparison to hard copy, 86% of students expressed a preference for online submission, but this preference fell to 65% of students for accessing feedback online, and to just 56% for reading feedback. Nevertheless, students report that they are more likely to revisit feedback in the LMS on multiple occasions than they would with paper-copy feedback, in part because online storage of comments makes it easier to locate earlier feedback exchanges and track grades over time (Parkin et al. 2012).

Technology also has the potential to counter the ‘invisibility of engagement’ with feedback (Price et al. 2011, 882), where, for example, learning analytics can give teachers insight into the extent of students’ engagement with feedback information (e.g. Zimbardi et al. 2017). In a recent study, Mensink and King (2020) studied patterns of access to online feedback in 484 undergraduate Biology students. Across 1462 separate feedback files, 38% of files were never accessed, and their analysis demonstrated that the location of the grade in relation to the feedback file had an influence on access. Where the grade was accessible without having to open the feedback file, 42% of files were not accessed but when the grade was contained within the feedback file, only 17% of files were not opened. This study indicates that there may be factors specific to the e-assessment environment that influence students’ engagement with feedback.

In conceptualising the possible cycle of engagement with feedback, we draw upon the process model of Price et al. (2011), which identifies potential points of disengagement in the process of receiving and enacting feedback comments. The first potential point of disengagement identified by Price et al. (2011) is where students may fail to even collect, or in the case of e-feedback, fail to access or open files containing feedback comments on their work. The next potential point of disengagement is influenced by the extent to which students pay attention to feedback comments. Merely skim-reading comments would not constitute meaningful engagement with feedback, rather a process of ‘doing time’ as a representation of engagement (Handley et al. 2011). In the context of e-feedback, students may find it easy to locate their grade, minimising scrutiny of feedback comments (Mensink and King 2020). Following this stage, students could potentially disengage with feedback at the point of determining what actions need to be taken on the basis of the comments. Finally, students could disengage at the point of taking such actions, for example if they are perceived to be too difficult or too effortful to achieve. The first two points in this cycle, accessing and paying attention to feedback, are likely to be most heavily influenced by the modality of feedback comments: electronic or paper-copy. However, whilst the following stages of determining and taking actions may be more similar between electronic and hard-copy feedback, there may well be ways through which technology can facilitate these two crucial stages of implementing feedback comments. Whilst we recognise that e-feedback could constitute audio, video, or screencast feedback, here we limit our focus to typed comments and/or annotations on students’ work presented via the LMS.

The present study

Whilst LMSs are used for grading student work and providing feedback comments in Higher Education systems across the world, we have much less insight into students' experiences of feedback in this specific context. Students themselves may also see opportunities for digital tools to facilitate their agentic engagement with feedback comments. Through focus groups with Undergraduate students, we set out to address three broad research questions:

1. How do students experience the process of receiving feedback comments via the LMS?
2. What barriers to engagement with feedback exist, and which are specific to the e-assessment context?
3. Is there potential for technology to help to overcome these barriers to engagement?

Methods

Participants

A total of 33 first-year undergraduate students (55% female) from a UK University participated in one of six focus group discussions, with group sizes ranging from 4-6 students. The students self-selected their participation in response to a study advertisement publicised by programme directors; we did, however, ensure that participants represented a broad range of disciplines (17 students from Arts and Social Sciences, 9 from Health and Medical Sciences, and 7 from Engineering and Physical Sciences). A £30 cash remuneration was provided to all participants. The composition of each focus group session was in part determined by students' availability, but a mix of disciplines were represented in each session. The research was approved by an institutional Research Ethics Committee; written informed consent, including consent to

use anonymised quotations, was obtained from all participants at the beginning of the session.

Study Design and Procedure

The semi-structured focus group schedule incorporated a series of activities. Activity-oriented discussions encourage participants to engage in more in-depth dialogue above what is generated from didactic question and answer formats (Bloor et al. 2001; Colucci 2007; Winstone et al. 2014). Questions and activities were designed to be interactive in nature in order to enable group discussion around barriers to engagement with feedback and potential facilitators. The focus group schedule consisted of five sections:

1. A general introduction and rapport building exercise as recommended by Kitzinger (1994).
2. **Activity 1: Exploring engagement.** Participants were asked work in subgroups of two or three to discuss two questions: 1) How do you currently receive your feedback; and 2) What are your barriers to engaging with feedback? Participants were given five minutes to complete the activity, followed by a larger group discussion and semi-structured questioning.
3. **Activity 2: Ranking resources.** Participants were provided with a list of 11 resources for supporting students' engagement with feedback. The list of resources was drawn from a systematic review conducted by Winstone et al. (2017a), also incorporating new tools that the researchers identified as becoming increasingly prominent within the feedback literature (e.g., learning analytics). The list of resources in the ranking activity included:

a) learning advisor support; b) guides to common topics raised in feedback such as critical thinking; c) workshops on how to use and engage with feedback; d) exemplar assignments; e) guide to using feedback; f) portfolio; g) action planning log; h) data on engagement with feedback; i) feedback discussion seminars; j) tracking grades; and k) tools to synthesise feedback comments. Participants were asked to discuss the resources amongst themselves and through discussion rank the resources according to how useful they perceived the resource would be at helping them engage with their feedback. This was followed by further semi-structured questioning.

4. Activity 3. Exploring mock feedback portfolio. Participants were asked to review mock-up screenshots of a feedback portfolio and record their thoughts regarding their likes, dislikes and suggestions for improvements using sticky notes. The aim of this activity was to provide students with a more detailed and concrete example of how technology might be used within feedback processes, as a way of opening up discussion around how technology could support engagement with feedback. This activity was completed individually followed by a group discussion. It has been suggested that providing participants with time to think enables them to process their thoughts and generate ideas (Colucci 2007).

5. At the end of the activities, participants were given the opportunity to raise any topics they felt had been missed and were important in relation to engagement with feedback.

For all activities, the researchers were primarily interested in the dialogue that the activities created. However, the accompanying artefacts were used for purposes of triangulation. For example, transcripts were reviewed alongside the notes that students made during the activities. This process served to position students' dialogue within the context of the activity they were undertaking at the time. A research assistant with experience of moderating focus group discussions facilitated each session, while a second research assistant took field notes in order to capture any non-verbal communication and group dynamics. A reflexive debrief between the research team followed each session. All sessions were audio-recorded and transcribed verbatim, and the focus group discussions ranged from 55-68 minutes.

Analyses

Once transcribed, data were subjected to realist thematic analysis as outlined by Braun and Clarke (2006). The process began with thorough reading of all six transcripts alongside activity artefacts to ensure data familiarization and to inductively explore recurring patterns within and across the transcripts. Patterns of interest were recorded manually and then organized into initial codes. Codes were then collated into broader semantic themes. Themes were then reviewed and further delineated into sub-themes, with any differences of opinion between the authors resolved through revisiting the data.

Findings

Thematic analysis of the data led to the identification of four themes relating to students' engagement with e-feedback (see Figure 1). Cutting across activities within the focus groups, students' dialogue revealed insight into what they believe are the

prerequisites to engagement with feedback, and their perceptions of the process of logging into the LMS and accessing assignment feedback. Students' discussions also revealed their preferences regarding the process of accessing feedback in the LMS, and what they perceive to be facilitative uses of technology to support their engagement with feedback in the LMS.

<INSERT FIGURE 1 ABOUT HERE>

Prerequisites

The first theme concerned the factors that students see as being essential prerequisites to their engagement with feedback, without which, they are unlikely to scrutinise and implement the advice contained within the comments. These prerequisites pertained to features of the feedback in terms of its perceived quality and quantity, as well as the focus of the comments and the specificity with which areas for improvement are presented. These discussions arose when students were asked to discuss how they engage with feedback; invariably, they discussed why they *don't* engage with feedback.

A common perception was that the feedback students receive via the LMS lacks detail; one student explained that '*I don't think I can really use [the feedback] to go anywhere since it's just really brief and it doesn't offer much*' (P23, FG5). Students recognised the limited utility of feedback containing '*just a one line comment*' (P30, FG6), and comments lacking '*substantial stuff you can learn from*' (P21, FG4). Students also discussed the difference between their experience of receiving feedback in hard copy and via the LMS:

Two [assignments] were online so we got feedback on [the LMS] but they weren't very detailed feedback, like I think they could've expanded more... one piece that we handed in, like on paper, we also got that back with feedback written on it, that was pretty decent feedback. (P17, FG4)

It was apparent through students' discussions of their experience of receiving feedback that they believe that the amount of feedback should match the effort they have expended in producing the assignment. One student explained that *'sometimes it's frustrating when you write an essay, 1500 words and they just give you a few lines of feedback, 'you did good but you should do better''* (P15, FG3). Another expressed their high expectations regarding the amount of feedback received: *'I don't think it's enough really. Considering how much work we've put in, I'd expect them to put in the effort as well.'* (P19, FG4)

Beyond their discussions of the quantity of feedback, students were clear in expressing a belief that in many cases their limited engagement with feedback results from comments that are *'not very specific about what we did wrong which I find is sometimes hard to learn from'*. (P12, FG3). For some students, this results in a perception that *'there's no way to act upon it so maybe if there was I'd feel more inclined to act on it'*. (P19, FG4). Students also feel limited in their agency to act upon feedback if the comments do not represent a good balance between praise and constructive criticism: *'they didn't give positive feedback, so maybe they didn't put the things that I'd done well and so when I tried to revise it I lost the things that I had done well... it was just on the negative things'* (P7, FG2).

These issues surrounding the quality and quantity of feedback comments were some of the first things students discussed when talking about receiving feedback in the

LMS, suggesting that receiving feedback of sufficient quality and quantity is a prerequisite for further engagement or action.

Process

Students' discussions around receiving feedback in the LMS provided insight into their experience of the process. Whilst there is undoubtedly an element of convenience associated with the ability to log into the LMS and access feedback at any time of the day and in any place, many students talked about difficulties in finding relevant feedback within the system. One of the first hurdles to be overcome is recognising that feedback has been uploaded in the first place; one student described how *'the notifications are a bit small sometimes. You don't always know that it's there unless you're checking [the LMS] all the time or word of mouth'* (P16, FG3). Another explained how this is a common experience amongst students: *'I know a lot of people that didn't even realise that feedback had been given'* (P10, FG2).

Students also discussed the difficulty in accessing feedback when it is found in individual module areas in the LMS: *'some of it's like on different parts of [the LMS] and it's confusing'* (P11, FG2). One student expressed that *'it's quite difficult to find it. I always forget where it is.... it's a complicated process to access it.'* (P6, FG1).

The process of navigating between different pieces of feedback is seen as an impediment to engagement: *'I guess if it's like a bit of a fuff to find it's not really worth trying to find it [laughter]'* (P2, FG1). Furthermore, in cases where written feedback is entered directly into common LMS marking systems, it is not always apparent that it is there. One student explained that *'I saw [the feedback] by chance actually as I was looking at my mark and I just saw some words, personally I didn't see it, my friends told me there was comments on it.'* (P27, FG5).

Students also discussed at length the ways in which they do (and do not) engage with the information contained within the feedback they receive on their work. Many researchers have written about students' grade focus, but this issue may be more pronounced within a LMS where the grade can be seen without even opening the feedback file. One student admitted that *'I think most people just tend to look at the grade and then leave it'* (P24, FG5); another explained how feedback was not seen as necessary: *'obviously [the grade is] your priority, you look at that first and then go 'I don't need feedback''* (P16, FG3). Whilst this issue of grade focus can be apparent when feedback is not delivered via the LMS, in hard copy format the grade and feedback are often on the same page, whereas there is often spatial separation between the grade itself and the feedback information within the LMS, where students have to open an additional file to access the feedback narrative. Some students do not take this additional step; one student explained that *'sometimes you just log on and if it's a good score you just leave it'* (P15, FG3). Similarly, in Focus Group 1, one student's account led to laughter and nods of agreement from the other participants: *'Check the grade [laughter], log out [agreement, laughter]'* (P4, FG1). A heavy focus on the grade received can mean that students fail to recognise the learning potential of feedback in leading to improved grades in future assignments. In two discussions tinged with irony, students described how they do not engage with feedback *'because it's not as if your mark's going to increase if you act upon it'* (P18, FG4), and because *'you're not going to get any more marks for looking at it'* (P19, FG4).

If students did move beyond the grade to access the feedback narrative, a common view was that *'you generally don't read the feedback more than once really'* (P3, FG1), *'because sometimes students prefer to see the feedback and just close the window'* (P15, FG3). Students expressed a belief that revisiting the comments in the

future was unnecessary, *'because once it's out the way...why would you look at it again?'* (P30, FG6).

Many participants admitted that their engagement consists solely of reading the feedback: *'I usually just view the feedback and read it, that's all actually'* (P15, FG3). Some students went further to explain that if the marker has provided a lot of comments, they *'might not go through every single comment'* (P12, FG3) because they *'don't want to read through all of it'* (P5, FG1). This was particularly evident where the marker had provided electronic annotations on the document; students seemed to find this amount of feedback overwhelming. Interestingly, surface engagement with feedback was seen as appropriate by one participant, who drew upon the financial contribution of students as a reason why they should not have to engage with feedback: *'we're paying for education so it's not our responsibility to engage with feedback because we're paying for it'* (P30, FG6).

Once students had accessed and read feedback within the LMS, the extent to which they took further action to implement the advice was influenced by commonly-reported barriers to engagement with feedback. Some of these barriers would exist regardless of whether feedback was returned via the LMS or in hard copy; one common issue was students' ability to 'decode' the language used within markers' comments: *'I got in my modules, 'be more specific' and I didn't know what that means'* (P13, FG3). Students also spoke of difficulty knowing *how* to implement feedback, having to *'experiment'* (P7, FG2) because there is *'a step missing... to just go from 'oh, you've done this, when it should be like this' and you're just like, well how do I do that'* (P4, FG1). Whilst these issues can be overcome by engaging in dialogue with the marker, the provision of e-feedback via the LMS might add a further layer of depersonalisation that can have an impact on students' willingness to discuss feedback with the marker. One

student commented that *'they give us the feedback and it's all thrown at us but it would be nice to have some back and forth'* (P26, FG5), whereas another explained the reasons for their reluctance to engage in dialogue: *'you feel like you're bothering them, they are very busy people'* (P18, FG4).

Beyond these barriers, students did explore actions they take beyond mere surface engagement with the comments. Some students expressed in vague terms that they *'kinda write some notes'* (P3, FG1), or reflect in some way on the comments: *'Click it, view it, read it [laughter] contemplate on it'* (P15, FG3). Others showed evidence of working to synthesise common messages coming through their feedback, for example *'I look to make a list of what they liked and what they didn't like and I use that list the next time I have an assignment'* (P33, FG6). Others implied that they engaged in action planning on this basis: *'if it's the same point being made I'll write it down and decide what I'm going to do'* (P12, FG3).

Preferences

When considering things that could be put in place to support their engagement with feedback, students unanimously expressed a perception that they would be unlikely to use additional sources of support unless they were compulsory. For example, when discussing the use of an action planning tool to guide implementation of feedback, one student said that *'people wouldn't do it'* (P7, FG2). Similarly, during a discussion about a tool to support reflection on assessment feedback, another student commented that *'if it wasn't compulsory or our tutor didn't see it, or if it's just for us I feel like it would just take you to be really motivated to actively do it'* (P12, FG3).

Similarly, in discussing how technology could be used to support their engagement with feedback, it was clear that students had a preference for tools that

maximise convenience, with tools or resources that required significant effort *'likely to put people off for sure'* (P13, FG3). Many students recommended that any use of technology to support engagement with feedback should be designed to maximise convenience: *'The less effort the better to be honest'* (P19, FG4).

It was clear that these preferences were not just a symptom of laziness; rather, students recognised that within the context of their workload, time-saving tools are likely to be of significant benefit. For example, when discussing a tool to synthesise common messages from multiple pieces of feedback, one participant explained that an automated system for doing this would be beneficial because *'it can become quite time consuming especially if you're in a subject where you have a lot of things you get feedback for'* (P2, FG1).

Facilitators

When discussing potential uses of technology to support engagement with feedback, students discussed how such uses might overcome some of the barriers to using feedback that they had surfaced earlier in the session. Students had earlier explained how they often read feedback once, without returning to that feedback later. They had also explained how the compartmentalisation of assessment, where individual modules and assignments are viewed in isolation from one another within the LMS, can limit their ability to synthesise feedback. They described their frustration in the need to go on a *'wild goose chase'* (P29, FG6) within the LMS to find feedback. Students saw great potential in a system where they could collate feedback in one place, expressing that this would encourage them to revisit feedback on multiple occasions: *'if it's all in one place I would, myself, definitely go and look back at it because it's easy to find and review'* (P2, FG1). Students felt that this facility would make it easier *'to check [feedback] and*

understand it I think' (P27, FG5), because *'you can see everything in one spot and say yeah, I need to improve in this and in this topic I need to improve in that'* (P8, FG2).

It was also apparent that collation of feedback in one place would help students to draw out common messages across different markers, and to recognise *'recurring themes from your feedback'* (P21, FG4). This also seemed to facilitate revisiting feedback when working on a new assignment: *'if I was starting another assignment I could go back and see just key points, like if I had problems with critical thinking I could be like, oh I should check my critical thinking in this essay rather than having to go back and look through every single assignment and all the feedback from those assignments'* (P33, FG6).

Finally, students saw the potential for technology to support their engagement with feedback by helping to overcome the barrier presented by not knowing what steps to take to implement feedback comments. In particular, students were very positive about the idea of a set of tools and resources contained within the LMS to help them know how to address comments: *'Yeah, for sure, it would be quite helpful actually, because if you want to improve any of these skills you just click on it and you get resources which is great'* (P13, FG3). Students saw that this would be sustainable in supporting further development of self-regulation, as it would *'give you the tools, so you would then be able to pull out the key messages from multiple pieces of feedback yourself, and that in itself I think is a form of self-feedback which could help you improve'* (P28, FG6). When engaging with resources and acting upon feedback, students also saw the potential for the LMS to support action planning, such that *'it would help you to be more organized, I think you'd be less likely to forget about what you're going to do with the feedback if you've got somewhere to write down notes as soon as you read it'* (P17, FG4). Having earlier expressed a view that automatised tools would be ideal, when talking about action planning tools some students expressed a view that undertaking the

process themselves would be beneficial, for example: *'you actually have to actively think about the feedback otherwise I'd just forget about feedback, so this is actually making an imprint on my memory about what the feedback was and how I can go about using it in my work'* (P17, FG4).

In summary, whilst students identified barriers to utilising feedback, they also saw great potential for learning technology within the LMS to support them in overcoming these barriers.

Discussion

A shift towards the conceptualisation of feedback as a socially-constructed dialogue between students and educators or peers that is development-oriented and focused on self-regulation has taken place in recent years (e.g. Boud and Soler 2016; Winstone and Carless 2019). In parallel to this shift in emphasis reported in the literature, practice has also evolved, particularly with regard to the use of technology to facilitate feedback processes. The present study aimed to explore 1) students' experience of engaging with feedback in the LMS; 2) barriers to students' engagement; and 3) students' perceptions of the potential for technology to ameliorate these barriers. In our discussion, we focus on engagement with feedback in the LMS context. For detailed discussion of more general cognitive and motivational barriers to engagement with feedback, readers are directed to Jönsson (2013) and Winstone et al. (2017b).

In their cycle of engagement with feedback, Price et al. (2011) argue that a basic prerequisite for engagement is collecting feedback in the first place. When discussing their experiences of engaging with feedback in the LMS, the basic issue of knowing that feedback comments had been released, and subsequently locating those comments, was portrayed as frustrating for students. Students reported that on many

occasions, they found feedback comments by chance rather than design. Akin to failing to collect hard-copy feedback, further attentional and cognitive engagement with feedback is precluded if students are not even aware that feedback is available. A similar barrier is evident where students focus primarily on the grade awarded and choose not to read the associated feedback. Students were candid in their discussion of this issue, aptly illustrated by the shared experience of '*check the grade, log out*'. The words of our participants are demonstrative of a challenge to engagement that is exacerbated by the LMS: that there is often spatial separation between the grade and the feedback comments, with the latter often uploaded in an additional file. It is therefore possible to log into the feedback environment in the LMS, appraise the grade attained, and not even open the feedback file before logging out. This issue is illustrated by data reported by Mensink and King (2020), where students are less likely to access feedback files if grades are available separately. This issue can, to a certain extent, be counteracted by adaptive release of grades following engagement with feedback (see Parkin et al. 2012), emphasising the importance of learning design to discussions about the potential of technology to support engagement with feedback.

If students do access feedback comments, Price et al. (2011) identify that cognitive disengagement can occur where students have difficulty 'decoding' the meaning of feedback comments. Our participants discussed the challenge of not being able to discern how they should action feedback comments and whilst this is not specific to the LMS, in our data there was some evidence that students perceive comments received via the LMS to be briefer than those received on hard-copy assignments. In fact, e-feedback has particular affordances, such as embedding within comments links to further resources, or generating different types of feedback using audio-visual software.

Acting on feedback, as well as depending on accessing and understanding information, requires students to feel confident and equipped with skills and resources to act (Price et al. 2011; Jönsson 2013; Winstone et al. 2017b). This challenge was clearly evident in our data, where students discussed difficulties knowing how to take action, and describing surface actions such as '*contemplate on it*', or '*write some notes*'. Students also identified this as an area where technology has potential to attenuate the challenge, through the opportunity for digital tools to link directly to resources supporting enactment of feedback, and tools to facilitate action planning.

The insights provided by our sample of students indicate that technology can both exacerbate certain barriers to engagement with feedback, but also be used to harness the potential for proactively overcoming other barriers. For example, students noted that it can be difficult to locate, access and navigate their feedback from different modules within a LMS. However, technology could be used to address this barrier by providing a space in which all feedback could be synthesised, thereby allowing students' time to focus on engaging with the feedback rather than the logistics of locating it. Curation of feedback in an e-portfolio (Winstone 2019) was seen as a way to facilitate revisiting of feedback, and to prevent the '*wild goose chase*' experienced when trying to locate feedback from different modules and assignments. Students felt that this would make accessing feedback less cumbersome and provide time for them to better engage with comments received by drawing out any recurring themes across feedback from different modules / markers.

Limitations

In considering these findings, it must be acknowledged that the data were collected from a single institution with a particular type of LMS, although many of the

common systems for providing electronic annotation and feedback are used across a range of LMSs and participants were drawn from a wide range of disciplines representing differing views. Nevertheless, students' opinions expressed through the focus groups are likely to represent their own experiences, which may not be common to all programmes or institutions. The nature of our sample as self-selected may also mean that these students were more engaged than the wider population of students. Our participants were all in the first year of their courses, and students' engagement with feedback may well change over the course of their degree. Whilst this points to an important direction for future research, it also limits the generalisability of our findings.

Implications for theory and practice

Our data indicate that students recognise the potential for technology to facilitate their use of feedback, overcoming potential barriers to engagement. This aligns with recent calls for the use of technology in assessment and feedback to be based upon a specific rationale or affordance, rather than just replicating transmission of comments in a different medium (e.g. Winstone and Carless 2019). Our data also resonate with recent developments in conceptualising students' feedback literacy (Carless and Boud 2018), particularly regarding students' appreciation of feedback and their capacity to take action. Whilst students discussed a desire for technological solutions to require minimum effort on their part, others recognised the importance of engaging in sense-making processes in response to feedback.

Feedback needs to be viewed as integral to education rather than an afterthought, and as part of a longitudinal process that encourages a developmental and self-regulative focus. Our findings suggest that the modular curriculum works against this aim through its compartmentalisation of knowledge that encourages end-loaded over-assessment and

encourages students to pursue performance goals rather than mastery of a subject, in which feedback merely transmits the correct answer. New initiatives such as programmatic assessment may go some way towards addressing this compartmentalisation and, as findings suggest, technology can be harnessed to scaffold this cultural shift. Ultimately, however, in order to avoid the replication of a transmission-focused paradigm of feedback within the online environment, the use of technology should be driven by a pedagogic rationale. The focus should not be on efficiency, but opening up new opportunities for learning (Laurillard et al. 2009).

Conclusion

Whilst our data surface barriers to engagement with feedback, the online environment also presented multiple opportunities for addressing and overcoming some of the barriers identified, particularly in relation to the ability of a LMS tool to synthesise feedback information from across modules /sources, which made action planning and tracking development much more convenient and personally tailored to each student. This in turn could then form the basis of meaningful dialogue with markers and personal tutors, for example, and support increasing levels of feedback literacy and self-regulation. Technology, if driven by sound pedagogic rationale, opens up opportunities for overcoming barriers to meaningful engagement with feedback processes.

References

Ambler, T., Y. Breyer, and S. Young. 2014. "Piloting online submission and online assessment with Grademark". In *Cases on the assessment of scenario and game-based virtual worlds in higher education*, edited by S. Kennedy-Clark, K. Everett, and P. Wheeler, 125-151. Hershey, PA: IGI Global.

- Bloor, M., J. Frankland, M. Thomas, and K. Robson. 2001. *Focus groups in social research*. London: Sage
- Boud, D., and E. Molloy. 2013. "Rethinking models of feedback for learning: The challenge of design". *Assessment and Evaluation in Higher Education* 38(6): 698-712.
- Boud, D., and R. Soler. 2016. "Sustainable assessment revisited". *Assessment and Evaluation in Higher Education* 41(3): 400-413.
- Braun, V. and V. Clarke. 2006. "Using thematic analysis in psychology". *Qualitative Research in Psychology* 3(2): 77-101.
- Buckley, E., and L. Cowap. 2013. "An evaluation of the use of Turnitin for electronic submission and marking and as a formative feedback tool from an educator's perspective". *British Journal of Educational Technology* 44(4): 562-570.
- Carless, D. (2015) *Excellence in University Assessment: Learning from award-winning practice*. Abingdon: Routledge.
- Carless, D., and D. Boud. 2018. "The development of student feedback literacy: enabling uptake of feedback". *Assessment and Evaluation in Higher Education* 43(8): 1315-1325.
- Carruthers, C., B. McCarron, P. Bolan, A. Devine, U. McMahon-Beattie, and A. Burns. 2015. "'I like the sound of that' – an evaluation of providing audio feedback via the virtual learning environment for summative assessment". *Assessment and Evaluation in Higher Education* 40(3): 352-370.
- Colucci, E. 2007. "'Focus Groups Can Be Fun': The use of activity oriented questions in focus group discussions". *Qualitative Health Research* 17(10): 1422-1433.
- Deeley, S. J. 2018. "Using technology to facilitate effective assessment for learning and feedback in higher education". *Assessment and Evaluation in Higher*

Education 43(3): 439-448.

- Handley, K., M. Price, M., and J. Millar. 2011 “Beyond ‘doing time’: investigating the concept of student engagement with feedback”. *Oxford Review of Education* 37(4): 543-560.
- Hast, M., and C. Healy. 2018. ““It’s like fifty-fifty”: Using the student voice towards enhancing undergraduates’ engagement with online feedback provision”. *Journal of Teaching and Learning with Technology* 7(1): 139-151.
- Hepplestone, S., G. Holden, B. Irwin, B. H.J. Parkin and L. Thorpe. 2011. “Using technology to encourage student engagement with feedback: a literature review”. *Research in Learning Technology* 19(2): 117-127.
- Jönsson, A. 2013. “Facilitating productive use of feedback in higher education”. *Active Learning in Higher Education* 14(1): 63-76.
- Kitzinger, J. 1994. “The methodology of focus groups: the importance of interaction between research participants”. *Sociology of Health and Illness* 16: 103-121.
- Lam, R. 2017. “Enacting feedback utilization from a task-specific perspective”. *The Curriculum Journal* 28(2): 266-282.
- Laurillard, D., M. Oliver, B. Wasson, and U. Hoppe. 2009. “Implementing technology-enhanced learning”. In *Technology-Enhanced Learning*, edited by N. Balacheff, S. Ludvigsen, T. de Jong, A. Lazander, and S. Barnes, 289-306. Dordrecht: Springer.
- Medland, E. 2016. “Assessment in higher education: drivers, barriers and directions for change in the UK”. *Assessment and Evaluation in Higher Education* 41(1): 81-96.
- Mensink, P. J., and K. King. 2020. “Student access of online feedback is modified by the availability of assessment marks, gender and academic performance”. *British Journal of Educational Technology* 51(1): 10-22.

- Mulliner, E., and M. Tucker. 2017. "Feedback on feedback practice: perceptions of students and academics." *Assessment and Evaluation in Higher Education* 42(2): 266-288.
- Parkin, H. J., S. Hepplestone, G. Holden, B. Irwin, and L. Thorpe. 2012. "A role for technology in enhancing students' engagement with feedback". *Assessment and Evaluation in Higher Education* 37(8): 963-973.
- Price, M., K. Handley, and J. Millar. 2011. "Feedback: Focusing attention of engagement". *Studies in Higher Education* 36(8): 879-896.
- Winstone, N., L. Millward, C. Huntington, L. Goldsack, and E. Kyrou. 2014. "Eliciting rich dialogue through the use of activity-oriented interviews with autistic young people". *Childhood* 21(2): 190-206.
- Winstone, N. E. 2019. "Facilitating students' use of feedback: Capturing and tracking impact using digital tools". In *The impact of feedback in higher education: Improving assessment outcomes for learners*, edited by M. Henderson, R. Ajjawi, D. Boud, and E. Molloy, 225-242. London: Palgrave.
- Winstone, N., R. A. Nash, M. Parker, and J. Rowntree. 2017a. "Supporting learners' agentic engagement with feedback: A systematic review and a taxonomy of recipience processes". *Educational Psychologist* 52(1): 17-37.
- Winstone, N. E., R. A. Nash, J. Rowntree, and M. Parker. 2017b. "'It'd be useful, but I wouldn't use it': barriers to university students' feedback seeking and recipience". *Studies in Higher Education* 42(11): 2026-2041.
- Winstone, N., and D. Carless. (2019) *Designing effective feedback processes in higher education: A learning-focused approach*. Abingdon: Routledge.

Vergés Bausili, A. (2018). From piloting e-submission to electronic management of assessment (EMA): Mapping grading journeys. *British Journal of Educational Technology*, 49(3), 463-478.

Zimbardi, K., K. Colthorpe, A. Dekker, C. Engstrom, A. Bugarcic, P. Worthy, R. Victor, P. Chunduri, L. Lluca, and P. Long. 2017. “Are they using my feedback? The extent of students’ feedback use has a large impact on subsequent academic performance”. *Assessment and Evaluation in Higher Education* 42(2): 625-644.

Figure 1. Thematic Map of data

