A Dialogic, Technology-Mediated Approach to Supporting Feedback Engagement in a Higher Education Context: Perceived Effects on Learners' Feedback Recipience

Submitted by

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Declaration

I, James Michael Wood confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Signed .....James Wood .....

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I would also like to thank my parents who have always supported me in my studies, from providing space for me to study in the summers, to help with childcare as my son has grown with me throughout the development of this EdD. Thank you, Dad, for the help with proofreading, and Mum for always encouraging me to keep at it and researching binding.

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Abstract (292 words)

Feedback in higher education (HE) is an important determinant of student success despite its variable impacts. Assessment and feedback have also been highlighted as one of the least satisfactory aspects of the learning experience. However, more scholarship has focussed on what constitutes 'good feedback' than about the factors that influence how it is perceived, engaged with, and used by students.

This study aims to redress this imbalance by investigating what measures can be taken by teachers to support feedback engagement processes. It explores how the existing literature on dialogism, technology, can be synthesised into a new model of feedback engagement. Principles from the resulting USM model were employed in the design of dialogic technology-mediated feedback practices used over a semester with 14 South Korean undergraduates on an academic writing course. Utilising a qualitative approach, data from reflections, questionnaires (N=14) and the main method, in-depth semi-structured interviews (N=13), were analysed to understand perceptions of the relationship between navigating the feedback activities and feedback engagement and use. The data was also used to consider how the model could be empirically enhanced.

The findings were analysed inductively, and the practices reportedly contributed to feedback engagement in four ways. Dialogism supported understanding of peer/teacher feedback, facilitated group knowledge co-construction, and motivated feedback engagement. Open access to peers' work helped participants to make comparisons and understand how their work could be improved. Screencast feedback was perceived to be more thorough, usable, and affectively supportive. After initial disappointment with feedback, participants reportedly engaged with the feedback by employing certain pre-introduced concepts related to learning from feedback. Overall, the practices were demonstrated to support the development of feedback receptivity. The data supported contributed to the refinement of the USM model; thus, contributions to both theory and practice were made.

Impact statement (481 words)

This thesis study was inspired by several 'calls to research' (see section 2.7) as well as the observation that there are several important gaps in the field regarding what is known about feedback engagement, as well as the lack of a model that unifies the disparate strands of literature as to how feedback engagement can be supported. This study has attempted to answer these calls and explore some of the noted gaps by attempting to unite these strands into one deductively derived and empirically enhanced 'USM' model. The findings have various potential/actual impacts.

Firstly, the study has contributed to several original findings. In some cases, these findings tally with similar work emerging in the field, and in other cases, they support and exemplify current theory in the literature. In addition, some findings go beyond those described in the literature and offer the first exploration of certain themes. The study also offers several feedback practices and tests them empirically, using this empirical data to examine and refine the model. Some of these practices could be developed and researched in other contexts or potentially be adapted for pre-tertiary education, as for education to be truly effective, understanding how feedback recipience[1], opportunities for vicarious learning and positive orientation to feedback can be supported early in students' learning career is of paramount importance. I also see possibilities for the development of the feedback practices in doctoral education, and for facilitating blended socio-constructivist based affective and cognitive peer support for distance doctoral students.

Dissemination and dissemination plans:

Since the inception of this EdD, I have presented at eight international conferences and several professional workshops to share preliminary results and best practices, including at the SRHE conference in December 2019. I intend to publish as soon as possible and am eager to continue to develop and test the implications arising from this thesis in different contexts. I envisage doing this in the form of local workshops to promote the use of formative assessment, and support for feedback engagement at Seoul National University, and at conferences both nationally and internationally. I aim to return to the UK to work in a context in which I can contribute to the development and research of effective teaching practices. I envisage that this may offer a springboard from which to encourage the take up of similar practices in other educational contexts, and from which to develop and offer training courses for professionals who wish to

[1] To be defined on page 30

improve feedback engagement in their contexts.

Overall, as a long term goal for this study and related research in the field, I hope that as envisaged by Crisp (2007, p.579) ‘one day there might no longer be grumbling by assessors that their efforts to provide feedback are just a waste of time,’ and practitioners will have a better understanding of what gives rise to engagement and disengagement with feedback.

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Reflective statement (1965 words)

While teaching on the pre-sessional course (in English for Academic purposes or EAP) at University College London (UCL) in 2012, a 'critical incident' occurred. An offer holder who appeared capable and competent failed to engage with her formative feedback, made only cursory changes to her essay draft (based on language), and subsequently failed the course and was forced to return to China. As a result of this experience, I wished to understand better the problem (and potential solution) of why so many students were failing to engage with their feedback and to understand the requirements for academic writing at the postgraduate level. This led to an embryonic doctoral proposal; however, at the time, I lacked a conceptual framing for the contribution I wanted to make. This is something that emerged throughout the progress of the EdD, and that I feel might not have happened without the iterative and reflective EdD process. I feel that the choice of the EdD rather than, PhD has facilitated the development of my work much more deeply, and has allowed me to accumulate knowledge of learner experiences regarding the feedback practices I have been exploring over the past six years and to identify a research topic that conceptualises both the problem and solution effectively. The problem I have identified is also under-researched and has the potential to positively transform the experience of learners and educators in higher education contexts. This has given me 'self-transcendent purpose' (Yaeger et al., 2014) a form of motivation that has been found to provide a strong drive for persisting through challenging tasks and this has helped to sustain my motivation during difficult moments in the EdD process.

Foundations of Professionalism Module

Despite initial confusion as to how the discourses of professionalism could be applied to a job role in which professional development opportunities had been extremely sparse and full-time jobs rare, the course helped me to realise the de-professionalising aspects of many of the English for Academic Purposes (EAP) jobs I have held. This encouraged me to redouble my efforts to leverage the doctoral programme as a tool for professional development and for finding a way to contribute to both professional practice and academia through my research. It also helped me to realise that the best trajectory for me was likely to be a move towards traditional academia. I was able to conceptualise the positioning of EAP professionals on the periphery of academia and with few real opportunities for advancement or successfully navigating the 'third space' (Whitchurch, 2008). This is especially true in the current climate of encroaching neo-liberalisation of EAP services, offered by private companies, often through underpaid

underqualified and overworked employees. Although academics in universities face many of the same pressures, I have come to understand that a more traditional academic trajectory may allow me to develop my professionalism and professionality in a way that is most conducive to my ethical stance as a 'democratic practitioner' (Whitty, 2008). As such, I aim to make a worthy contribution as both a practitioner and a researcher. These are perspectives that have driven me towards the pursuit of excellence in my professional practice and to create impact in my research endeavours.

Methods of Inquiry 1

In my second assignment, I analysed some of the learning issues in teaching and learning facing students and teachers at King's College London (KCL) and employing an action research approach devised a technology-enhanced strategy for helping to solve some of the issues. I experienced the development process of a proposal for a doctoral-level piece of research, and in this process, I was able to evaluate and reflect on different ontological and epistemological perspectives, consider my own beliefs and orientations and reflect on the most appropriate research approaches and methodologies for the kinds of research I would be likely to conduct. This introduced me to the notion of pragmatism in research, as well as an investigation into action research and its appropriacy for research of that nature. I was able to review the current literature on peer review and peer learning, as well as digital portfolio approaches and socio-cultural/cognitive collaborative learning approaches. I was also able to consider the issues inherent in insider research and delve into ethical issues that might be brought about by conducting research within one's context and in general. Much of this work laid the foundation for the methods of Enquiry 2 module, the Institution Focused Study (IFS) and, eventually, the thesis.

MOE2 Module

MOE 2 allowed me to take what I had learned in MOE 1 and to execute a small-scale research study. At the time we were using Moodle Forums at KCL, and I'd noted problems with homework completion, and a lack of attention to corrections, and because of this, it was difficult to get information about how students were struggling until problems were revealed in summative assignments. I had gathered from my reading that many of the problems identified were solvable using a technology-mediated formative assessment environment. I envisaged that this would allow better accountability, a range of peer-to-peer learning opportunities and allow the teacher to obtain a snapshot of student attainment. The findings from this study also provided evidence that the practices I was experimenting with had the potential to scaffold different

forms of learning from feedback, motivation and engagement. I also learned that there were some limitations to the techniques I was using and that there was much more to learn about facilitating engagement with feedback. This preliminary data-informed the practices investigated in the Institution Focused Study (IFS), and I began to see the entire doctoral process through the lens of the design research process (Barab and Squire, 2004) so that the EdD outputs could be viewed cumulatively.

IFS

The IFS (a project expected to solve a practitioner level problem within an institution) built on the findings of MOE2. The feedback practices researched had been successful and had facilitated learning and engagement in the expected ways (and some unexpected). However, limitations had been found to the use of Moodle forums for group learning from an open formative feedback environment. I experienced the process of developing questions, conducting interviews and analysing the data. The findings were also useful, as they confirmed earlier findings regarding the possible benefits of the feedback practices, including some that had not been indicated by participants in MOE2. However, although the practices I had deployed appeared to be having a positive impact, the study lacked a solid theoretical basis, and I understood from reflecting on feedback that this was something that would need development for the final thesis.

Thesis

I spent a long time thinking about my thesis topic, and at times, felt lost. It was also at this point that I wanted to reach out and get some support from the EdD team and from peers, as I felt isolated and that I would benefit from a dialogic peer discussion process. This led to a fruitless log on to Moodle in which I found there was no engagement from any of my peers and very little from the EdD team. In the end, talking with a colleague in my office who had completed a PhD in EAP studies gave me the sounding board I needed in the development of my ideas. I had wanted to continue the work I had been developing in some way following a 'design research' inspired iterative approach. I discovered a paper on 'proactive feedback recipience' (Winstone, Nash, Parker and Rowntree, 2017) and this helped me to understand that my objective throughout all stages of the Doctorate could have been better conceptualised as finding ways to enhance student engagement with feedback. This is because although feedback is such a powerful force for learning (Hattie, 2009), the impacts of feedback are also highly variable (Boud and Carless, 2018) and this was the problem I had been attempting to address. I then wanted to find a way to develop implement and test the model of feedback recipience offered in the

Winstone led paper because the paper offered a convincing feedback model that had been derived a substantial systematic review in the field. After reading this paper and much of the contributing and subsequent literature, as well as the dialogic and technology literature, I believed that process approaches to supporting feedback engagement held a potential key to effective feedback practice, and this had been partially evidenced by my work so far.

My first upgrade panel, however, was not successful, and this experience became a critical incident for me that led to a great deal of thinking and reflecting as well as learning and experimenting with new perspectives from the literature. The feedback from my panel pushed me towards work that was much more ambitious. As a result, I have been able to combine my understandings of what can be done to support feedback recipience from the academic literature and from my own experience and EdD data thus far. This led to the construction of the first iteration of a new model of feedback recipience and the derived feedback practices and culminated in a successful upgrade panel attempt as well as some useful feedback as to how to proceed. Through the process of preparing the study, I was also able to trial and develop confidence in the feedback processes, practice them and observe the effects as a teacher before being given the authorisation to start thesis data collection.

In retrospect, the upgrade process was the most difficult aspect of the EdD and the most emotionally challenging. I felt that the panel picked on aspects of my work that had been beyond the limits of my comprehension, and this I realise, is also why feedback is such a powerful force for learning. It was, in fact, the dialogic discussion and co-constructed interpretation of this feedback with supervisors that was central to my ability to understand and action the feedback. In retrospect, I also realise that it was my ability to regulate my emotions, which allowed me to be resilient and pragmatic in doing so. There is no small irony in the fact that my own experience of getting through the upgrade process strongly mirrors my thesis findings, and indeed, my own experience has become anecdotal evidence for the findings of my thesis. I also believe that having more contact with peers, having examples of supervisor feedback from other students, and taking part in peer review and co-construction of knowledge would have been hugely helpful and affectively supportive. Due to changes in my circumstances, I have not been able to attend face-to-face sessions or benefit from other student support mechanisms since the IFS. Thus, utilising blended or peer support discussion elements in the course would have been especially supportive, both in terms of peer learning and emotional and collegial support.

The future

My findings have thus far been disseminated in the form of eight international conference sessions in the UK and South Korea, including the 2019 SRHE conference. I also wish to publish in the near future. The EdD and thesis work have challenged and expanded my thinking and provided a self-transcendent motivation to continue my research and develop both in theory and practice and to disseminate the findings for development and testing in different higher education contexts. I have become a strongly motivated researcher with an interest in further investigating the fields of feedback and feedback engagement to explore its nexus with dialogic feedback, technology-mediated learning and learning through academic writing. I am very grateful for the learning opportunities I have had during the EdD process. However, as a result, I have developed an interest in researching how doctoral students (especially distance or non-traditional background) can be better supported throughout the doctoral process by making workload neutral changes to learning design and utilising socio-cognitive potentials for learning and affective support.

Chapter 1 Introduction and Rationale

1.1 Introduction and background

Feedback is an important determinant in student success in both higher education (HE) and other contexts (Black and Wiliam, 1998; Hattie and Timperley, 2007; Shute, 2008; Jönsson, 2013). It is also integral to student satisfaction (Higgins, Hartley, and Skelton, 2002). Assessment and feedback have also been highlighted as one of the least satisfactory aspects of the HE learning experience for students (Williams and Kane, 2009; O'Donovan, Rust and Price, 2016; Mulliner and Tucker, 2017) in the UK and Australia (Winstone and Boud, 2018; Carless and Boud 2018). Although not unproblematic as a proxy for quality in recent years, learner 'satisfaction' with feedback has begun to be considered a component of perceived 'value for money' (Yorke, 2013) which has also declined in recent years (Neves and Hillman, 2017). This is also demonstrated in an unchanging satisfaction score of 73% in 'assessment and feedback' over the past four years of the National Student Satisfaction survey. Satisfaction with 'feedback and assessment' has been at least 10% lower than the 'general satisfaction' category (at 84%) (Office for Students, 2019). Due to the enormous potential of feedback to enhance learning (Hattie, 2009) and the variable effect it has in practice (Carless and Boud, 2018) an emergent strand of research has begun to investigate the effectiveness of feedback practice (e.g., Price, Handley, and Millar, 2011; Evans, 2013). Feedback continues to be among the issues of the highest importance to practitioners (Nicol, Thomson, and Breslin, 2014) and institutions (Nash and Winstone, 2016). Indeed, the drive to improve students' perceptions of their feedback experience has arguably become a central rallying point in the drive to enhance the student experience of HE as a whole.

1.2 The general gap in feedback research

Studies investigating contribution to feedback 'quality' have identified many factors that impact satisfaction with feedback. 'Clarity of language' (Nicol, 2010; Spina and McNeill, 2015), 'timeliness' (Bailey and Garner, 2010; Scott, 2014; Hill and West, 2019) 'detail' (Sopina and McNeil, 2015; Hill and West, 2019) 'consistency among providers' (Careless, 2006) 'relevance' (in that it can be acted upon) (Nicol, Thomson, and Breslin, 2014; Hill and West, 2019) 'individualisation of response' (Brown, 2007; Hill and West, 2019) and facilitating questions and answers (Hill and West, 2019) have been identified as key factors among many more (Shute, 2008; Jönsson, 2013; Winstone, Nash, Parker, and Rowntree, 2017) identified. However, studies show that improvements in such areas do not necessarily lead to improved learning outcomes

(or significantly higher satisfaction ratings) (Jönsson, 2013; Nicol, Thomson, and Breslin, 2014) and only modest improvements have been reported after many years of institutional focus on such issues (OFS, 2019).

It has also been noted that many of the problems identified in the wider feedback and assessment literature in HE contexts are also common in the field of English for Academic Purposes (EAP) or HE academic writing instruction environments (Fuccio, 2014; Aubrey, 2014; Kelly and Moogen, 2012). However, much more research on this problem appears to have been conducted in the general HE literature than in the area of language education despite the issue being equally applicable to both domains. Furthermore, findings in the HE literature suggest, for example, that some students focus more on their summative grades than on their feedback (Bailey and Garner, 2010, Hernandez, 2012), and that around 50% of learners fail to even pick up their feedback (Sinclair and Cleland, 2007; Price, Handley, and Millar, 2011) or engage poorly with it (Jönsson, 2013; Evans, 2013; Handley, Price and, Millar, 2011; Winstone, Nash, Parker, and Rowntree, 2017) and as a consequence, often fail to implement the recommendations within it (Hyland, 1998; Crisp, 2007). For feedback to be effective, it needs to be understood and used effectively (Jönsson, 2013). Sadler (1989), argues that information on student performance can only be regarded as feedback if it is used to 'alter the gap' between a student's level and desired performance. It has been noted that no matter how 'lovingly crafted,' promptly provided, or clear and individualised feedback is, there is no guarantee it will be used at all (Gibbs and Simon, 2004, p.21). In other words, there appear to be factors other than the feedback quality that impact whether a student will engage effectively with or use feedback.

As Jönsson (2013) points out, more scholarship has focussed on what constitutes 'good feedback' than about the factors that influence how it is perceived, engaged with, and used by students. By extension, few studies have focused on which factors may stimulate active engagement with and use of feedback to 'close the gap' between current level and performance (Winstone, Nash, Rowntree, and Parker, 2016), and research in this area has been described as 'underrepresented…and somewhat disconnected' (ibid, p.3). While there have been some attempts to model feedback engagement in the literature (Price, Handley, and Millar, 2011; Winstone, Nash, Rowntree, and Parker, 2016; Winstone, Nash, Parker and Rowntree, 2017) that have made useful contributions, there remains a general lack of empirical data in the field of feedback engagement (Winstone, Nash, Parker, and Rowntree, 2017; Ajjawi and Carless, 2018), despite various calls to research for greater understanding in the area (Shute, 2008; Nicol, 2010; Handley, Price, and Millar, 2011). Thus, there appears to be scope for work that explores the

area of feedback engagement from a hitherto mostly unexplored empirical perspective.

1.3 Research focus

This project seeks to redress the imbalance between research into what constitutes a good feedback message and mode (the transmission perspective), and research that examines engagement and use of feedback. The study explores how the disparate and somewhat unconnected literature on engagement with feedback and learning through dialogue, can be synthesised into a new model of feedback engagement and use. Principles from the resulting original dialogic technology-mediated 'USM' model of feedback engagement[2] (Understanding the assessment and feedback landscape, self-assessment, goal setting and regulation, and motivation, affect, and receptivity processes), were then utilised in the design of a set of 'feedback practices'. These practices were used over a semester with 15 South Korean undergraduate students, 14 of whom consented to take part in data collection. The study gathers qualitative data on the perceived influence of the feedback activities on feedback engagement and use. This information is then used to reflectively consider in what ways the data can be understood to evidence, reject or refine the USM model. The claim to knowledge contribution in this thesis will be based on two factors. First, the aim to 'create new understandings of existing issues' (in this case feedback engagement) and second to 'combine disparate concepts in new ways to investigate a conventional issue' (an original model of feedback engagement). These have been suggested by Trafford and Leshem, (2008 p.141) to be two ways in which a claim to knowledge can be justified in doctoral work. In doing so, I hope to enhance theoretical and practical understandings of how feedback engagement and use can be supported.

1.4 Context of the study

The study, which will be described in detail in chapter three, took place in my current professional context, on an undergraduate two credit-bearing (in-sessional), 16-week, 40-hour, advanced academic writing course at Seoul National University (SNU) in South Korea. On the course, participants are expected to have a TEPS[3] score of 815, (which equates to around 7.5 in IELTS overall, but which does not measure productive ability). The course (designed at my discretion within some guidelines) has some basis in British foundation and EAP courses such as those found at University College London and King's College London (my previous working

[2] The development process and centrality of the USM model to the study will be explained in the literature review

[3] A test of English proficiency developed by Seoul National University

contexts). It aims to prepare students for independent international scholarship in English, helping students predominantly to master the organisational and critical evidence-based aspects of English university-level academic writing.

1.5 Summary and thesis structure

This chapter has attempted to explain the recent scholarly interest in the field of feedback engagement, and the importance of understanding more about how the feedback engagement can be supported. The general research gap, study focus, and the context in which the study took place were also introduced.

Chapter two briefly examines the historical and changing paradigms of feedback. It goes on to introduce the concept of 'dialogic feedback' and how it might be realised in practice. The essential contribution (or proactivity) of the learner in successful feedback practice is then discussed, and the related concept of 'feedback recipience' introduced[4]. The chapter continues by considering how feedback recipience may manifest and then considers what is currently known about what might contribute to facilitating it. This discussion builds to the introduction of the original 'USM model' of feedback recipience which is based on a synthesis of known influences on feedback engagement in the current literature. The chapter culminates in the justification of the theoretical perspectives taken, of the conceptual framework used, and the introduction and rationale of the specific research focus and the research question guiding the investigation.

Chapter three, first, introduces the classroom practices derived from the USM model and the technology chosen to support them to give context for methodological consideration of how the research question can be answered. It continues by summarising the research design, to provide context for a discussion of insider research and ethical perspectives and safeguards, the participants, and the methodological approach. It then goes on to describe and justify the data collection methods, data collection procedure, approach to data analysis, and critical approach.

Chapter four presents an analysis of the results of the study and details the four major thematic findings of the study; dialogic feedback, the open-folder environment, screencast feedback, and the role of receptivity or beliefs in supporting feedback recipience.

Chapter five discusses how the data analysis has contributed to answering the research question

[4] Page 30

contributed to a greater understanding of feedback recipience in the academic literature. The chapter concludes by considering how the data can be interpreted to either evidence, refute, or refine the USM model. The result is the empirically enhanced USM model.

The concluding chapter considers the limitations and main contributions to knowledge in the light of the answers to the research question, as well as avenues for future research. Some of the broader implications for professional practice in higher-education or EAP/English education contexts are then discussed.

Chapter 2: Literature Review

2.1 Changing historical conceptions of feedback

How feedback can be defined has been a matter of some discussion in HE, and no one definition has yet been agreed upon (Evans, 2013; Steen-Utheim and Witteck, 2017). Burke and Pieterick (2010) explain that term the 'feedback', as well as the understanding of its role in learning, is complex and has undergone paradigm shifts over time. An early perspective (Thorndike's law of effect) (Thorndike, 1927) conceptualised the 'reinforcement' effect of feedback. This paved the way for B.F. Skinner's (1958) behaviourist perspective, and under its influence, most of the research at the time viewed feedback as both a 'reinforcer and motivator' (ibid, p.12). By the 1970s, this perspective had given way to the idea that feedback should be 'processed' and enacted by learners in an 'information-processing' view (Evans, 2013) or 'transmission' perspective (Ajjawi and Boud, 2017). This view highlighted the 'informational role of feedback' in which the 'expert' delivers information to a passive student as a 'gift' (Askew and Lodge, 2000, p.5). This focuses on the transmission process in developing feedback, rather than on the students' process of receiving and understanding it.

This perspective is relevant to much of the research that builds on such 'transmission' perspectives in considering how the most effective feedback can be produced (ibid, p.12, Scott and Coate, 2003). However, this 'old paradigm' of feedback (Carless, 2015) also relies on the 'unexamined idealised conception' that 'teacher comments should be precisely mirrored in student comprehension and use' (Scott and Coate, 2003, p.89) and there are clearly several internal and external factors that govern the extent to which this is likely to be possible. This renders the assumptions of feedback practice from a pure transmission perspective open to doubt. Such perspectives may also encourage over-dependence on the feedback giver and ascribe less importance to the capacity of students themselves to make informed judgements about their work and to understand their own responsibility for making feedback effective through proactive behaviours. This is something required for 'good' feedback practices (Nicol and McFarlane-Dick, 2006) to be 'sustainable' (Carless, 2016). Thus, feedback practices should aim to develop the critical and evaluative capacities of learners through dialogues and should be conceptualised as part of a 'mutually constructed' (Boud and Soler, 2016) paradigm of assessment activity known as 'dialogic feedback practice'.

2.1.1 Dialogic conceptions of feedback

For a growing number of feedback researchers, the 'old paradigm' (Carless, 2015, p.191) in which feedback is viewed as 'gift' or 'product' that can be optimised by considering the most effective methods of feedback formulation and delivery, has now been superseded by one that considers the entire feedback process rather than any single stage (Dunworth and Sanchez, 2016; Nicol, 2010; Sadler, 2010; Wiliam, 2011; Winstone, Nash, Parker and Rowntree, 2017). Although the two perspectives overlap (Carless, 2015; Evans, 2013) and good feedback engagement is predicated on good feedback production, the need for the new paradigm is based on the understanding that feedback giving information only about student performance is 'likely to be insufficient to engage students and prompt them to take action' (Carless, 2015 p.193). Likewise, feedback delivery alone does not necessarily lead to learning (Nicol, 2010). Feedback often fails to engage with students' needs and interests (Carless, 2015), and much of it goes to waste or is never viewed[5] (Price, Handley, and Millar, 2011; Evans, 2013; Gibbs and Simpson, 2004). Or even if it is engaged with and broadly understood, learners may not understand how to use it to improve their writing, as illustrated in a recent case study by Green (2019) in which the postgraduate TESOL course participant had only a 'vague sense' (p.89) of how to apply the feedback received.

From this 'new paradigm' or dialogic perspective (Carless, 2015), feedback should be an 'interactive process', that is ideally socially embedded (Price, Handley, and Millar, 2011). Learning through feedback is 'constructed' via interaction (with interpreted experiences in the world) in a Vygotskian (1978) socio-constructivist process (Laurillard, 2002; Nicol and Mcfarlane Dick, 2006; Dunworth and Sanchez, 2016; Carless and Boud, 2018). From this perspective, feedback is viewed as a 'dynamic', 'interpretive' process of communication, that is thus a 'social and constructed phenomenon' (Ajjawi and Boud, 2017, p.253). Within a dialogic feedback practice, 'shared and individual interpretations are developed through dialogue, sense-making and co-construction between participants' (Carless and Boud, 2018, p.1316). For feedback to be dialogic, it requires active participation and two-way dialogues regarding feedback (Winstone and Nash, 2016) from both givers and receivers. This implies a partnership between teachers and students (or among peers), sharing responsibility for both producing feedback of sufficient quality, and utilising it effectively (Winstone, Nash, Parker, and Rowntree, 2017). For successful learning to happen, there must be a response to 'transmitted' feedback', which could be at the level of analysis, discussion, connection with prior understanding, or using feedback to influence

[5] See page 17 and section 2.3 for more a more detailed explanation of this point (to avoid redundancy)

behaviour and act as a result of it (ibid). In this way, 'dialogic feedback' can be defined as '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' (Carless, 2015, p192). Carless (2015) also suggests that such a dialogue can be among peers, with the teacher, or take place as a reflective 'inner dialogue' in which individuals contrast their understandings, judgements or evaluations with examples of writing from others. Recent work suggests that dialogues to aid in the interpretation of feedback can also usefully take place with third parties such as 'learning developers' and not only with the original feedback provider (Gravett and Winstone, 2019).

The participatory nature of dialogic feedback also brings into focus the importance of relationships and power dynamics in feedback interactions, and some research has evidenced this. While 'transmission' feedback positions students as 'passive recipients' (Ajjawi and Boud, 2017), as Hyatt, (2005) asserts, dialogic feedback offers leaners '…a position from which to challenge'. In dialogic feedback conditions, learners are no longer 'disempowered apprentices' who can only 'adhere to instructions' (p.351). Dialogic practice critically includes learners in the learning process by providing opportunities to negotiate meaning (Zhu and Carless, 2018), challenge, evaluate, and even iteratively co-construct an improved understanding of the feedback they receive. This facilitates the process of gathering the necessary information and context required to understand feedback and the development of the critical and evaluative skills needed for the individual construction of knowledge. In this sense, dialogic feedback may be considered both democratic and participatory compared with the traditional feedback paradigm. Arguably, in the dialogic feedback paradigm, an evaluation of the quality of feedback provision needs to consider quality from a transmission perspective (Evans, 2013), but also from a learner engagement perspective. To understand the potential role of dialogue in supporting engagement with feedback, it is first necessary to explore what dialogic feedback might involve in practice.

2.1.2 What might constitute dialogic feedback practices?

Several scholars have put forward a convincing case for the importance of dialogic feedback practices in higher-education settings for supporting learners' self-evaluative skills (Beaumont, O'Doherty, and Shannon, 2011; Carless Salter, Yang, and Lam 2011; Price, Handley, and Millar, 2011; Nicol, 2010; Carless, 2015). There has also been much discussion regarding what might constitute dialogic feedback practice, and what practices are likely to be effective in promoting engagement with feedback and helping students to avoid disengagement with feedback.

In a review of dialogic feedback practices, Carless (2016), proposes (but does not provide evidence for) five ways in which dialogic feedback practices could be realised: (1) 'integrated cycles of guidance and feedback, (2) peer feedback, (3) technologically facilitated feedback, (4) internal feedback and (5) teacher-generated written feedback' (p.2). The first method, 'integrated cycles of guidance and feedback' according to Carless, should involve the clarification of goals, standards, and expectations, through activities that involve student participation in furthering understanding. This could include student generation of rubrics, peer/group analysis of exemplar student work (Nicol, 2010), and 'on display assignments' (Hounsell, McCune, Hounsell and Litjens, 2008) such as presentations and group work shared for discussion, peer feedback and analysis of attainment in comparison with marking criteria. The goal of such activities is to promote the ability to self-evaluate. The visibility of peers' work and the ensuing interactive engagement it can promote, is thought to assist students in making comparisons and to strengthen their ability to do so. Such capacities, should, in turn, support productive engagement with feedback. However, there appears to be little empirical evidence in the current literature of the effects (or perceived effects) of such practices from the student perspective on feedback engagement.

In addition to 'on display assignments', i.e. activities involving the group analysis of exemplar writing, peer scaffolding/feedback activities are thought to support learners in recognising good performance; they also offer quick and voluminous feedback (Carless, 2016). They can also involve students more in cognitively engaging 'higher-order processes' (Nicol, Thompson, and Breslin, 2014) that are believed to lead to deeper learning. There is some academic support for such claims. Some studies, for example, have shown that student groups in a 'giving feedback only' condition compared to 'receiving feedback only', made more substantial gains in their own writing (as assessed by raters) compared to control groups (Lundstrom and Baker 2009; Rouhi and Azizian 2013; Cho and McArthur, 2011; Ion, Sánchez Martí, and Agud Morell, 2019). The general claim for such results appears to be based on the premise that giving peer feedback involves deep engagement with assessment criteria in a way similar to the analysis of exemplars. This, in turn, encourages the development of the ability to make critical judgements what constitutes quality, which can then be turned towards the evaluation of learners' own work. There is also limited evidence in support of this perspective, for example, master's participants in a recent study Li and Grion (2019), reported that giving feedback both motivated them and encouraged self-assessment. The majority also rated the beneficial effects of providing feedback higher than receiving it. While there appears to be good evidence that analysing peers' work aids learning in such experiments, the process by which such learning takes place appears to be

under-researched. Thus, this is an area of potential contribution to the literature for this thesis.

Generally, the empirical literature on the success of dialogic feedback practices is currently rather sparse; although there are signs, this is beginning to change. Only 31% of students in Duncan's 2007 study, for example, signed up for face-to-face dialogic feedback opportunities, and even then, often failed to ask directed questions about their feedback. Similarly, of the nine interventions classified by Winstone, Nash, Parker, and Rowntree, (2017) in their systematic review as 'dialogic', none were designed to incorporate multiple cycles of ongoing bi-directional peer or teacher feedback, or the use technology to mediate the peer/teacher dialogue process.

One recent study investigating feedback dialogue that shows promising findings (Zhu and Carless, 2018) found two main advantages of feedback dialogue in peer-review situations. First, feedback receivers were able to clarify and negotiate the meaning of their peer feedback, which the authors argued promoted engagement with feedback. The study also found that through giving feedback and checking it with the receiver, feedback givers were able to better evaluate the quality of their feedback. However, the paper also reported that in many cases, in the sample of five classes and 210 students, that peer feedback often failed due to a lack of class time, difficulty meeting when peer review was assigned outside of class, or over-reliance on the teacher to mediate disagreements. The authors perceived this potentially workload-increasing factor as a challenge for the general uptake of dialogic peer feedback practices.

In another recent study (published after completion of this study), on the theme of dialogic feedback, Hill and West (2019), report on the perceived effect of teacher-student 'dialogic feedforward' meetings with two cohorts of students using 44 interviews, a pre and post-intervention performance test and two group interviews. Participants reported feeling nervous, apprehensive, and fearful of criticism or failure before feedback meetings. They also talked of being disappointed, annoyed, and ashamed on receiving their feed-forward during meetings. The authors asserted (but offered no evidence) that in feedforward meetings, the key was to persuade students that they have capabilities that can be developed over time, and that are not fixed. In the resulting data, participants reported having enjoyed the experience of 'feedforward meetings' and that the meetings helped them to know they were on the 'right track' and made them feel personally valued and cared for. They also reported that the meetings encouraged more time-on-task and that the drafting process and use of exemplars supported self-assessment, self-efficacy and regulation and motivated feedback-seeking behaviour and acting on it after the intervention. Finally, grades improved 7% compared to previous cohorts. In

comparison with Duncan (2007), the was no mention of the sign-up or attendance rate for feedforward meetings, or the amount of teacher time this took. In addition, no data was collected on whether the meetings aided feedback engagement. However, these qualitative reports may provide a useful comparison with this study and will be addressed in the discussion.

Finally, a study conducted by Harvey (2019) on dialogic feedback with 23 undergraduates found that although the anecdotal evidence for feedback dialogue was positive and students reported improved understanding, and motivation and engagement, in the following assessment it appeared that a high percentage of the students did not apply their feedback and 63% actually performed worse than previously. Subsequent interviews indicated that they had been unable to apply or remember the feedback or to reflect on it. Harvey concluded by quoting Steen-Uthiem and Hopenbeck's (2019, p.84) observation that 'providing…opportunities to engage in dialogue with feedback does not imply that students understand the feedback and consequently use feedback to improve their work'. Steen-Utheim and Hopenbeck (2019) also point out that despite recently gaining ground, work on dialogic feedback thus far has been mostly theoretical, and little is known about how students engage with dialogic feedback. Further, to date, there appear to have been few connections made between dialogic feedback and facilitating engagement with feedback. Indeed, dialogic feedback approaches can still suffer from monologism, avoidance of useful dialogue about the feedback (Duncan, 2007), power imbalance, misunderstandings, and learners may lack the skills or motivation to engage with dialogic feedback opportunities effectively (Steen-Utheim and Witteck, 2017).

Zhu and Carless (2018) and Hill and West (2019) illustrate some of the potential benefits of peer and teacher-student feedback dialogue, but also some of the inherent difficulties, i.e. time and space, in the case of Zhu and Carless, or the time required for individual face-to-face meetings in the case of Hill and West. One possible solution is the use of technology to overcome such barriers and which could offer more than a simple replication (or even enhancement) of what is possible in a face-to-face learning space. This has also been noted as a potential solution by key researchers in the field (Carless, 2015; Carless and Boud, 2018). To avoid redundancy, the further potential of technology to mediate dialogic feedback/learning practices will be discussed in the context of the introduction of the USM model (and why technology is an integral aspect of it) in section 2.9.

2.2 What constitutes feedback engagement?

In the feedback literature thus far, there has not been one widely agreed definition of what might constitute the kinds of engagement that may be desirable as a response to feedback, although many attempts have been made. Generally, though, feedback engagement has been said to be possible on at least three levels; that of behaviour, cognition and emotion (Fredricks, Blumenfeld, and Paris, 2004). Some benefits (or drawbacks) of feedback are also likely to be deferred or may influence subsequent feedback engagement (Price, Handley, and Millar, 2011). Various suggestions as to what may constitute feedback engagement have been offered. The following section attempts to compile some examples to help identify forms of engagement that may be reported in this study, and ascertain if any new forms can be evidenced. It is not intended to be exhaustive or authoritative and may be expanded by the data gathered from the present study.

At the level of Behaviour:

1. Reading/listening to/watching feedback (Gibbs and Simon, 2004) (multiple times)
2. Filing and returning to feedback (Bevan et al., 2008; Park et al., 2012).
3. Reflecting on feedback and self-evaluating/regulating (Nicol, 2010; Gibbs and Simpson, 2004; Nicol and McFarlane-Dick, 2006), while making 'informed judgements' (Boud, 2007).
4. Interpreting/deepening/understanding and changing behaviour (Saloman and Globerson, 1987 in Price, Handley and Millar, 2011).
5. Proactively seeking dialogue with peers or the teacher about feedback or to improve learning (Hepplestone and Chikwa, 2016; Nicol and McFarlane-Dick, 2006) or proactively seeking feedback (Evans, 2016) face-to-face (Zhu and Carless, 2018) or online.
6. Setting goals and action planning (Hepplestone and Chikwa, 2016; Nicol and McFarlane-Dick 2006)
7. Showing adaptability: applying feedback about one assignment or context to another (Evans, 2013; Hepplestone and Chikwa, 2016).
8. Taking written notes on verbal feedback (Hepplestone and Chikwa, 2016).
9. Active engagement (Handley, Price and Millar, 2011). This may comprise thinking, or 'reflecting mindfully,' and actions, such as asking questions about feedback, challenging the tutor, engaging in discussion with peers, teachers, or family members and friends to assist in interpreting assignments and feedback. It may also involve drawing on resources and transferring learning from feedback on one assignment to another, or

engaging with a learning community (ibid).

At the level of cognition:

1. Focusing on meaning-making, understanding principles rather than 'going through the motions' by deploying appropriate learning strategies (Evans, 2013).
2. Self-management skills (Evans, 2016).
3. The extent to which feedback is considered in relation to learning (Price, Handley, and Millar, 2011).
4. Demonstrating perspective and appropriate affective filtering of feedback (Evans, 2013).
5. Developing the ability and willingness to notice and take opportunities regarding learning from feedback or assessment processes (ibid).
6. Full use and understanding of resources that might help students to better understand or use feedback (Winstone, Nash, Parker, and Rowntree, 2017) such as task criteria, exemplars assignments, peers' assignments and feedback, dialogue with communities of practice, and improved uptake of opportunities for dialogic feedback practices or teacher produced guides to engaging with feedback such as the guides provided by Winstone and Nash (2016) or Evans (2016).
7. Improved understanding and acceptance of responsibility sharing in making processes effective feedback (Winstone and Nash, 2017).
8. Improved awareness of what constitutes quality (Nicol and McFarlane Dick, 2006).
9. Understanding assessment criteria and being able to apply them (Nicol and McFarlane Dick, 2006). Developing the capacity for making 'informed judgements' about the quality of work (Boud, 2007).
10. Active engagement at the individual abstract level which Handley, Price, and Millar, (2011) described as 'learner to content interaction' (Moore, 1989). Also described as 'internal didactic conversation' (Holmberg, 1986) or internal dialogue (Carless, 2016).
11. Forward-thinking regarding the application of feedback/improving learning (Evans, 2016).

At the level of emotion:

1. Developing better resilience, self-awareness, monitoring and 'grit' (Duckworth, Peterson and Matthews, 2007; Evans, 2016).
2. Developing better receptivity to feedback that threatens the student's self-conceptualisation (Evans, 2013; 2016).

3. Demonstrating readiness to engage (Handley, Price, and Millar, 2011), which entails commitment, self-efficacy and a sense of ownership.
4. Establishment of a trusting relationship with the marker (Nixon, Brooman, Murphy, and Fearon, 2017; Pulos and Mahony, 2008).
5. Feeling valued, showing interest, enthusiasm (Kahu, 2013)
6. Developing motivation/interest in the subject after feedback (Evans, 2013)
7. Participation, time-on-task outside class, interaction with peers (Nicol, 2009).
8. Feeling ownership of the feedback process (Evans, 2016).
9. Developing a receptive feedback orientation, being aware of the agency to improve skills (Winstone, Nash, Rowntree, and Parker, 2016) or having an incremental learning theory (Robins and Pals, 2002).
10. Having the volition to engage with feedback (Winstone, Nash, Parker, and Rowntree, 2017).

This section illustrates the complex and multifaceted nature of feedback engagement, and one of the critical issues involved in supporting feedback engagement is the problem that although desirable feedback engagement may occur, it may not be immediately measurable or observable. There are also clearly different degrees of engagement; for example, a learner could engage a little, a lot or not at all. Thus, an understanding of the importance of the learner contribution to making feedback processes effective through these different aspects of feedback engagement should be considered in assessment and feedback design so that all forms of feedback engagement can be encouraged.

As stated by Black and Wiliam (2009), while responsibility for 'implementing an effective learning environment' lies with the teacher, it is the student who is responsible for 'learning within that environment' (p.7), and the same principles apply to the production and implementation of feedback. Winstone, Nash and Rowntree and Parker (2016), utilised the concept of 'agentic engagement' defined as a 'student's constructive contribution into the flow of instruction they receive' (Reeve and Tseng, 2011, p.258), and adapted it to feedback, coining the term 'proactive feedback recipience'. This denotes the 'form of agentic engagement that involves the learner sharing responsibility for making feedback processes effective' (p.17) and includes learners becoming both proactive receivers and seekers of feedback. Proactive responses to feedback are especially important in the current climate, as, for example, there are indications in the literature that adopting a 'consumer orientation' towards education (in the face of higher student fees) is linked with lower attainment (Bunce, Baird, and Jones, 2017)

which is perhaps due to the perception that educators should be doing more for students. In turn, this may lead to less proactivity in the process of understanding and engaging with feedback.

In recent literature, the term 'proactive feedback recipience' appears to have diverged into two strands. 13 papers (as of July 19, 2019, via Google Scholar search), for example, refer to the term 'feedback recipience' or to how feedback can be engaged with or used. On the other hand, 21 papers use the term 'proactive feedback recipience' which suggests a greater focus on the agentic aspects of feedback engagement and use; however, the terms also appear to be used interchangeably. Thus far, the terms have been used either as a framework for analysis or to point out important recent developments in the literature. However, in these papers there appear to have been no further attempts to explore the concepts in relation to empirical research with dialogic feedback or to develop further understanding of the concept. Although support for the 'proactivity' of feedback recipience is an important goal and an inseparable aspect of feedback recipience, the focus of this study is feedback recipience itself, how it can be supported and how it may manifest in response to the classroom practices (to be introduced in chapter three). Thus, in this thesis, I employ only the term 'feedback recipience' to describe some of the many ways in which learners can engage with feedback or feedback activities or use feedback, whether at the level of behaviour, cognition or emotion. Now that the concept of engagement has been explored and the term feedback recipience considered, the next sections consider how it may be supported.

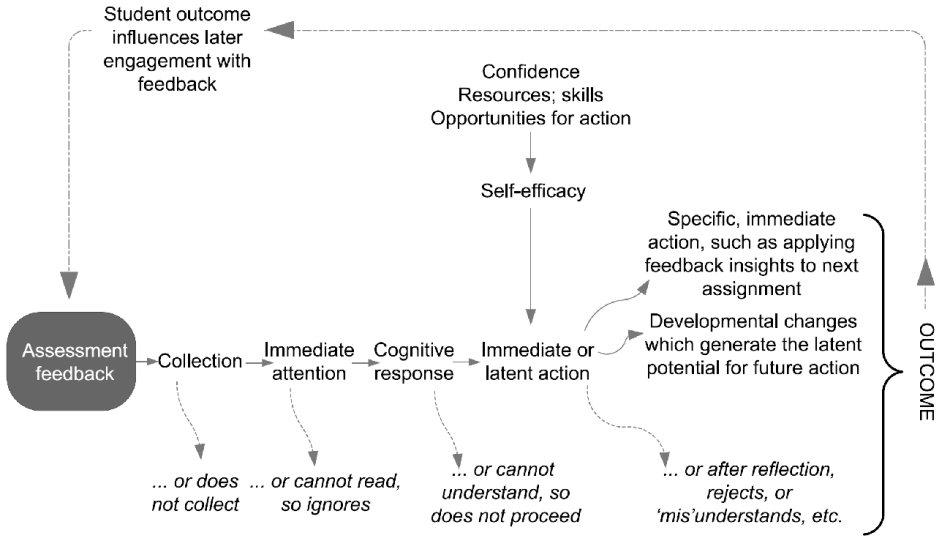
2.3 What influences feedback recipience?

In recent years, the level of scholarly attention towards engagement with feedback has steadily increased (e.g. Handley, Price, and Millar, 2011; Jönsson, 2013; Evans, 2013/2016; Winstone, Nash, Parker, and Rowntree, 2017; Winstone and Nash, 2017). While many smaller studies have provided a part of the picture regarding what influences engagement with feedback and continue to help frame and enhance understanding, only two recent larger-scale reviews have examined students' engagement with feedback in HE: Jönsson, (2013) and Winstone, Nash, Parker, and Rowntree, (2017). Other studies have also attempted to formulate models of student engagement with feedback empirically, through qualitative research strategies such as interviews and focus groups (Price, Handley, and Millar, 2011; Winstone, Nash Rowntree, and Parker, 2016). While these projects have provided useful results, there is yet to be a consensus on the factors that foster feedback engagement. Nor have the reviews and models been

synthesised with each other, or with the broader feedback literature from different domains. With one notable exception (Nicol, 2009), there appears to have been little empirical work on holistic feedback designs, or studies investigating multiple variables. Other potentially relevant work on improving assessment and feedback in HE (Shute, 2008; Jönsson, 2013; Evans, 2013) has tended to focus on what the teacher can do to produce feedback, learning environments, and tasks that result in more engagement with feedback from a transmission perspective. Although providing good quality feedback is an essential element of good feedback practice, a fuller discussion of it is beyond the scope of this study.

Much previous research has focused on disengagement with feedback and its causes. In a widely quoted paper on the design of instructional systems, Sadler (1989) stated that three premises need to be met for feedback practice to be effective: 1. Students must have a good understanding of target performance; 2. They must be able to assess their work in comparison to such standards; and 3. They must have strategies that can be successfully employed to improve their work based on those standards. Recent empirical work supports these conclusions regarding a lack of student understanding of strategies for using feedback (Jönsson, 2013). Furthermore, Winstone, Nash, Rowntree, and Parker's (2016) findings suggest that in some cases, feedback may not be used because students may misconstrue its purpose or lack the agency or volition to use feedback. Such results also chime with the conclusions of Price, Handley, and Millar (2011), who found through longitudinal data that students may become disengaged with their feedback (at various points) due to disappointing experiences with feedback and that these can continue to negatively influence their 'orientation' or 'receptivity' towards feedback as can be seen in figure 1 below.

Figure 1: Points of potential disengagement with feedback (Price, Handley, and Millar, 2011 p.883)



There has also been more recent academic data to support such a perspective. Ali, Ahmed, and Rose (2018) for example reported that the 447 psychology students they surveyed generally held a negative view of feedback, had experienced it as more of a 'one-way' than a 'two-way process', and had grown more dissatisfied and disengaged with feedback as their degrees progressed. Similarly, focus group participants in Williams and Smith (2017) perceived that their feedback was more focused on 'justifying the grade' rather than supporting further learning. Thus, it can be suggested that experiences such as these may contribute to misunderstandings regarding the 'purpose of feedback'. This is what Winstone, Nash, Rowntree, and Parker (2016), identified (from 11 focus groups with 29 students) as one of four 'barriers to feedback recipience' (illustrated in figure 2) that interrupt four 'psychological processes' involved in feedback recipience. The results tallied with commonly identified causes of disengagement in the literature such as having a limited mental-model of feedback, being unable to read feedback due to poor (lecturer) handwriting (Ball, Franks, and Jenkins, 2009; Carless; 2006; Price, Handley, and Millar, 2011) use of impenetrable jargon (Carless, 2006; Hyland, 2000; Lea and Street, 1998), poor knowledge of what to do with feedback and how to take action on it, as well as a lack of 'agency' or 'receptiveness' and 'proactivity'.

Figure 2: Main themes (psychological processes) and subthemes (barriers) Winstone, Nash, Rowntree and Parker, (2016)

Psychological process		Barriers to feedback recipience
(1) AWARENESS of what the feedback means, and its purpose	→	Inability to decode feedback Limited 'feedback mental model'
(2) COGNISANCE of strategies by which the feedback could be implemented	→	Poor knowledge of appropriate strategies Poor knowledge of available opportunities
(3) AGENCY to implement strategies	→	Sense of disempowerment Difficulties with translating feedback into action
(4) VOLITION to scrutinise feedback and implement strategies	→	Lack of proactivity Lack of receptiveness

The study suggests that recipience should be encouraged by considering these barriers to the active use of feedback and designing curricula and assessment environments that attempt to circumnavigate them by supporting the psychological processes involved. This appears to offer a more systematised perspective on how course designers can support feedback recipience, and in subsequent work, a 'toolkit' was developed (Winstone and Nash, 2016), to assist learners in their 'proactive engagement'. However, although students were surveyed and took part in focus groups to discuss the perceived utility of such resources if they were to be used (Winstone,

Mathlin and Nash, 2019), they have yet to be empirically tested.

The causes of disengagement with feedback seem to go beyond the issue of academic 'confidence' (in the case of Price, Handley and Millar, 2011 see figure 1) and may not be fully encapsulated by Winstone, Nash, and Rowntree and Parker's (2016) 'awareness of the purpose of feedback' or the concept of lacking the 'volition' to use feedback. This is because there also appear to be emotional, psychological and cultural factors at play that may influence feedback recipience at the level of individual attributes (Henderson, Ryan, and Phillips, 2019). This is discussed next.

2.3.1 Emotional, psychological and cultural factors

Evidence that other factors need to be considered in feedback engagement comes from the broader feedback literature and suggests that there are several complex psychological and emotional factors that influence engagement with feedback. For example, Pitt and Norton (2016) in their empirical work with 14 final year undergraduates identified a potential 'emotional backwash' effect of feedback. The authors believe this is linked to both emotional processing factors and grade expectations that may be unfulfilled. Feedback should thus consider the interaction of the cognitive, emotional and behavioural responses and reactions to feedback (Pitt and Norton, 2016 p.512) because emotional reactions are 'powerful mediators of behavioural responses and future intentions' (Harrison et al., 2015 p.15) regarding the use of feedback. Pitt and Norton (2016) identify 'emotional maturity' as a 'processing factor' that determines the subsequent response to feedback. However, while there is clearly an affective aspect in the feedback recipience process, the concept of 'maturity' could be considered vague, difficult to quantify, and a potentially inaccurate way to encapsulate the psychological or affective dimensions of feedback disengagement which appear have complex causes.

Other governing factors regarding receptivity to feedback may be related to perception. For example, learners who expected higher grades than they received have also been found to be more likely to experience more negative emotional reactions to feedback, including the perception that the feedback is less accurate and less useful (Brett and Atwater, 2001). Others have reported feelings of hostility towards the assessor (Ryan and Henderson, 2018) or to have been more prone to 'defensive behaviours' and decrease in self-efficacy in the cases of receiving summative feedback over which they felt they had less control than when receiving formative feedback after failure in a test (Chan and Lam, 2010). Such findings may have implications for

metrics such as the UK's National Student Survey (NSS)[6] as well as for feedback engagement and use.

Furthermore, some learners have been reported to view their intellectual capacities as a 'fixed entity' or have a 'fixed mindset' (Dweck, 2017). In a longitudinal study conducted with 508 undergraduates over four years, such 'fixed entity' theorists (Robins and Pals, 2002, p.313) tended to adopt 'performance goals' and displayed a 'helpless response pattern' and were more likely to feel 'distressed' 'ashamed' and 'upset' about their academic performance (p.324). This suggests such students may display avoidant or averse behaviour towards feedback (Dweck and Leggett, 1998; Stewart McConnell, and Stallings, 2017), or be less emotionally receptive to feedback. Thus, it may be the case that learners' individual beliefs about their ability to improve as a result of feedback may be a more significant 'processing factor' than suggested by Pitt and Norton's (2016) 'emotional maturity'.

To exemplify the importance of this, in recent feedback research straddling the domain between feedback engagement and psychology (Forsythe and Johnson, 2017), 86 UK undergraduate students out of 151 were tested via two psychometric surveys and determined to have 'fixed mindsets'. In the study, those who believe intelligence is a 'fixed' rather than malleable were also found to be more likely to adopt defensive behaviours, such as distorting the feedback message or demonstrating less ability to self-monitor. On the other hand, those with a 'growth mindset' or 'incremental theorists' (Robins and Pals, 2002) were more positive towards assessors, more likely to see 'challenge interventions' (in which feedback encourages new perspectives and experiences) as positive experiences, and more likely to engage in developmental activities to act on feedback. This may be because 'incremental theorists' (or those with a growth mindset) have been found to be more likely to adopt 'learning goals' (Robins and Pals, 2002). However, because most students appear to hold 'fixed mindsets' (Forsythe and Johnson, (2017), the authors, quote Cross (1984) to suggest the business of education should not be about 'choosing winners' but about 'making winners out of ordinary people' (p.6). As Forsythe and Johnson argue, educators should work with students to make them aware of this kind of self-sabotage and give guidance as to how they can govern their emotional reactions to feedback and develop appropriate strategies that support reflection and self-vigilance. The authors also point out the number of connections made between the mindset and feedback engagement literature has been 'fairly minimal' to date (p.851), this suggests that further work

[6] a metric that attempts to collect data about the student learning experience

to explore the potential nexus between beliefs about learning and emotional reactions to feedback may be useful.

In a similar vein, the influence of culture has also been suggested as a potential 'barrier' to feedback engagement. The results of Evan's (2013) thematic analysis suggested that this can influence student understanding of the concept and function of feedback. This, in turn, may influence learners' affective reactions when receiving feedback. To exemplify this, one study surveying 4515 students, found that international students (of non-specified nationality in an Australian context) were more likely to find feedback comments discouraging, upsetting, and too critical compared with domestic students (Ryan and Henderson, 2018). Another study (Tian and Lowe, 2013) analysing reflective data from Chinese postgraduate students in the UK, found similarly, that the differences in the academic cultures between China and the UK led to the students feeling discouraged with formative feedback and disengaging with it. This was due to the large volume of comments being interpreted as a sign of failure rather than as a means of delivering constructive advice for improvement, even in the cases of postgraduate English teachers. These findings suggest that receptivity to feedback can be influenced by culture or past experiences of feedback which may also vary by educational culture. Thus, learners from some cultural backgrounds may be at a higher risk of an adverse reaction to feedback than others. This implies that measures to attempt to mitigate these risks should be considered at the feedback and assessment design stage.

As dialogic feedback is a social endeavour, it is also worth mentioning the importance of 'trust' in the relationship between educators and learners. For example, Nixon, Brooman, Murphy, and Fearon (2017), Pulos and Mahony (2008) and Eva et al., (2012) concluded that a critical aspect of feedback receptivity is the perceived relationship and trust (from a benevolence perspective) between the feedback giver and the student. In a similar vein Leighton and Bustos Gomez, (2018) also found that a three-minute intervention in which the importance of mistakes for the learning process was discussed, encouraged students to indicate more 'trust' in their lecturer. Participants were then willing to identify (163 compared to 33 in the control group) areas on lecturers' slides they felt were confusing and likely to lead to interpretation mistakes. The authors talk about the importance of establishing a 'pedagogical alliance' (akin to a 'therapeutic alliance' in which a therapist is viewed as benevolent) with students. They believe this can be established if educators demonstrate 'openness, honesty and benevolence' (p.385). They further suggest that this should be built up over time and involves having 'caring open and honest conversations about errors in view of the learning activities...' so that 'teachers can

explain that mistakes are not to be feared and, instead, are avenues for meaningful feedback and learning' (p.386). This was also described to be 'key' to the success of dialogic feedforward meetings for Hill and West (2019).

These examples suggest that measures to mitigate the impact of some of the psychological causes of disengagement with feedback may be necessary before feedback is given to support maximal feedback engagement. To date, there appears to be little empirical data regarding how psychological receptivity to feedback might be nurtured. There is reason to believe, however, based on the findings of Leighton and Bustos Gomez (2018), Robins and Pals, (2002) and Forsythe and Johnson, (2017) that attention to trust, and attempts to mitigate some of the psychological causes of disengagement with feedback and resilience in engaging with it, may support active engagement with feedback.

2.3.2 Towards a process account and synthesis of the literature

Winstone, Nash, Parker, and Rowntree (2017), conducted a systematic review process of 195 relevant papers on improving engagement with feedback and found 90 mainly non-empirical papers that offer theoretical perspectives, and 105 papers reporting empirical interventions that had a positive, or partially positive effect on feedback engagement. Through an inductive coding process (using independent coders) of the intention of each empirical study, a taxonomy of four feedback 'recipience processes' was produced. These 'SAGE' processes: *1. Self-appraisal, 2. assessment literacy, 3. goal setting and 4. self-regulation, engagement and motivation*, in some ways, overlap (as an inverted version) with the 'barriers model' of feedback recipience (discussed in section 2.3), as the two research outputs share very similar conclusions about what processes of feedback recipience need to be supported to generate proactive feedback recipience. There are methodological issues with the generation of the SAGE taxonomy, (i.e. a systematic review in divergent domains and contexts in which findings may not be generalisable, little critical appraisal of conclusions and the problem of survivorship bias). However, because similar conclusions were reached in SAGE through the systematic review, and in the barriers model (Winstone, Nash, Rowntree, and Parker, 2016) through group interviews, where convergent, the findings of the two studies seem to offer support for each other. This lends credence to conclusions that can be drawn from the work.

While the work of Winstone and colleagues approaches the issue of engagement with feedback from more of a psychological perspective that foregrounds the importance of 'psychological processes' involved in feedback engagement, it also 'backgrounds' the importance of dialogism

as a means of supporting them. In Winstone, Nash, Parker, and Rowntree (2017), 'dialogic feedback' is introduced, as part of the 'new paradigm' of feedback practice, but it is then relegated to being listed as one of many intervention activities that may facilitate one or more of the SAGE feedback processes. This appears to underplay the potential importance of dialogism in supporting feedback recipience (see section 2.3) and the processes underlying feedback recipience introduced in section 2.2. One plausible reason for this is that within the parameters of the systematic review they conducted there were very few successful empirical studies that employed feedback dialogue; thus, there was little evidence for a central role for dialogism in supporting feedback recipience processes. Futhermore, as has been pointed out in the literature, there have been few empirical studies of dialogic feedback (Ajjawi and Carless, 2018; Steen-Utheim and Hopenbeck, 2019) and to my knowledge, no studies have attempted to encourage feedback engagement through dialogic processes. Thus, there appears to be a substantial gap in the field regarding the potential relationship between the two concepts.

2.4 An emergent dialogic model of feedback recipience

The dialogic feedback paradigm is important to this study and to the proposed emergent model of feedback recipience that will be later introduced in this section for several reasons, some of which have already been discussed. The dialogic feedback paradigm views the learner as an active or proactive participant (Nicol, 2010). Taking part in dialogues may also support learners' evaluative capacity (Boud, 2007). Through dialogue, (internal and external, with teachers or peers) distributed meaning-making can take place, and socially constructed knowledge can be synthesised. In the feedback engagement process, dialogue (in the form of questions and discussion around feedback can allow meaning to be negotiated from underdeveloped peer feedback that lacks clarity or sufficient context for the receiver (Zhu and Carless, 2018). A similar process may also help with the interpretation of teacher feedback (Hill and West, 2019). However as noted in Zhu and Carless (2018), dialogism in the classroom can often fail due to logistical constraints; not every context has the time resources needed for face-to-face meetings for every student, and there is no guarantee that face-to-face dialogues will always be productive (Harvey, 2019; Steen-Utheim and Hopenbeck, 2019). Therefore, I provisionally contend that while face-to-face dialogue is an important tool for learning and supporting engagement with feedback, the use of technology to mediate dialogic feedback practices may also be useful in realising their full potential in scaffolding engagement with feedback and its effective use. It may also yield additional benefits that are not possible from face-to-face dialogues (see Wegerif, 2013) (discussed in 2.4.1).

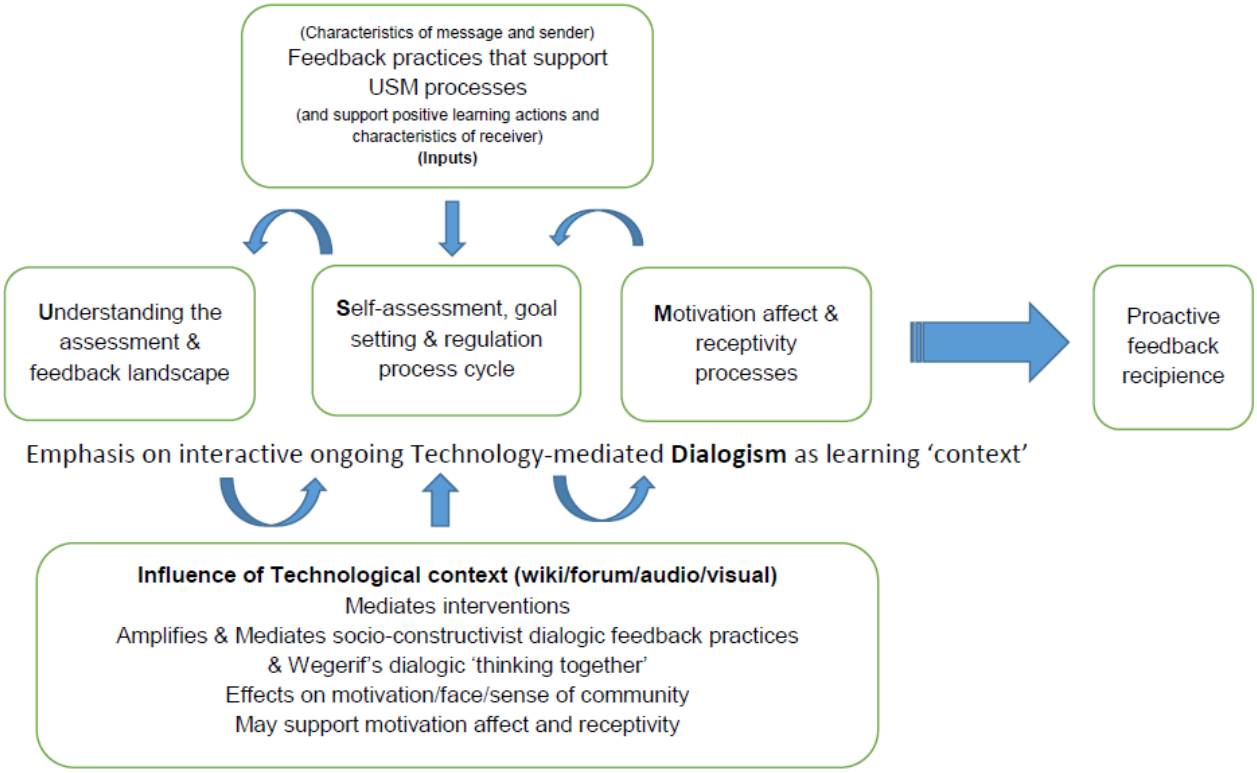
Part of the work of this thesis is the development (and testing) of a synthesised original model of what might lead to feedback recipience, to help guide the design of practical activities to support it. The model has developed from two perspectives. Firstly, iterative development throughout the EdD programme influenced by 'Design Research' as described by Barab and Squire, (2004)[7] in which each output of the EdD helped to inform and scope the next. Secondly, it has emerged through synthesis after engagement with several divergent strands of literature related to feedback: 'Good formative assessment theory' (e.g. Nicol and McFarlane-Dick, 2006; Black and Wiliam 2009), dialogic feedback (e.g. Boud, 2007; Nicol, 2010; Carless Salter, Yang, and Lam, 2011; Carless, 2015), engagement with feedback; (e.g. Price, Handley, and Millar, 2011; Jönsson, 2013; Evans, 2013/2016) and 'process approaches' to engagement with feedback (e.g. Winstone, Nash, Parker, and Rowntree, 2017; Price, Handley, and Millar, 2011; Dunworth and Sanchez, 2016 etc.). As a process model, it also seeks to contribute to an ethos of teaching in which support for feedback recipience is built into teaching and assessment practices throughout courses. As Black (2015) points out, 'checklist' approaches to improving practice are often perceived as an additional burden for overworked teachers and are thus given superficial attention or perceived as counterproductive when applied in actual teaching situations. The model also incorporates a fourth strand of literature on the potential for technology to invigorate and transform dialogic educational practices from the work of Wegerif (2013) but also drawing on dialogic feedback literature (Carless/Nicol etc.) as well as findings in the technology-enhanced learning literature (see 2.4.1). The result of this synthesis of theories, findings, and models is the 'USM' model of feedback recipience (see figure 3 below). While the model draws substantially on the SAGE processes (Winstone, Nash, Rowntree, and Parker, 2017), it also attempts to incorporate a broader range of relevant foundational feedback literature from divergent but pertinent domains related to feedback engagement. Most importantly, the 'USM model', is focused on harnessing the potential of technology-mediated dialogism to aid navigation through the proposed feedback recipience processes and to help scaffold some of the learning that takes place through navigating them.

The technology-mediated dialogic **U**nderstanding feedback landscape, **S**elf-assessment, goal setting, reflection and regulation and **M**otivation and receptivity model (figure 3), draws on some of the understandings derived from the four SAGE processes and consideration of the many 'barriers' in the literature, and (for practical reasons) simplifies them from four processes (in SAGE) into three tightly connected process cycles that feed into, support and synergise

[7] See reflective statement (however a discussion of design research is beyond the scope of this thesis).

cyclically (discussed in section 2.4.2.).

Figure 3: The USM model of feedback recipience



The model represents a synthesis of much of the relevant literature that has so far been discussed. The following five sections (covering the boxes on the left of the diagram), will explain how the different aspects of the model have been drawn from the literature, how the sections work together and how the diagram can be understood. Following on from the previous discussion of dialogism, the role of technology in supporting dialogism will be discussed first.

2.4.1 The role of technology-mediated dialogue in the model

While some dialogic feedback processes that could support feedback recipience are possible without it, technology is intrinsic to the USM model because it can create opportunities for dialogue and learning from feedback practices that may be impractical or impossible without it. There are several reasons for this. First, technology can facilitate a virtual classroom in which work can be submitted and graded, but this can also be used to allow students to read each other's work, perform peer-review and mediate the dialogic or 'judgment' processes that students undertake when they analyse exemplar essays or consider on-display work (Carless, 2016). An online feedback environment also maximises the number of peer writing samples and teacher feedback exposure (that can also act as on display assignments). Furthermore, it may

even allow students to learn from viewing each other's learning and thinking processes as they draft and respond to feedback or answer homework questions. While discussion and meaning negotiation can also take place face-to-face in class, technology can be considered a tool of mediation (Rish, Bylem, Vreeland, and Wimberley, 2015) for dialogic processes or as a tool that provides additional opportunities for ongoing 'dialogic spaces' (Wegerif, 2013) that may support or enhance learning and the process of engaging with feedback and using it. This is especially useful when sufficient class time cannot be used for such activities, or when students cannot meet outside class due to the kinds of logistical issues reported in Zhu and Carless (2018).

Much of the technologically based evidence cited by experts on dialogic feedback such as Boud and Carless is based on forum software such as Moodle, through software like 'peer mark' (a facility for peers to give feedback on 'Turnitin' (an anti-plagiarism software widely used in HE) (Nicol, Thomson, and Breslin, 2014), or through 'track changes' in Microsoft word, (Glover, Parkin, Hepplestone, and Irwin. 2015). In these examples, feedback 'dialogues' among peers were uni-directional and did not develop into multi-directional or multi-turn discussions; accordingly, little is known about the potential effect of technology that can efficiently mediate such a collaborative process on feedback recipience. However, there is evidence that some technologies can 'deepen' and sustain asynchronous dialogues among peers, allowing time for reflection on others' contributions and the 'reconstruction of thinking' (Gikandi, Morrow, and Davis. 2011 p.2346). For example, Google Docs (an internet 2.0 cloud technology) has been reported to facilitate bi-directional peer feedback exchanges. A recent study shows that ten peers responded to 529 of 837 peer feedback comments using Docs (Alharbi, 2019), and this demonstrates the potential of these kinds of technologies for hosting ongoing dialogues. This is key to the justification of the use of technology in the USM model, as will be described in the next paragraph.

The work of Wegerif (2013) advances understanding of the learning potential of online dialogues. As he argues, the products of a goal-directed face-to-face discussion, only exist 'momentarily and only for those involved', but technologies can be used 'as a way of deepening dialogues, by turning transitory talk and thoughts into external objects that are available to learners for discussion and shared reflection' (p.144). In such technology-mediated dialogic 'spaces' differing voices can 'inter-animate' meaning that additional learning can be facilitated via peer-to-peer interaction, through peer groups or through teacher interaction both inside or outside the classroom. In addition, because of the digital records left by such interactions, such voices, and the modified understandings or ideas of an interlocutor can theoretically become a

learning resource (termed by Wegerif as 'artefacts') for other apprentice academic writers (Jessoon and Rosedal, 2016). In the USM model, I argue that such 'artefacts' left by peer feedback discussions, homework activities, teacher feedback and the like, can be used by other students to scaffold their learning, this may, in turn, make it easier to obtain understandings that may assist the successful modification of their work. This gives rise to the possibility of a category change in terms of what is educationally possible, as learners can gain access to data that can be used for learning if they wish to use it. Such digitisation can be used to support the formative assessment practices conceptualised by Black and Wiliam (1998/2009) and that were suggested as an advantage of online assessment in a study conducted by Gaytan and McEwen (2007), by providing instantly accessible attainment information that can be used to adapt classroom content to learner needs as they emerge.

Another potential advantage of the use of such technologies may be exposure to thinking processes that are enhanced by social contact (as proposed by Wegerif, 2013). When learners work is visible in online spaces, they may get a sense of the 'infinite other' which can be described as an additional 'perspective' experienced by learners when they consider how an audience of peers might view and understand their work (Wegerif, 2013). The effect of such a perspective has been noted in research with children and suggests that the act of explaining something to an observer is associated with learning gains (Manion and Alexander, 1997; Rittle-Johnson, Saylor and Swygert, 2008). Similar findings have been noted when the 'other' perspective is represented by a screencast recording that children in one study produced (Soto, 2015). In this condition, children were found to be more explicit in their choice of vocabulary than compared to a condition without screencast production. Similarly, exposing students to a peer audience has been shown to improve the quality of first drafts (Patchan, Schunn, and Clark, 2011), as such exposure during the drafting stage may encourage audience perspective-taking. It is also possible that the effect of the 'infinite other' may be in the form of social pressure to help learners to produce their best work to enhance or avoid damage to their social 'face' (Brown and Levinson, 1987). As there appears to be a lack of qualitative accounts of reasons for the effect of peer audience in the current literature, further exploration in this area may make a small contribution to the literature.

2.4.2 Screencast technology and dialogic feedback

Another potentially important aspect of promoting feedback engagement is producing feedback in a manner that has the potential to support engagement. One method that has been considered to have the potential for enhancing the dialogic nature of feedback is screencasting

(Carless, 2016). Screencasts allow educators' reactions (including their screen and/or face) to learners' work to be recorded as it is read, and students can then receive links to feedback videos which can be downloaded or saved in the cloud.

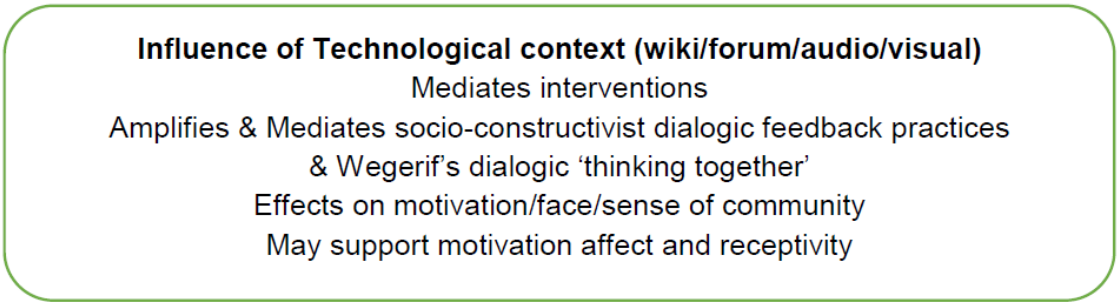
There have been several investigations of the screencast feedback medium over the past decade. Most findings suggest that it is considered a welcome innovation by both learners and educators and is popular with students (Silva, 2012; Séror, 2012; Turner and West, 2013). In some cases, it was found to be preferable to text feedback (Vinclette and Bostic, 2013; Crook et al., 2012; Lamey, 2015). It is also said to be clearer, easier to understand, less ambiguous (Turner and West, 2016), and improved the perceived value, quantity and quality of feedback (Turner and West, 2013) in empirical studies. It is also considered to be more detailed and extensive (Borup, West, and Thomas, 2015; Crook et al., 2012; Henderson and Phillips, 2015), and it has been suggested that screencasting makes it easier to produce feedback oriented towards future performance (Lamey, 2015) or 'feedforward'. Perhaps because screencasts can reveal the thought process of instructors as they read in real-time, learners can glean an extra level of understanding from them (Fernandez-Toro and Furnborough, 2014; Vicelette and Bostick, 2013). Henderson and Phillips (2015), and Edwards, Dujardin, and Williams (2012), also reported similar findings. However, due to an institutional requirement to give 'feedforward' in both cases, it was difficult to ascertain whether the effect was caused by the medium of screencast feedback or the requirement itself; therefore, the finding was considered inconclusive.

Other advantages of screencast feedback have been noted. The student experience of screencast feedback was reportedly similar to face-to-face meetings (Grigoryan, 2017; Mathison, 2012). It has also been found to give the impression that the teacher is trying to 'go the extra mile' Stannard (2019, p.65) and shows the marker has spent time reviewing the work (Brick and Holmes, 2008) which may, in turn, positively impact course satisfaction (Stannard, 2019). Screencasts were also perceived as 'conversational' (Anson, Dannels, Laboy, and Carneiro, 2016). However, conversely, it was also concluded that the uni-directional nature of the feedback made it a poor substitute for face-to-face meetings (ibid; Vincelette and Bostic, 2013). Lamey (2015), for example, reported that screencasts left one student feeling 'especially helpless' because they could not respond. However, there appear to be no reports of screencast feedback research that investigated the duel use of screencast and a complementary technology (such as a cloud-based text editor like Google Docs) to facilitate receivers' ability to question the feedback. Such a system may help overcome the uni-directional limitation of screencasts while capitalising on their strengths as a form of feedback that has verbal, visual and re-playable

functionality.

Overall the nexus between dialogic feedback practice (Carless, Nicol), technology-mediated dialogic theory (Wegerif), and feedback engagement and its potential to support learning is yet to be fully explored in the scholarly literature and represents another gap to be potentially filled by this project. Figure 4 shows the synthesis of technological perspectives represented in the model.

Figure 4: Technological aspects of the model



The following section will explain the process cycles of the USM model and how these interact in more detail.

2.4.3 The USM processes in detail

2.4.3.1 Understanding the assessment and feedback landscape

'Clarifying learning intentions and criteria for success', is the first of Black and Wiliams' and Nicol and Mcfarlane-Dick's principles of formative assessment and is well-founded in the feedback literature (Sadler, 1989; Black and Wiliam, 1998; Nelson and Shunn, 2009). Something similar was reported to be a 'barrier' to engagement with feedback, and a SAGE recipience process known as 'assessment literacy' (Winstone, Nash, Parker, and Rowntree, 2017). For this reason, it is implicit that teachers should introduce useful task criteria, and spend time working with students on exemplar work to facilitate understanding of how the assessment criteria can be applied and used to enhance learning. Understanding the assessment and feedback landscape, however, also expands previous formulations of 'assessment literacy' to highlight the importance of learners understanding the reasons for, and possible benefits of, different elements of the assessment and 'feedback landscape'. I use the term 'landscape' here because of a study by Parker and Winstone (2016) that showed that students felt they would be more likely to engage in feedback interventions or tasks if they understand their rationale, how skills/attributes are targeted, and how assessments are

designed and combine to promote and maximise learning. Thus, as well as developing a solid understanding of assessment criteria and what constitutes 'good academic practice', students also need to understand the rationale for assessments and be able to roughly model how learning from course materials and feedback may occur. They must understand learning objectives, the potential benefits of peer feedback, self-assessment and the feedback design, as well as the intended purposes of, and rationale for, classroom practices designed to support the USM processes. Good practice in supporting learner understanding in this category includes instilling in learners 'a sense of competence and autonomy within feedback exchanges' (Seifert, 2010 in Evans, 2013 p.105). Thus, learners are encouraged to use online resources to negotiate differences of opinion and seek teacher adjudication only as a secondary resource. Encouraging autonomy also means helping learners to consider their positioning in terms of power relationships and community, as well as the effect of individuals' culture on these other elements (for an in-depth discussion see Evans, 2013).

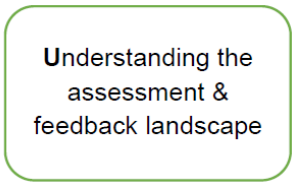
Encouraging practitioners to produce high-quality feedback from a transmission perspective is also ideal (and could be supported with dialogic screencast feedback as mentioned). However, it is not realistic to expect that all educators will always produce feedback that all students can understand perfectly. In this way, the conceptualisation of this first process in the USM model goes beyond those suggested by previous commentators (e.g. Black and Wiliam, 2009; Winstone, Nash, Parker, and Rowntree, 2017). By introducing a dialogic feedback questioning strategy (mainly technologically-mediated), into the feedback process, there may be less pressure on educators and peers to give 'perfect' feedback, or even to provide face-to-face sessions for all students in which to explain feedback (which may not be attended, e.g. Duncan, (2007) or impractical). Instead, technology can mediate the production and delivery of messages that allow learners to highlight text extracts and send in 'in-context' questions to feedback givers. These, in turn, can be instantly delivered and responded to efficiently. Feedback dialogue has been reported to help learners to negotiate meaning in face-to-face peer review, (Zhu and Carless, 2018); thus, technology may also mediate questions on teacher feedback, with similar benefits to understanding and subsequently feedback utilisation.

Due to the technologically mediated nature of the USM model, one additional important aspect of the U process is ensuing that learners understand how to use the designated platform of technological mediation and can generate feedback dialogues, questions for peers and the teacher, and navigate within it. It is thus recommended that educators using the model guide learners through practice feedback dialogues (peer-to-peer and student-to-

teacher), using the system (ideally in class), and/or provide resources to facilitate effective use of the system. This could be done while offering guidance on how to engage in productive peer feedback dialogues.

This synthesis above represents the first **U** of the **U**SM processes, as shown below in figure 5.

Figure 5: The U aspect of the USM model



2.4.3.2 Self-assessment, Goal setting regulation and reflection

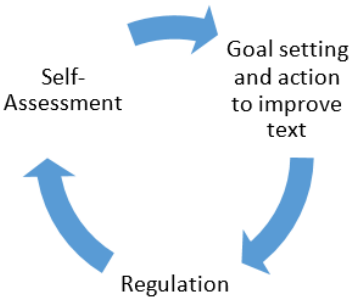
The **'S**elf-assessment, goal setting regulation and reflection process cycle', can be considered a continuous cycle and includes planning and reflecting on progress made towards goals and regulating behaviour based on Winstone, Nash, Parker, and Rowntree, (2017) and the 'self-assessment' aspect of Nicol and Mcfarlane-Dick, (2006, principle 2). It stipulates that students should be supported in becoming 'active agents in assessing their own malleable strengths and weaknesses reducing reliance on the educator' (Winstone, Nash, Parker, and Rowntree, 2017, p.9). This helps to draw learners into dialogues on learning and feedback with peers (through peer-review and other discussions) and encourages skills for lifelong learning such as self-management, regulation, evaluation and proactively taking responsibility for one's own learning (Boud, 2010; Careless, Salter, Yang, and Lam, 2011). 'Peer activation as instructional resources' and 'peer and teacher dialogues' are explicitly referenced as 'good practice' in Black and Wiliam, (2009) and Nicol and McFarlane Dick (2006). However, in the USM model, the value of dialogue among peers is highlighted (as previously discussed) as a practice that may aid self-assessment, goal setting, regulation and reflection processes, as well as opportunities to co-construct meaning and learning through the navigation of other feedback processes.

In the model, dialogue (with the teacher but especially among peers) performs several roles. It may, for example, help to generate individual 'cycles' of peer teaching and learning, of applying previous knowledge, of stimulating additional student research or fact-checking, and of generating reflectivity and nurturing evaluative ability (through guided reflection tasks) regarding what constitutes excellence. These skills can also be turned towards self-appraisal of students' own work in the manner discussed in section 2.12. Dialogue and the textual examples

of written thought and reflection generated by a learner through homework tasks or reflective assignments can also be noted and commented on by peers or the teacher. The resulting dialogues may subsequently aid in the recognition of gaps, misunderstandings, misconceptions, and targets for future learning strategies. Dialogic practice and the existence of a motivated and interested readership of students' work and reflections (due to the use of technology) is also a potential motivation that stimulates the third category of the USM model; 'motivation affect and receptivity processes' discussed in the next section.

This second USM process also incorporates the 'Goal setting and Self-regulation' aspect of Winstone, Nash, Parker, and Rowntree's (2017) SAGE processes, which involve 'explicitly articulating desired outcomes'. This requires the adoption of 'goal-directed behaviour' to achieve such outcomes and to develop the ability to self-regulate this process throughout the iterative drafting-feedback process. The understanding of self-regulation here draws on Winstone, Nash, Parker, and Rowntree, (2017) and is taken to mean the 'ongoing process of monitoring and evaluating one's progress and strategic approaches to learning' (p.25). It involves monitoring and updating strategies or supporting resources, as goals and needs change in response to feedback. Ideally, learners will be able to reflect on their progress and feedback to identify areas in which progress is required, develop plans to target these, and then execute action plans and modify behaviour accordingly. Then, notice if there is a shortfall between the desired level and subsequent attainment for further goal setting if required. Departing from the work of Winstone, Nash, Parker, and Rowntree (2017), here, I suggest they can be considered as a larger single cycle rather than separate ones (see figure 6).

Figure 6: The self-assessment, goal setting and regulation process cycle



This notion of 'cyclical synergy' is a feature that has been lacking from accounts of feedback engagement in the existing literature. However, including this perspective is important as it may take some time for learners to fully understand task requirements and what constitutes optimal performance. This means that engaging effectively with feedback may necessitate navigating

through the cyclical process several times, (and perhaps requires a mini-cycle each time a student responds to a feedback item). As learners understand more about the required standards, they are better able to set goals and assess their attainment. It can be speculated that noticing the difference in the quality of their work before and after responding to feedback may also provide motivation to continue to move through the USM process cycle or to do so in the future. This synthesis is represented by the box on the diagram below (figure 7).

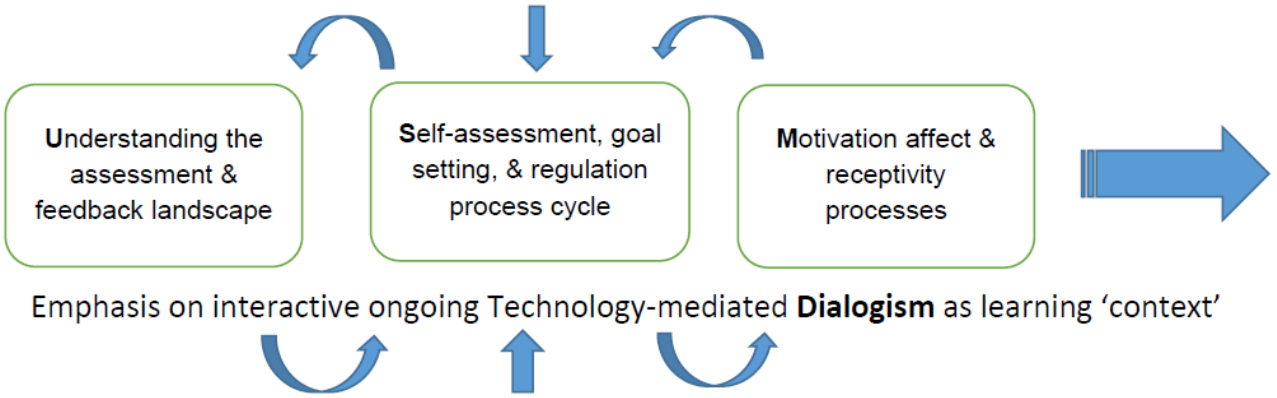
Figure 7: The S aspect of the USM model

2.4.3.3 Motivation affect and receptivity processes

'Motivation affect and receptivity processes', consider Winstone, Nash, Rowntree, and Parker's (2016) barrier of lacking a sense of agency to implement feedback and volition to use it, and focuses on the building of self-efficacy (Evans, 2013) as well as the SAGE process of 'Engagement and Motivation'. This entails learners being 'enthusiastic about, and open to receiving performance information' (Winstone, Nash, Parker and Rowntree, 2017, p.25). It also involves attentiveness to feedback and the willingness to consider it and relate it to one's own learning in a self-reflective process (ibid).

This process also incorporates the perspectives of much of the broader literature on disengagement and with feedback discussed in sections 2.3 and 2.3.1 and the risk of the 'emotional backwash' effect to feedback, (Handley, Price, and Millar, 2011; Jönsson, 2013; Pitt and Norton, 2016) or the potential impact of previous experiences (Price, Handley, and Millar, 2011) or cultures (Evans, 2013). It also incorporates the importance of supporting receptivity and orientation towards feedback (i.e. Forsythe and Johnson, 2017; Ryan and Henderson, 2018; Robins and Pals, 2002; Nixon et al., 2017) discussed in section 2.3 and 2.3.1. This aspect of the model encourages assessment and feedback designers to consider how to minimise 'barriers' to feedback engagement and maximise affective and relational aspects of practice that promote or support receptivity, such as supporting students in 'incremental theory' building. The arrows on the diagram (see figure 8) also depict the role of motivation and receptivity in the USM processes. If motivation and receptivity fail at any point in the process, the learner may exit the cycle and fail to engage with the feedback.

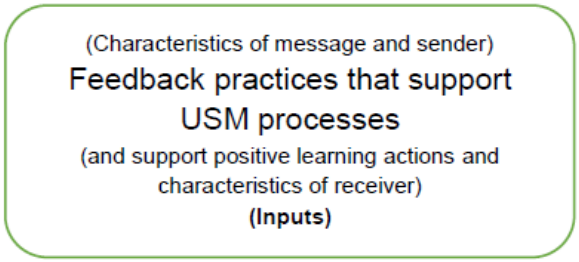
Figure 8: Arrows depicting the cyclical nature of USM and the need for motivation/receptivity



2.4.3.4 Inputs to the model

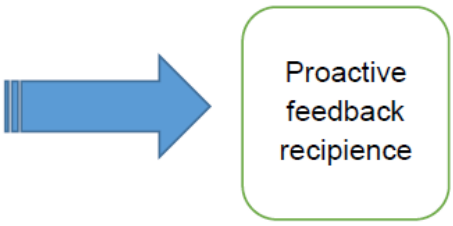
Now the dialogic, technological and USM aspects of the model have been explained, inputs to the model can also be considered. These inputs constitute the classroom practices designed to support the USM processes (see section 3.2) and for this study, focus on dialogic feedback practices (see figure 9). Of course, the characteristics of the message itself as well as the sender and receiver will influence engagement; however, these aspects are not the focus of data gathering for this project. Inputs to the model are discussed in detail in chapter three.

Figure 9: Inputs to the model



Finally, the arrows at the bottom of the USM model diagram represent the cyclical synergy among the 'U' 'S' and 'M' processes, as explained above. The result of cycling through these processes while taking part in dialogues with peers and the teacher using technology (as well as face-to-face) is predicted to be, various forms of feedback recipience at the behavioural, cognitive and emotional levels. The output of moving through these cycles is, of course, feedback engagement and use, or in other words, different aspects of feedback recipience (see figure 10).

Figure 10: Output of the model



Overall, the USM model is designed to be comprehensive in coverage regarding what is known about feedback engagement, yet also relatively easy to operationalise through complementary interventions within a technology-mediated environment. Like other process approaches to feedback recipience (Winstone, Nash, Parker, and Rowntree, 2017) it represents a small but significant shift from a focus on the responsibility of the teacher to foregrounding the role and importance of students in using feedback more effectively. It also highlights the role of the teacher in scaffolding engagement in the technology-mediated dialogic feedback practices and activities designed to support learner navigation through the USM processes and cycles.

2.5 Theoretical perspectives and positioning

Although much technology and educational research has been criticised for being dominated by social constructivist approaches (Selwyn and Facer, 2013) such approaches have also been recommended (Handley, Price, and Millar, 2011), to better explore the 'phenomenology of feedback engagement' (Fredericks, Blumenfeld, and Paris, 2004). Such approaches are also compatible with the interpretivist (Cohen, Manion, and Morrison, 2018) ontological perspective I adopt; that there are as many 'realities' as there are participants and researchers (Robson, 2011). Because this study (as will be discussed in the next chapter) investigates learner interactions with feedback and dialogic feedback practices, and the process of 'constructing' meaning must happen at an individual level (even if supported by group practices), it follows that understanding this process is also something that must be communicated by, and interpreted, by individuals. Therefore, this study is also designed within a (socio) constructivist epistemology (Robson, 2011). From this standpoint, understanding the perspective of participants is the first step, while coming to an academic account of the 'social world seen from those perspectives' is the second (Bryman, 2012, p.401). Researchers must thus be aware of how the theoretical account of the phenomena to be studied is rooted in the 'world view' of participants. Participants first reflect on their 'lived experience,' and then these reflections must be interpreted by researchers in the light of existing theory and frameworks while considering the possibility of bias.

In terms of positioning this study in the literature, I align this work with the distinction made by Jönsson (2013) and Winstone, Nash, Parker, and Rowntree (2017), in their literature reviews, in which research in EAP contexts (like this one) was considered relevant to the higher-education domain (and not language education) if it examined learners' responses to feedback and not language correction itself. Furthermore, because most of the literature I have drawn on in this review comes from higher-education research contexts in the domain of engagement, this is also the main area in which I seek to contribute. While the field of language education has also attempted to problematise dialogic approaches in language learning contexts (i.e. Lantolf, 2006; Swain, 2000), many have focused on dialogic interaction for language learning and not specifically feedback recipience. In addition, current studies on collaborative dialogue have been mainly restricted to face-to-face communication (Teng, 2019), and not technology-mediated collaborative dialogue and its effect on feedback engagement. However, as the study takes place in an EAP research writing environment, the work (and findings) are also highly relevant to the EAP, academic writing, and technology-enhanced learning literature, and to improving practice in these areas. These are also areas in which I expect to explore the implications of the USM model further in future studies.

2.6 Theoretical framework

In addition to the constructivist ontological and epistemological perspectives taken in this study, as has been argued, the USM model is an attempt to integrate, synthesise and accumulate theoretical and empirical perspectives on feedback recipience into a model that can serve as a starting point for making the theoretical discussion of models of feedback recipience more concrete. The model, based on socio-constructivist dialogic feedback theory, formative assessment theory, and technology-mediated dialogic theory, together with the perspective that feedback recipience manifests through engaging in certain processes, and that dialogue can help facilitate those processes, is also a key part of the theoretical framework to be employed in the analysis of data gathered in the project. It represents a 'midrange theory' (Trowler, 2016; Cohen, Manion, and Morrison, 2018). In qualitative research, such theories are said to aim to make claims about the nature of learning and can potentially maintain relevance and generate useful implications across contexts. In the case of this study, this refers to contexts that use critical source-based writing as a form of learning and assessment, that employ formative assessment feedback, and in which supporting active student engagement with feedback is recognised as an important concern.

As Robson (2011) states, if there is a 'serviceable theory' relating to a study, then it is sensible to test its utility, while if no theory exists, this indicates the need for a purely inductive (or grounded) approach to generating theory. Drawing on this understanding, the analytical approach taken in generating and answering the research question in this thesis will be mainly inductive, to establish what themes emerge from the data naturally, without the influence of pre-ordinate themes (Thomas, 2006). However, this data can also be used to 'test' the utility of the USM (see section 5.6) so that the model can be evidenced, amended and 'empirically enhanced' (Yin, 2014 p.41) by the data. This process may result in a more robust model that can be 'generalised to theory' (ibid).

This literature review has established an argument for the paradigm of dialogic feedback, has examined the literature on feedback engagement, has considered the gaps in current understanding and has considered, how the connected concept of feedback recipience may manifest itself and be potentially supported through an original model of feedback recipience synthesised from the literature. It has also identified several gaps in the literature to be partially addressed by the research question, which will now be introduced.

2.7 Research question

In the light of the theoretical perspectives and literature so far discussed, the research process undertaken in this study takes justification from the gaps identified as well as several 'calls to research' in key papers for the field of feedback and engagement research. Firstly, from Handley, Price, and Millar (2011), who suggested that an important research question regarding this topic is 'How do different pedagogic interventions and assessment designs facilitate or impede active engagement with feedback' p.554), and 'how does the assessment environment (in this case technology-mediated dialogism and open feedback environment) influence students' readiness-to-engage and active engagement with feedback?' (ibid). This somewhat converges with Shute (2007, p.34) who suggests 'a multidimensional view' of feedback is needed that considers both the situational and individual characteristics of the learning context and the nature (and quality) of feedback (i.e. the use of technology in this study). Similarly, Winstone, Nash, Rowntree, and Parker (2016), suggested the need to know how interventions 'can best be used in conjunction' to nurture recipience in a 'holistic rather than piecemeal' manner, to 'counter the invisibility of learners' engagement (Price, Handley, and Millar, 2011). Indeed, feedback recipience, (of both the emotional, cognitive and behavioural kind) is often invisible to the practitioner. These calls to research appear to justify an in-depth qualitative account-based approach to exploring

feedback practices 'in conjunction' so that what makes feedback truly effective can be better understood.

To devise a research question that has some relevance to the calls to research above and that is realistically researchable, I draw again on Handley, Price, and Millar (2011), who quote Fredericks, Blumenfeld, and Paris, (2004), (discussing the pre-tertiary domain) to justify their conclusion that qualitative approaches to researching learner engagement with feedback in HE are required:

> Research that takes a qualitative approach to understanding the phenomenology of engagement is needed ... [Prior] research has used variable-centred rather than pattern centred analytic techniques. As a result, we have little information about interactions or synergy.
>
> (Fredericks, Blumenfeld, and Paris, 2004, p.86–87)

The authors thus propose that useful research engagement could take place around both qualitative 'descriptions of engagement' and 'analysis of the influences on and outcomes of student engagement with feedback' (Handley, Price, and Millar, 2011 p.553). One route towards such 'descriptions' and 'analysis' that is researchable, is to qualitatively investigate participants' feedback engagement experiences in the form of their in-depth account data. Thus, in this way, the research question was designed to directly address such 'descriptions' of what 'influences' engagement and to investigate whether the practices can be used in conjunction for synergistic effects on feedback recipience. The research question that guided this study was thus:

What were the perceived effects on feedback recipience of technology-mediated dialogic feedback practices, based on the USM model?

The key focus of the question is a qualitative naturalistic exploration of student accounts of the nexus between their experience of the feedback practices and feedback recipience. The question was designed to address or partially address the calls to research and the thus far identified gaps in knowledge in the field regarding the general 'blind spot' in feedback engagement literature. This includes the lack of empirical research on feedback dialogue and technology-mediated feedback dialogue, the lack of empirical evidence for process approaches to feedback recipience (like SAGE and USM), gaps in the understanding of the affective, cultural, or cognitive barriers to feedback engagement, as well as the learner experience of potential learning opportunities offered by the 'artefacts' of other students' work, thinking and learning

left in the open feedback environment, and the combined use of screencast and cloud-based text editor feedback. The USM model of feedback recipience is also a key area of investigation for the study; and thus, it forms an aspect of the question. Recent feedback research has also sought to understand learner perceptions from a similar methodological perspective (for example, Zhu and Carless, (2018)).

Chapter 3 Methodology

Before considering how the research question that guides this study can be answered, it is first useful to consider the feedback practices that are referred to in the question. Thus far, the literature review and USM model synthesised from it, have provided the rationale for a series of teaching approaches, or 'feedback practices' that are used in my classes to attempt to support learners in their feedback engagement and use. This section first introduces these elements of my teaching practice to provide context for the discussion of methodological and research aspects of the study to follow (section 3.3).

3.1 Feedback practices based on the USM Model

The technology-mediated, dialogic feedback practices are designed to be complementary in offering targeted support for learners to navigate the USM processes as they engage with feedback and attempt to use it. They have been chosen because they represent the USM model, are dialogic and can be mediated through technology in a way that aligns with the technology-mediated dialogic USM model.

The first of the practices on which data collection was based is in essence, 'dialogic feedback' practice as described in the literature (Nicol, 2010; Carless, 2015; Carless, 2016) supported with a cloud-based document editing technology that allows students to question and engage in discussion about their feedback comments. It includes cycles of 'integrated guidance' (Carless, 2016), and this was conducted in exactly the ways described by Carless (2016) (see 2.1.2). As a part of this training process, students practised generating dialogues using the designated technology platform (discussed in the next section) by applying task criteria (see figure 22) to example essays in groups, and suggesting ways in which the work could be improved. The teacher then shared exemplar feedback comments with the class so that learners could reflect on the difference in quality and depth between their comments and those provided, and consider the nature of 'good' quality feedback.

Part of this guidance also involves some attempt to 'prime' or support receptivity to feedback (the M aspect of the USM model see 2.4.3.3) by asking students to consider their beliefs about the malleability of their academic writing skills and the role feedback might play in improving them. This was discussed in class and again online after watching a YouTube video by Carol

Dweck (2014b)[8] in which she explains her 'mindset' concept and supporting research, and another by Angela Duckworth on 'grit' (2013)[9]. These were selected to introduce students to the concepts, and homework discussion tasks were assigned to encourage reflection on how they have reacted to feedback in the past, and what levels of growth mindset and grit they would give themselves on a scale of 1-5. They were also asked to consider how they thought they could develop their growth mindset and grit (in the context of feedback) this then became a talking point for the beginning of the next class. The concept of Vygotsky's zone of proximal development (ZPD) was also introduced to enable students to conceptualise how feedback from peers or the teacher might aid in learning from feedback.

The second practice is the 'open feedback' environment that is generated by the use of a cloud-based document editing technology to mediate peer feedback, questions and discussion, submission, feedback and the marking of texts. Because students submit links (URLs) to a virtual learning environment (VLE), (and I recommend that they grant permission so that other students have access and can see each other's progress, homework, reflective writing and teacher feedback), an 'open-folder feedback environment' is created. These also serve as digital 'artefacts' (Wegerif, 2013) (as discussed in section 2.4.1.) or may stimulate inner dialogue in a way similar to exemplar analysis or giving peer review (see 2.1.2). There appears to be little precedent for such an environment in the literature except for 'on display' assignments (Hounsell, 2008).

The final practice is the use of screencast feedback to give formative and summative feedback combined with a cloud document editor (for questions) as discussed in section 2.4.2. A rationale for the use of the three strategies has already been given in the literature review (section 2.4.1 and 2.4.2).

The table below shows the three dialogic feedback practices, and how they might target the USM processes, as well as some justification for the practices from the empirical literature. A timeline for each of the feedback practices and the way they integrated into the course has been planned in the indicative scheme of work (see appendix), and appropriate pedagogic materials have been developed, tested and improved through reflection after use on several previous courses. The next section will discuss what technology was used to mediate the dialogic feedback practices and why it was selected

[8] https://www.youtube.com/watch?v=hiiEeMN7vbQ
[9] https://www.youtube.com/watch?v=H14bBuluwB8&list=RDQMayVumfYuZo8&start_radio=1

Table 1: Proposed practices and rationale for targeting USM processes

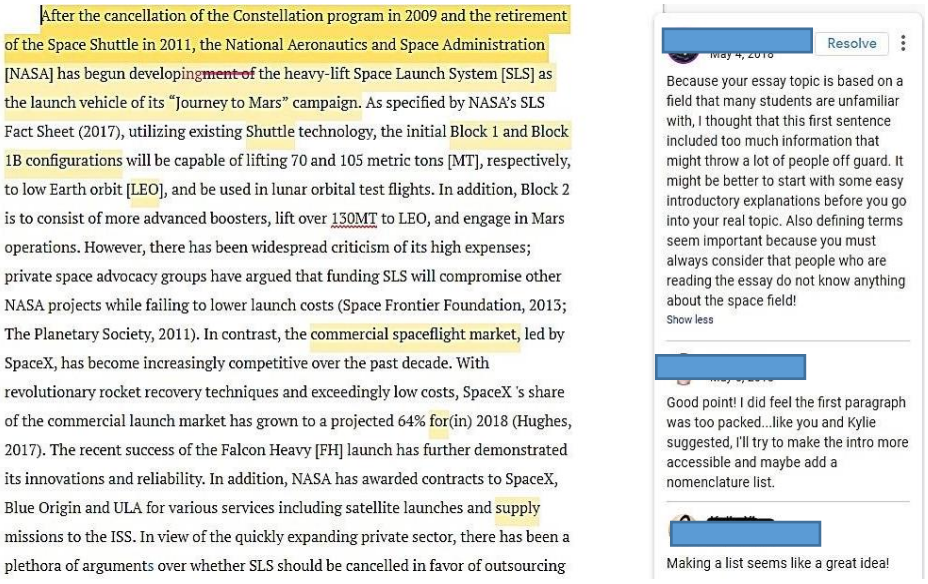
Feedback practice component	Understanding feedback landscape	Self-assessment planning & goal setting	Motivation affect & receptivity	Dialogic process	Technology environment
1. Technology based formative assessment, and cycles of integrated guidance in dialogic feedback practice	Student can query feedback and discuss attainment before submission. May enhance communication (Millar, Davis, Rollin & Spiro, (2010). Peer review dialogues helped in 'negotiation of meaning' (Zhu and Carless, 2018).	Students must assess own attainment and plan and set goals in response to feedback (Millar, et al. 2010)	Students may find dialogic feedback helps foster positive affect. Students 'positive' about use of technology (Geddes, 2009; Nicol, 2009)	Students and teachers engage in dialog	Dialog is supported in technological environment, making asynchronous discussion possible
2. Technology based dialogic peer feedback	Peers apply marking criteria and seek to understand target performance (Defeyter & McPartlin, 2007; Moor & Teather, 2013). Peer review dialogues helped in 'negotiation of meaning' (Zhu and Carless, 2018).	Peers better reflect on their own performance after applying criteria to others. (AlBarakat & Al-Hassan, 2009) (Moore & Teather, 2013) May help in developing ability to make academic judgements (Boud, 2007).	Viewing peers' work may have a motivating effect.	Peers engage in an extended learning focused dialog (a form of feedback engagement and time on task)	Peers can extend discussion over several days using technology, check facts etc.
3. Screencast feedback	Screencast feedback may help students understand feedback and marking criteria, by offering richer feedback (Turner and West (2015)	Screencast feedback may better support the use of feedback to set goals Lamey (2015)	Students may feel affective benefits, closer relationships or feel more supported (Vicelette and Bostick, 2013; Fernandez-Toro & Furnborough, 2014)	Students can query screencast feedback and dialogically respond to feedback using cloud document editor	Screencast feedback integrates with technology supported environment. (Screencast of document in environment)

3.2 Candidates to facilitate an open dialogic feedback environment

Because they can mediate group access to documents without relinquishing editing control, cloud technologies seemed to be an obvious candidate for supporting a peer or group dialogic feedback environment for the practices that instantiate the USM model. As pointed out in the literature review (Section 2.4.1) there have been few technology-mediated dialogic feedback interventions in which feedback practices were genuinely dialogic; however, there is evidence that Google Drive has been successfully used to mediate bi-directional dialogues (Alharbi, 2019; Rish, Bylen, Vreeland and Wimberley). In addition, a combination of Google Drive and Google Classroom seem capable of supporting the kinds of interactions envisaged by consideration of the USM model; thus, the combination of technologies were chosen to mediate the dialogic feedback practices.

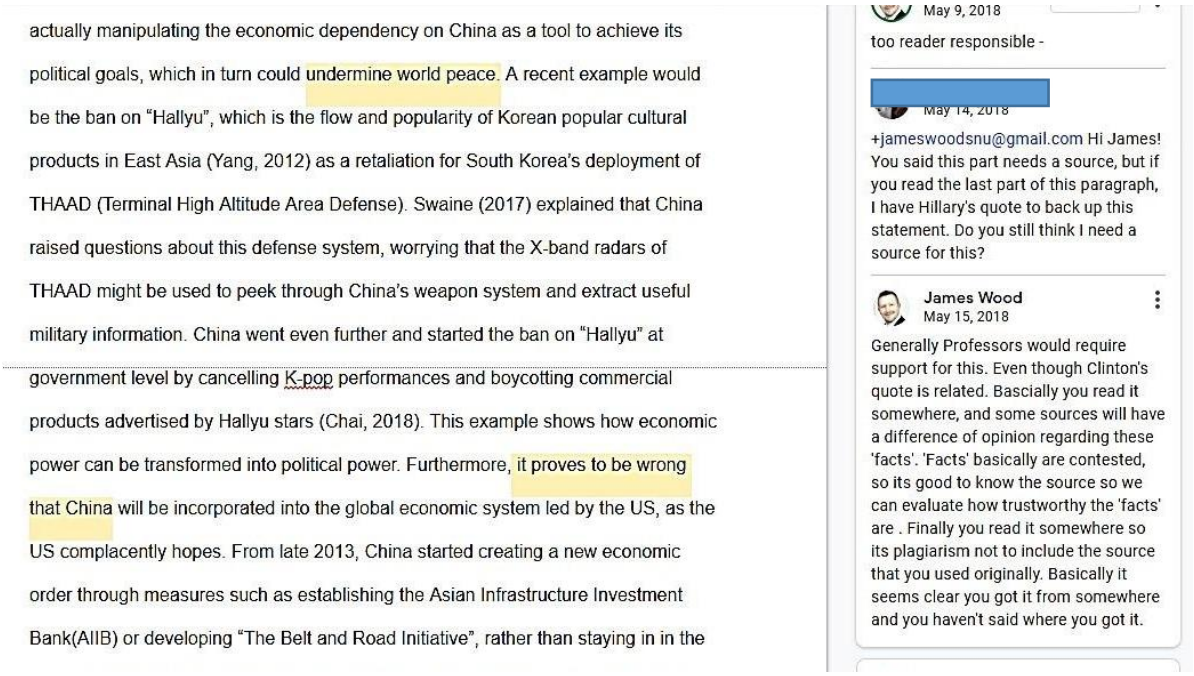
Google Drive is a combined cloud storage and sharing service, which includes a document editor (Google Docs). It has most of the functions of Microsoft word and allows documents to be edited by multiple users simultaneously. Google Classroom has features that work much like a standard VLE; however, integration with Google Drive, Docs and Gmail notifications is a distinct advantage of the system in comparison with the SNU VLE which is based on Moodle (another option). Google Docs also allows extract of text to be highlighted, and can then mediate a multiple-turn, multiple contributor, comment-based discussion, around the highlighted text. It can also deliver email notifications to relevant users. Discussions can go on indefinitely without the creator of the document needing to relinquish control or cease working on the document (see figure 11)

Figure 11: An example of how Google Drive can mediate dialogic feedback



Users (for example, the teacher) can also be invited to join a discussion and can be notified via a system-generated email. Students are encouraged to use online resources to verify and justify their opinions and hunches about peer feedback but are also encouraged to ask the teacher (via the system) if they cannot find answers or require clarification of a point (see figure 12).

Figure 12: Example of participant tagging feature of Google Drive



Google Drive and Classroom apps are also supported by Android, IOS, PCs and Macs, can be accessed on portable devices, and support 'one-touch operation' as opposed to the several steps and password entry required to log onto a browser-based service. While Google products offer apparent advantages for this study, I always advocate a critical approach to using the services and users are warned about the possible implications of long-term enmeshment in the Google (or similar) ecosystem as discussed extensively by Harari (2018).

Finally, regarding the choice of screencasting platforms, at the time of the study, the platform chosen 'Loom'[10] was completely free and offered instantaneous uploading of screencasts of unlimited lengths, user downloading, as well as reviewing at multiple speeds. It also allows users to produce videos with a view of their screen and quickly share the videos. Having found Loom to be stable, quick, versatile and high-quality, the platform was determined to be a good fit for the study.

Now that the classroom practices that represent the USM model have been outlined and the

[10] https://www.loom.com

rationale for using Google products and Loom to facilitate the feedback practices has been explained, the next sections will consider the design of the research study from a methodological perspective.

3.3 Introduction to the research methodology

Sections 2.5, 2.6 and 2.7 discussed the links between the literature and theoretical perspectives inherent in the design and rationale of the research question. Now that the literature derived pedagogic approach to teaching (to be researched in this study) has been introduced to provide context, this study aims to answer the following research question:

What were the perceived effects on feedback recipience of technology-mediated dialogic feedback practices, based on the USM model?

This section will discuss the ethical, methodological considerations and research approach taken to answering it. First, the chapter will consider the influence of the insider nature of the research context and describe the ethical considerations and safeguards before introducing the methodological considerations, explaining and justifying the methods, and describing the participants and data collection. Finally, data analysis procedures and research integrity are considered.

3.4 Insider research

My status as an 'insider researcher' is likely to impact this project, both in the conduct of the study and in the analysis of data. Insider research can offer various advantages (Trowler, 2016b; Brannick and Coghlan, 2007) for example, issues with research design can be noted and fixed as they emerge. As I am both teacher and researcher, I am already familiar with my side of the dialogic feedback exchanges I have with learners, and with their work. This may provide deeper insight into the data because I am aware of the surrounding context. Thus, the 'endogenous' (or 'insider') nature of research that takes place within a place of work may potentially offer 'illumination' (Trowler, 2016b) of certain aspects of the research process. As an 'insider' I can understand the 'emic accounts' or 'in culture description' (Sinkovics, Penz, and Ghauri, 2008) of the data considered within the social world context in which it is generated. Indeed, because of this, I have access to additional (technologically collated) data that can be used to help illustrate the nature of the classroom and types of engagement learners were involved in. Similarly, I am more likely to understand social or cultural issues related to the data because I know the

students and observe them in a real-life setting; providing helpful context to aid in accurate data analysis.

However, this subjectivity also introduces the risk of bias in the interpretation of how the practices or activities influenced students. As Trowler (ibid) points out, because of this, it may be more challenging to generate 'etic' accounts that are culturally neutral and free from potential bias introduced due to the subjective nature of the dual positionality of the observer, as both teacher and researcher. Such accounts may also be harder for a reader to understand. There may also be issues of perceived power differential or other insider factors that give rise to various biases, or which are of potential detriment to the ethical nature or veracity of the research process.

The key points regarding the nature of insider research and issues of positionality are that a robust research process requires reflective awareness of these issues (Cohen, Manion, and Morrison, 2018), and the active management of possible tensions between roles and the undertaking of sensible measures to avoid them (Trowler, 2016). It also requires the general approach to be congruent with the research questions, the claims made, and the claimed contribution of the research generally. In both key regards, the research process in this study was carried out with full researcher 'reflectivity' (Bryman, 2012; Cohen, Manion, and Morrison, 2018) regarding these issues, both in terms of data collection, and data analysis. Accordingly, I made every attempt to be aware of potential biases and consider how they can be avoided. I was also cognizant that despite the awareness of best practices, these factors could still negatively influence the research process.

3.5 Ethical considerations and safeguards

Related to the issues of positionality for an insider researcher is a consideration of ethics and adherence to ethical principles throughout the research process. According to Norton (2009), the three most widely agreed ethical principles regarding educational research focus on informed consent, privacy, confidentiality, and protection from harm, so these considerations were my starting point when considering ethics. Firstly, to ensure consent is genuine, according to BERA guidelines (2018) it is crucial to ensure that participants understand the 'process in which they are to be engaged', why their participation is required, and how the data generated will be used. Because of my status as both researcher and teacher in this study, the issue of consent was more complex; and this may have been exacerbated by cultural factors such as

differences in what can be described as 'power distance' (Hofstede, 2001) between South Korea and my own UK culture. In South Korea, for example, power distance is assumed to be higher, which may discourage students from raising questions or objections, or from opting out of data collection. Taking these factors into consideration, I introduced the concept of variability in power distance in the global classroom, and encouraged learners to ask questions, challenge feedback, and contribute suggestions to teaching and learning activities and use my first name in an attempt to mitigate such effects. I also endeavoured to be mindful and avoid situations in which the perceived power and authority inherent in my role was used to either explicitly or implicitly coerce students into participating (see appendix ethics form for further detail). To further support the garnering of genuine un-coerced informed consent, I provided a clear participant information sheet explaining the rationale for collecting the data (see appendix 3). I also included checkboxes for each of the different data collection methods to be used (see appendix 3). This included a checkbox for the use of Drive and Classroom data (in the form of screenshots), and this was explained on the ethics form[11].

I also clarified the procedure orally and reiterated the right not to take part, or to withdraw from the study before data gathering activities began in week 9 of the course (after a full feedback cycle was complete). Since the participants of the study (to be introduced) were between 19 and 25 years old and studying in their native contexts, they were not considered a 'vulnerable' group. The risks and benefits of taking part were explained; in this case, the time required to participate vs the chance to formulate a 'self-explanation' of learning which may aid learning (Lang, 2016 p.137).

The concept of 'demand characteristics' refers to the somewhat contested idea in social psychology that participants might try to anticipate the behaviour expected of them as 'good research subjects' and try to offer answers that might please or help the researcher (McCambridge, De Bruin, and Witton, 2012; Cohen, Manion, and Morrison, 2018) this can manifest at an unconscious or conscious level. However, because the course covered how to critique research for writing critical literature reviews, the theme of research quality and avoidance of bias was discussed. This may have helped participants to be aware of potential bias in their accounts. I also encouraged participants to talk about negative aspects, so that the data could be used to improve the teaching practices.

[11] Discussed in greater detail in section 3.8.2.1

Further, I made it clear in writing and orally that participation or non-participation in data gathering would not affect grading or the care and attention they receive from me. No other threats to taking part in the research were identified, as no personal or sensitive data was being sought or was needed. Questionnaire data were collected anonymously, and interview or reflection data were assigned pseudonyms chosen by participants (on their consent forms) and known only to me (although some students chose to use the English names they used in the class, they understood and accepted that this might identify them to their peers). I also made it clear in participant information sheets that data would be collected using Google forms but then any working data would be assigned to pseudonyms, encrypted, password-protected and physically secured at all times according to UCL data protection guidelines (including screenshots of Drive files). Participants were informed that they have the right to access any information held about them under the data protection act and GDPR (BERA, 2018).

I also became familiar with BERA (2018) guidelines and to be thorough and reflective, read the ethics sections of various research methods books (Bryman, 2012; Robson, 2011; Cohen, Manion, and Morrison, 2018; Norton, 2009) to ensure I had not overlooked any important ethical perspectives that might pertain to the research context (see appendix 1 for an 11-page account of ethical considerations, permissions, rationales and procedures from the signed ethics consent form). Finally, I was confident that all relevant ethical dimensions had been fully considered (as discussed earlier in 5.3 and on attached ethics form).

The ethics clearance process was guided by my supervisors and an internal ethical advisor who was familiar with the work and who gave valuable and conscientious critical feedback. Finally, an ethics approval reference number was generated and attached to my participant information forms and ethics application. Ethics approval was granted after a formal review, and copies of all documentation were provided to the UCL data protection registration (see appendix 1). BERA guidelines (2018) also state that local permission should be sought. Thus, I approached the director of my course at SNU for permission and offered a summary of what I intended to do and how I would ensure ethical standards in accordance with university rules. Permission to advance the research was duly given in writing (see appendix 2) before data collection commenced.

3.6 Participants

This short section will discuss the participants in the study. 15 undergraduates signed up for the credit-bearing Advanced Academic Writing class. In the class, learners are guided through the process of writing a 1,200-word research-based discussion essay and a 1,500-word literature review. All students were invited to join the study. One student signed informed consent but did not attend an interview, while one student withheld consent, so their data were not used. The remaining participants comprised five males and eight females, of South Korean origin, reading a range of subjects from humanities, social sciences and sciences between the ages of 19 and 25, and the group ranged from 'freshmen' to 'seniors'. I did not request any other personal data for ethical reasons and because it was not pertinent to the study. All 14 students volunteered for interview (with one no-show, N=13); therefore, no sampling strategy was required. A fuller explanation of the institutional context of the advanced academic writing class is available in the description of participants in Appendix 1 (an extract from my signed ethics form) and in section 1.4.

3.7 Methodological approach

Now that the insider and ethical aspects relating to the teaching context have been discussed, to ensure theoretical alignment, I will now consider the methodological approach to researching ethically in the insider context that has been described.

The methodological approach I adopt aligns with the perspectives discussed in sections 2.5, 2.6 and 2.7. Thus, it is important to note that in any 'social research' endeavour to find the 'truth' or 'objective reality' of such phenomena may be inherently impossible because the phenomena to be investigated are themselves intangible and subject to interpretation and challenge (Crotty, 1998). As previously discussed, this can happen at an observable and 'invisible' level (Fredericks, Blumenfeld, and Paris, 2004) and deriving meaning from feedback can be explained as a socially constructed phenomenon. Some aspects of the phenomena in focus for this research are behavioural and may be observable in the physical classroom environment or in the written data produced by participants throughout the semester. However, there are also important aspects of recipience behaviour that are likely to happen 'off the record' at an abstract, emotional and even a subconscious level. Using only observational or quantitative data collection techniques would only tell a part of this story, and instead, I reasoned that a flexible, reflective and responsive qualitative approach would better allow me to 'study things in their natural settings, attempting to make sense of or to interpret phenomena in terms of the meanings people bring

to them' (Denzin and Lincoln, 2003, p.4). This has implications for which research methods may be most suitable and helps to account for the choices made. However, choosing such a perspective also introduces the danger of bias in the accounts or data interpretation process.

3.8 Data collection methods: Questionnaires, semi-structured interviews, reflections and Drive/Classroom data

To answer the research question, methods were needed that offered a clear and researchable route to doing so in a way that aligns with theoretical perspectives adopted and methodological insider and ethical considerations discussed above. The data collection methods of qualitative questionnaire and semi-structured interview were thus chosen as data collection methods to align with the socio-constructivist ontology and epistemology that is reflected in the design of the practices to be researched and in the methodological stance implied in the formulation of the research question. To facilitate this, a process of qualitative data collection was designed to follow an 'explanatory sequential design' (Creswell, 2014, p.44). Data collection thus utilised questionnaires in the first instance, and data from these were used to inform a mild process of 'progressive focussing' (gradual refinement of research focus) (Sinkovics and Alfoldi, 2012) for the main method of interviews. This was intended to help 'tease out' accounts of participants' experiences of feedback recipience that may require an iterative deep-thinking process to consciously formulate and communicate effectively. This was done first through questionnaires, and then in more depth in interviews. Questionnaire data was also intended to provide initial context so that as the researcher, I had a broad mental representation of participants' 'lived experience' going into the interview. Interview questions were also influenced by the initial analysis of the questionnaire feedback (described in section 3.9).

Semi-structured interviews were also chosen as the main data collection technique, as they are thought to be flexible and adaptable and offer freedom to the interviewer to adapt to themes emerging from the discussion and follow up, asking a string of questions to access deeper and more hidden levels of understanding when necessary. They are also 'structured' which offers guidance to the researcher (Robson, 2011) and consistency from interview-to-interview. These were also deemed to align with the research question, ontology and epistemology, and with the focus on dialogism (and the meaning-making from it), that permeates the project. Questionnaires and interviews have also been used successfully together in seminal feedback engagement research (Price, Handley, and Millar, 2011) while interviews have been used in recent empirical research on dialogic feedback (Zhu and Carless, 2018; Hill and West, 2019), and

group interviews were used in empirical work investigating feedback recipience (Winstone, Nash Rowntree, and Parker, 2016). This demonstrates 'external consistency' with related work in the field (Trafford, and Leshem, 2008, p.103) providing an additional rationale for the approach chosen based on precedent. Other possibilities for data collection were considered, such as the use of Google Drive data for analysis or observation, but this would not have facilitated a record of the 'invisible' aspects of feedback recipience or aligned with the theoretical perspectives taken. Furthermore, a mixed methodology while potentially illuminating would have required rigorous handling, which would not have been manageable within the scope of an EdD.

In developing the questionnaire and interview questions that were focused on eliciting participant responses to the feedback practices, possibilities were mapped out against the research question, research gaps, and the USM model (See appendix). I attempted to ensure there were plausible methods of data collection for the different aspects of the feedback practices and model so that the collected data might contribute to filling the research gaps (see appendix 4 and 5). The participants were asked how they were able to navigate the USM processes such as understanding what constitutes high-quality work, how they were able to self-assess and set goals and what motivated them to use and engage with feedback. All questions were open, and great care was taken to avoid 'leading-questions' or to use vocabulary that might unduly influence participants' answers.

3.8.1 Rational for the use of additional research data

A problem for the main data collection methods was that little has been written as to what methodologies allow feedback recipience to be caught 'on record' and to 'counter the invisibility' of feedback engagement. I thus aimed to make effective use of ethical data collection opportunities inherent in the design of the technology-mediated feedback practices. This included opportunities to collect data on feedback recipience in 'a natural setting'. Accordingly, as all student writing was to be stored on Google Drive and Google classroom, this offered potential for data collection from the learning process itself, and from the activities recorded in the technology-mediated environment.

In my classes after receiving feedback, learners are asked to write a reflection on what they could not understand, what they learned from the writing process and how they can transfer their learning to the next assignment. I anticipated that in some cases, interesting participant accounts of feedback recipience might emerge naturally through this process. Thus, I made the case for including this data within the dataset in my ethics application; ethical approval was

subsequently granted (after informal and formal reviews). 14 students out of 15 participants granted permission to use reflective data for the study. To exemplify the rationale for such an approach, in appendix 5, one student is asked about the resources she needs for reaching her learning goals (question 4), and in her answer discusses how receiving screencast feedback supported her feedback recipience in an unusually effective way. This constitutes a high-quality, candid account of feedback recipience that emerged spontaneously, and in answer to an unrelated question. Importantly, it also aligns with the previous methodological discussion as it was an excellent example of 'studying things in their natural settings' while 'attempting to make sense of…the meanings people bring to them' (Denzin and Lincoln, 2003, p.4). Such data is also extremely pertinent to answering the research question, and the analysis of reflective writing has also been used successfully in related research (Price, Handley, and Millar, 2011; Zhu and Carless, 2018) which again provides 'external consistency' (Trafford and Leshem, 2008).

3.8.2 Overall rationale for the 4 data sources

Each of the forms of data is designed to contribute to answering the research question in a specific way. Reflections were designed for pedagogic purposes but sometimes illustrate how the research question can be answered in emergent and spontaneous ways, and were therefore of interest to the study. Questionnaire data were used to focus the interviews, in the generation of the data participants had as much time as they wanted to generate answers; thus, comments are often well developed and concise. Interviews, on the other hand, enabled interactivity in pursuing the research question to facilitate in-depth understanding. However, this data was also often lacked concision. Thus, the three data collection methods complemented each other well.

3.8.2.1 Use of illustrative screenshots from Google Drive/Google Classroom

Drive data (in the form of screenshots) were not intended to be used to directly answer the research question, but to provide contextualisation regarding what the participants did in the class, and in some cases to exemplify comments made by students in interviews. Consistency from reflection, to questionnaire data, to interview, and again with Drive and Classroom data supported confidence in the findings and may have made the data themes more persuasive by providing evidence that what the participants said in their accounts matched observations. In using this data, it was important to make sure that individuals would not be identifiable either due to their real names being disclosed or their faces being visible. For these reasons, when this data was used, care was taken to redact any identifying features. Participants were also informed of what consent to use this data would mean (i.e. some of their writing being visible to readers in the form of screenshots). Permission to use this data in the study was subsequently

requested, and 14 students granted permission. One screenshot of a screencast was also used, however, because a screencast displays only what is on the computer screen, and this was a Google Drive file, the discussion of how Google Drive files would be used (both procedurally and ethically) covers this usage.

To illustrate the relative status of the data collection methods, 84 comments in the data chapter come from interviews, 45 from questionnaires, and 16 from reflections. Drive and Classroom screenshots are also used for confirmation and illustration purposes.

3.9 Data collection procedure

By week nine of the course, ethical clearance and the first round of essay feedback (from the teacher) was complete. Informed consent had been acquired, and learners had written reflections on their feedback engagement process and ongoing goals for the next assignment. Participants were then offered the opportunity to answer a small number of open, reflective, questions using 'Google Forms' (a platform in Google Drive for questionnaires). Students were given about a week to answer the questions and were reminded (in class) of their right not to. When this process was complete, the data was printed and briefly analysed by hand for answers best associated with the research focus or USM model. The results were then used to help develop the interview questions. In the questionnaire data, students explained that in many cases, their experience of screencasting and dialogic feedback had been the most important aspects of their experience:

> 'the most impressive experience was feedback from loom'

or

> 'This class was special because the feedback was more two-way…This aspect of the activities was the most helpful for me'

The comments above, for example, encouraged me to ask deeper, open-ended questions about screencasts and dialogism to promote depth of response and to follow up on these answers with further questions. Such comments also helped me to identify areas that participants themselves identified as important to their experience. This helped me to determine the priority of the comprehensive lists of interview questions I had designed, which resulted in the prioritisation of some questions while others were omitted. One example of this process was the (unexpected) emphasis students placed on the concept of 'mindset' and 'grit' in their questionnaire accounts, and the role they believe it played in supporting their ability to engage with their first round of feedback. This led to the generation of a new question to ask if there was anything that

motivated (or demotivated) them to engage with feedback. This was intended to glean more about their experience of emotional aspects of feedback recipience. In this way, the questionnaire data successfully assisted in guiding the direction of the interviews based on the participant accounts from the perspective of the 'lived experience' and 'world view' of the participants' feedback recipience.

Before the interviews, I familiarised myself with the advice offered by Bryman, (2012) and Cohen, Manion, and Morrison, (2018) on how to prepare for qualitative interviews, and prepared lists of question types and functions, focusing on Kvale's (1996) 'successful interviewer criteria'. These were used as a guide during the semi-structured interview process. I then piloted the resulting questionnaire items with two students from previous classes and found that the interview yielded the anticipated responses in 30 minutes, but that there was a need for slight language simplification. Interviews were conducted in my office and digitally recorded, data was stored in adherence to the privacy and confidentiality standards outlined by the GDPR. In total, 13 interviews were conducted and took between 30 minutes and an hour to complete. Data collection took place after each of the feedback practice strategies had undergone a full teaching cycle in weeks 11 to 13 of the 16-week course (see table two). This was timed before the final examination period on major courses (an ethical consideration) and made it more likely interviews would be attended.

Table 2: The timing of research procedures

The timing of research procedures
Week 8: • Ethical approval is granted, paperwork is filed. Formal permission sought-following local ethical procedure (appendix 1 and 2)
Week 9: • Students have conducted peer review, corrected their work, had formative teacher and summative teacher feedback. Feedback practices have been used. • 14 Participants sign informed consent for the anonymous use of Google Drive files, (including reflections and homework) Google Classroom files, questionnaire and interview participation (appendix 3). • Students write reflections on feedback (for pedagogic rather than research reasons) some students discuss the feedback practices and engagement with them (Appendix 5). The teacher reads and replies to reflections to encourage learning.
Week 10: • Students are offered the opportunity to answer mainly open questionnaire questions over a week (appendix 6). • Researcher hand codes results and highlights areas for deeper investigation. • Researcher modifies pre-written interview questions accordingly.
Week 11-13: • Researcher pilots interview with ex-students adapts the language of interview • Researcher schedules interviews and conducts 13 altogether.

3.10 Data analysis and approach

Although Yin (2014) points out that when analysing data, following the 'theoretical propositions' that likely shaped the research questions and data collection plan, and thus the 'analytic priorities' is a common and logical approach, inductive strategies can 'yield appreciable benefits' (p242). In addition, analysis of the pre-ordinate themes discussed in the USM model and contributing literature may have led to an over-deterministic interpretation of the data (Thomas, 2006). I also considered it important to focus on fully understanding participant accounts, perspectives and priorities. Accordingly, an inductive coding of emergent themes (Cohen, Manion, and Morrison, 2018) was chosen.

Both content analysis and thematic analysis (Braun and Clarke, 2012) were considered as possible approaches for the interrogation of the qualitative data I had obtained (Bryman, 2012). Of the two, thematic analysis was chosen as it is thought to better support understanding of the phenomena from the participant perspective (Norton, 2009). Thematic analysis is described by Braun and Clarke (2012) as 'a method of systematically identifying, organising and offering insight into patterns of meaning (themes) across a dataset' (p.57). It is also considered flexible and offers a systematic approach to data analysis (Braun and Clarke, 2006).

Thematic data was carried out in the following order.

1. Analysis of the interview data
2. Analysis of the reflection and then questionnaire data
3. Comparison to check for consistency in the main themes.
4. Constructing the written report using data from 2. to introduce themes and data from interviews to explore and illustrate in more depth where possible.
5. Use of Google Drive and classroom data to illustrate where deemed beneficial.

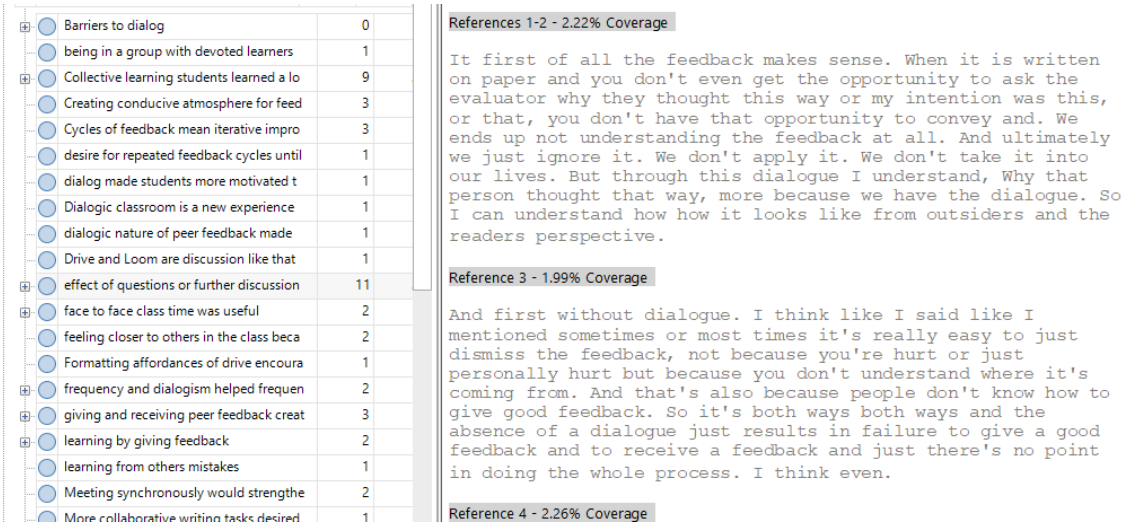
The following paragraphs describe the process in detail. To familiarise myself with the data, I took a chronological approach and read the reflections first, then the surveys, and then transcribed the interviews. This provided an overview of the participant experience. I decided to do a trial analysis from the written data sources first to practice the skills required and familiarise myself with the process using NVivo following Braun and Clarke's (2006) Phases of thematic analysis as shown in figure 13.

Figure 13: Phases of thematic analysis (Braun and Clarke, 2006)

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

After this experiment, I was more familiar with the data and skills required on NVivo. I decided to formally code the interview data first, as this was the primary data source. After correcting the transcriptions a second time, I read the data several times while taking notes over several days, then coded it. The screenshot (figure 14) below shows an excerpt from the transcription, how it was coded to 'effect of discussion' (step two of Braun and Clarke) and how this was later (step three) attributed to the overall theme of 'dialogic aspects'. As suggested by Braun and Clarke (2006), data were coded in different sized chunks so that useful surrounding contextual data was preserved to aid understanding. Extracts were also left un-coded or re-coded multiple times as necessary and at various levels of granularity (phrases, sentences or paragraphs) depending on what could be 'assessed in a meaningful way regarding the phenomenon' (Boyatzis 1998; p.63 in ibid, p.18). Everything relevant to the research question, classroom practices, learner responses to them, the USM model and learning was coded.

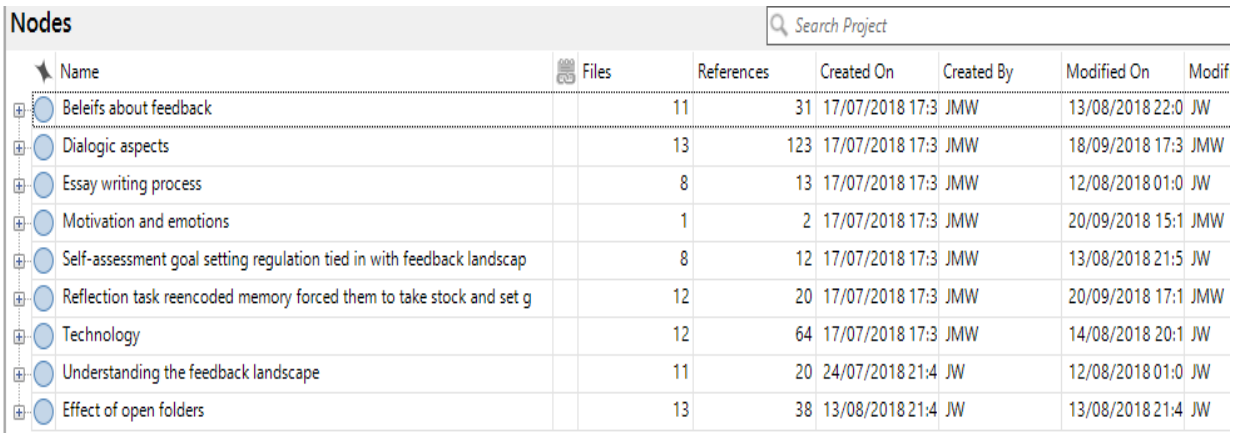
Figure 14: Example of data coded to: 'effect of questions or peer discussion'



Themes were then generated from the initial coding process. At this stage, nine overarching

themes were identified that could accommodate the smaller codes and were found to be mutually exclusive. Figure 15 shows an example of the final themes after the interview data was coded.

Figure 15: Example of final interview data theme



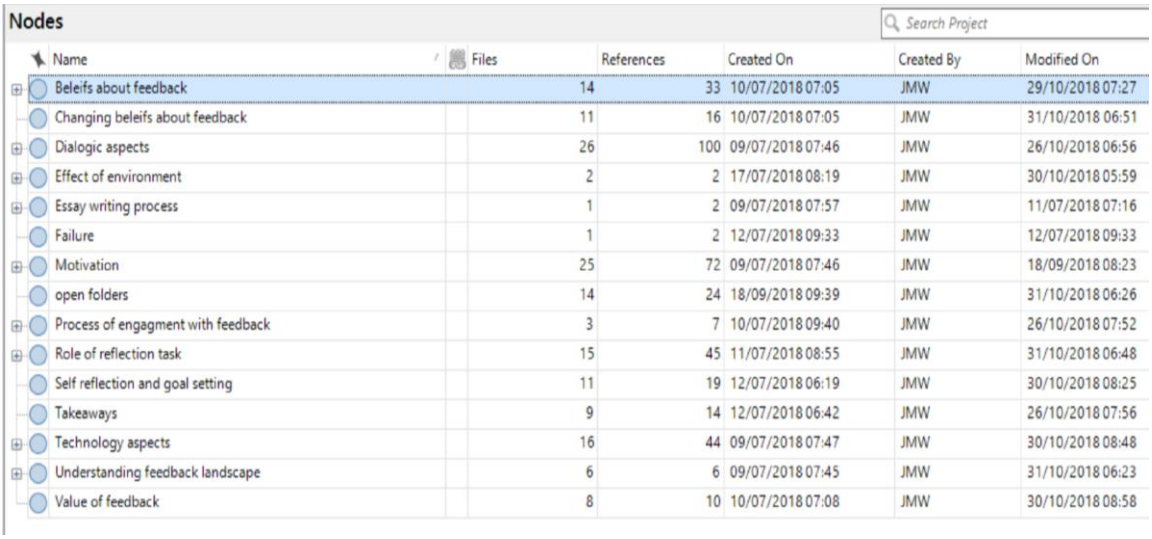
Nodes

Search Project

Name	Files	References	Created On	Created By	Modified On	Modif
Beleifs about feedback	11	31	17/07/2018 17:3	JMW	13/08/2018 22:0	JW
Dialogic aspects	13	123	17/07/2018 17:3	JMW	18/09/2018 17:3	JMW
Essay writing process	8	13	17/07/2018 17:3	JMW	12/08/2018 01:0	JW
Motivation and emotions	1	2	17/07/2018 17:3	JMW	20/09/2018 15:1	JMW
Self-assessment goal setting regulation tied in with feedback landscap	8	12	17/07/2018 17:3	JMW	13/08/2018 21:5	JW
Reflection task reencoded memory forced them to take stock and set g	12	20	17/07/2018 17:3	JMW	20/09/2018 17:1	JMW
Technology	12	64	17/07/2018 17:3	JMW	14/08/2018 20:1	JW
Understanding the feedback landscape	11	20	24/07/2018 21:4	JW	12/08/2018 01:0	JW
Effect of open folders	13	38	13/08/2018 21:4	JW	13/08/2018 21:4	JW

I then decided to analyse the reflection and questionnaire data in the same way in a separate NVivo file. This allowed me to check for consistency between the interview data and written data by comparing the content of the matching themes. There was consistency in the accounts, and this resulted in main themes that overlapped with interview themes (see figure 16). It also provided complimentary perspectives that aided understanding of the data where it overlapped. I also found that while interviews were the most useful data source accounting for 58% of data excerpts, questionnaire data was also helpful (at 31%) and reflections accounted for 11% of extracts. As intended interview data often represented a 'deep dive' into topics in comparison with questionnaire and reflection data, but sometimes other data sources were more concisely expressed.

Figure 16: second time coding the written data (see date modified)



Nodes

Search Project

Name	Files	References	Created On	Created By	Modified On
Beleifs about feedback	14	33	10/07/2018 07:05	JMW	29/10/2018 07:27
Changing beleifs about feedback	11	16	10/07/2018 07:05	JMW	31/10/2018 06:51
Dialogic aspects	26	100	09/07/2018 07:46	JMW	26/10/2018 06:56
Effect of environment	2	2	17/07/2018 08:19	JMW	30/10/2018 05:59
Essay writing process	1	2	09/07/2018 07:57	JMW	11/07/2018 07:16
Failure	1	2	12/07/2018 09:33	JMW	12/07/2018 09:33
Motivation	25	72	09/07/2018 07:46	JMW	18/09/2018 08:23
open folders	14	24	18/09/2018 09:39	JMW	31/10/2018 06:26
Process of engagment with feedback	3	7	10/07/2018 09:40	JMW	26/10/2018 07:52
Role of reflection task	15	45	11/07/2018 08:55	JMW	31/10/2018 06:48
Self reflection and goal setting	11	19	12/07/2018 06:19	JMW	30/10/2018 08:25
Takeaways	9	14	12/07/2018 06:42	JMW	26/10/2018 07:56
Technology aspects	16	44	09/07/2018 07:47	JMW	30/10/2018 08:48
Understanding feedback landscape	6	6	09/07/2018 07:45	JMW	31/10/2018 06:23
Value of feedback	8	10	10/07/2018 07:08	JMW	30/10/2018 08:58

The final stages of analysis involved reviewing the final themes (step 4) and defining and naming them (step 5). This involved collating the data and using it to illustrate the four main themes reported in the study. Finally, step 6 entailed producing the report. This was done focusing on interview data, comparing the themes from the written data, and then searching to see if there was any pertinent data missed in an exhaustive process. This resulted in a very long report, which brought the draft to 88,000 words. Scoping decisions were then made, and the report was reduced to its current form after consultation with supervisors through an exhaustive, thorough and reflective process.

Finally, after the report was finished, and chapter 5 was also written, I compared the inductive findings that answered the research question and considered the evidence against the propositions inherent in the USM model. The result was a confirmation of some aspects of the model, and clarity regarding model inputs and outputs. As this is not directly related to answering the research question, this is reported at the end of the discussion chapter in section 5.6 to avoid redundancy.

3.11 Critical approach

At Yin (2014) notes, the data in a case study project can be considered a way to 'shed empirical light on theoretical concepts or principles' (in this case the USM model) to produce 'analytic generalisations that go beyond…the specific case…studied' p.41). Using inductively generated data to answer the research question and then to empirically test the model, I aimed to produce a more strongly evidenced model that may have useful implications for other contexts. The boundaries of the investigation are also implicit within the wording of the research question.

Bryman (2012) offers a thorough discussion of issues relating to the concepts of 'reliability' and 'validity' that are usually associated with quantitative rather than qualitative research and how different writers have viewed regarding qualitative research. He notes that there is considerable disagreement concerning how far and even if they should be applied. I take the position that there can be indicators of quality in qualitative research that can be helpful, particularly to novice researchers. Of various frameworks and concepts discussed by Bryman (2012 p.396), the ones offered by Tracy (2010), offer both coverage and conciseness. Using these as a guide, I have endeavoured to research a 'worthy' topic, in a 'rigorous' manner, with 'reflexivity', using methods to enhance 'credibility', such as clear 'auditable' records, while discussing the process with supervisors to aid in critical reflection regarding substantive research choices.

Chapter 4: Results and Analysis of Data.

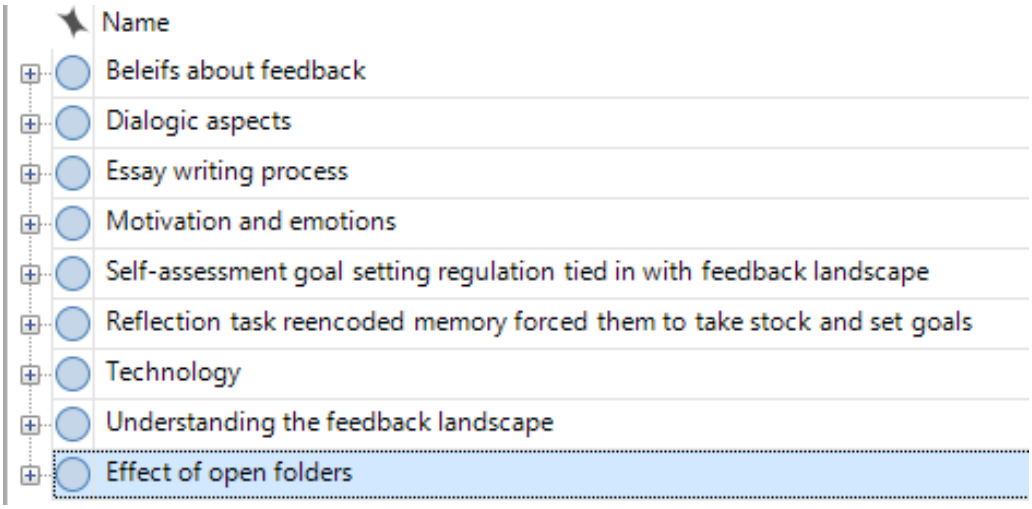
4.1 Introduction: Main themes derived from data analysis

Chapter 3 described the feedback practices and technology platforms on which data collection was based. This provided context for the discussion of the methodology and methods by which the research was conducted. This chapter presents the main themes that were determined from the analysis of the data.

The focus of the chapter will be on analysing accounts of participant experiences of the feedback practices in reference to the perceived effects on feedback recipience (and learning from feedback practices) outlined in section 2.2 to answer the research question:

What were the perceived effects on feedback recipience of technology-mediated dialogic feedback practices, based on the USM model?

In answer to this question, nine overarching themes were derived from the initial analysis:



In a combination of the 4th, 5th, and 6th stages of Braun and Clark (2006), these were collated where possible, and scoped and narrowed down to the four themes deemed most central to the participant accounts of feedback recipience:

1. The role of technology-mediated dialogism
2. The role of the technology-mediated 'open-folder' environment
3. The experience of screencast feedback
4. Receptivity and developing positive beliefs about feedback

These themes will now be discussed in detail to answer the research question.

4.2 The general role of dialogic feedback practice

Data analysis revealed that the most prevalent theme occurring in the data was the importance of dialogism for peer and teacher feedback practice. Participants revealed the impact this had on their understanding of current attainment, what good standards were, how they could be reached as well as checking attainment. Participants frequently cited dialogism as the aspect of the feedback practices that had the most significant impact on them in both the questionnaires and interviews. There we over 100 references from 26 unique data sources referencing dialogism in the written data, and all interviewees raised the topic, contributing 121 codes to the theme of dialogism. These had various reported impacts which shall be reported as sub-themes in the following sections.

Across the dataset, participants made positive comments about their experience of the dialogic feedback activities. They indicated in some cases (without prompting) that their experience of it was superior to their previous experiences of non-dialogic or non-dialogically technology-mediated feedback (using Moodle). Generally, participants indicated several reasons for the positive impact of dialogue: dialogue facilitates a better understanding of peer and teacher feedback points, facilitates collective learning and improvement of feedback points, and helps learners to develop an awareness of their audience.

There were also affective aspects: dialogic communication through technology appeared to make it easier for students to ask for teacher help, it reportedly reduced cultural and emotional barriers to taking part in peer feedback, reduced the stress involved in participating in peer feedback (because commenting was viewed as a two-way conversation). It also apparently fostered more positive attitudes about peer feedback, strengthened relationships among peers and gave students a strong imperative (the desire to reciprocate) to engage with their feedback. The following sections will examine each of these claims in the context of evidence.

4.2.1: Dialogic peer feedback facilitates the repair & development of feedback points

One of the most pronounced themes was related to how dialogic peer feedback promotes the repair or expansion of original communicative intention. Many of the codes ascribed to this theme were connected to the desire of participants for clear and actionable feedback, particularly from peers:

> For many feedback points [from peers], there are many that are hard to understand, many that

> need clearing of the point, and many that can be arguable. Dialogic feedback through Google Docs helped resolve this issue. I could understand better what others commented about my writing, and also I could make my points clearer and delivered better when they didn't understand them.
>
> (Questionnaire 3)

Several reflections and questionnaire responses pointed out that if the feedback was not dialogic, and thus participants were unable to understand feedback points fully, they would more likely to simply disengage with the feedback. This is illustrated by the following comment from questionnaire participant 10 who realised from the feedback experience:

> The importance of clear communication between the feedback giver and receiver. This makes it more likely that the feedback will be effectively utilized and lessens the circumstance of receivers simply reading through the feedback comments and not doing much about it because they don't fully understand what the suggestion is implying.
>
> (Questionnaire 10)

Other participants appeared to agree, and even named dialogism as the most helpful aspect of the course:

> this class was special because the feedback was more two-way. What I mean is that I could question the feedback, and why the peer thought I should revise that part of the essay. This aspect of the activities was the most helpful for me.
>
> (Questionnaire 9)

Such comments suggested that dialogism was very important for recipience of peer feedback, and this point was corroborated by Jenny, who felt that without dialogue around peer feedback:

> There will be no result of the feedback. Feedback is useless as no one can get what it means, having a discussion and having time to clarify it can make that feedback useful.
>
> (Jenny interview)

Similarly, Grace, elaborated on the point that dialogue between peers essentially allows the feedback to 'make sense', and that peer feedback without dialogue often does not, and consequently, is often not worth doing at all, ends up being ignored, and feels like a waste of time:

> When it is [feedback] written on paper, and you don't even get the opportunity to ask the evaluator why they thought this way...we end up not understanding the feedback at all. And ultimately, we just ignore it. We don't apply it…But through this dialogue, I understand, why that

> person thought that way more because we have the dialogue. So, I can understand how it looks from outsiders' and the readers' perspective…The absence of dialogue just results in failure to give good feedback and to receive it, and **there's just no point in doing the whole process…**
>
> (Grace interview)

Similarly, in interview Nahyun compared the value of peer feedback with and without dialogue and pointed out that she felt peer feedback with dialogue about the points made was 'much more valuable' than peer feedback without it. Jenny's reflection suggested that this is because:

> I can know the intention of the feedback and the feeling readers received from my writing sufficiently.
>
> (Jenny reflection)

These accounts illustrate the perceived value of dialogues around peer feedback and participants' ability to understand it or receive information about how their feedback could be better understood. This appears to help avoid the situation where peer feedback is simply overlooked or ignored and to maximise the possibility that peer feedback is utilised effectively.

4.2.2 Dialogic peer feedback facilitates collective learning in cycles

In addition to facilitating the use of teacher and peer feedback, participants reported cases in which dialogue allowed the expansion or evolution of the original feedback message into something more akin to a 'collective learning process' evolving over several 'feedback cycles'. For example, it was often stated in the participants' reflection and questionnaire data that it was the discussion that took place among peers in Google Drive that helped them to improve their work (as opposed to peer feedback itself), or to 'find a better and more specific way to make a revision' (Questionnaire 5). Other participants reported that they had resolved problems through peer feedback or learned effectively through dialogue with peers. Some students touched on this specifically, explaining both the effect and how it was achieved.

> By conversation and solving problems together, I could learn things more easily than any other courses. I never thought students learning by having a conversation can yield this much effectiveness in learning
>
> (Questionnaire 5)

> Also I can ask and refute the feedback…Through this process, I can reflect and develop the feedback and eventually improve my writing.
>
> (Questionnaire 7)

> I think I could respond to the feedback, so they will give, and I will get better feedback for asking questions, so, it improves the quality
>
> (Kevin, interview)

Several comments explained that this becomes a multi-step process, expanding the original peer-review comments into numerous cycles of peer feedback. To illustrate this, Judy explained the process:

> Usually, if it [peer review] was in paper form it would be a one-way thing, and it would finish, but here I could do a follow-up question or ask them for feedback on my answer "oh is it okay now?" and they would say "oh I think it's much better".
>
> (Judy interview)

In the same vein, Juno explained how he was able to develop the original feedback point into something that led to a better-quality understanding through cycles of dialogic peer support:

> …I can expand upon that feedback, and like not just clarify the meaning…if someone said this part of my sentence is wrong so I could, for example, say "what about this part, is this part okay", and they would say "that's okay, but in conjunction with my above feedback if you could combine this to make this, that'll be even better".
>
> (Juno interview)

Hayley corroborated this effect in her interview when asked what difference the fact that feedback was dialogic made to her experience of peer feedback:

> Well, I could keep checking if I was doing okay, for some grammatical errors or language errors she told me that these expressions were weird, so I changed to another expression, and I could check "does this sound okay?"

I also asked how extensive these exchanges were:

> Three or four times, I think it was four
>
> (Hayley interview)

Figure 17, from the android mobile version of Google Drive, verifies that the discussions mediated by Google Drive were as extensive as claimed in the interview data. The number at the bottom of the graphic refers to the fact that this is the 7th of 99 comments, made by a group of four students working on the first draft of Juno's essay.

Figure 17: Evidence of extended discussion on participants' work

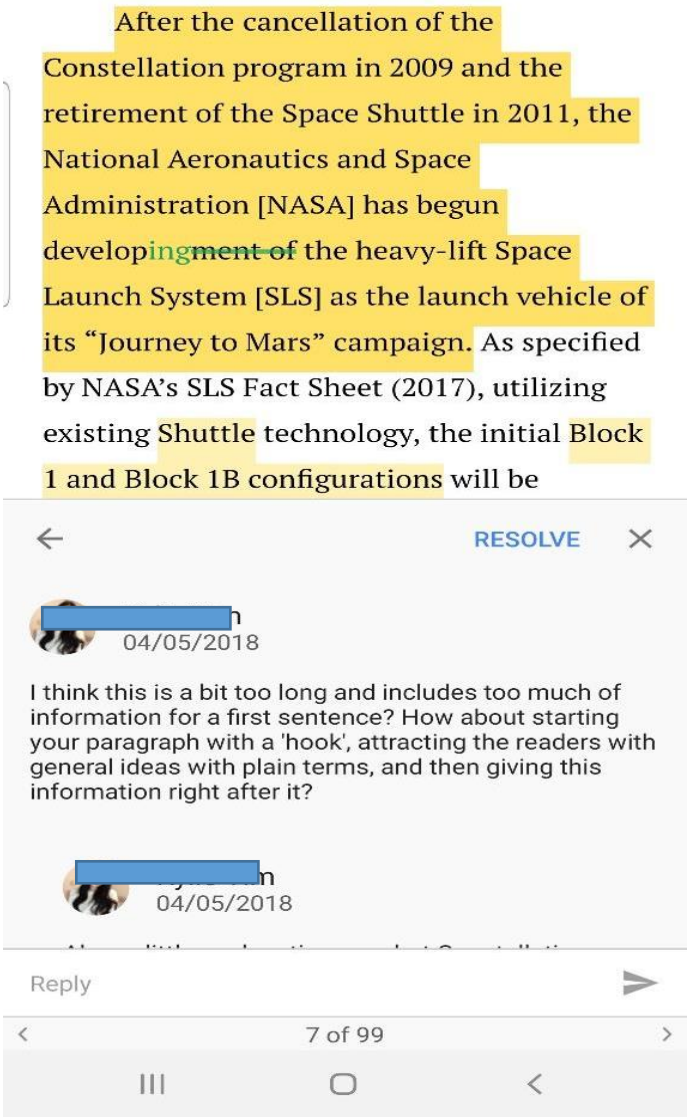
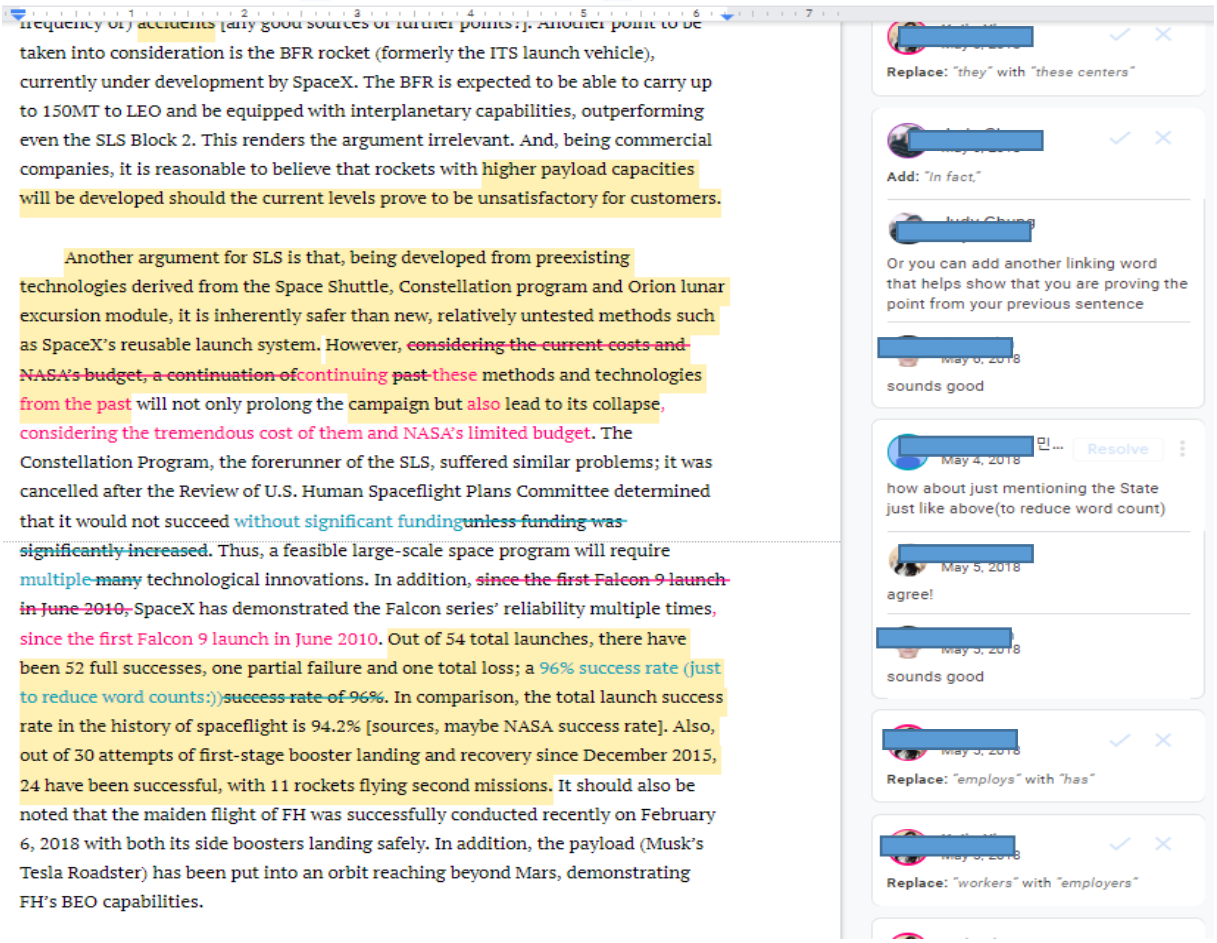


Figure 18 shows some of the exchanges in this discussion and illustrates the process by which one student makes a point, another agrees, and a third suggests a solution; thus, the feedback can be said to be 'co-constructed':

Figure 18: Example of co-constructed peer feedback



In addition to multiple cycles of engagement in peer feedback processes through dialogues, some participants described the process through which they synthesised knowledge in groups by referring to authoritative sources and comparing the understandings they gleaned from them. Hayley elaborated on how she experienced this:

> For Kylie's essay, Juno was also reviewing hers, so the three us could talk about common mistakes we were finding in her essay. There were agreements on some parts, and there were disagreements on some parts, so it was interesting to find that some people didn't think the same as me.
>
> (Hayley interview)

I then asked Hayley how the disagreements were resolved, and she explained that the participants attempted to evidence their opinions using learning resources:

> Well if someone didn't agree with me, I think I found some sources to back up my opinion, and Juno also did; it became a kind of debate.
>
> (Hayley interview)

Kylie confirmed her experience of Google Drive facilitating multiple feedback cycles:

> Google drive was awesome, if you do paper feedbacks, you get a feedback, and that's it, but if you do it on Google drive, one feedback is like **multiple feedbacks** because you can talk to each other and like one person says you should fix this to this and I just suggest another thing, and when that person replies again it's like another feedback I get.
>
> (Kylie interview)

The fact that students could collectively develop their feedback points also made them more willing to try to give feedback which reminds us that giving feedback can also be considered a face-threatening act (Brown and Levinson, 1987) that learners may wish to avoid:

> Also, I can give feedback more freely because I know that **I can develop my idea** effectively talking with people about the feedback. I threw away the fear about giving right and perfect feedback. I feel free about giving any idea and feelings.
>
> (Questionnaire 7)

Jane also confirmed this:

> I think it [dialogism] made people more free about giving feedback, **people can give feedback that is not perfect,** and the small idea of someone can be fed back with others advising.
>
> (Jane interview)

Overall, the data in this section also suggests that several students experienced the co-construction of learning through the online (and other) dialogues they took part in. Participants believe this helped them to improve their understanding and thus, their ability to respond to feedback and to improve their work based on this understanding. Being aware of this also encouraged participants to give feedback. This appeared to have a substantial impact on participants' ability to use and engage with feedback but also represents an instance of significant learning and recipience behaviour in itself.

4.2.3 Dialogue aids understanding and use of teacher feedback

Participants made similar points about the importance of dialogue when understanding and interpreting teacher feedback, and the data suggest that independently of whether feedback is elaborate and detailed, students still appreciate the option to clarify and question feedback, so they can both fully understand it, and determine how it can be applied:

> Using Google Drive and Loom for feedback allowed room for discussion so I can extend and apply what I learned from feedback to my actual writing. The problem with the conventional way of feedback was that it was a one-way notification almost, from the Professor to the student. As I mentioned earlier, this serves as no more than a justification of our final grades.
>
> (Jenny reflection)

Jenny also contrasted her previous experience of feedback with this one and claimed that dialogism enabled her to better understand her feedback and how to improve her work:

> The feedback I used to get was not interactive at all. It was usually one-way feedback written on the paper, and brief feedback did not help me understand what the feedback is saying and what I have to do improve my paper. However, feedback via Google drive and loom made it much easier to understand and clarify the feedback as it was much more elaborate and as **I could make questions if there was anything that was not clear to me**.
>
> (Jenny reflection)

The claim was developed further in interviews:

> Through the feedback, you gave like both in writing the comment and the loom feedback you can **have a discussion right away** so that helped me more to understand exactly what you're saying.
>
> (Kylie interview)

Furthermore, the process of engaging with feedback with the help of dialogues with either the teacher or peers was the aspect of the course that some participants felt had the most substantial impact on their learning:

> I think after receiving the feedback from you and the process of correcting those mistakes, like though asking some questions, or like having a discussion with other peers, **that process was the most important part** of the course, I think.
>
> (Nahyun interview)

Grace also reported that the technology-mediated dialogues she engaged in completely satisfied her need for support from the teacher during the course.

> I didn't visit the office, I didn't even write an email or anything because I thought the dialogue itself was sufficient and it was clear to me, it was clear enough.
>
> (Grace interview)

In her interview, kylie highlighted the importance of technology-mediated discussion about the feedback she received, and the difference this had made to her ability to use the feedback, and to her emotional state regarding the feedback:

> If I don't agree with something then I raise a question [electronically], so I asked the teacher why I got this mark. Then if the explanation is reasonable enough for me, that is super good, so I understand why, and I find some points that I can work on.
>
> (Kylie interview)

She then referred to an actual case during the course in which she had asked me more questions about the feedback using the technology on her persuasive essay:

> I was really confused and frustrated after reading the feedback, so I asked a question, and then after I got the answer I thought the answers were reasonable enough, so my confusion went away, so then I could focus on the content itself… from there I think my emotional response was actively engaging with enthusiasm and with passion
>
> (Kylie interview)

This data supports the supposition that participants felt that the ability to ask technology-mediated questions to the teacher supported understanding of feedback and therefore the ability to use and apply the feedback. There was also the perception that it was easier and faster to do so with technology:

> Google Drive allowed us to easily access teacher's help or opinions by tagging the teacher in our comments (no need to look for the teacher face-to-face).
>
> (Questionnaire 10)

> …you can have a discussion right away
>
> (Kylie interview)

This data shows the potential of student-teacher dialogue using technology to support the understanding and use of feedback.

4.2.4 Peer feedback facilitated the skill of audience awareness

In interview, Judy, Grace and Kylie also talked about what was perceived to be another benefit of dialogic peer review, the fact that it helped them to understand the perspective of the reader and develop audience awareness skills:

> It really helped… because I have no idea if I'm doing it right if I'm on the right track … I sometimes

> get blinded by what's clear and what's not, and I know what I'm wanting to say, so if I read it, it could sound clear but without having another perspective… having that process in the middle is very helpful
>
> (Judy interview)

Grace's interview confirmed that for her, peer dialogues enabled her to understand audience perspective:

> …It enabled me to **equip myself with the perspective of the reader**: 'Oh that's how they think oh that's how my sentence it looks like'.
>
> (Grace interview)

Kylie's interview account confirmed a similar experience of peer review:

> The content of the comments…always gives me some new points that I need to consider during the dialogical process I can figure out what it was and then what I need to be more specific on.
>
> (Kylie interview)

Similarly, Hayley explained that it helped her to understand what a general audience outside of her field could be expected to understand and what she needed to define or explain:

> I could check if the concepts of that area I was using were understandable by other people by general people
>
> (Hayley interview)

These accounts suggest that in addition to the value of the peer feedback they received, partaking in dialogic feedback activities also allowed participants to develop skills in audience perspective-taking. This then acted as a form of feedback the participants were able to reflect on to improve their drafts.

4.2.5 Receptivity and dialogue

Participants reported that dialogue facilitated their understanding of feedback, supported collective learning and supported their use of feedback. In addition, there were also reports that the online dialogues supported receptivity to engagement in feedback practices such as peer review, as well as to discussions with the teacher and peers. It was reported that technology supports this in at least three ways; first, by removing barriers to seeking help between the student and teacher, second, by mitigating cultural and emotional barriers to peer feedback engagement, and finally by reducing the perceived burden of giving peer feedback. Each of these points will be discussed in the context of the supporting data in the following sections.

4.2.5.1 Reducing barriers to seeking help from the teacher

Participants reported that they would be much more likely to ask for help with their work or in understanding feedback if the discussion took place as a Google Drive comment discussion rather than as an email which they perceived as too formal to produce or too burdensome for the teacher to answer. They also seemed reluctant to ask questions face-to-face due to a Korean cultural barrier in which questioning teachers is seen as impertinent. Kevin explained his attitude to asking questions.

> I still thought asking professor was like not agreeing with you, refusing the instructions I saw it as that, it implied that you are wrong or is there something wrong
>
> (Kevin interview)

I asked if there was anything that would help him to ask questions:

> I can ask questions now, I think it just took time to ask the professor questions, you kept saying that it was okay to ask anything anytime, so your attitude also break-off the barriers.
>
> (Kevin interview)

However, the idea that participants feel less reluctant to open a dialogue with a teacher because of the use of technology was first discovered in the questionnaire data:

> instead of writing an email using @jameswoodsnu@gmail.com on doc I think made it feel less formal, so I was more comfortable with asking the teacher.
>
> (Questionnaire 1)

But this was then confirmed by Holly, Judy, Nahyun and Kylie:

> If I use email if it feels more formal to me, so I feel more reluctant to send an email, but then if you do it on Google docs, it feels more casual, so you're more willing to send a comment or remark.
>
> (Holly interview)

Holly also claimed that this increased the number of interactions she had with the teacher because compared to email, she felt sending Drive comments ‘bothered people’ less. Judy perceived that emails might be ‘annoying’ for the receiver; and thus, a more ‘informal way of communicating with the teacher was helpful’. According to Judy, the effect of such informality was:

> when you're in doubt, you usually end up asking whereas, if there was no such means, when you're in doubt, you most likely do not ask.

(Judy interview)

In her interview, Kylie expanded on this and claimed that the usability of Google technology itself made a difference to her experience of the course and the way she engaged in the feedback activities:

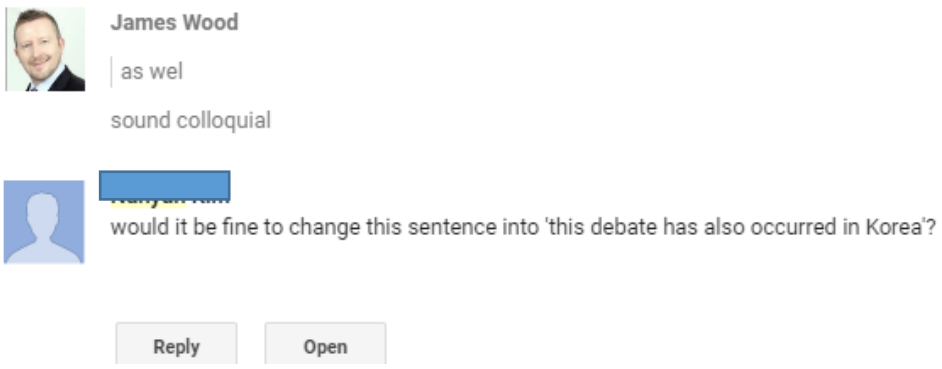
> I think the technology that we use during the class was really important for facilitating engagement of the feedback process…because **it's way easier**, and **way faster**, **way approachable** than not having it, especially Google classroom, you can always make comments and then you can answer to them right away… For other classes I sometimes I'm asked to make comments to other students work but it's not on the work itself but it's there's a file I can click it to see it but I have to make comments on the bottom of the posting right hmm so it's not as effective as Google Drive…
>
> (Kylie interview)

The participants also felt they were able to receive timely and relevant answers to their questions (including general questions through Google Classroom) and some participants noted this as one of the most outstanding aspects of their experience.

> It was excellent to get feedback as I asked a question. In fact, in other classes, it happened so often that professors are too busy to reply to student e-mails. Or, they answered too late However, in this course, I could get important answer for my question.
>
> (Questionnaire 5)

Answering such questions an efficient process using the system. In figure 18, one of the participants asks if her suggestion is an appropriate solution to the problem I pointed out in feedback on her text. I was then able to select the reply button (see below) this generated an email, and I was able to write 'yes', and press send. In this way, technology mediated a time-efficient feedback response process.

Figure 18: Example of a comment question



Overall, participants' accounts converged on the notion that the use of technology for communication with the teacher made students feel more comfortable (because of a perceived reduction in formality) to ask questions and increased the frequency of questions asked. These questions, in turn, enhanced their ability to use the feedback they received.

4.2.5.2 Reducing cultural/emotional barriers to engagement in peer feedback

An important aspect of the technology-mediated feedback practices was the fact that they were designed to facilitate feedback as an ongoing conversation. This reportedly helped participants to overcome some cultural and emotional barriers to engaging in peer feedback activities. This theme was first detected in the written data:

> Enabling feedback to be like a two-way conversation helps in several ways. First, this creates a sense of relationship with peers, and thus students feel more comfortable in giving many comments to each other because they know that they are **not criticizing each other** but rather helping.
>
> (Questionnaire 3)

Several participants also explained that their prior experiences of feedback caused them to view feedback as an unwelcome 'criticism of performance' and discussed 'cultural barriers' or experiential reasons to refrain from peer feedback engagement. These apparently caused younger students to feel that giving accurate feedback to an older student might be perceived by others as a transgression of Korean cultural norms. In Korea, younger individuals are expected to defer to the 'greater experience' of older students in an age-related hierarchy. This is reflected in the excerpt below:

> The ways we use to give and get feedback [technology] make me feel easy and comfortable about the feedback. Before entering this class, **I was afraid of advising** someone, **especially older** and **higher-grade** peer. I felt that advising someone needs perfect certainty. I thought advice is not giving my idea, but giving the answer, **pointing out wrong point**.
>
> (Questionnaire 7)

However, it appears that the technology-mediated dialogic aspects of the course helped participants to modify their beliefs regarding what is acceptable when giving peer feedback and to realise that peer feedback is about 'helping each other' to reach full potential rather than pointing out shortcomings. The response from Questionnaire 7 continues below to reflect this:

> However now, I learned that we can give feedback when we have opinion, advice and feelings. All this can help writer to reflect readers. Methods such as google classroom and google drive made us give or get feedback anywhere anytime, and made giving feedback more easy and comfortable…the practices made us freely talking with people regardless of position (whether superior or inferior).
>
> (Questionnaire 7)

In interview, Kevin also explained why some Korean students might have negative feelings about giving/receiving feedback due to previous experiences:

> Getting feedback means getting evaluated or criticized in most of my experience…and also there was no chance to revise it. It was just a declairement that you've done this wrong or you have to fix this but there was no chance to fix it.
>
> (Kevin interview)

While another questionnaire response explained why it is easier to give peer feedback as a two-way conversation, because taking part in a conversation about how to improve work did not feel as much like personal criticism:

> Being able to have two-way conversation made it less stressful for me to give and respond to feedback. When there was something that I didn't know, I could always put questions about it, and since it is a conversation, I could give my feedback as question. I think this makes it easier for people to make peer feedback because it **doesn't feel that I am pointing out someone's mistakes** when I am having a conversation…
>
> (Questionnaire 3)

Participants also revealed that they felt more inclined to give feedback when in the form of an ongoing online conversation because of a collective scaffolding process that supported and expanded their understanding (see section 4.2.3). This meant that even a hunch could be developed into an actionable feedback point, and this reportedly increased willingness to offer a feedback point, even if the participant had not yet been able to clearly formulate the point they wished to make:

> …because one can always ask a follow-up question, there is no pressure in the feedback having to be a one-time thing.
>
> (Questionnaire 1)

The point was also further developed in interviews. Holly explained the typical process under which even uncertain peer feedback comments would facilitate the use of the feedback:

> …My peers asked me a lot of question about my comments so I really replied, and I think that actually some comments helped them to change their way…when I put a comment there is another comment from the writer of that essay and the other feedback giver also agrees about that point then the original writer changes the point, I think that was the most common process…
>
> (Holly interview)

In her interview, Judy described the process of working with others to develop understanding as a 'huge synergy effect':

> When all this feedback is compiled, and people utilize teamwork, a huge synergy effect can be achieved.
>
> (Judy interview)

While others talked about how this had helped them to change their attitudes towards engaging with peer feedback and other feedback activities:

> My biggest take-away is that feedback is open to everyone, everywhere and every time. It made me feel feedback more comfortable and easier. This led me to actively participate in feedback process.
>
> (Questionnaire 10)

Overall, the data reported in this section shows that participants perceived there to be several emotional and cultural barriers to engaging in feedback activities. Taking part in online dialogues with peers was helpful for them in mitigating some of these barriers. This, in turn, supported their ability to use and engage with feedback.

4.2.5.3 Interaction in texts encouraged the need to reciprocate effort

In addition to the perceived effects of dialogism reported thus far, several participants also explained that the presence of dialogic interaction on their work also made them more motivated them to use the feedback. This was because they perceived that the effort that had gone into producing the feedback was itself something valuable. In her interview, Judy explained in depth how group discussion of her work triggered a strong imperative to engage with the peer group feedback she received:

> It made me more motivated to actually fix it, so I know that everyone's engaged and people are putting their time and effort in doing my feedback and I'm also doing the same, and because I know how much time it takes because I'm doing their feedback also, it would be a sin to not use

> it…**I think it's just like a motivator**, it's like a **synergy effect**, everyone. One person gives some feedback, and you're required to give others feedback that just creates like **this energy** and **this collaboration**…
>
> (Judy interview)

Kevin also explained how he perceived the discussion about improving his work to be emotionally supportive:

> I feel I'm being an important person, so everyone is helping me to be a better writer, **that emotion itself helped me a lot in writing.**
>
> (Kevin interview)

In her interview, Jenny explained that in comparison to dialogic feedback, her experience of non-dialogic feedback often made her feel like giving up:

> When I think that I cannot get any support and I just feel frustrated, and I'm gonna make-up very bad work, like giving up, I should give up, yeah.
>
> (Jenny interview)

Jenny also explained that her experience of the technologically supported dialogic classroom was emotionally supportive and helped her to feel:

> I'm not doing this work alone, and there is someone who are so looking forward to my improving…I think it was support and feedback yeah that make me really motivated to work hard and improve.
>
> (Jenny interview)

These comments show that perceiving 'time and effort' and the 'value' and connectedness of a dialogic peer community can be experienced as 'synergy' or motivational force, as well as a source of emotional support. It appears to encourage feedback recipience within ad-hoc informal learning communities that can form as a by-product of engaging in dialogic feedback practices.

4.2.6 Giving peer feedback assists in self-assessment

A slightly different but related point was that students felt they could learn from giving feedback and that the benefits of the act of giving feedback were perceived as akin to the process of comparing work to exemplars and analysing them against assessment criteria. Seven of the participants mentioned these aspects in their written feedback. The data presented below is in answer to a question on what helped students to understand 'what good standards are', as well as to self-assess and set goals for improvement. This also refers to the U of the USM model:

> …Not only receiving the feedbacks but also **giving it** was also very important process that also helped me view my paper from objective point of view, learning from others weakness and strength. And as I had to give feedback, it motivated me to learn more and to absorb the lessons in the class to make valid feedback on other's work. After this process, I learned many requirements for academic essay (writer-responsible way of writing and criticality) however, I could also realize the area that I have to work on for further progress. I'm very thankful for this kind of opportunity!
>
> (Jenny reflection)

> Peer review! It was a little bit hard to try to be critical of three other writings, but I learned how to be more critical of my own writing. The fact that giving proper, detailed feedback rather than receiving such feedback is more effective encouraged me to go through the process.
>
> (Judy reflection)

In his reflection, Juno went into some detail about how he could apply what he learned in a class about, for example, logical fallacy by looking for fallacies in the work of others:

> I found that I could apply what we learned in class about logical fallacies. I saw the straw man fallacy in many essays, and an argument from authority and cherry-picking.
>
> (Juno reflection)

He then explained how this led him to reassess his own work:

> …this went both ways. After I discovered where potential fallacies could be lurking [in others' writing], I went back to my essay and revised some of my arguments to reflect this.
>
> (Juno reflection)

Kevin corroborated this perspective, and believed it gave him the ability to see his essay more objectively:

> Also, giving feedback to others improves my essay too...It gives an opportunity to see my essay in an outsider's point of view.
>
> (Kevin interview)

While in her interview, Grace indicated the belief that giving feedback was also important for her own learning:

> Understanding how feedback changed and improved my writing helped me to be more active and critical in giving feedback especially because I realized that not only using but giving feedback to others matters a lot in my learning process.
>
> (Grace interview)

And as a part-time academic writing teacher herself, Kylie was able to explain more explicitly how the process of self-reflection worked for her:

> I know from my work that giving feedback also helps me, because I learn a lot about good writing itself when I'm giving feedback…if I see other people's writing, then it's much more clear to me what can be done better, compared to looking at my own writing, so looking at other people's writing and then finding out how it can be improved and what they're missing, or doing good I can also apply that knowledge to my writing later.
>
> (Kylie interview)

Kylie further explained that though the class, her belief that giving feedback could improve her own writing had become stronger because, through dialogic peer feedback activities, the number of cases she was exposed to and could reflect on had increased. This made her more certain that giving peer feedback was helping her in her own learning:

> Because like the number gets bigger like the more examples you see, the more knowledge you have that you can apply to your own writings.
>
> (Kylie interview)

After prompting Kylie provided a clear account of how she believes she learns from giving peer review:

> So, if I see writing that has really bad structure, then I probably learned 'oh structure is really important' so I should never do this…then if I see something that is really context-dependent, then I'm full of questions, and I also learn that I should never do this.
>
> (Kylie interview)

The accounts of the seven participants provide a deeper understanding of how and why participants believe they can learn effectively from giving peer feedback. Jenny and Kevin's reports suggest that giving peer feedback helped them to take an 'objective' or 'outside' perspective, while Juno and Kylie's explained that they believe it gives them the ability to reflect on their own mistakes more clearly. Jenny suggested that it also motivated her to learn more about 'academic writing requirements' so she could be a responsible feedback giver. Kylie's exploration of how she believes she learns from giving peer-review also illustrates the kinds of 'internal dialogues' that take place when participants engaged in peer-review activities more deeply.

4.3 Open-folder environment and feedback recipience

A second major theme found in the data that has a direct bearing on answering the research question is the role of the technology-mediated open-folder system, mediated through Google Classroom and Drive. Some reported effects overlap with those described as a result of peer review, and participants also reported learning from peers' work through the open folder system. This included learning from others' approaches to learning, thinking, ways of responding to feedback and viewing others' teacher feedback.

The existence of the open-folder environment also had some affective influences. Participants reported the perception of positive (and potentially negative) social pressure. In addition, knowing they were not the only ones experiencing difficulties after feedback (because of the open environment) offered emotional support. Comments that were coded to the effects of the open aspects of the feedback environment occurred in around half of all written data sources and in all interviews.

4.3.1 Using other students' work as a model

One of the most frequently discussed aspects of the open feedback environment was the fact that it allowed learning from others in a broader sense. This was described by Kylie as:

> Opportunities for extended learning that are there if you want to use them.
>
> (Kylie interview)

Many of the participants described how they gained from the open feedback environment. While some students reported being uncomfortable having their work on show at first, they also reported quickly adapting to it quickly. Finally, in all cases, participants indicated that the benefits outweighed the disadvantages. The following account exemplifies this change in thinking from first exposure, to acclimatisation to the environment:

> At first, I thought it was odd that everyone could see each other's work. I thought that some of the conservative students would dislike this and feel conscious of their work being publicly shared. However, I think seeing our class now most people are benefiting from this! This is because no one is perfect, and there is always something to learn from others. As a class, we don't judge each other because someone got a lower grade but our mindset has changed to try giving each other the best feedback, learn from each other's mistakes, and also learn from good examples.
>
> (Questionnaire 10)

Respondent 10 also referred to using others' essays as a way of continuing to learn even after the final feedback process has finished:

> If I think I had done worse on one assignment that someone else, then what better resource is there than looking at how others did it and compare/contrast?
>
> (Questionnaire 10)

The compare/contrast process while not a form of feedback in itself, could be considered a dialogic feedback activity similar to 'inner dialogue' (Carless, 2016) and also an example of a strong form of feedback engagement. This is because it constitutes an example of proactive learning that goes beyond class requirements and for which students cannot be given immediate credit or recognition. There was some evidence that this was a common activity among participants:

> Comparing my work with peers that got better feedback and grade, I could understand the point where I have to work on.
>
> (Jenny reflection)

> I was a little surprised that I could freely see other's output, not only reply to google classroom but also midterm essay draft in google drive. It was quite helpful for me knowing my direction to refer other's output.
>
> (Questionnaire 12)

This comparison process was also discussed in interviews:

> I think through what others are writing, I could um recognize a common mistake that both of us are doing, and also, when I look at someone's draft that is a bit better than me, I can also compare with mine and try to get some idea to improve my work.
>
> (Nahyun interview)

I asked Nahyun for specific examples cases she was able to learn from:

> Judy and Juno…I felt like they have deeper thinking or criticality than mine, so I tried to look at their works.

And what she learned from those examples:

> When I was struggling with coherence and cohesion and the whole structure of the essay, I could get some hints from them, like "oh, there they were organizing their own texts really well"
>
> (Nahyun interview)

In her interview Jenny explained that she was able to use other students' work (in the case of work I had said was a good example) as a concrete illustration of lecture content, and of how that made it easier for her to apply what was being taught in her own work:

> I could learn from others work, and you suggest which paper is good and which can be the example essay I could learn from, like the things I learned from the lecture how to write the good essay, cannot really come to me in a specific way, but the good examples help me to get the content of the lecture more specifically.
>
> (Jenny interview)

In addition to looking at each other's essays and drafts, students also claimed to learn from others' reflective homework tasks on Google classroom. Figure 19 shows an example:

Figure 19: Example of Google Classroom task

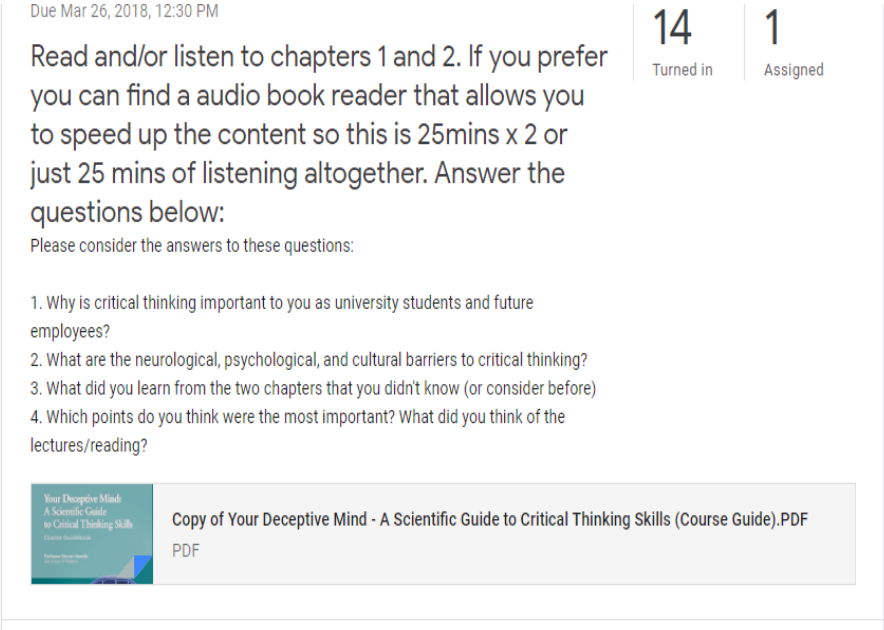
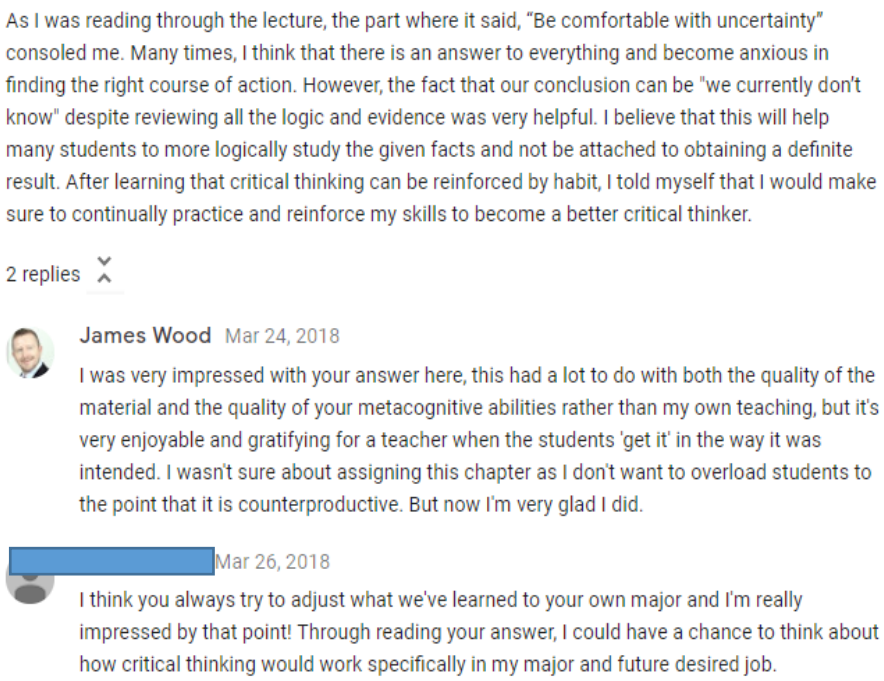


Figure 20 shows part of a response by Judy, and my attempt to give encouraging feedback. Nahyun then replies, declaring that she had been able to gain a useful perspective from reading Judy's answer to the question:

Figure 20: Example of learning from a peer forum post



Making a similar point, Hayley described what she learned from reading others' Google classroom reflective homework tasks as 'stealing their takeaways':

> they all have different perspective to what they're learning and like I said, when I was reading other people's takeaways, I felt like I was stealing their takeaways in a good sense.
>
> (Hayley, interview)

Similarly, Kylie also talked about how the Google Classroom mediated, open environment allowed for a rich learning experience and reiterated her belief that being exposed to other's work can lead to knowledge expansion:

> one thing I like about the settings was that I was able to access other people's work and learn from them and then…as we were doing our assignments, we could…always be exposed to new perspectives and share…knowledge and expand our knowledge through others. That's something that I liked.
>
> (Kylie interview)

Questionnaire data also suggested that engagement in secondary learning from the open-folder environment also supports general attainment because it can scaffold learning for weaker students:

> It helped me to get an idea of how to do the homework from the performance of peers.
>
> (Questionnaire 4)

> it was convenient for me for getting to know what I have to do, because sometimes I just slip away on the classes but after I check it I can be clear what I should do, and that helped me a lot in doing homework, and also I just seeing others' work get letting me know whether I was doing right or wrong I fix many times after submitting and seeing others' work.
>
> (Questionnaire 3)

Kevin developed this point further, explaining how viewing other students' work both before and after submission supported his understanding:

> …what really made a big difference, because like in other classes, that I take as a freshman, I really have problems…sometimes I don't have idea how can I get started and just watching others' works really helps me in that aspect, at least I know how to start it, and then I do it and after submitting I just again,…. that really helped me catch up, I think.
>
> (Kevin interview)

He also explained how the process of noticing the gap between the work he produced and some good examples on Google classroom acted as a form of feedback akin to that from peers or the teacher feedback:

> By seeing each other's work and reflecting into my work and revising it again, I think that is really similar to the progress that we have done…this is part of the feedback.

Similarly, Kylie summarised what she perceived to be the benefit of what she termed the 'open community' derived through Google classroom and the Google Drive open-folder system:

> So from that perspective, the openness, one of the biggest advantages, is that **I can choose to learn more if I want to.** So if I choose to learn one thing from each student, then I can click on everyone's work and then find a takeaway from each of them, and that's the biggest strength of open community,…I think that's very true and **that's such a valuable thing** even if we have some negative effects, we can always you know try to mitigate the negative effects for the sake of the beneficial effects.
>
> (Kylie interview)

Together these accounts suggest that participants did use the data within the open feedback environment as a learning resource. There was a general belief that this had a positive effect on learning, and thus, on the quality of written work, and this was found to be valuable. Interestingly, these reports evidence use of the 'open feedback environment' by students at both ends of the attainment spectrum, suggesting potential learning benefits across the board from such practices.

4.3.2 Observing and Modelling others' feedback recipience

In addition to using others' work as a model, example, or guide, participants also revealed that they gained from observing and, in some cases modelling how other students responded to and used feedback. Grace also explained that having access to the open-folder environment and others' essays and Google Drive comments not only functioned in a similar way to analysing exemplar essays which she found helpful:

> it's similar to you giving us an example exemplar essay
>
> (Grace interview)

Grace also explained that the open-folder environment exposed her to alternative methods for integrating feedback that she could contrast with her own strategy to reflect on how effectively she was learning:

> I like it when I see my peers because we're going through a discussion and we're giving feedback to each other every week so I can see the progress…I can see how your feedback is reflected in hers or his. I can see how other students integrate that feedback in their writing vs how I do it.
>
> (Grace interview)

The ability to model the process of peer feedback engagement also reportedly helped Holly to develop more positive beliefs about the effectiveness of engaging with feedback which she explained led to her being more motivated to engage in her own feedback process:

> …Judy… really actively, put the peer feedbacks in her essay by asking us a question or those kinds of things, and she really wrote it well the other time [her redraft] and I just like thought, if I also, utilized the peer feedback well, I can get better.
>
> (Holly interview)

Judy (a student with very high attainment) also explored how she was able to learn from observation of others' feedback integration strategies:

> For example, I watched Juno's essay feedback, and I just learned you gave him feedback on like, 'make this clear', like his paragraphs at the beginning were very long and a bit disorganized so I just saw the process of how it became clear.
>
> (Judy interview)

Similarly, Juno also detailed his process of learning from others' work in the open-folders and how he applied the learning to his own work:

> I kept tabs on three or so people who I judged to be much better than me in many respects (thus, whom I had a lot to learn from)…I checked their drafts from time to time, saw their feedback process and improvements in later drafts.
>
> (Juno questionnaire)

Interestingly, he reported that while his first motivation to look at others work was to establish his position in the class hierarchy, by the end, he realised process the process had resulted in unexpected learning gains:

> I must admit that an urge to see how well others did and compare myself to them partially motivated me in the beginning. However, at the end, I had learned some new things, saw others improve, and was able to apply this to improve myself as well.
>
> (Juno questionnaire)

Thus far, this overarching theme has presented evidence that the students used the open-folder learning environment and that this helped them to learn from others' work in several ways; comparing and contrasting, helping with 'direction' (participant 12), reflecting on weak points (Jenny), or scaffolding 'deep thinking', 'criticality' and textual organisation (Nahyun). Nahyun's response to Judy's forum post also suggests that her thinking was positively influenced by Judy's reflective writing.

Similarly, Jenny also indicated that she felt that others' work in conjunction with teacher feedback could act as an exemplification of lecture content, while other participants claimed it helped them to keep up with the classes. In the case of Kevin, it also appeared to stop him from falling too far behind as he had in some of his other classes. Finally, Grace, Holly, Judy and Juno (higher attaining students) explained how viewing other students' responses to feedback helped them to reflect on, and potentially modify their own feedback response processes. These accounts suggest that when given the opportunity, some students will use additional information available to them through an open environment to independently further their own learning and even support their engagement in the classroom.

4.3.3 Learning from others' teacher feedback.

Several participants reported that looking at others' feedback from the teacher helped them to understand good performance, and to achieve it. This phenomenon was first illustrated by Kevin who mentioned that after checking his own grade against the criteria, he also checked the discussion of how others' essays met the criteria. This apparently helped him to better

understand target performance:

> I checked how did you mark others and that also let me know what a good essay is.
>
> (Kevin interview)

In fact, several students admitted watching colleagues' feedback videos, Judy, for example, when asked if she used others' teacher feedback explained:

> Yeah, I just go to their Loom and…see what kind of feedback other people get yeah…I would watch it a couple of times, a couple of essays that I liked, I would watch their feedback
>
> (Judy interview)

In the same vein, when asked about her use (if at all) of others' teacher feedback, Hayley felt that viewing higher attaining student's feedback, helped her to feel that she would be able to achieve a higher score in the future. She found this motivating:

> I kept thinking that even if I got a lower grade than them when I was reading those other good essays, I was thinking that I can do better than that if I do it next time.
>
> (Hayley interview)

Jane explained how she used the data to improve her understanding:

> I often log in to Google and read others' writings essays and the feedback, and I also read my own writing and feedback, also others writing and feedback too, - so I read all the people's ideas feedbacks in their minds…
>
> (Jane interview)

Finally, Juno went into more detail regarding the learning process he engaged in when using teacher feedback videos. He noted:

> I also watched a lot of teacher feedback videos for students, positive and negative, and saw where other students had gone wrong or needed to improve. I was able to learn somewhat from their mistakes as well and incorporate some of their learning points into my own.
>
> (Juno interview)

This section has established that some students did use each other's teacher feedback and that this helped them to both understand the standards and feel they could produce better work in the future.

4.3.4 Motivation and the 'audience effect'

It was apparent from the data that the participants also felt motivated to use feedback due to the public nature of the feedback environment and the existence of an audience for their work beyond the teacher. This is illustrated by a questionnaire response:

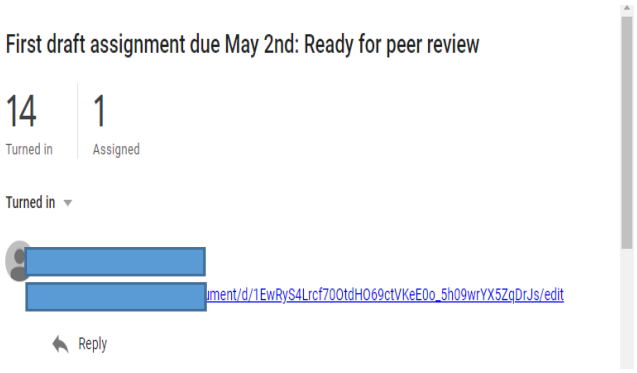
> Because my works were open to the public so that all of the peers were potential audience of my essays, I could pay more careful attention on my writing. Also, the existence itself of someone who give some advice/suggestions on my work drove me to spend more time on thinking about and correcting my mistakes/weaknesses.
>
> (Questionnaire 6)

This respondent also reported that the use of Google Classroom for submitting assignments encouraged on-time submission and increased the effort expended on each task:

> It led me to be more careful to submit the assignments in time, and do my work putting much more effort.
>
> (Questionnaire 6)

This may have been because Google Classroom provides a list of who has and who has not completed each task after the submission date, and students can view each other's work as seen in figure 21:

Figure 21: Example of Google Classroom showing assignment completion



Questionnaire respondent 3 made a similar observation:

> I thought more students wouldn't do the homework without Google classroom. Sometimes the amount of homework is burdensome because of other work that I have to do, but the fact that everyone would see me as an irresponsible person if I didn't do the homework motivated me to at least finish the homework.

Similarly, Jenny suggested that submitting homework on Classroom encouraged her to do better work and offered a model she could learn from:

> I think the fact that my work can be seen by others made me do work better, and from seeing other's work, I could learn from peers.
>
> (Jenny reflection)

Other students noted that the open environment helped them gauge their progress against others, and the motivational effect of seeing the work of other students was also a common theme in the data:

> I was motivated by being able to see the progress of all my classmates in real-time.
>
> (Questionnaire 11)

> Knowing my work would be seen by everyone encourages students to make more active for the class, since students does not want to…appear poor attitude to others.
>
> (Questionnaire 4)

These comments indicate that participants felt motivated to engage with feedback, complete homework and improve their drafts due to the visibility of participation/non-participation in the open feedback environment and their preferences for preserving and building face.

4.3.5 Relationship between mobile convenience and engagement

Similarly, the ease of use and affordances of the technological platform may have encouraged participation in the feedback practices by reducing the friction or hassle involved in doing so:

> It was also efficient in terms of feedback because we had this unified platform/place where we can find all of each other's works, read them, comment on them, get immediate notifications when getting comments on our work, etc. I also liked how we were able to see how other people were progressing and giving feedback to others because this motivated me to do better and get inspired by the hardworking students. Using Drive greatly motivated me to actively participate in feedback.
>
> (Questionnaire 10)

It was also reported that the online and mobile functionality of the system was a contributor to engagement in the feedback activities because it allowed free time and transition time to be used productively:

> I think the best thing is that you can access the class materials on mobile (Reading things on subway is extremely convenient).
>
> (Questionnaire 6)

Minseung explained the connections between the accessibility of the Google Drive system and his motivation to use it productively during his commute more deeply:

> Using Google Drive was awesome…one feedback is like multiple feedbacks…it's easier to understand the feedbacks you can ask what the peer exactly means and it's easier to do fixing because you can do it on the **mobile** and computer… **it saves a lot of time I spent almost two-hours per day on the subway, so that means I get two hours to do the feedback I think per day**… if I didn't use the Google Doc and I would have just like spent that time like watching YouTube or listening to music, but I get two hours of extra time thinking per day, so I get a deeper understanding of what that feedback means, or what I should do.
>
> (Minseung interview)

Juno also explained that this helped him to engage more than he would have done if it had not been so convenient:

> Because we could do it at home in school anywhere not just in class, especially not in class, but anytime we had free time…I did a lot of on Drive work and to respond to that again, that was really easy, so I think it was really accessible, commenting, and to comment back on that and maintaining a conversation is really easy.
>
> (Juno interview)

Juno also felt that the functionality would not have been possible without technology:

> If we were just using paper, I'm not sure how we could have talked at all if not for Drive or any other online tool. I'm not sure we could have done anything
>
> (Juno interview)

Juno further pointed out that in comparison to face-to-face collaborative work which can be difficult to schedule, Google Drive allowed peer feedback discussions to be staged asynchronously over time, and this encouraged collaboration:

> You know like on normal projects the teacher goes just 'meet on your own decide your time, meet somewhere and do your stuff', but that's really hard for people to synchronize their time, so they usually have very few meetings close to the deadline and then that that's it. But drive didn't have a time limit, so it was able to facilitate conversation at all times, I think that helped a lot.
>
> (Juno interview)

The time factor also apparently helped with both the quality of the feedback and the motivation to take part in feedback activities:

> Using Drive for peer feedback gives peer and me **enough time to think about each other's works.** I think it helps us to give higher quality feedback, making us more motivated.
>
> (Questionnaire 4)

On a more practical note, Kylie also talked about the suitability of Google drive for the open-folder and peer discussion environment, making the point that Drive was better than ETL (the Moodle-based system at SNU):

> It was very helpful Google Drive was something that I could save all my works and then talk with the professor and with the students' classmates and when you're using Google Docs, the most simple, the most attractive feature of it is that you can write something together at the same time and then you can make comments and then you can make suggestions and then you can chat right away.
>
> (Kylie Interview)

In comparison to other systems she had used, she felt the notifications were also crucial for drawing in student engagement:

> Because you don't get notifications and then the interface is not as adequate for having those kinds of dialogues, so Google Drive certainly has its advantage when it comes to dialogical process.
>
> (Kylie interview)

Grace also focused on the notification aspect of the affordances of Drive and Classroom in the 'any other comments' section of her reflection:

> Google Classroom was successful! I love how it sends notifications on my phone to remind me of due dates.
>
> (Grace reflection)

While Judy reflected on how the affordances of Drive had facilitated the lengthening, deepening and clarification of the dialogues they took part in:

> it's much easier to write on the computer…when I give people feedback on paper, I feel like I have to write it more concise and just like fit it right there… but on the internet, because it's like a conversation style you're free to write longer and I think…the content becomes more deep and clear.
>
> (Judy interview)

Juno's account concurred with this point, and he explored just how feedback discussions had evolved due to the 'conversational' affordance of Google Docs:

> The essay was like, eight pages, but the comments on the sides were like ten, twenty pages, they're really long, so I don't think we could have done that much and that extensively if you were doing just on paper or during class or just talking about it face-to-face or looking at…paper essays.
>
> (Juno interview)

Juno also felt that the feedback activities had worked synergistically to promote his engagement in the feedback process:

> Overall, I feel that these various activities significantly opened my mind to feedback and its positive results. However, this effect may not occur with different materials (e.g. solving math problems) or with insufficient tools (no Drive).
>
> (Juno reflection)

This evidence suggests that affordances of the technology platform used (or perhaps the synergy of the affordances of the platform) encouraged feedback engagement and time-on-task in several ways; it facilitated an open peer/teacher feedback environment that was convenient to access for (mobile learning), enabled in-depth discussion, collaborative learning (irrespective of time or place) and delivered notifications, reminding learners to complete homework or engage with peers. These aspects served to reduce the friction of participation in the feedback activities. It should also be understood that it is the strategic pedagogic use of the affordances of the technologies (and their interactions) that gave rise to such perceptions rather than the technologies themselves.

4.4 Perceived impact of screencast feedback

A great deal of data on how participants believed feedback delivered by the screencast medium influenced their feedback use and engagement process. Because some of these findings are also well-founded in the literature data reporting will focus on findings that may make a contribution to the literature on feedback engagement.

Participants generally indicated that Google Drive, Google Classroom and the screencast technology 'Loom', contributed to their experience of the feedback practices being dialogic. Participants reported the perception that they were able to communicate with the teacher as

much as was needed. This was noted by a questionnaire respondee:

> The methods such as Google made professor and students contact each other anywhere anytime outside the classroom. This opened enough opportunity to learn from and talk with the professor.
>
> (Questionnaire 7)

A number of participants also mentioned that the replayability of their screencast feedback helped them to understand and remember the content:

> For the video feedback I could replay that, so it helped me to remember and it was more detailed than paper feedback, so it was really helpful
>
> (Jenny Interview)

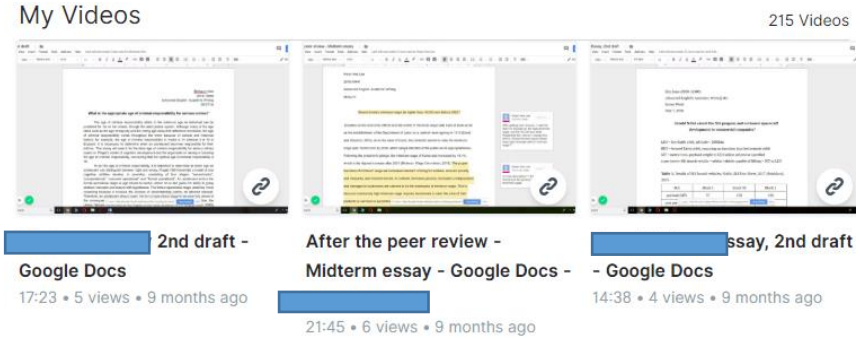
Kevin agreed this was a 'special feature' of the video feedback for him:

> I could see over time like many times if I couldn't catch some points on first thought, but by seeing again and again and I could understand more.
>
> (Kevin interview)

Kylie explained how the speed setting of Loom encouraged her to view the feedback more than once suggesting that new affordances of screencasts may positively enhance learner engagement with them:

> first I watched it with 1.0 [Speed] and then second I did it with 1.5 and I then actually watched the feedback for like 4 to 5 times and then after the second time I kind of played it while doing other things like with the 2.0 or 1.5 [speed] to like repeat it, so yeah kind of like background music so I was like doing dishes listening to the feedback, because the more I listened to it the more I remember it.

The screenshot below from my personal loom 'dashboard' shows that the feedback videos were in fact viewed multiple times, as we can see, 5 views, 6 views, 4 views, although the system does not disclose who watched the videos.



In comparison with face-to-face feedback, Judy noted that screencasts produced a permanent record which made it preferable to face-to-face meetings in which feedback could be forgotten.

> I liked how you could save it, not save it but re-watch it, so it's a form of feedback where it's not if I'm just talking with you one on one and it was in your office, I could forget it, and I'll be like oh wait what did he say again…
>
> (Judy interview)

Generally, participants appeared to appreciate the perceived dialogic 'conversational' and paralinguistic nature of screencasts (in combination with Drive). They also highlighted their replayability, their permanence as a record of feedback, as well as the variable speed options for repeated consumption.

4.4.1 Screencast feedback perceived as more 'feedforward' oriented

Participants also indicated that screencast feedback communicated more information than other forms and supported the use of the assessment criteria in summative assessment (because these could appear visually in the video). This made it easier for students to understand their 'level' and how to improve:

> Loom gave me elaborated feedback, so it was very helpful. And I liked that I could watch it repeatedly. As teacher assessed my work according to the marking criteria, I could see in what area I should more work on the next time and thus could set a goal checking the marking criteria.
>
> (Questionnaire 3)

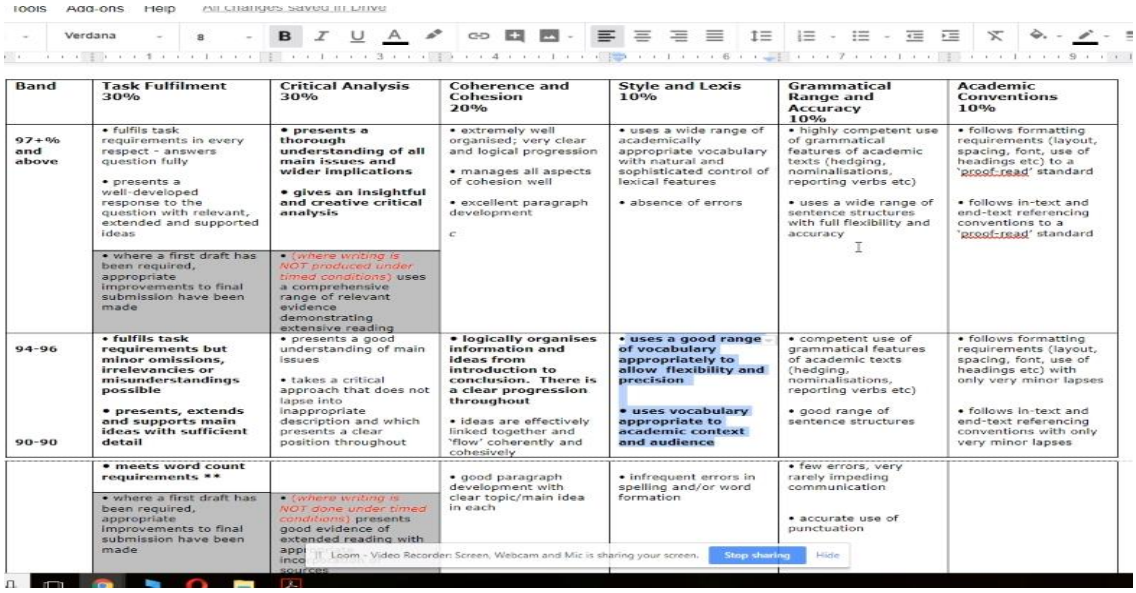
This was also corroborated by other participants:

> Because the class had clear marking criteria for the essay, and with the video, I could easily understand how my essay was.
>
> (Questionnaire 11)

> The feedback given in Loom helped me set goals and measure my goal achievement by looking back on what I should have done but didn't.
>
> (Questionnaire 2)

Figure 22 shows a screenshot of the marking criteria being used (on Drive) to highlight descriptors to aid learner understanding of their current abilities, as well as how they could be improved.

Figure 22: Marking criteria used in a screencast



Band	Task Fulfilment 30%	Critical Analysis 30%	Coherence and Cohesion 20%	Style and Lexis 10%	Grammatical Range and Accuracy 10%	Academic Conventions 10%
97+% and above	• fulfils task requirements in every respect - answers question fully • presents a well-developed response to the question with relevant, extended and supported ideas	• **presents a thorough understanding of all main issues and wider implications** • **gives an insightful and creative critical analysis**	• extremely well organised; very clear and logical progression • manages all aspects of cohesion well • excellent paragraph development	• uses a wide range of academically appropriate vocabulary with natural and sophisticated control of lexical features • absence of errors	• highly competent use of grammatical features of academic texts (hedging, nominalisations, reporting verbs etc) • uses a wide range of sentence structures with full flexibility and accuracy	• follows formatting requirements (layout, spacing, font, use of headings etc) to a 'proof-read' standard • follows in-text and end-text referencing conventions to a 'proof-read' standard
	• where a first draft has been required, appropriate improvements to final submission have been made	• *(where writing is NOT produced under timed conditions)* uses a comprehensive range of relevant evidence demonstrating extensive reading				
94-96 90-90	• **fulfils task requirements but minor omissions, irrelevancies or misunderstandings possible** • **presents, extends and supports main ideas with sufficient detail**	• presents a good understanding of main issues • takes a critical approach that does not lapse into inappropriate description and which presents a clear position throughout	• **logically organises information and ideas from introduction to conclusion. There is a clear progression throughout** • ideas are effectively linked together and 'flow' coherently and cohesively	• **uses a good range of vocabulary appropriately to allow flexibility and precision** • **uses vocabulary appropriate to academic context and audience**	• competent use of grammatical features of academic texts (hedging, nominalisations, reporting verbs etc) • good range of sentence structures	• follows formatting requirements (layout, spacing, font, use of headings etc) with only very minor lapses • follows in-text and end-text referencing conventions with only very minor lapses
	• **meets word count requirements ****		• good paragraph development with clear topic/main idea in each	• infrequent errors in spelling and/or word formation	• few errors, very rarely impeding communication • accurate use of punctuation	
	• where a first draft has been required, appropriate improvements to final submission have been made	• *(where writing is NOT done under timed conditions)* presents good evidence of extended reading with appl...				

Throughout the dataset, there were 13 unique references to, and 18 comments that discussed how feedback via video increased the clarity and depth of understanding of the feedback as well as how it could be utilised. Giving learners enough information through video reportedly had a highly positive effect on their ability to use the information to make a change. The questionnaire participant below, for example, reported that feedback through Loom was clearer and assisted in goal setting (i.e. the S aspect of the USM):

> Because Loom feedback gave me a clearer direction on what I was supposed to fix and focus on for my next draft, it was easier for me to set goals for what I want to accomplish in my next edit. Feedback would be meaningless for both the giver and receiver if there was poor communication between the two people.
>
> (Questionnaire 10)

A different questionnaire respondent corroborated this:

> I can understand more easily about intention of the professor and the cause that my writing is wrong and how I should revise it. The loom video gave me a detailed way that I can develop my writing and writing skills. Also, it made me a strong goal to achieve about writing academic essays and develop my learning abilities.
>
> (Questionnaire 8)

While another respondent explained that this was because screencast feedback provided more details and context on their writing:

> One big advantage of Loom is that it can give more details and contexts about the feedback.

> When someone give feedback through writing, it can be easy to become revising rather than advising. However, speaking about the feedback can give students more about advising and feeling. I think that giving aspiration to students is more important rather than making students' present essay better by revising.
>
> (Questionnaire 7)

Judy elaborated on this point in her reflection:

> After watching my final draft feedback video and taking notes on areas I need to change to improve my coherence/cohesion, I was able to get an idea of my weaknesses and on HOW I could change it. This is super important because many times students are told "you need to fix this part" but not "how" or any suggestions regarding it. I loved how in the video, I was not only told "this word choice is not appropriate" but I was also told why it was not fitting and some suggestions on how it could be changed. I think repetition of such a process will aid me in my areas of weakness.
>
> (Judy reflection)

Grace also discussed this aspect of the Loom feedback in detail in her reflection, showing how she thought it helped her in her ability to actually use feedback to modify her work because it was sufficiently specific advising 'where exactly' to improve, it also aided understanding of how changes could be made:

> Loom feedback was so much more helping and practical than receiving paper feedback with a summary-like evaluation. Feedback through Loom is straightforward and specific, the opposite of what most traditional feedback looks like (ambiguous and lumped together). Loom helps me to see where exactly I made errors, what parts of the writing contribute to form that sort of impression, etc. This helps to set specific goals for improvement on specific aspects. And most importantly, I know what I need to do to achieve that goal, instead of vaguely thinking "Next time, I'll make my writing clearer.... hmm... how do I achieve this?"
>
> (Grace reflection)

Another questionnaire participant suggested that screencasts also provided an extra layer of information as the marker gives feedback in 'real-time' as they read:

> I think the reason why Loom helps understand feedback better is because, in it, you are giving the feedback as you read through it. So I get to understand a bit more on why you gave that comment.
>
> (Questionnaire 2)

Grace also elaborated on this insight into the readers thought process as they read through the

essay:

> Many times when we get feedback on writing it's more just like underline, and like a red pen like a little scribble, and we don't really get the context of why the professor thought this way, and how he or she interpreted this, this phrase, but Loom, has the advantage of you underlining a certain line that I wrote in the sentence, and you can give context, you can give your thoughts in more detail. Then, I know the thought process that you're going through because you're just speaking and it's being recorded.
>
> (Grace interview)

Based on this evidence, it appears that learners perceived screencast feedback to be both in-depth and precise, suppling sufficient context and corrective information participants needed to utilise the feedback effectively. Participants also reported that witnessing a marker's thought process as they read the work added another layer of useful information transfer. This suggests that for several reasons, feedback provided through screencast was perceived as more 'feedforward' in nature.

4.4.2 Screencast feedback approximates face-to-face dialogism

Several students also explained that they perceived feedback facilitated by Loom (and supplemented by Drive) as conversational, which also made it easier to absorb:

> I realized that using adequate technology could be really helpful in the course of giving/receiving feedback. Especially with Loom, I was impressed at how it can imitate face-to-face feedback and make the content easy to understand compared to written feedback.
>
> (Questionnaire 8)

Hannah also raised this point and explained that the vocal nature of the screencast feedback represented something that could not be captured by writing alone:

> when you used the comments using google, I don't think I really think about deeply compared to the video, in the video you explain more about the points I missed, and I can actually hear your voice, and of like that's I think another language that cannot be known by the written language…
>
> (Hannah interview)

Nahyun made a similar point about screencast feedback and said it made her feel 'more connected' I asked her why:

> because it's like face-to-face I feel like you're having a discussion individually in class
>
> (Nahyun interview)

Grace explained that the combination of feedback dialogue but especially the use of loom removed her need for face-to-face meetings:

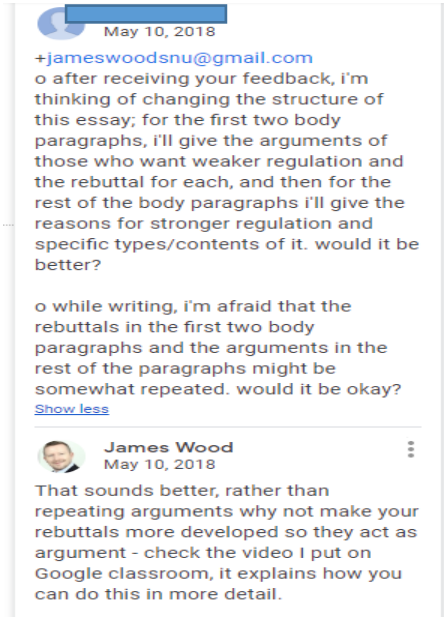
> I can see, especially from the loom you know, that's sort of like a substitute for office hours. Without Loom, though there will be a necessity for visiting or making appointments. But I felt like I'm already having office hours.
>
> (Grace interview)

These accounts suggest that some of the students felt that feedback delivered verbally has a greater positive impact on understanding. Perhaps due to the paralinguistic features of spoken communication that cannot be present when responding to students writing in a written medium, or because it gives the impression of two-way dialogue even though it is not actually two-way. Other participants reported that screencast feedback positively enhanced their perception of the level of dialogism in the classroom. For example, when Judy was asked which aspect of the course had the biggest impact on her engagement with feedback, she replied that it was Loom feedback because it replicated one-on-one meetings:

> …Google comments were also helpful but those were things I was able to get
>
> before, but getting the loom feedback, it really felt like I was one-on-one with you.
>
> (Judy interview)

Likewise, students reported being able to ask questions about feedback using Drive even if it was in response to a screencast, for example, in figure 23, Nahyun asks a question about her screencast feedback using a comment on her Google Doc:

Figure 23: Nahyun Initiating a dialogue about screencast feedback



This was also confirmed by a questionnaire participant, who referred to the use of Google Docs to ask questions about screencast feedback if required:

> If I did not understand something in the video feedback, I could go to Google Drive and leave a comment (tag the teacher) asking for further clarification.
>
> (Questionnaire 10)

Thus, it appeared that participants perceived screencasting feedback to be dialogic and to offer the benefits of a one-to-one session when used in combination with Google Drive commenting functionality. Screencasts have previously been criticised as a feedback medium due to the lack of bi-directional communication functionality; thus, this appears to be the first study in which this problem was reportedly solved (see chapter 5 for further discussion).

4.4.3 Feedback through screencasts triggers a desire to reciprocate

One important aspect of screencast feedback was the finding that feedback through the medium better illustrates teacher effort, care and devotion and that this in turn strongly motivates students to reciprocate by engaging with their feedback and using it:

> I realized that video requires a lot of time to give everyone. And I felt that it was an effort to make my learning better.
>
> (Questionnaire 11)

> You can see the teacher made so much effort you feel like you need to reciprocate it.
>
> (Questionnaire 2)

> Using Loom to receive feedback showed the explicit method…for better academic writing. It also motivated me a lot
>
> (Questionnaire 4)

Judy's comments on screencast feedback illustrate the motivational aspects of the feedback medium for her:

> It is honestly so amazing that I can get a 20-minute feedback video from a professor for not only my draft but also my final essay. I realize how valuable and rare of an experience this is from an SNU class and I am grateful for being able to GROW as a student through such feedback.
>
> (Judy reflection)

It seems her positive affective reaction was also due to the perception that the teacher read her

work properly:

> I am amazed and excited that I can have 20+ minutes of a PROFESSOR's feedback. It seems **rare** that professors **carefully** read through students' papers, but going beyond, reading our papers carefully, you make these videos which I am so thankful for. **It really motivates me** to do better in my final draft knowing that **you have chosen** to give us a chance to improve our essays using the feedback.
>
> (Judy reflection)

Kevin also explored the affective difference this made for him more deeply and how it helped him to understand that he was cared about by the marker.:

> I literally know that, you've seen every sentence in my work and you know, that makes me more, **trusting**, I know that feedback is better than on paper then **because you've put a lot of time** on it, I can know, how much time you've took, and I **know that you've seen every sentence**… That gave me a, 'do I deserve this?'. Even in university, I haven't felt like getting this much **affection.**
>
> (Kevin interview)

Hannah's account concurred with this perception and suggested that the medium of video encouraged her to work harder in integrating the feedback into her work:

> …in written feedback I don't consider it really much, and **especially the video, I know** you have put a really big effort in order to make it, so I just think, in that aspect I also tried to do it more, I pay more attention when I do that.
>
> (Hannah interview)

Judy also revisited this point in her interview:

> …**and it felt like my work really mattered** to someone that really cared about it and how my work was, like you spent time on my work, for it to get better, I could feel that.
>
> (Judy interview)

Finally, in Judy explained that the screencast feedback made her feel 'connected' with the teacher (interview), while Kylie found it 'soothing' and found the feedback 'less distant' (interview). This appeared to be further evidence that the vocal delivery of the feedback promoted positive affect, this may have, in turn, promoted engagement with screencast feedback.

In aggregate, these accounts suggest that feedback through the medium of screencasting can be effectively understood and utilised by learners, especially in combination with opportunity

for technology-mediated questions and discussion. Interestingly, feedback delivered by screencast was perceived as a demonstration that the feedback giver 'cares' about the learners' improvement and is devoted to facilitating it in a way that written feedback does not. This had an apparent impact on learners' positive affect as well as their motivation to engage with it and use feedback.

4.5 Receptivity and developing positive feedback beliefs

4.5.1 Initial adverse reactions to feedback

The final theme to be explored is one that appeared to be an unexpectedly important contributor to feedback recipience. This section will report the different aspects of the data that fell under the theme of receptivity to feedback.

Continuing on the theme of cultural and emotional barriers to feedback, discussed in section 4.1, participants reported that their original beliefs regarding feedback were almost completely negative. Judy's comment below is typical of many other comments on original beliefs regarding feedback at the start of the course:

> Before I took this class, I would have definitely been stressed by all the comments I received. In Korea, having "red marks" all over your paper means a bad thing. It usually implies that there is something very 'wrong' with the paper, and **many may consider this as criticism** rather than helpful suggestions.
>
> (Judy reflection)

Such beliefs appeared to be typical, and many of the students reported having strongly negative reactions to their feedback, especially at first. Indeed, 20 comments were coded to 'dealing with negative emotions' in the overall data; participants described feeling 'ashamed' (Questionnaire 13) and 'depressed' even to the point of wanting to drop the course as evidenced in the following questionnaire responses:

> At first, emotional aspect really affected me. I was not used to feedback, and it really was uncomfortable. It again made me seriously consider **giving up the course.**
>
> (Questionnaire 5)

> At first I thought that lots of feedback meant that there were lots of parts with flaws, so I was kind of **depressed**.
>
> (Questionnaire 11)

Hayley and Hannah's accounts concurred that emotional aspects had affected them emotionally:

> After I saw the second draft feedback from James, **I felt very much frustration** because I knew that I had to fix almost half my essay. It felt like a **very big burden**
>
> (Hayley reflection)

Hannah also explained her first reaction to getting feedback:

> … **I was really shocked,** and even for a short time, I wasn't able to do anything…I just slept…
>
> (Hannah interview)

4.5.2 Engaging with feedback after initial disengagement

Participants later explained that their initial reaction to feedback had been temporary and that a homework task in which they had watched videos on Carol Dweck's 'Mindset' theory, and Angela Duckworth's 'Grit' in class and discussed their 'takeaways' from them on Google Classroom had helped them to move past their initial adverse reactions and engage with the feedback. Below is an excerpt from the original classroom activity on Google Classroom in which Nahyun and Hayley discuss the transition from exhibiting signs of a 'fixed mindset' to seeing failure and feedback as a growth opportunity (figure 24):

Figure 24: Nahyun and Hayley discuss changes in their mindset

Much of the data suggested that this activity provided participants with concepts that seemingly aided in the process of controlling cognitive and emotional responses to feedback. In the following extract, one student used the word 'trained' to express how she felt more 'ready' for

dealing with negative feelings after reflecting on her discussion of mindset and grit and that this made her 'more ready' to learn:

> I reminisced the learning experience about the…2Gs [growth mindset and grit]…Because I was trained how to deal with emotional ups and downs, **I was more ready to think about what I can learn from the feedback**, not just check what grade I got…
>
> (Questionnaire 3)

In her interview Hannah also detailed her experience of the importance of this process, and how it helped after her initial 'shock' and disengagement with the feedback, to develop a 'learning goal' rather than a 'performance goal' (Robins and Pals, 2002):

> But really, the grit and those things you did at the beginning of the class [mindset] really helped me…I just was able to remember the first part of the class and "oh this class also values these kinds of things and **even though I fail, if I just try to learn**, my teacher will…actually know it".
>
> (Hannah interview)

In her reflection, Judy explained the importance of what she termed 'open mindset' [growth mindset] in her learning process from feedback, and how this encouraged her to try to fully understand her feedback by watching it twice:

> I realized the importance of having an open-mindset at this point…because if I were to have a closed mindset, I think I would have refused to acknowledge or understand the feedback that I did not understand the first time I received it and **would have not bothered watching it a second time…**
>
> (Judy reflection)

Kevin reported that the activity encouraged him to 'look beyond' the current result to believe he can make progress after receiving feedback:

> …I could experience what growth mindset meant first handedly… James told us about the growth mindset...The lesson really impressed me, **helped me not be discouraged** with current result and **have more 'active and learning' mindset toward feedback I get**… I have very positive attitude toward the feedback, and **I think this is related to the growth mindset**, and I'll keep developing on it. It will be helpful for my next essay, **since I believe that I'll do better**.
>
> (Kevin reflection)

Hayley's interview account also corroborated the point that thinking about the growth mindset and grit that helped her to understand her ability could grow incrementally with her use of feedback:

> so, I remember the growth mindset and like having grit in what I'm doing and especially about the growth mindset and fixed mindset. I was more of a fixed mindset person because at first, **I was thinking that I don't really want to do this I don't want to** fix all these many mistakes that's **too much**. But **I thought that though I can grow more** with this feedback, if I learn how to learn, what kind of mistakes I made, and how I can fix these problems I thought that I could become a better writer, academic writer...**I think it's a really important step before you actually learn** because that way, **you can know how to learn**…
>
> (Hayley interview)

Overall, 11 out of 14 participants indicated that the mindset activity motivated them to engage with feedback. As a whole, the data implies that learners believed the concepts grit and particularly mindset supported emotional and cognitive aspects of feedback recipience (see section 2.2

4.5.3 Receptivity and positive beliefs about feedback

Now that the main focus on the perceived impacts of the distinct practices of the research question has been addressed, I will consider the holistic or systemic effects of the feedback practices by examining account data that illustrated the effects not attributable to any one feedback practice, but rather to the overall experience.

One interesting subtheme in the data was coded to 'understanding that feedback can be formative'. Accounts attributed to this code in aggregate suggested that feedback is not acted on in some cases because learners may have had no experiences in which they were able to act on feedback to improve work:

> In my past, feedback was always merely a one-time thing that happens at the end of my writing process. It was more like a justification for my grades than a building block for perfecting my final draft. Now I realise the importance and purpose of feedback, which is to help me improve and revise my work based upon them.
>
> (Grace interview)

Other sources corroborated this understanding:

> Instead of receiving one feedback at the very final draft, these practices made me realize that feedback is most effective when it is continually given and used during the whole process of writing an essay.
>
> (Questionnaire 10)

> here feedback was like a process throughout the middle, so I think that aspect of feedback changed the way I looked at feedback how I was not just for the end, but for the process it was me learning through the process.
>
> (Judy interview)

These data suggest that there may be a relationship between previous feedback experiences being only summative and knowing what to do with formative feedback. Furthermore, Kevin, for example, explained that part of his 'fear of getting feedback' (interview) came from not knowing others also had much to learn from feedback, and he (and others) said that seeing others' feedback helped them to feel it was normal.

> ...seeing each other's feedback also gave me relief of the fear of getting feedback.
>
> (Kevin interview)

I asked him about the origin of the fear, and he revealed that it came from feeling helpless to respond to the feedback that in his experience had only ever been summative and perceived as a form of criticism:

> so, getting feedback means like getting evaluated or criticized…it was just like declaring that you've done wrong or you have to fix this, but there was no chance to fix it.
>
> (Kevin interview)

These accounts suggest that when starting a western-style course, some learners may fear feedback because they do not understand its role in learning due to a lack of experience of developmental feedback. Thus, introducing students to the concept and potential benefits of formative feedback at the start of courses (in contrast with previous experiences) may support learners 'mental models' of how learning from feedback occurs. This may, in turn, promote feedback recipience.

On a similar note, several participants reported that as a consequence of their experience of encountering certain concepts, participating in the feedback practices and their observations of their own and others' learning as a result of navigating the practices, their beliefs about feedback had changed. In her interview, Kylie explored her understanding of how this occurred and volunteered the opinion that being introduced to certain 'learning theories' had a significant impact on her receptivity to feedback. I asked her which ones were important to her:

> oh, the **area of proximal learning** [ZPD] and then, what was it, **growth mindset** and theories

related to feedback, **Grit**, and the area of proximal learning.

I asked Kylie what role the theories played, she then explained her view that they provided evidence for the benefits of feedback and that this was an important step in scaffolding her receptivity to feedback:

> Basically, they are theories and they're based on scientific research **so it's convincing,** when I look at the theory then **I can get understandings** of **why feedback is so important**, I agree with it, so I get another motivation to engage in feedback, so it gives **like academic grounds** to using feedback.
>
> (Kylie interview)

Judy also believed that this was the basis for supporting feedback engagement in her interview:

> before we can effectively use feedback, we need to learn - **the first step is to learn about the growth mindset** and then **that leads on to the feedback process**, **which I think worked really well** in our class because we didn't jump right into writing essays…
>
> (Judy interview)

In the account above, Kylie appears to be describing how she used these concepts in the formation of her own account of how learning occurs from feedback, and how this helped to convince her that engaging with her feedback would be worth her time and effort. She went on to explain how the process of forming positive beliefs about the role of feedback in her learning required more than just a theoretical base; it also needed 'empirical' data in the form of witnessing her own progress after receiving feedback, but also from observing the development of others through the open-folder feedback environment.

> I got more **empirical grounds** for **why feedback is useful** because I experienced that the feedback that I got **helped me improve my work** and understand the purpose of the assignment and how … **more examples of the evidence base**;… **seeing that over and over and experiencing it myself,** hmm you know **it totally affected me,** it totally made me **believe that feedback is so important** and then this change of belief I think it **will continue** even after taking this class because it's kind of **change of your attitude**.
>
> (Kylie interview)

The end result of this journey for Kylie was feeling that 'feedback is so important' and it led to a substantial change in orientation towards feedback which Kylie felt would be sustained. Kylie is not the only participant to talk about such changes. Several students also spoke about how their attitude beliefs and orientation to feedback had changed through the experience of the feedback practices:

> I didn't think feedback was helpful…after taking this course, I understand what real feedback is, what feedback has to look like, it's like - what we did in this class, so after experiencing this I felt like that it is a **really important step** for getting improved and learning, **really truly learning** something.
>
> (Nahyun interview)

Kevin's comments supported the idea of a new orientation to feedback:

> I thought **at first feedback was just like marking**…now I know **that it's helping each other**, it's for others and for me, also giving the feedback would also help mine improve later… **the barriers went down**
>
> (Kevin interview)

Similarly, Holly also claimed that the change in her beliefs regarding feedback was the aspect of the course that had the most significant impact on her:

> Hmm, I just **want more feedback** now, on all my works.
>
> (Holly interview)

Jane also indicated that a change in beliefs had occurred during the course:

> [In the past] I thought that I can grow more with the hard study, but I didn't think that I can grow with others' communication.
>
> (Jane interview)

And Nahyun claimed that her beliefs regarding feedback had experienced a complete about-turn:

> I couldn't think of any value of the feedback before, but this course made me think the feedback is really valuable and really appreciate someone giving me feedback and helping me improve.
>
> (Nahyun interview)

Together these accounts and those in earlier sections suggest that the holistic impacts of the feedback practices are cumulative. Accounts indicate that being introduced to, and discussing certain concepts related to learning (like growth mindset, grit and ZPD) played a role in learners developing their own understandings of how learning occurred from feedback. It also seemed that understanding that feedback can be formative and not only summative, and the reasons why feedback is worth the investment of time and effort, also encouraged cognitive and emotional feedback recipience (see section 2.2).

4.6 Chapter summary

Overall this chapter has illustrated the results of the feedback practices from four distinct perspectives, the nexus between dialogic feedback practice, the open feedback environment, screencast feedback and disengagement, and receptivity and developing positive beliefs about feedback. In the next chapter, the results will be discussed in the context of the academic literature on feedback engagement and the contributing literature to the USM model.

Chapter 5: Discussion of Findings

In the previous chapter, the answer to the research question was discussed from the perspective of four major themes. This chapter will attempt to summarise key findings and discuss how the research question has been answered, what contributions have been made to the literature and what this might mean for that advance of theory and practice in the field. I will introduce the research question once again:

What were the perceived effects on feedback recipience of technology-mediated dialogic feedback practices, based on the USM model?

In answering the research question, contributions to the literature will be reported in four main areas: Dialogic feedback practices, the role of the open feedback environment, the role of screencast/Google Drive hybrid dialogic feedback and, receptivity and beliefs about feedback.

5.1 Dialogic feedback practices: peer review; teacher review; and feedback recipience

One of the most significant findings in the last chapter in section 4.2.1 (dialogic feedback promotes repair and development of peer feedback) was the report that the ability to discuss peer feedback (through Drive) enabled feedback givers and receivers to negotiate meaning and thus, to generate more precise and actionable feedback through the exchange. Participants believed this resulted in enhanced feedback recipience compared to not using such methods for peer review. This appears to support the main finding of the recent paper by Zhu and Carless (2018) (although feedback engagement was not the focus). However, participants also reported that peer review often failed due to a lack of time in class, or the failure of students to meet outside class when peer-review homework was assigned. In contrast, this study found that participants were both willing and able to take part in peer discussion activities using technology, that this also happened outside of class and constituted an ongoing process in which exchanges continued as many as four times for a single discussion point. These findings also go beyond those of Zhu and Carless as they provide evidence of potential for the use of technology-mediated dialogic feedback practices as a solution to the issues they described. In addition, participants in this study reported that they were better able to engage with and use peer feedback because of the technology-mediated dialogism. Although similar findings have been reported in face-to-face scenarios, this appears to be the first time that negotiation of meaning has been reported in technology-mediated cases. This is because previous technology-mediated

dialogic feedback research did not consider highly interactive and bi-directional feedback designs (2.4.1).

Another important function of ongoing peer discussion reported in section 4.2.2, (dialogic peer feedback facilitates collective learning cycles), was that peer group feedback exchanges enabled participants to develop feedback points through a co-construction process. These exchanges often constituted multiple-mini feedback cycles of several exchanges, which developed the content of feedback points into recommended steps that led to goal-setting processes (S aspect of USM). This included opportunities to solicit peer opinions regarding how successfully feedback had been enacted. Participants also explained that this discussion process encouraged them to check their claims against outside sources, which aided learning, encouraged time-on-task and supported the improvement of writing. Also as discussed in 4.2.4, because interaction with peers enabled participants to understand audience perspective at various times throughout the composition process, they could use this as a form of feedback to reflect on and improve the comprehensibility of their work.

This finding contributes to answering the research question by presenting the first evidence in the literature that technology-mediated dialogic feedback practice among peers can facilitate the co-construction and development of feedback points while offering audience perspective. The evidence also indicates that this leads to enhanced peer feedback recipience. This is again a unique finding, because to date, feedback engagement related work has not used a highly dialogic technological medium. These findings also provide an account and exemplification of how the practice supports feedback recipience.

On a similar note, participants reported in section 4.2.3 (dialogue aids understanding of teacher feedback), that the ability to ask questions to the teacher about feedback using Google Docs/Classroom also facilitated understanding, engagement and ability to use feedback to improve work. In a similar vein, Hill and West's (2019) participants reportedly viewed the face-to-face opportunities for discussion and questions about feedback to be integral to their notion of high-quality feedback, however, an analysis of the difference this made to feedback engagement and use was not offered. Hill and West's work shows that the ability to discuss feedback with the provider is useful. However, the findings of this study answer the research question by providing evidence that students benefit from teacher-student communication in similar ways through technological mediation, and, that can lead to enhanced feedback recipience. This has several implications for the field, as it potentially removes the requirement

for dialogic feedback to involve often time-consuming face-to-face meetings or tutorials, and provides a possible model for dialogic feedback exchanges for distance students or those in blended learning environments. It also has positive practical implications for workload management and the deployability of the feedback practices as an alternative to face-to-face meetings. This could be usefully tested and explored through future studies.

In a related finding, the participants also explained in section 4.2.5.1 (reducing barriers to seeking help from the teacher), the general culturally derived fear of initiating dialogue with the teacher and the associations with the perception that asking questions demonstrates impertinence or challenges the authority of the teacher. Participants reported that the use of a technological medium for initiating and continuing dialogues with the teacher encouraged questions due to a reduced sense of 'formality' and imposition. They explained that in comparison, they would have been more reluctant to use email or set up an appointment which they perceived as 'more formal' or 'annoying' to the teacher. There is evidence from Duncan (2007) that only 16 out of 52 students signed up for face-to-face dialogic feedback sessions, and even then, often did not discuss their feedback. Hill and West (2019) do not address attendance rates in their paper. In contrast, in this study, the technological-mediation of feedback dialogue itself appeared to encourage students to ask questions during the meaning-making process of interpreting feedback, which could be responded to efficiently.

These findings answer the research question by highlighting what appears to be the first evidence in the literature of a nexus between the ability to ask teachers questions about feedback electronically (using a bi-directional multi-turn format), motivation to do so and feedback recipience. The data also provide accounts of how and why this relationship exists, which further contributes to answering the research question. This finding also supports Steen-Utheim and Wittek's (2017) notion that emotional factors influence the potential of feedback dialogue so that even if office hours or meetings are provided, there is no guarantee they will be utilised effectively or attended.

Participants also explained in section 4.2.5.2 (reducing cultural/emotional barriers to engagement in peer feedback), that viewing feedback as a dialogue helped them to develop a relationship with other students that made them feel more comfortable giving peer feedback comments. They also reported that it reduced the pressure to give comments (because they could be given as questions or without being fully formed or certain). This perspective also helped participants to interpret peer feedback as a form of support rather than criticism. In

section 4.2.5.3 (interaction in texts encouraged the need to reciprocate effort), the participants also explained that experiencing peer interaction on their work motivated them to reciprocate by applying and using the feedback. This further answers the research question by providing further new evidence (and thus new understandings in the literature) regarding the role of technology in dialogic feedback, and its relationship with emotional aspects of feedback recipience (see 2.2). This may also aid understanding of the role of dialogue itself in encouraging participation in peer review and engagement with the feedback generated, whether technology-mediated or not.

Finally, seven participants in section 4.2.6 (giving peer feedback aids in self-evaluation) reported gaining the ability to develop evaluation skills from giving peer feedback that could be applied to improving their own work (also reported by Li and Grion, 2019). As discussed in section 2.6, giving peer feedback has been found in several empirical studies to confer more significant benefits in 'giving only' conditions than in 'receiving only' groups (Lundstrum and Baker 2009; Cho and McArthur, 2011; Ion, Sánchez Martí, and Agud Morell, 2019). Participants in this study believed that further experience and practice of giving peer-review would improve their future ability to make informed judgements about their work and consequently, the development of their writing skills (section 4.2.6). These reports answer the research question by providing evidence of a relationship between giving peer feedback in a technology-mediated environment and behavioural (making judgement) and cognitive (ability to judge) feedback recipience (section 2.2). The accounts also describe a mechanism for the development of such skills from the peer comparison process and appear to be the first in the feedback literature to do so. This provides further details that help answer the research question.

5.2 Open feedback environment and feedback recipience

Another of the major findings of the study reported in section 4.3.1 (using others' work as a model), is the report that having access to the homework, ongoing drafts, and teacher feedback (4.3.3) of other students (via Google Docs and Classroom), enabled a 'compare and contrast' process that helped participants to learn in various ways. Participants explained that this enabled them to become aware of their weak points, note common mistakes, and improve criticality coherence and cohesion. On a similar note, some reportedly used the data to better understand classroom instruction (as they could observe its application by other students). These learning processes, in turn, acted as a form of feedback, which aided in the improvement of their writing skills, thus demonstrating a form of proactive feedback recipience. These

accounts illustrate a process that appears similar to what Carless (2016) terms 'inner dialogue'. They further suggest that such dialogues can occur not only when considering exemplar work (as Carless suggests) but also when considering the work of peers or classmates as they appear as 'artefacts' (Wegerif, 2013) in online learning environments. Accounts of what can be gleaned from the open folder environment also overlap with explanations of how participants learn from peer review.

Interestingly, in section 4.3.2, participants also claimed that they were able to gain from observing other students' thinking and feedback recipience processes in the open environment and provided accounts of the perceived effects on their reflective skills and motivation. Participants also claimed that this aided in their ability to make reflective judgements (and comparisons with others) about the quality of their own learning processes from feedback which they were able to reflect on and reconsider so that they could implement the strategies in their own work. These appear to novel forms of feedback recipience in the literature and suggest the potential for learners to not only model writing skills but also learning skills from peers.

Participants also reported in section 4.3.4 (motivation and audience effect) that having access to other students' folders, seeing others' work and knowing their work could be seen furnished them with a new perspective. This, participants reported, encouraged the production of higher standard work due to the desire to appear diligent, or not to be viewed negatively by others. As discussed in section 2.4.1, there has been some empirical work that has examined the positive effect of being aware of an audience (e.g. Soto, 2015; Patchan, Schunn, and Clark, 2011), when composing work or engaging in a communicative activity. Data from this study support those conclusions by providing accounts of why such effects are associated with audience awareness.

Overall, the accounts in this section help to answer the research question by illustrating the perceived effect of the open folder feedback practice on different aspects of feedback recipience and learning. They also contribute to the literature by introducing a previously unreported feedback recipience behaviour, 'using others' feedback recipience strategies to reflectively consider one's own'. They also provide explanations (that overlap with peer review), of the mechanism of interaction between the open folder environment and individual learning and feedback recipience. These accounts also appear to offer empirical evidence of the effect of Wegerif's 'artefacts' that can serve as learning resources for others' within a digital environment. They also suggest the potential for agglomeration with other literature domains such as 'vicarious learning'. This Mayes (2015) suggests, is a promising learning approach that is

'still unexploited' (p.367) because rather than posing a technical challenge, it requires a change in attitude or culture. These accounts may offer some suggestions as to how these attitudes can be influenced, at least from a learner perspective.

5.3 Screencasts dialogism and feedback recipience

In section 4.4 (impact of screencast feedback), participants reported many of the most consistent findings commonly reported in the general screencast and video feedback literature (section 2.4.2). For example, participants reported that screencast feedback was detailed and extensive and that there was more elaboration on points and specific details in comparison with previous feedback they had experienced (Moore and Filling; 2012). They also felt that screencast feedback was 'conversational', 'dialogic' and approximated face-to-face meetings (4.4.2), (also found by Grigoryan, 2017). It was even reported that screencast feedback could be an appropriate substitute for face-to-face meetings when used in conjunction with other dialogic strategies, such as the use of technology, or limited time for face-to-face questions in class. This partially contradicts some of the conclusions of earlier studies (e.g. Vincelette and Bostic, 2013 and Anson, Dannels, Laboy, and Carneiro, 2016) in which the perceived lack of dialogism inherent in the screencast format was seen as a significant drawback for the feedback medium. This is perhaps because this appears to be the first study in the current literature to investigate a hybrid screencast/Google Drive feedback method.

The evidence suggests that screencasts if used in conjunction with a technology that facilitates feedback dialogue (such as Google Drive), can satisfy learners' needs and desires for dialogic communication with the teacher. Screencast feedback was viewed by participants as an enhancement to student-teacher communication and provided the opportunity to observe feedback multiple times at variable speeds. Furthermore, in section 4.4.1 (screencasts are more feedforward oriented), participants also reported that screencasts facilitated their use of feedback effectively (feedforward) because they provided sufficient information on how feedback could be enacted (in comparison with written feedback they had experienced). Participants recalled past experiences of being told there was a gap, but not how to fix it. Feedback through the screencast medium, on the other hand, provided this information. This was either explicitly through the additional content and context through what the marker said, or implicitly through observing as the marker reads and react to the work. These accounts confirm a similar observation by Vicelette and Bostic, (2013), Fernandez-Toro and Furnborough (2014) and of Lamey (2015). They also help clear up doubt reported regarding the origin of the

same observation in Henderson and Phillips (2015), and Edwards, Dujardin, and Williams (2012).

The observation in the literature that students often have trouble understanding how they can enact their feedback is common (as reported in section 2.8). Winstone, Nash, Rowntree, and Parker (2016), identified one cause as not understanding what to do with feedback. Evidence from this study suggests that if the feedback message itself contains the necessary detail to facilitate effective use, and there are opportunities to negotiate meaning with the feedback provider, such barriers can be surmounted. These accounts contribute to answering the research questions by providing evidence of a relationship between the combined screencast/Google Drive feedback method and an enhanced ability to understand and use feedback. This explores new territory in the screencast and feedback recipience literature because as Stannard (2019) notes, the approach still very much suffers from the problem of being a 'one-way experience' (p.68).

One important finding in the current study reported in section 4.4.3 (screencast feedback shows care students wish to reciprocate), is that screencasts seem to better support positive affective responses to feedback. Participants reported that their positive feelings about feedback came not only because of the individualisation and medium of the feedback itself (feeling 'connected' or 'soothed'), but because through the screencast they were able to understand the time, effort and commitment required to produce it. Something similar was also reported by Brick and Holmes, (2008) and noted by Stannard, (2019). Participants explained that they felt their work had been properly read and that they had been given 'affection' or that the teacher 'really cared' and had made a 'choice' to give learners a chance to improve. This reportedly motivated them to reciprocate by making a greater effort to enact feedback.

Interestingly, participants in Hill and West (2019) also reported that face-to-face meetings made them feel cared for. This further suggests that screencasts have similar affective benefits to face-to-face meetings, and there is evidence that such affective responses to feedback can be important moderators of feedback engagement. For example, there is much research suggesting that students do not feel cared for in their experience of feedback in the UK (as discussed in section 2.3) and that this can lead to emotional disengagement with feedback. There is also work on the importance of trust (Nixon, Brooman, Murphy, and Fearon, 2017; Pulous and Mahony, 2008; Eva et al., 2012) and establishing a pedagogic alliance in which an educator is perceived as benevolent and open (Leighton and Bustos Gomez, 2018). The data from this theme contributes to answering the research question by providing novel evidence that screencast

feedback (supplemented by Drive to mediate dialogism) provided the kind of affective support that participants reported led to them feeling motivated to engage with their feedback. This appears to be the first study in which the links between screencasting and feedback engagement have been identified. Screencasts, however, should also be deployed with caution, as there have been reports of adverse emotional reactions to them (Borup, West, Thomas, 2015).

5.4 Disengagement, engagement, beliefs and receptivity

In section 4.2.5 (on receptivity and dialogue), participants explained that their culture or previous experiences of feedback (Price, Handley, and Millar, 2011) influenced their receptivity to engagement with feedback, willingness to engage in peer discussions, give feedback to 'seniors' or engage in dialogues with the teacher. Accounts indicate that this is because, in Korean culture, feedback is often taken to imply that there is 'something wrong' and is perceived as unhelpful 'criticism', blame and 'justifying the grade', rather than as constructive. This even contributed to a 'fear' of feedback in the case of one student. This chimes with findings of Tian and Lowe (2013) who reported that Chinese learners in the UK reacted to feedback with an 'intense, initial emotional reaction that blocked engagement with the cognitive content of the feedback' and identified one cause as being 'different previous experience of assessment' (p.595). It also tallies with Chan and Lam (2010) who reported that summative feedback (after failure on a test) had a more detrimental impact on self-efficacy than formative assessment.

Accounts from this study suggest that the experience of only summative past feedback may contribute to disengagement with formative assessment feedback. Without understanding the purpose of the feedback, learners may process formative feedback emotionally in the same way as their previous summative feedback. This appeared to be true for the participants in this study, who reported feeling 'ashamed' 'upset' or 'depressed' (or considering quitting the course) by the feedback they received (4.5.1). Similar reactions were reported by participants in Tian and Lowe (2013) as after receiving formative feedback for the first time, participants reported feeling they were 'such a bad student' and 'completely discouraged' unable to engage with feedback and 'depressed' and 'stupid' (p.587). Interestingly, negative feelings about feedback were also reported by UK students in the study by Hill and West (2019). However, the affective responses reported by Tian and Lowe, (2013) and by the participants in this study used comparatively stronger negative language as seen in the participant accounts above. Ryan and Henderson (2018) also found that international students perceived feedback comments to be more discouraging and upsetting than domestic students. Thus, the findings of this study support

those of Tian and Lowe, and Ryan and Henderson; as there appears to be a relationship between culture or past experience of feedback and emotional disengagement with feedback.

However, participants in this study reported that understanding that feedback could be for the 'process of learning' (i.e. formative) as well as for evaluation (summative) was an important realisation and one of the results of their experience of the feedback practices. This also implies that helping learners to understand the rationale for formative assessment, and to prepare to engage with formative feedback may further support feedback recipience and may mitigate some negative effects of previous feedback experiences. This has interesting implications for further research.

In section 4.5.2, participants explained that after their initial adverse reactions to feedback, they had been able to reflect on the concepts of mindset and grit, and this helped them to consider what they could learn from the feedback. Participants reported that these ideas 'really helped', 'really impressed', and 'trained' them to overcome their initial reactions and to choose interpretations of the feedback that were more conducive to their engagement with it. This process was reported by all of the participants who reported adverse reactions to feedback. Interestingly, analysis of the language in the account data (4.5.2), suggests that learners were thinking as 'incremental theorists' (Robins and Pals, 2002) and demonstrating a 'learning orientation' (as opposed to performance orientation) which is associated with 'growth mindset' theory (ibid). This has also been associated with more significant learning gains, increased self-esteem (ibid), and a greater willingness to engage in developmental activities after feedback (Forsythe and Johnson, 2017), which aligns with the findings of this study. This also seems to exemplify cognitive as well as emotional aspects of feedback engagement (see section 2.2). These accounts appear to be the first in the feedback engagement literature of learners who reportedly suffered adverse reactions to feedback (which seemingly encouraged disengagement) being able to employ pre-introduced concepts to support their eventual engagement with feedback. The accounts also emerged spontaneously and were found to be consistent across the data set, in reflections, questionnaire data, interviews, and spread among participants.

It is important to note, however, that these concepts were introduced in the class, and consequently, there may be elements of bias or demand characteristics in these accounts. However, the reports help to answer the research question regarding the perceived relationship between this aspect of the feedback practices and feedback recipience and are, therefore,

pertinent to the study. In comparison with the literature, Tian and Lowe's (2013) postgraduate Chinese English teachers did not report that they had been able to engage with their feedback unaided. Based on their empirical data Forsythe and Johnson (2017) also demonstrate a relationship between the concept of growth mindset and engagement with feedback. The findings of this study appear to support their conclusion that learners should be supported in recognising 'self-sabotage' and assisted in developing strategies for becoming more receptive to feedback. The participant accounts in this study provide evidence, that attempts to offer such support were perceived as helpful and supported receptivity to feedback, or, aspects of cognitive and emotional feedback recipience (see limitations).

Building on this theme, in section 4.5.3, Kylie volunteered her view that being introduced to the theories of ZPD, growth mindset, and grit, had helped to support her understanding of the benefits of feedback. This had given her 'academic grounds' in the process of coming to believe that feedback can lead to effective learning. Although the literature on the subject of feedback and growth mindset appears sparse (Forsythe and Johnson, 2017), more evidence or discussion of the connection is emerging. Hill and West (2019), for example, claimed (without offering evidence) that for dialogic feedback meetings in their longitudinal study to be successful:

> The key was to persuade the students they had **capabilities that could be developed over time** rather than fixed abilities that might limit their achievements (p.6).

They also suggested that the foundational discussion with the teacher, to remind learners of the 'unfinishedness' of students and their work 'seemed to nurture a growth mindset' (p.10). However, again, no evidence was offered for the claim that this was 'key'. Interestingly, analysis of participant accounts in this study (4.5.2 and 4.6) suggested that it was similar thinking that supported the process of forming personal accounts of how learning from feedback occurs. This appeared to be part of a more extensive process, that culminated in positive beliefs about feedback and greater feedback receptivity or a favourable orientation for feedback. Kylie's account suggested that this involved a two-stage process: 1. Exposure to 'academic grounds' (in this case, theories or models of how learning from feedback occurs) for believing in the benefits of feedback 2. Empirical examples of oneself and others learning from feedback (from ongoing peer review and the open feedback environment). This account suggests that participants' confidence in the value of learning from feedback increased as the number of 'cases' of positive outcomes from engaging in feedback increased. This suggests that learners may adopt a cost/benefit approach to allocating learning effort, and the evidence suggests that providing learners with a rationale for effort expenditure in engaging with feedback may play a part in

supporting receptivity to feedback (as in the U formulation of the USM model). Interestingly, Hill and West's (2019) participants also reported adopting more feedback-seeking behaviour after taking part in dialogic feedforward meetings, which they also found useful. These findings leave much scope for future research.

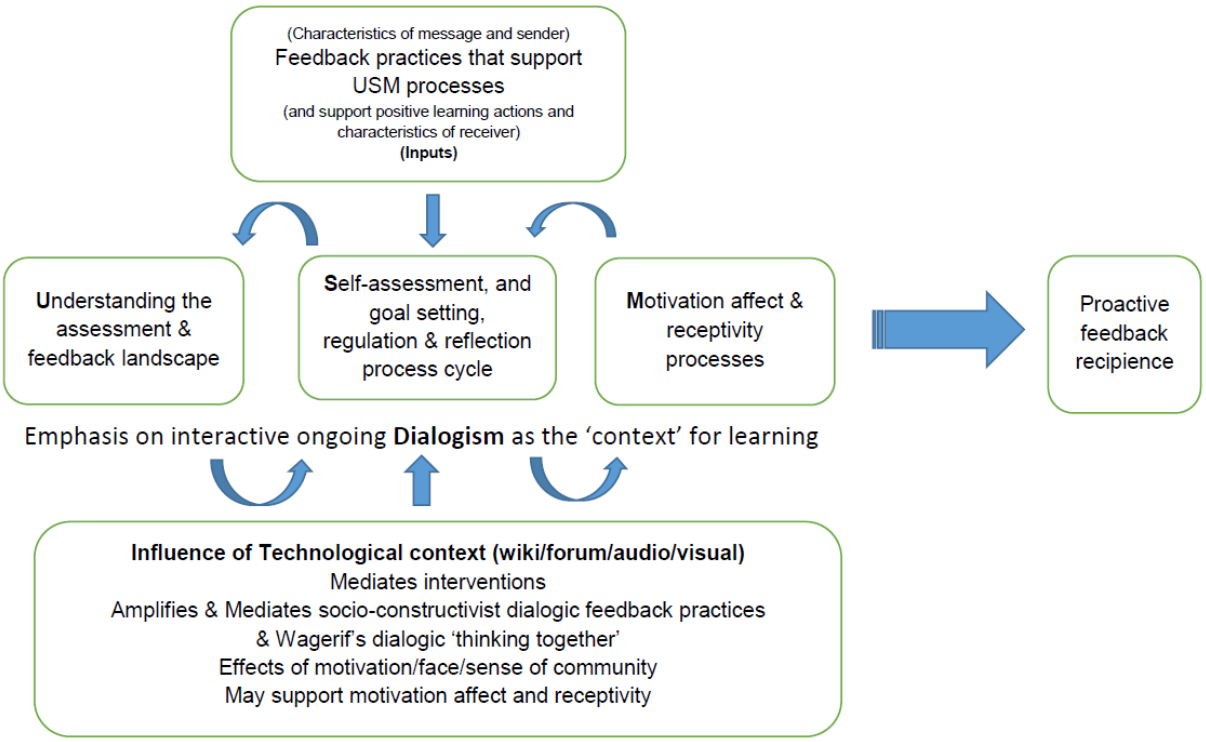
Section 4.5.3 also provides evidence that helps to answer the research question, as several participants reportedly experienced a positive change in their beliefs about feedback and in general receptivity to feedback. These changes appear due to the overall experience of the feedback practices in the technology-mediated dialogic environment rather than to any particular factor. They also appear to constitute the first accounts of such changes in the feedback literature that have related the experience of technology-mediated dialogic or dialogic feedback practices with feedback engagement. This is also opposite to the effect reported by Price, Handley, and Millar (2011) and others (2.3.1) of exposure to feedback over time.

Thus far, this section has addressed the research question by discussing learner perceptions of the effect of the different feedback practices on feedback recipience. The next section will examine the implications of the data for the USM model.

5.5 Theoretical perspectives on the findings

In the discussion thus far, this thesis has found on the basis of participant accounts, evidence that supports (and in some cases surpasses) the theories and empirical work reported in a range of literature. This suggests 'external consistency' (Trafford and Leshem, 2008) between this study and others in the field at the level of empirical results which may 'legitimise…findings' (p.103). A broader aim of the thesis was to better understand what factors give rise to feedback recipience by examining the impact of feedback practices derived from a model that represents a synthesis of literature from different domains on what supports feedback engagement. To assess the contribution of the original model (see figure 25), it is necessary to consider the implications of the inductively derived data (presented in the results section) and conclusions that can be drawn from them.

Figure 25: the original USM model



This section will provide analysis and discussion of how the data from this study, evidence, or necessitate changes to the model.

The results of the study appear to support the configuration of the top box of the diagram and suggest that the four selected feedback practices, can indeed be considered inputs to the USM model, as depicted in figure 26. The data also offer clarification, in some cases, as to what the practices should involve.

Figure 26: Inputs to the USM model evidenced by the study

Inputs to USM model (that the data support)

1. Priming for positive beliefs about feedback, and for receptivity when receiving feedback/ Providing concepts to support learner accounts of how learning can occur from feedback formatively.
2. Ongoing dialogic peer and teacher feedback in over time, face-to-face and technologically facilitated
3. Feedback message: supports affective receptivity to feedback and feedforward and dialogism (e.g. screencast/Drive feedback)
4. Open folder feedback environment, opportunities to learn from and be inspired by: peers' writing, answers to questions, teacher feedback, responses to peer and teacher feedback, thinking, and feedback recipience strategies.

I will now discuss the rationale for their inclusion as inputs to the USM model.

1. Priming for positive beliefs and receptivity

First, the feedback literature suggests that feedback can fail due to a number of 'barriers' (2.3). Data from this study suggests that such 'barriers' may also exist due to undesirable perceptions of feedback, for example, the 'fear of feedback' (Kevin) or believing that feedback has 'no value at all' (Nahyun), 'blames' the student, 'justifies the grade', or is only for the 'end of the process' (Judy) (i.e. summative) and not for the 'process of learning' (i.e. ongoing and formative). The original USM model considered the need for pre-emptive support for feedback receptivity; however, there was little empirical data to support this assumption or to suggest what form it should take. Interestingly, Parker and Winstone's (2016) participants reported that they would be more likely to engage in interventions if they understood their rationale. Thus, I predicted that providing a rationale for learning activities and for learning from feedback may help promote receptivity, and this seems to have been reflected in the participant accounts.

Data from this study (4.5.2) suggests that providing elements or concepts to support learners in developing personal accounts of how learning occurs through feedback incrementally (i.e. mindset, grit, etc.) can help students to engage with feedback after they have experienced adverse reactions to it. In 4.5.3, accounts suggest this can aid in the construction of positive beliefs, receptivity or emotional feedback recipience (2.2). They suggest exposure to such ideas support motivation and receptivity process (M aspect of the USM model) and understanding the 'feedback landscape' (U aspect of the model). Thus, a modification to the original model was made, in the form input 1. (see figure 26). There is potential for further work to clarify this finding and to verify this result (see limitations).

2. Technology-mediated dialogism

The next input to the model that has been clarified and evidenced by the data is ensuring that feedback takes place in 'ongoing multidirectional dialogic cycles'. Evidence presented in section 4.2, indicates that such dialogism enhances understanding of what constitutes good performance (U aspect of the USM model). It also mediated the co-construction of knowledge, and, offers various opportunities for learning while fostering motivation to engage with feedback. Some participants claimed that some learning opportunities would not have been possible without the system. Thus, there is evidence of the beneficial role of technology-mediated dialogism, and accordingly, grounds for considering it to be a second input to the enhanced USM model.

3. Feedback message to support receptivity

The third input to the model that was suggested in the original model, but that has been clarified by the data (section 4.4), is that feedback should be produced that has the necessary characteristics to promote receiver receptivity to the message. The data suggest that participants wanted to engage with the feedback because it was clear to understand, detailed, and contained enough context (including prosodic/paralinguistic context and illustration of the reader thought process) to facilitate its use.

The evidence also suggested that ideally, feedback (in whatever medium) should also demonstrate teacher 'effort', illustrate full attention to reading the entire student text, and be perceived as a benevolent attempt to assist learning (this supports the M aspect of the USM model). Providing opportunities for questions also helped when participants could not fully understand the feedback message (U aspect of the USM model) or how it could be applied. The data suggest that screencast feedback used in conjunction with Google Docs was perceived as having the above qualities, and as dialogic. It was also viewed as an acceptable (or even preferable) substitute for one-on-one tutorials (perhaps because it reduced perceived friction). Thus, the production of feedback with the requisite characteristics is now a clearly defined aspect of the model, and screencasting is recommended as a method of providing feedback that has the potential to be perceived as 'going the extra mile' (Stannard, 2019) without requiring particular effort in production.

4.Open-feedback environment

Finally, the findings (4.3) also support the use of an open-folder feedback environment mediated by technology as an input to the model that promotes 'audience effect', and facilitates learning from peers. It also provides additional vicarious learning opportunities from the shared data or 'artefacts' left by homework tasks, reflective writing, and discussion. This was also an original aspect of the USM model synthesised from findings and theories from the literature. The evidence indicates that students believe they can benefit from such an environment, by viewing each other's work and teacher feedback, and that this also helps aids understanding of what constitutes good performance (U of USM). The reports indicate that learners do avail themselves of such learning opportunities to varying degrees.

There is also evidence that the success of the approach was enhanced by the technological affordances of Drive and Classroom, which were perceived as being a convenient and easy-to-use 'unified' and mobile platform for the mediation of feedback practices supportive of feedback

engagement. This potentially reduced the 'behavioural friction' or 'hassle factor' (Behavioural Insights Team, 2014) of participation in the feedback activities, which may act to 'lubricate' the adoption of desirable behaviours (Wood and Neal, 2016). The open-folder environment is thus suggested as an input to the model. Data on these inputs validates the conceptualisation of the U and M aspects of the USM models (as dialogism, screencasting and the open-folder environment also reportedly supported motivation). Ideally, the environment (and dialogue) should be mediated using a technology that facilitates a range of learning opportunities, minimises 'friction', and makes participation as attractive and intuitive as possible (for teachers and learners). It is worth noting that the inappropriate use of some technologies can have the opposite effect and disincentivise the participation of both learners and teachers.

Understanding the feedback landscape (U aspect of USM model).

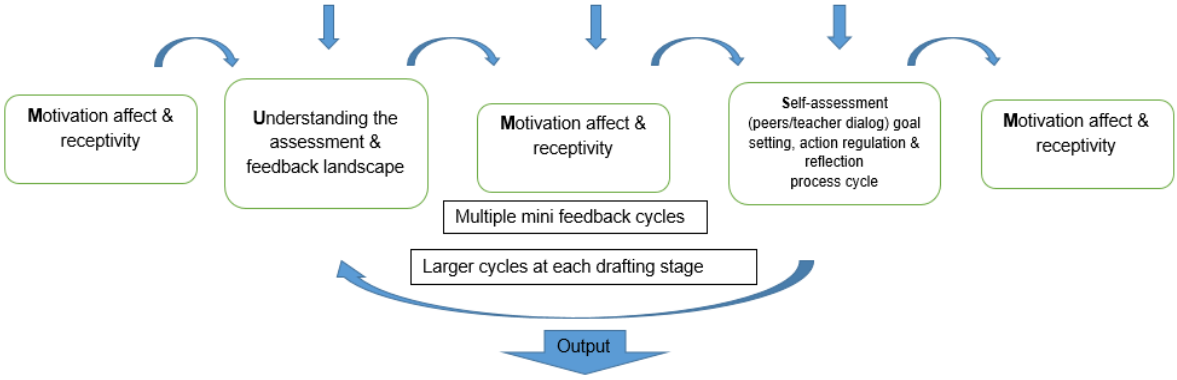
As has already been discussed in the previous paragraphs, there is evidence that the U aspect of the USM model is supported by dialogic peer feedback, co-construction of knowledge, and dialogic student and teacher feedback. It also appears to be supported by the open-folder environment, viewing other students' work, and feedback, and potentially, by reflecting on the rationale for formative assessment and how learning occurs from feedback incrementally. All of this helped learners to understand what good performance is. There is also evidence that learners developed autonomy, were proactive in engaging with feedback and used technology-mediated questions and discussions when needed, to bolster their navigation through the U processes as well as the S processes of setting goals and self-regulating (next paragraph). It can thus be claimed that the data supports the current U formulation of the USM model.

Self-assessment, goal setting, action, and regulation process cycle

Learner accounts suggested that the U aspect of the model and self-assessment, goal setting, and regulation (S aspect of the model) are tightly connected. Data presented in chapter 4 suggests that understanding the need to change one's work could come from: dialogic peer/teacher feedback, asking questions to peers or the teacher, viewing others' work, or comparing and contrasting with peers' open folder work (4.3.1/2). Sometimes feedback points were also co-constructed, which led to setting a goal. Participants then attempted to improve their work and checked back with their peer group to check goals achievement in mini cycles. Thus, the adding of 'mini cycles' to the diagram appears to be justified by the data. Screencast feedback also aided the S processes, because it was clearer, and offered more corrective and contextual elements; thus, goals could be set more easily. Students, therefore, better understood what was wrong, why it was wrong, and how to fix it. This aided S process

development cycles encouraged by the affective benefits of perceiving the teacher 'went the extra mile'. However, this was an aspect of the data that was less generative, so while the data help to explain the S process cycles, no additional claims are made in this area, leaving potential for future studies.

Figure 27: The USM elements and their interactions



Because each of the four inputs to the USM model might facilitate the different aspects of the feedback recipience processes, additional curved arrows have been added to the model (as seen above) to illustrate this.

Motivation affect and receptivity

The data and literature suggest that a lack of motivation, positive affect, and receptivity (including understanding how learning occurs through feedback: see section 4.6) can act as barriers to feedback recipience, i.e. fear of feedback, negative beliefs, etc. Therefore, I have adapted the diagram to illustrate that these factors can inhibit or facilitate the other processes and thus require attention and management throughout the cycle. Motivation, positive affect, and receptivity are seemingly needed in sufficient levels to encourage engagement in the processes; however, participant accounts suggest they can also be a synergistic outcome of navigating the processes successfully. This leads to more motivation and receptivity in a virtuous circle.

Motivation, positive affect, and receptivity can also be considered a catalyst or condition for feedback practices to take place, as without them disengagement from the feedback processes can happen at any time as reported by participants after receiving their first feedback. Motivation was also reportedly generated by other aspects of the feedback processes, such as being the recipient of supportive peer dialogue or receiving feedback demonstrating teacher/peer effort and care, etc. Additional evidence regarding the M aspects of the USM cycle

has been discussed in the context of the first input the model (point number 1 above).

I have also altered the diagram to note that cycles through the USM model can happen at various times and levels. For example, students may move through the cycle in response to one small piece of feedback from a peer or may move through a more extensive cycle (constituting several shorter cycles) in response to feedback on a draft. The arrows along the top of the diagram show that the cycles are recursive and feed into and support each other. For example, as learners understand the feedback landscape better, they can self-assess, goal set and act on feedback more effectively. Successful experiences of this will, in turn, result in motivation, positive affect, and greater receptivity to feedback (as well as 'grounds' for positive feedback beliefs). This supports more receptivity to understanding the assessment and feedback landscape in the next feedback cycle. The longer arrow at the bottom represents the broader cyclical nature of the processes. The box at the bottom of the model has also been adapted to illustrate what the account evidence suggests constitute the outputs of the model, i.e. forms of recipience evidenced by the data. These could be at the level of behaviour, emotion, cognition, or belief (see figure 28).

Figure 28: Outputs of the USM model

Behaviours beliefs and states that constitute feedback recipience:

- Developing positive beliefs and a receptivity towards feedback
- Developing a mental model of how learning occurs from receiving and giving feedback
- Being able to re-engage after encountering negative feelings about feedback experiences
- Being motivated to use feedback to attempt to improve work
- Proactively initiating feedback dialogues with questions for peers and teachers
- Spending time on task through dialogues, engaging with feedback, making comparisons: viewing others' work, feedback, and feedback engagement strategies
- Believing in the effectiveness of feedback to improve work
- Understanding the learner role and responsibility in making feedback processes effective

The findings presented in chapter 4 and discussed in chapter 5, have provided empirical evidence supporting the three process USM model, the way they interact, and its cyclical nature (indicated by the arrows above and below the second set of boxes). They have also provided some clarity regarding what desirable outcomes might be in terms of what might constitute feedback recipience or forms of engagement with feedback and a broad exploration of how such practices might influence the perceptions of learners. This provides preliminary data (and perhaps exemplar methodologies) for future practitioners and researchers who may wish to investigate these areas in more detail (see figure 29 for the second iteration of the USM model).

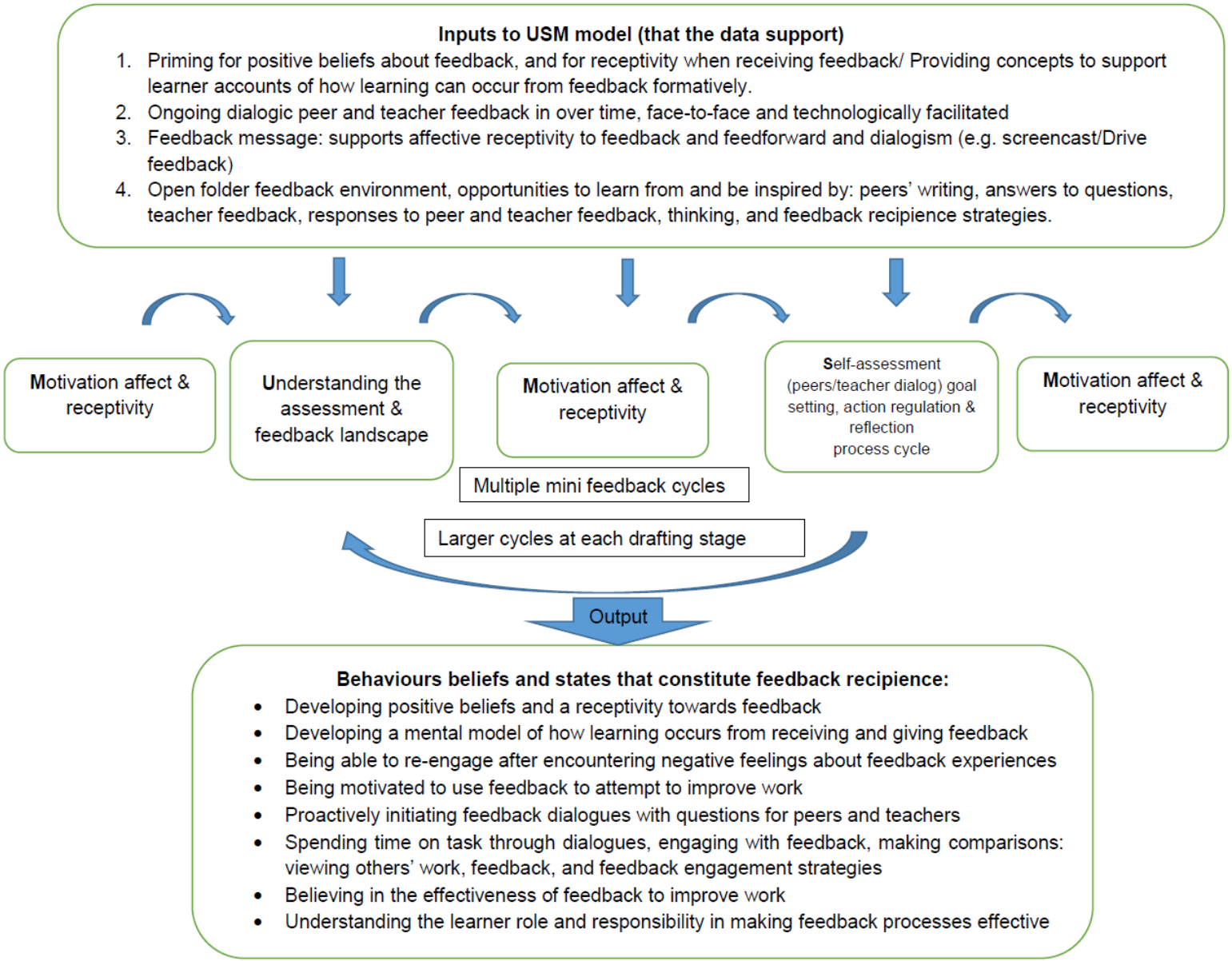


Figure 29: The empirically enhanced feedback recipience

Chapter 6: Conclusion

6.1 Introduction

The introduction to this study identified both the academic importance of feedback, the general problem of its variable effect on learning, and the problem of student dissatisfaction with the feedback experience within HE. The general lack of research in the field of feedback engagement was also noted. In the literature review, the importance of proactive feedback recipience was identified, as well as several broad gaps in understanding in the field. These were in the areas of empirical work on dialogism, technology-mediated dialogism and process models of feedback recipience. The review also identified the need for a more comprehensively synthesised model of how feedback recipience can be supported; in particular, one that centralises the importance of dialogism and utilises the potential of technology. The review culminated with a description of the synthesis of the USM model of feedback recipience, the positioning of the work, and a discussion and justification of interpretivism and the socio-constructivist theoretical perspectives adopted.

This project takes a cue from several important 'calls to action' in the feedback engagement literature. These identified the need for research into feedback engagement that takes a multidimensional perspective and attempts to understand how interventions can be used in conjunction to achieve synergistic effects; using methods to help counter the 'invisibility of feedback engagement'. The research question was then set forth, considering these calls and perspectives while clearly setting the boundaries of the investigation. The main aims of the study were discussed in consideration of the current gaps in the field and the importance of making a theoretical as well as practical contribution in the field of feedback engagement. It aimed to do this by combining disparate concepts and literature (i.e. dialogism, technology, influences on engagement, process approaches) in ways that were yet to be empirically investigated, and, to discover new understandings in the field of feedback engagement that might have implications for practice and theory.

In chapter 3, the literature and USM model derived feedback practices on which the study is based were introduced, insider issues, ethical safeguards, and the participants described, and the methodological approach and data collection choices justified. Semi-structured interviews were chosen as the main data collection device, while questionnaires were selected as a subsidiary method to progressively focus interviews and provide their own data. Reflections

were also checked for emergent and spontaneous discussion of matters relevant to the investigation, while Drive and Classroom data were used for illustration and confirmation purposes. Data were thematically analysed inductively to minimise the influence of pre-ordinate themes.

In chapter 4, the findings are described and analysed from four dimensions, and in chapter five, the findings are discussed in the context of the way they contribute to answering the research question, the way they relate to other work in the field and what implications this may have for understanding in the field.

In section 5.6 the findings are contrasted with the current formulation of the USM model, and an analysis of how the data can be said to empirically enhance or refine the model was offered. Some parts of the model were better evidenced by the study than others. This leaves scope for future research and investigations into practice.

6.2 Main contributions

To clarify the main contribution of the study, the research question will once be considered thematically in terms of the apparent effects of the individual aspects of the feedback practices on elements of feedback recipience. Contributions to knowledge and what conceptual conclusions can be drawn will also be addressed.

Dialogic feedback and recipience

The aspect of the course most prevalently reported in the data and that appeared to have the most substantial impact on participants' ability to engage with and use feedback was the technology-mediated dialogic peer feedback practices (4.2 and 5.1). These reportedly allowed participants to negotiate understanding of feedback points with peers and work collaboratively to develop understandings into higher-quality actionable feedback. This encouraged multiple and ongoing cycles of peer support within what could be characterised as ad-hoc learning communities. Participants also reported feeling supported and motivated to respond to feedback due to the attention received from peer groups.

Other work on dialogism has considered face-to-face peer feedback, or face-to-face teacher feedback, but has not attempted to investigate the impact of this on feedback engagement. This study provides evidence of the link between this kind of technology-mediated dialogic feedback

practice, the ability to 'socially construct' learning collaboratively in 'dialogic spaces', and feedback recipience. It appears to be the only study to do so in the current literature. This has implications for practice and blended and online learning environments. It also warrants the conceptual conclusion that technology-mediated peer review should be considered an input to the USM model.

Participants also reported that technology-mediated dialogic feedback opportunities to discuss the meaning of feedback with the teacher supported understanding and use of feedback. Participants also explained technology-mediated dialogic communication with the teacher encouraged student-teacher questions because it decreased perceptions of formality and reduced the sense of imposition on the teacher. Consequently, participants reported feeling free to ask questions and seek support when needed. There were also reports that the nature of the technology itself, its convenience, mobile functionality and ease of use, removed barriers, and encouraged engagement in the dialogic feedback activities, which supported feedback recipience. These accounts appear to constitute the first evidence in the literature of the potential benefits of such an approach to teacher-student dialogue and the use of technology to support engagement in feedback related activities. This further helps to justify conceptual claims regarding the role of technology-mediated dialogism in the USM model.

Peer feedback and the open folder environment and recipience

In addition to the dialogic aspects of the course, and perhaps as an extension of them, participants reported that they were able to learn by giving peer feedback and provided accounts of how this helped them. This supports claims from studies with similar findings by providing accounts of why providing peer review may be more beneficial to the feedback provider than to the receiver. Participants also explained that the technology-mediated open-folder feedback environment encouraged learning and feedback recipience in ways similar to peer review, but also presented additional learning opportunities. Participants reported that this allowed comparison and contrast, aided learning and attainment, but also allowed the modelling of other students' feedback engagement strategies. For example, some students reported that when they saw feedback used in particularly effective ways, they reflected on it and tried to emulate the process. These learning/feedback opportunities reportedly motivated more engagement with feedback or further enhanced learners' ability. Participants also reported that the visibility of their work to peers motivated them to produce higher-quality work but also, in some cases, provided data (during the drafting process) that could be used to encourage skills in audience perspective-taking. Students also said that they were able to learn from others'

teacher feedback (4.3.3), and this helped them to recognise high-standards, learn from others' mistakes and notice the difference between higher performance and their own for future implementation.

There appears to be little or no work conducted on the effect of open-folder learning environments in the domain of feedback engagement. Thus, these findings appear to make an original contribution to the literature by providing evidence of the many potential benefits of such an approach for attainment, motivation, and feedback engagement. This also helps to justify the conceptual claim that a technology-mediated open-folder feedback environment should be considered an input to the USM model, because there is evidence of a relationship between learning in such an environment (in appropriate conditions), and different aspects of feedback recipience.

Screencast feedback and recipience

Participants also reported that the clarity, elaboration, and quantity of screencast feedback (as well as the prosodic/vocal elements and observation of reading process) provided more context and detail, and the shortcomings of work could be explained more effectively. Screencasts also reportedly included more corrective information to facilitate use. This finding supports earlier work on screencasting that inconclusively suggested that screencast feedback better promotes 'feedforward', but that may have been influenced by an institutional requirement to conceptualise feedback as 'feedforward'. There was no such requirement for this study, and in producing screencasts, I used 'one take' and attempted to be thorough but also economical with time. It should also be noted, however, that students had the option to ask questions about feedback and did so in many cases using Google Drive comments. This also demonstrates an empirically tested method for overcoming the widely reported 'one-way' limitation of screencast feedback that appears to be novel in the screencast literature.

If (dialogic) screencasts promote feedforward effectively, this has some implications for the work on 'barriers' to feedback (2.3). This is because it suggests that such barriers may exist because in some cases, the feedback is not extensive and contextually detailed enough to support its use (depending on individual feedback givers and receivers). Therefore, if feedback is sufficiently detailed, and providers offer technology-mediated questioning opportunities (or provide other low friction/imposition methods for clarifying feedback meaning), such 'barriers' to feedback engagement can be potentially reduced. Thus, there may be less need for the provision of 'guidance resource packs' (which may not be engaged with), or dialogic sessions

with 'learning developers' (see 2.2.1). These findings contribute to knowledge by demonstrating how reported problems with feedback engagement and limitations reported with the screencast feedback method can be overcome.

Related to this point, participants also reported feeling motivated to engage with the screencast feedback and use it because it proves that their work has been 'properly' read. They also believed it represented a more significant investment of time or effort (on the part of the teacher) and showed educator benevolence. These findings demonstrate the first evidence in the literature of a relationship between the provision of screencast feedback and emotional and behavioural feedback recipience. They also evidence the conceptual conclusion of the third input to the empirically enhanced USM model.

Receptivity and feedback orientation

In the final data theme (section 4.5 and 5.4) on disengagement, engagement beliefs and receptivity, participants also explained the perceived detrimental effect some of their cultural and experience-based beliefs about feedback. They also described their initial adverse reactions to feedback. Participants revealed that the video and discussion activities on 'mindsets' and 'grit' in particular, supported them in engaging with their feedback by considering how learning could occur incrementally and by understanding learning was a more important goal than performance. In addition, further evidence, presented in 4.5.3, suggests that these and related concepts (together with empirical evidence of their own and others' progress) provided the foundation for overall positive beliefs and receptivity towards feedback. This is perhaps the opposite effect to the disengagement problems reported as a consequence of long-term exposure to feedback in HE (see section 2.3). These findings suggest that the enacting the following three principles may lead to enhanced feedback receptivity: 1. Attention to feedback receptivity in feedback design 2. Providing learners with a rationale for how learning can occur from feedback activities and feedback (U of USM model 2.4.3.1) and 3. Providing learners with access to empirical examples of how peers (or previous students) used feedback to improve their work (4.5.3 and 5.4). Thus, account data on the theme of receptivity and feedback orientation helps to evidence these aspects of the current conceptualisation of the USM model and offers possibilities for future research.

The research question and USM model and critique

A final contribution of the study is the output of the empirically enhanced USM model of feedback recipience. The model has a deductive foundation with broadly sourced roots in the

formative assessment, feedback engagement, technology, and dialogic feedback literature, and this served as groundwork, justifying its use in the design of this study. The model has also now been tested empirically against the in-depth, progressively focused and inductively analysed account data, and has been found to be consistent with the findings of this study. This led to the empirically enhanced USM model, which represents the main theoretical contribution of the study.

6.3 Limitations

Due to the exploratory nature of the study and choices made regarding scale, the number of participants, and homogeneity of the sample, there are some limits to the claims that can be made regarding the generalisability of some of the findings from this study. This is especially true regarding specific cultural perspectives on feedback that may have arisen through the specific background and homogeneity of the students. The sample also arose from convenience (Bryman, 2012), which precludes claims about representativeness.

It is also important to point out that the findings were based on perceptual data, and thus may be prone to bias. For example, aspects of recipience or disengagement may occur outside of conscious awareness, and the causation of certain phenomena may have been misattributed or affected by social desirability bias, demand characteristics (Bryman, 2012), or other biases. Giving a rationale for the feedback practices, for example, may have impacted perceptions of how effective they were (through confirmation bias). Thus, participant claims of a more psychological or abstract nature should be interpreted with this in mind.

Another limitation is that feedback recipience no doubt takes place within the greater context of formative feedback practice and university engagement. Deeper elucidation of these concepts, however, was deemed beyond the scope of this study, for the sake of clarity and the setting of appropriate and manageable research boundaries. Finally, some aspects of the practices are likely to be more generalisable than others. This will depend to a great extent on the context in which the USM model is deployed.

6.4 Future research

While the findings of this study have contributed to the academic understanding of feedback engagement, covered several important gaps and informed the research question, there are also several ways in which the work could be taken forward by further research to reduce the

impact of the reported limitations. To enhance the ability to make general claims about the model and derived feedback practices, similar studies could be conducted in other contexts, domains, and with different cohorts and teachers. Using triangulated or mixed methods, considering longitudinal data, analysis of technologically derived data, cohort data, and attainment data, may also help to encourage wider-scale adaptation of the feedback practices and model.

The scalability, 'time-neutrality' (Carless, 2016), and context adaptability of the feedback practices are also important areas for further research, which may also influence the potential impact on professional practice in different contexts. Thus, work to determine how, when and in what combinations practices could be used effectively, and to determine work-load and training implications, may be important to encourage established professionals to adapt to such methods. There also appears to be potential for work to examine the effect of receptivity and affective factors on feedback orientation using methods from the domain of psychology.

6.5 Implications for professional practice

The main aim of this thesis was to make both a theoretical and practical contribution to the feedback engagement literature through developing the USM model, the derived practices, and answering the research questions. The findings show that the feedback practices used in the study have the potential to improve how effectively students engage with and use feedback. This warrants further investigation to explore the potential of the feedback practices (and USM model) and develop them for use in other educational contexts and domains.

In addition to the general contribution to professional practice, there are also 'measurable' or 'performative' (Ball, 2003) outcomes that may be influenced by the deployment of the feedback practices. As noted in the introduction and section 2.3, there are many examples of studies highlighting the shortcomings of feedback practices in UK HE. 'Assessment and feedback' has been highlighted in the NSS as an area lagging compared with other teaching-related metrics by at least 10 points (OFS, 2020). In fact, the headline for the results of the 2019 NSS exercise is 'student satisfaction rises, but universities should do more to improve feedback' (ibid). The feedback engagement literature (and evidence from this study) has also revealed the danger to feedback recipience that suboptimal feedback experiences can cause. Thus, improving perceptions of feedback and assessment quality can be considered a crucially important goal for both institutions and individuals independently of how it is measured.

This study provides evidence that dialogic feedback in a technology-mediated open feedback environment can illustrate to students how marking criteria have been fairly applied and can aid understanding of how excellence can be conceptualised and achieved. Such practices may also improve perceptions of feedback provider responsiveness and perceptions of the ease of communication between students and teachers. It also raises the visibility of the feedback process, of the learners' responsibility within it, and of the care and attention offered by feedback providers, 'going the extra mile' in helping students to improve their work through feedback. The use of such practices may also, in turn, minimise negative interpretations of some of the feedback processes employed in HE, and perhaps make feedback less of a 'thankless task' for all concerned. This may have a positive impact on the assessment and feedback aspect of the NSS (see figure 30):

Figures 30, 31 and 32: NSS 2020 core questions (OFS, 2020)

Assessment and feedback

8. The criteria used in marking have been clear in advance.
9. Marking and assessment has been fair.
10. Feedback on my work has been timely.
11. I have received helpful comments on my work.

But may also have a positive impact on other aspects of the survey, such as academic support:

Academic support

12. I have been able to contact staff when I needed to.
13. I have received sufficient advice and guidance in relation to my course.
14. Good advice was available when I needed to make study choices on my course.

Or on perceptions of belonging to a learning community:

Learning community

21. I feel part of a community of staff and students.
22. I have had the right opportunities to work with other students as part of my course.

Evidence from this study suggests that despite the existence of cultural and experiential barriers to engaging with feedback, participants responded enthusiastically to combined screencast/Drive feedback and to their overall experience in a technology-mediated feedback environment. Therefore, future work to adapt the practices to other contexts may be of value to institutions seeking to rise in the Teaching Excellence and Student Outcomes Framework (TEF)[12], to institutions considering learning engagement measures such as the American National Survey of Student Engagement (Langan & Harris, 2019) and to those attempting to develop broader frameworks of behavioural, cognitive and emotional engagement in HE such as Kahu, (2013). Countries such as Australia, which record similar data about the student experience (QUILT, n.d.) as a metric to aid student university choice, may also benefit from enhanced self-reported engagement with feedback student/teacher communication and engagement in learning communities.

Most importantly, the evidence presented in this study shows that the deployment of dialogic technology-mediated feedback practices improved participants' learning experience in various ways and that this led to perceived improvements in feedback recipience. This study also aids in the professional understanding of what improving feedback recipience might mean, how it can be encouraged, and how it may manifest in desirable ways that may not be immediately visible to a practitioner. This is likely to have a variety of useful implications for other educational contexts.

6.6 Final conclusions

This study has demonstrated the potential (and exemplification) of ongoing multidirectional technology-mediated dialogic feedback techniques for supporting feedback recipience based on the deductive USM model. This resulted in the empirically enhanced USM model. The key contribution and original knowledge claim of this thesis is based on the participant accounts that consistently evidenced the relationship between dialogism and technology-mediated dialogic feedback practice and feedback recipience. This was a key feature of the feedback practices explored in the study. If the practices can be said to support feedback recipience, they were reported to do so at least partly because they supported dialogism or derivative dialogic processes. Although dialogism has begun to enter into the narrative of academic and empirical discussions about feedback usefulness, a focus on the link between feedback dialogue, technology-mediated ongoing multidirectional dialogue, and feedback engagement has been

[12] A national metric for teaching excellence and outcomes at the tertiary level

almost entirely absent from the literature. This thesis makes a modest but potentially significant contribution by exploring the relationship between the two mostly previously disparate concepts in both theory and practice, and by deepening understanding of dialogic and technology-mediated dialogic feedback practices and their nexus with feedback recipience. The thesis has also attempted to synthesise a range of theoretical and empirical perspectives from previously disparate literature domains to shed light on a highly significant academic and practical problem that impacts a range of stakeholders in a variety of educational contexts.

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Appendix 1 Cleared ethics form: description of purpose and ethical safeguard process.

The purpose of the research:

Literature in higher education over the past two decades suggests that feedback and assessment are areas of higher education with which students are least satisfied (HEFCE, 2015). Evidence suggests around 50% of students don't even bother to pick up feedback or do little to engage with it when they receive it.

There is now a consensus that feedback needs to be used to be effective, and some work has examined what the barriers might be to active engagement with and use of feedback and what processes, supported by the teacher, may help learners to use and engage with feedback more proactively.

At the same time the recent and most convincing perspectives on feedback suggest that what constitutes good feedback has developed from a 'transmission perspective' where feedback is seen as a 'gift' from an expert to a passive student, to a perspective that sees feedback as an interactive process in which learning is constructed through a Vygotskian socio-constructivist approach.

Drawing from the latter perspectives, I have developed my own model of engagement with and use of feedback or 'feedback recipience' that both incorporates and expands beyond the relevant literature, suggesting that in order to use feedback and engage with it most effectively, learners need to engage in three teacher-supported processes (i.e., the USM model): **(1) U**nderstanding the assessment and feedback landscape; (2) **S**elf-assessment goal setting and regulation,; and (3) **M**otivation affect and receptivity processes.

The purpose of my research is to gather data on the use of the three dialogic classroom practices that have been in use on my courses for several semesters that are based on the USM model:

1. technology-based feedback and sustained dialogue among the teacher and peers with formative assessment resubmission.

2. Peer review in the technology-enhanced environment.

3. Screencast feedback and student reflection on how to feedforward and plan responses to the feedback.

I'd also like to gather data on perceptions of the dialogic nature of the classroom practices and its relationship with student use of feedback and engagement with feedback.

These are intended to support the three USM processes, to be dialogic (Invoking socio-

constructivist learning practices), and to require the use of technology. As such, the USM model also necessitates that these processes take place in an interactive dialogic environment which although partially possible without the use of technology would be impractical without its use in many contexts. As Wegerif's work posits (2015), technology gives added enhancements that would not be possible without its use even if time and effort were made to try to replicate the effects. This research will, therefore, make use of a technology-enhanced learning environment as a dialogic space for engaging students in holistic feedback processes. Based on several requirements for the technology that have been identified, Google Drive has been chosen as the main context for the intervention, and the screencasting tool 'Loom' has been chosen as the video feedback technology.

In the literature review part of the study a theoretical model of how feedback recipience can likely be increased was generated, this model informed the classroom practices that are being used. The purpose of the research is then to gather data from the learners regarding how classroom practices based on the model influenced their engagement with feedback and their use of feedback. It is anticipated that findings can be used to develop and offer guidelines to practitioners on how the model can be operationalised and what the likely effects are, and to continue the process of refining the model and contributing to theory in the area of technology-enhanced dialogic feedback and assessment.

The main research questions:

RQ1: How did the learners account for their response to a set of practices developed from the USM model?

RQ2: What were the perceived effects of different elements of the feedback practices on feedback recipience?

Research design

I plan to answer the main research question using a variety of main methods and supplemental methods to help illustrate themes emerging from the main data collection methods. Sources of data constitute **secondary data collection methods** such as student work, reflections on work, forum entries on Google Classroom, peer review and responses to feedback, as well as the main **primary data collection methods** of questionnaire and semi-structured interview.

Questionnaire data will be collected the week before interviews take place and analysed for themes to help develop the interview questions. A secondary coding process will also take place after the interviews have taken place. A third analytic step will involve further examination of Google Drive data that students refer to as part of their interview responses, to identify evidence that illustrates the points they make in the interviews.

Questionnaire and interview questions will be framed by the research questions, and will focus on leaners' accounts of responses to the three main feedback interventions and their perceived effects. It is expected that the main data collection would happen after the midterm essay has been returned and students have responded to feedback. This would place the minimum burden on students from a workload perspective, as learners tend to have many exams and tests towards the end of the semester.

Questionnaires are likely to focus on designed to encourage students to express themselves openly and elicit information about learner experiences of the intervention. These are unlikely to yield personal information (personal information is not desired), but all reporting on data sources in this study will be confidential and anonymous:

All participants will be invited to fill out questionnaires, and will be invited to interview (currently there are 15 students in the class). It is likely that some students will decline to participate, and some might not turn up on the day. My sample will therefore consist of all students who consent to the data gathering process. To make sure the most appropriate sample of students is interviewed I will use a maximum variation principle (Bryman, 2012) to choose the order of participant interviews so if some interviews cannot take place these are likely to represent participants who have features closest to the class norm.

Mode of data collection

If for some reason it is difficult to meet students face to face, I may conduct some interviews using software such as skype or chat software, these would be audio recorded as a default option, or if the participant gives oral permission on the day also recorded using screencasting technology such as 'Loom'. In this case the video recording would not start until permission was given, and the visual data itself would not be used as a form of data. Instead the video recording would be used to aid accurate transcription with reference to mouth movements and other visual cues. All data would be kept in password-protected/or finger print protected form, using encryption such as the KNOX application on Samsung phones that would be used as my primary recording device. It is important to point out that no identifying information, or information of a sensitive or personal nature will be sought, as it would simply be irrelevant to the research questions.

Secondary data use:

The secondary data sources I am asking permission to use for this research are created routinely as a part of all my courses, and thus the collection and use of this data would put no additional burden on participants. In my courses, Google Drive is used to house student work and student reflections on learning, as well as other data produced during the course that will not be used in this study. Google classroom is used for students to report on homework tasks, and discuss their answers. I plan to use this Google Drive and Google classroom data in an anonymised form (using the pseudonyms learners' request) in order to provide examples and illustrations of themes that emerge from the two data collection methods.

The tasks that generate students' reflective writing have been designed with the stimulation of metacognition in mind; they were not designed as part of this research study and will only play a supplemental role in the evidence base for this research. They will be used – in anonymised form, and with the participants' informed consent - to provide context and illustration for the interview accounts as they provide a candid and reflective account of learning as it happens. These reflection questions ask students to consider what they learned from the process of completing the assignments and how they can learn more effectively in future, or what they would do differently if they had to do the assignments again. Sometimes students specify that an element of the course was important in helping them to understand something or changing the way they interact with feedback. This data will be useful for illustrating themes that emerge from interviews, providing contextual details and also a simple form of triangulation.

There are also teacher student dialogues that are generated from these reflections that will also be included in the data set. Such dialogues occur when the teacher comments on a point that a student made in their reflection, and the student follows it up with another comment or question. Similar dialogues also happen on student work. Again, these are generated in the normal course of teaching, and have not been generated specifically for this research study. These will be used in the same way as the reflections themselves.

When using data from these alternative sources, I will be careful to make sure that nothing personally identifying, and particularly nothing that is sensitive or damaging, would be included. Students will be given the option to consent separately to whether Drive and classroom data can be used, in the form of a check box on the consent form. Participants will be reminded of their rights, including the right to withdraw, orally before interviews, as well as being provided with copies of consent forms and information sheets. It will also be made clear between data gathering steps (e.g. the questionnaire, and follow up interviews) that participants have a right to withdraw.

The information sheet will be provided in simple English to ensure that students understand what they are consenting to. As the students are generally moving from a more casual understanding of writing to being acculturated into higher education academic writing practices, the essays and examples of writing they produce do not involve personal information, and usually aim for an objective and impersonal discussion of a question or academic field. Reflections on learning may include thoughts of a more introspective nature but have not in the past produced any data that could be considered sensitive or that could damage participants in any way.

Students are required to write one critical mid-term essay and one critical literature review during the course. Students are encouraged to write objectively, use sources, and be critical. This means that it is unlikely that anything they write in their essays would create privacy issues. If I were to use excerpts from their essays (part of the drive data I referred to earlier) to demonstrate how a student changed their work based on feedback, I would make sure that there was nothing sensitive or personally identifying (which would anyway be unlikely) by using pseudonyms of their choice (or assigned by the researcher if they have no preference) so that participants can identify

themselves if they wish to view the final thesis.

Permission will be sought from the course Director and from the students themselves (through the standard consent form) to use these secondary data sets; they will then be used only with the permission of both parties.

Participants:

Permission is being sought to study the perceptions of students in my classes. Students in these classes tend to take the class because they plan to study abroad or apply to graduate school. This means that the ability to write academically in English to a high standard, and use and engage with feedback effectively, is likely to be highly useful to them. Almost all of the students who take my classes are ethnically Korean, a fairly high number of them have lived abroad or attended English speaking schools such as international schools. Students need a TEPS score of 815 to enter the class, which is equivalent to around IELTS 7.5. TEPS does not measure productive ability, so there is sometimes a wide gap between students' passive and active English skills. However, this does mean that they are likely to be able to understand the principles of consent when explained clearly and in a written form.

Taking the current class I teach as an example of the kinds of participants I am likely to include, the current class is made up of 14 undergraduate students and one post graduate student. All 15 are of South Korean origin, and there are currently 7 females and 8 males in the class, 4 students who registered first in 2013, one from 2014, one from 2015, one from 2016, one from 2017, and seven from 2018. There is also a broad mix of subjects studied, with one student studying Russian, one economics, one from sociology, one from statistics, one from physics, one from biological sciences, one from business, two from materials science, one from electrical and computer engineering, one from plant science, two from agricultural economics and rural development and one doing a Master's degree in Mathematics. However, many opt to write about subjects they are not studying.

Normally students who take the advanced academic writing class are interested in improving their academic writing, because there are easier options available that they could also choose; however, it is possible that some students take the course because they are even more afraid of taking a speaking course. Some students are also caught by the fact that there is a huge gap between passive English levels and productive levels; some struggle or drop the course as a consequence. These factors may have an impact on how many participants there are at the end, and may influence participants who take the course under duress and may not want to take part in any research. As a consequence, all students will be regularly assured of their rights to withdraw from data collection whether in writing and orally throughout the course whenever data collection is discussed or takes place. This is to attempt to avoid a 'bandwagon' effect regarding the informed consent process.

Because the course is credit-bearing in itself (2 credits of 130 over a 4 or more-year degree) the course and assessment of it are lower 'stakes' as they might be in other UK EAP contexts where course results may dictate whether students are admitted to

their courses of choice at all. Students on the program generally suffer much less stress as a result. The point here is that because less is at stake for the students, dynamics of power may play less of a part in students' decisions of whether or not to take part in the research than if the context was a UK EAP pre-sessional or foundation course. This may lessen the ethical issues in comparison with EAP research in English speaking countries.

Data collection: Google Drive will be used as a repository for student work, peer review comments and some written exchanges with the teacher. Further teacher feedback will be recorded in Google classroom forums. This secondary data will be generated as a normal part of the course. Students have not begun to create the work that will be included in the study, however, so it will be possible to gain permission in advance to use this work. (Students will also have the right to opt out once the work has been created.)

I will be asking for consent to use students' work for this project, and I will also ask students for permission to use the work for future publications in which it is analysed directly for signs of feedback recipience, or for a publication based on this study.

Questionnaires are scheduled to take place a week before the interviews start, towards the final weeks of the course, after a full feedback cycle has taken place. I will be targeting a lull in the workload period to reduce stress on all stakeholders concerned. Data from the questionnaires will then be used to inform interview questions.

Google technologies are being used as a data collection method (Drive/Forms/Classroom). Google has been certified under the US-EU privacy shield agreement. This means that although Google is a US company, data privacy will be covered by EU law, and is thus considered an acceptable data collection method according to the data protection standards of UCL. In addition, the nature of the data to be collected can be classified by the UCL is considered to be 'restricted' which means low risk, but not expected to be in the public domain. Google guarantees that its data is encrypted and can only be accessed through a two-step process that will be activated. This means access will require a password. Access to my phone, which will be used to create the interview recordings, is biometrically protected.

Because of potential problems scheduling interviews, although face to face interviews are preferred, it is likely that some interviews will need to take place using VOIP or Skype. In either case, interviews are not expected to be longer than 1 hour, and I will aim for 30 to 45 minutes in duration.

It will be made clear both orally and in writing that there will be no consequences of any kind under any circumstances to either taking part in the study or deciding not to take part. I will also try to maintain a reflective researcher stance (Cohen, et al., 2018) throughout the course, helping the students to understand that quality research aims to be as objective as possible rather than aiming for any particular research which may introduce bias. This will be conveyed through a discussion of research objectivity and bias that relates to the work they have to complete as a part of the course. This is always something I talk about, as critiquing literature is a part of the course content; for

this reason, discussions of this sort are not expected to take much class time or constitute harm to the students. The most important message conveyed to students will be that regardless of participation in the study, all students will be entitled to the same amount of attention and care. This is intended to improve the likelihood that consent is genuine.

Data analysis: Data will be held securely on password-protected databases either held in UCL or on external devices that are encrypted and password protected and kept behind a locked door while data analysis takes place, with the exception of my phone which requires a fingerprint to access and to de-encrypt, but will be kept on or very near to my person. Data will be analysed after a close reading using thematic analysis. NVivo will be used as required and I will take the advice of my supervisors as to whether it is better to use it, or to follow a manual coding process.

One other possibility for data analysis is a case study method that focuses on using individual cases to illustrate the effects of the classroom practices, using individuals' experiences and data as examples of how the practices influence students' engagement and use of feedback. Use of this reporting method will depend on whether using a case study method would be better illustrative of the effect of the classroom practices. If case studies are used the focus will be examples of student development with a focus on the effects of the classroom practices over time by looking at examples of individuals' experiences. Due to scope limitations, the number of case studies, if used at all, would be minimal. If a case study approach is used, the same anonymity rules would apply. Individuals would be given a pseudonym, and I would avoid disclosing any information that would identify individuals such as their course of study, if there is only one student of that gender on that course of study. If for some reason such information is pertinent to the analysis, such information would only be disclosed with the permission of the participant (which would be requested before such a write up happens). It is important to reiterate that any reporting of case study data in the study will be focused on the overall effects of the intervention. In other words, the focus of analysis will not be the individual, it will be effects of the intervention itself using some individual cases to illustrate these effects. Some individual data may be used to discuss an example of longitudinal development regarding the intervention, but this again will not be personal data, it will be data about students' development and changing beliefs about feedback and responses to it. Care will be taken to remove identifying data, over personal/off topic comments, or anything that compromises anonymity from comments, although this information is rarely featured in data, as almost all discussion on google drive, google classroom or on essays is about the work itself or about the learning process.

I will be asking that the data can be used for 10 years. This is because I strongly believe that there will be no compromising details in the data that could harm participants in any way, and the data may be useful in the future when more time is available for a more fully reported analysis (subject to permission being granted for its use).

Because there are few students in the study, I will also be careful not to share details of

the academic subjects students are studying in the reporting of data unless for some reason it is important for the analysis, however, it is unlikely that this information would be relevant (or even damaging in any way).

Samples of the consent forms will be enclosed with this ethics application and have been redrafted according to the guidance and advice of my two supervisors and preliminary ethics panel members.

General research description

The proposed research aims to investigate learner responses to some established classroom practices that have been used for the past few semesters on my advanced academic writing courses. This is not an intervention study, but a study of participants' responses to classroom practices and their relationship with use of feedback and engagement with feedback and feedback processes.

Consideration of possible ethical issues in the research

No sensitive information will be requested in the interview or questionnaires, and all participants are at least 18 years old. The students are studying in their home context and are all legal adults. There are no indications that any of them would be considered vulnerable.

i) 'Power distance' or social pressure that may undermine consent

One major issue is that some students may not wish to take part, but may feel compelled to because of social pressure from colleagues or because of the power dynamic present in the local context as discussed by Hofstede, (2001). While Hofstede's work is not without controversy, it can be said that in South Korean University contexts, in comparison with UK university contexts, the power of an individual teacher may be greater, and learners seem to feel more influenced by this power in their classroom behaviour. Hofstede referred to such factors as 'power distance' which seems to describe the situation adequately in this case.

Teachers in Korea also seem to have more powers to 'punish' students who displease them, and there are rumours from students that the best way to get A's is to repeat the lecturers' words back to them verbatim. I am aware of this issue of 'power dynamics' and make some effort in my classes to reduce power distance and encourage academic objectivity. In addition, usually towards the middle of the course learners also become accustomed to a more western style of teaching and tend to become more relaxed. At this stage power distance is reduced and learners tend to be more honest about their preferences and opinions. As has been explained there is unlikely to be any risk to participants, and participants may benefit as discussion of learning may contribute to the development of metacognitive skills and further internalisation of sustainable feedback engagement skills.

ii) Potential solution to the power distance/social pressure influence on

informed consent and bias

As a teacher, I also remind my students of the importance of objectivity and ethics in research, and as a researcher, ensure that the students know that I seek to understand the participants' honest views and consider the integrity and ethics of the process more important than the content of the data that is collected. Participant information and consent forms will also reiterate this point, and participants will be told orally and in writing that personal opinions, participation or non-participation will not be held against them in any way. One way in which my classroom practices ensure that there is a fair approach to marking is the fact that all students are able to see all other students' feedback and work. This means that if bias was to be introduced to the way I mark students' work, it might be detectable, and this is likely to encourage a reflective marking process. Students knowing that this is the case may also reduce research bias in the data collection process.

Potential for dissemination and value of the research: The findings of the project are likely to hold interest to a range of practitioners, both in the Korean context and in an international context. I currently have opportunities to give paid workshops and lectures to aid staff development at SNU and at other universities, I am able to suggest my own topics, and I believe helping students to use and engage with feedback or encouraging teachers to support feedback engagement processes is a valuable practice that can be considered a 'public good'. I also have opportunities to speak at Google Apps events to disseminate findings predominantly to primary and secondary school teachers. I believe there is a sufficient gap in the field for the research and that if the research goes as planned there is potential for international publishing.

Informed consent: Students will be told at the point of data gathering that the process is designed to inform course design, inform teaching practice and that some of the data will be used in an ongoing research project and other possible projects in the future. A short introduction to the questionnaire will offer this information. There will also be one unified information and consent form, and students will be informed that by checking the boxes and signing the forms they are consenting to take part.

Students will also be informed, that they are free to refuse to take part (which can be done anonymously from other students). Or simply omit to provide information or sign up for an interview.

Students will also be told about the research as soon as this ethics process is complete and asked to sign the consent form (attached) after indicating their understanding of the project and their rights to withdraw from the research. Students will also be informed that whether or not they choose to give data they will be taught just as they were before. Learners can also mix and match their consent using the checkboxes. The researcher also intends to remain aware of the possibility of the power dynamic influencing the consent process and to remain 'reflective' (Cohen et al., 2018) in ensuring consent is genuine.

Anonymity: All reporting of data will respect participants' privacy and anonymity, and the collection of sensitive data will be avoided as it is deemed unnecessary to the goals

of the project. Several procedures will be followed to safeguard anonymity and privacy:

First students will be assigned pseudonyms that they will choose for themselves. The data regarding which students were assigned to which pseudonyms will be kept physically in a locked drawer behind a key coded door, meaning that it would be near impossible for a third party to get hold of. The data and the participant pseudonym key will also be kept apart. Questionnaires will be collected anonymously, but interviewees will be assigned pseudonyms and all data analysis and reporting will use those pseudonyms. The list of pseudonyms will later be destroyed after it is no longer needed.

As per UK data service recommendations, data anonymization techniques will be used during interview, transcription, analysis and reporting. No direct identifiers will be used, and data disclosing individual variable are not of interest to the investigation and will not be sought. The names of towns or cities connected with individuals will not be sought. I may disclose that the research took place in SNU in reporting on the advice of my supervisors if they are confident that this would not constitute any risk to participants, which I strongly believe it would not.

Confidentiality: I am aware of the confidentiality requirements of both IOE and BERA, and will ensure anonymity and confidentiality. Any data gathered is also likely to be generally innocuous, as it will be student's evaluations of feedback. Very little information of a personal nature is likely to be divulged and nothing of a sensitive nature is deemed relevant to the fulfilment of the research questions or research aims.

All data stored online will be stored in the EU (at UCL) or on a local encrypted and password/fingerprint lock protected device. Through Google services which promise encryption and two-step authentication or on my phone which is encrypted and biometrically locked.

Secondary data analysis: The secondary data referred to above includes the Google Drive and Google classroom data generated in the classroom. I am a co-owner of the data with the individual students who produce it within folders that I created and own on the Google system. I intend to ask permission to use the data before the data is generated, but if some useful data is generated before the permission is obtained I will be asking for permission to use data that was generated before consent was obtained. However, it is unlikely that this data will be very useful for the research process and therefore it is less likely that it will be used. As I have stated above, secondary data will be used to corroborate and enrich the reporting of themes from the main data set (interviews and questionnaires) and will not be reported as a data set in its own right. The aim here is to provide a sort of 'triangulation' to reduce the potential for bias, and increase the value of the data gathered by being able to exemplify and enrich it. Because this data is collected anyway and is used for formative assessment, as a matter of course, I would argue that there is no expectation that the use of this data would put participants under any additional burden or stress. Therefore, as long anonymity and privacy are guaranteed, and this is an important part of this ethics application (explained below), the inclusion of this data should not constitute an ethical

impact of consequence. Instead the inclusion of secondary data is only likely to improve the impact of the research and therefore inclusion of the data could make the research more ethical and the proportionality between the potential usefulness of the data and conclusions that can be drawn from the project vs the potential imposition on participants is likely to improve, and may improve in unforeseen ways that are even more positive than currently envisaged.

Because no data has been collected yet it is difficult to foresee how exactly this data will be used. However, to give a hypothetical example, a student might say that peer review helped them to engage with the feedback process because it made them feel their work was being read and commented on and thus, they felt their work to be 'more important'. I might ask the student for an example of peer review helping them to feel that way, they might name a student, and an essay, I could then look at the record, see the interaction, and report a short except of the exchange as an example of an interaction type that made the student feel their work was more valued by virtue of the fact it is being read and critiqued by interested other parties. This would be reported as a theme referenced by the pseudonym of the student concerned which would be anonymised.

Another example of work from drive or classroom being useful is in student learning reflections. These are generated as a response to feedback. Students are required to acknowledge the feedback, make a correction and then afterwards write about what the feedback from peers and the teacher helped them to learn, and how it might contribute to doing better work in the future. This data is collected so that credit can be given to students who show that even if they haven't achieved a certain grade that they can show they have learned what they would need to learn in order to improve. Some of this data might be useful as it might illustrate that learning has happened that is due to something connected with the learning practices under investigation.

Safeguarding of personal data in secondary data analysis:
In addition to seeking consent for the use of secondary data, no personally identifying data will be used in the reporting of secondary data (except the use of personally selected pseudonyms). The use of secondary data is intended to illustrate themes from interviews and questionnaires, and questionnaires will be filled out anonymously. In the case of themes emerging from the interviews, it will be possible to link an individual by Drive/classroom data to their interview data, but this would be reported using the same procedures of anonymity and confidentiality as data from the primary set which involves the use of student chosen pseudonyms. Google Drive and classroom data is separate from individuals' student records, and there is no personally identifying information in the data extracts themselves. These extracts mainly constitute student conversations with peers about their work, or conversations with the teacher about work.

Safeguarding of data procedures for secondary data: Lists of which students chose which pseudonyms will be kept separately from the data in a locked draw inside a locked room, thus it would not be possible to trace data to the individuals concerned. Course records (identifying students) are kept using a different system and will not be utilized for this study.

As recommended by the UK Data Service, the following anonymization techniques will be used during data collection and analysis:

1. No direct identifiers will be used in reporting or analysis.
2. Any information that makes it clear that a certain academic subject is being studied by the participant will be removed in case only one student in the group is studying that subject. Any other identifying data will also be handled in the same way, although no other data of this nature is required.
3. The only data available on drive or classroom is name and email address and these will be exchanged for pseudonyms as it enters the research record.

Appendix 2 Local ethics clearance

KIM Hyonjin <hyonjin@snu.ac.kr> Fri, May 11, 2018, 11

to me

Dear Professor Wood,

I read the ethics application from you sent me. As director of the College English Program at SNU, I give you the permission to conduct this research.

Sincerely,

Hyonjin KIM
Professor of English Literature
Director of the Center for Medieval and Renaissance Studies
Director of the College English Program
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Appendix 3 Sample participant information and consent form

Participant information sheet

Why are we asking for your opinions?
As you are aware, your course has included additional elements that are aimed at helping you to understand and engage with feedback, to use your feedback effectively and be motivated to do so. In order to understand and develop theory regarding the way that these elements interact I would like permission to use data from your Google Drive folders and learning reflections. I would also like to ask you to complete an online questionnaire, and will ask some of you to take part in an interview. This is to investigate how your use of feedback and engagement with feedback has changed during the course and why.
The reason for collecting this data is to learn more about how teachers can facilitate the best and most effective use of feedback. We would like to know how you felt about certain aspects of the course, and about which aspects (if any) helped you to be more engaged, understand better, change your beliefs regarding feedback, set more effective goals or use your feedback more effectively. It is hoped this will help university teachers at SNU and around the world to design better feedback practices and for learners to learn more effectively from feedback.
It is important that you are honest in your responses especially if you felt some aspects of the course were not effective or could have been more effective in facilitating your use of feedback and engagement with feedback. Please give your honest impressions and reflections.

How will this information be used and who will benefit?
This information will be used to improve our courses and inform teachers of the best ways to facilitate teaching and learning especially regarding feedback and the use of feedback. This research may benefit future students, but will also be used in an unfunded doctoral thesis for the University College London, Institute of Education. This work may be published, used in meetings or conferences or in further research aimed at contributing to the field of knowledge with your permission.

What is involved?
While developing a portfolio of work in Drive is compulsory as part of the

course, allowing it to be used for this research is your own personal choice. If you allow it to be used, Drive and Classroom data may be cross referenced with interview data to provide context for your remarks. Drive or classroom data may also be used (in the form of screenshots) to try to understand how you have learned from different aspects of the course, for example, peer review, from writing reflections or from being able to discuss things with the teacher though an electronic medium. Please indicate whether you consent to this in the check boxes at the end of this form.
You will also be asked to answer some reflective survey questions in a separate anonymous questionnaire, this should not take longer than 15 minutes, and participation is completely voluntary.

An interview is a one on one discussion with a researcher (in this case, your teacher), in which you will be asked questions and encouraged to give your opinion freely with minimal input from the researcher. This will be audio recorded and later transcribed to get a deeper understanding of your opinions. Interviews will be conducted after the first full cycle of feedback has taken place on the first essay, and before the end of the course when students are likely to be busier with other assignments. They will take place in a quiet space on campus, this is likely to be in the College English Programme building or an empty classroom. It is possible to meet by Skype if meeting face to face is not possible. Participation in the interview is completely voluntary and interviews should take from 30 to 45 minutes.

Confidentiality
All data reporting will be anonymous, and to ensure anonymity you will be asked to choose a pseudonym, (a name that only the researcher and you will know) to be used in data reporting. Nothing that can identify participants (except this name) will be used in any publicly viewable writing. Only the researcher will have access to the collected data, and the all data will be held securely using a high-security password at a specialised UCL data centre, and locally on password protected and encrypted machines. Google technologies are being used as a data collection method (Drive/Forms/Classroom). Google has been certified under the US-EU privacy shield agreement. This means that although Google is a US company, data privacy will be covered by EU law, and is thus considered an acceptable data collection method according to the data protection standards of UCL.

Withdrawing
You are welcome to withdraw from the research at any time without giving a reason, either by omitting to check a check box or not signing the consent form overleaf, or notifying the researcher that you would like to withdraw. You can also write to the researcher with the request that your data be withdrawn at any point in the project. Whatever you decide, and whatever information you give or

omit to give, you will always receive the same care and teaching as before.

Risks/benefits

There are no known risks involved in taking part, except for the time taken. It is assumed that thinking and writing about your learning processes in the questionnaire, and talking about your learning process in the interview will aid in the development of meta-cognitive skills (skills which involve active control over the cognitive processes engaged in learning). You will also have the opportunity to practice English speaking in an academic setting with a native speaker, and as a by-product you will gain experience and knowledge of conducting interviews from the participant perspective. This could be useful if you plan to conduct your own research in the future. On request you can also be provided with a copy of the final report before it is published, this may also provide insights into the research process.

This research project has been cleared by the Institute of Education research ethics committee and is project number: Z6364106/2017/12/62 social research

It has also followed the ethical procedures of Seoul National University and has been approved by the head of the College English programme department in line with local research ethics regulations.

Institute of Education

CONSENT FORM

Full title of Project: A technology-mediated dialogic approach to holistic feedback processes with Google Drive: Effects on learners' feedback recipience.

Researcher contact details: James Wood, Assistant Teaching Professor, 2-205-1 Seoul National University, Gwanak Ro-1, Gwanak-Gu, Seoul, 08826
jameswood@snu.ac.uk

UCL Data Protection registration number Z6364106/2017/12/62 social research

Please check box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. ☐
3. I agree to take part in the above study. ☐

Please check all that apply

4. I agree to data from Drive/classroom being included in the study ☐
5. I agree that data from the questionnaire can be analysed and reported ☐
6. I agree to take part in the interview which will be audio recorded and transcribed for the purposes of analysing and reporting. ☐

7. I agree to the use of anonymised quotes in the study/future publications/conferences etc. ☐

So that you can identify yourself in the final report if you wish to see it, if you have consented to take part in the interview what would you like your assigned name to be? This can be an English or Korean name. Ideally, it will start with the same letter as your real name.

_____

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

Appendix 4 Indicative Scheme of work/feedback practices

Date Monday Wednesday	Lesson	Notes/Homework	**Feedback practices**
Week 1 **September 4th**	Course introduction/Classmate speed dating Academic style.	Needs analysis to determine the goals of students on the course	
Week 2	Principles of academic writing vs non-academic writing How to write well-structured paragraphs – unity	Academic style – improve the style of paragraphs – Peer review and teacher feedback SNUON – Sentences – https://youtu.be/dfL8gWlTk5E https://youtu.be/1qJSJne_V0c	
Week 3	Coherence and cohesion – organising paragraphs How to avoid plagiarism, paraphrase and summary – in text citations and Harvard/APA referencing	Hw King's College London's http://gg.gg/Rhetoricalstyle **Write a paragraph/peer review/teacher feedback** Different types of sentences/paragraphs SNUON - https://youtu.be/toOdzq8tr78 Analysing and	

		formatting paragraphs https://youtu.be/XSZXl9qL6E8	**Intervention processes**
Week 4	Searching for reliable sources – the CRAAP test, using Google Scholar and the library From Paragraphs to essays/Capital punishment essay example analysis –	Ways to connect ideas SNUON. https://youtu.be/toOdzq8tr78 Feedback on paragraphs returned	In class • Share example essays • Introduce the marking criteria • Students apply criteria to model essays and consider what peer feedback they could give as training for peer feedback At home - • Students complete a reflection on: their feedback experiences, their mindset regarding learning academic writing, the purpose of feedback, how the assessment criteria, teacher peer and self-assessment can be used together to help students to improve, and a

			plan for how to use feedback they have so far, how and if looking at other students work or teacher feedback might be a learning resource.
Week 5	From Paragraphs to essays/Capital punishment essay example analysis – Assignment titles – How to come up with a sufficiently critical and appropriately narrow essay topic.	Using outside sources SNUON https://youtu.be/Q4RFzlgTL-8 SNUON summarising https://youtu.be/z0SCwTuVsPI SNU on 15 – From paragraph to essay https://youtu.be/_ZvQJYgoZ2Q	In class • Begin with a discussion of answers to reflections in groups • Teacher discusses reflections with a view to helping students consider the most effective ways to learn. • Introduces feedback resources – a collection of websites and materials students can use to target their weak points so far.
Week 6 April 6 April 11	Peer review workshop – How to do peer review well The language of	**First draft of midterm essay due – peer review** Reflection on	• Show past student essay – students collaboratively add peer review comments,

	argument/logical fallacy	meaning and purpose of feedback	contrast with example of good peer review comments. • Start peer review in class and continue at home
Week 7 April 13 April 18	Academic grammar problems with tenses – response to formative assessment needs	**First draft of essay due for teacher review** Respond to teacher feedback Reviewing final drafts SNUON https://youtu.be/qf4L0MjIsLY	• Introduce essay checklist for self-assessment before first draft due in second class • Students do self-assessment in drive
Week 8 April 20 April 25	Responding to feedback and feedback workshop Q and A		• Students read/listen to feedback, and respond to prompt questions about the feedback on their second draft essay document. • Students follow a feedback engagement process with stages 1. View and understand feedback – ask teacher for clarification 2. Consider feedback

			agree/disagree 3. Write a list of things to improve for the essay and overall. 4. Write goals. 5. Make a plan – when and with what resources.
Week 9 April 27 May 2	Writing a literature review Common mistakes in academic writing	**Final midterm essay due** **Literature review announcement**	• Students appraise literature review examples
Week 10 May 3 May 10	Reporting verbs nouns/reporting structures Workshop on subject of literature review and synthesis matrix	**Titles due for literature review**	• **Students reflect on how they can learn from their final feedback, and write goals and plans for how to reach them** **Conduct Questionnaires and interviews**
Week 11 May 11 May 16	Synthesising sources for a definition How to write a general synthesis	**Plans due** Synthesis matrix due	
Week 12 May 18 May 23	Writing better sentences improving writing quality	**First draft for peer review due**	• **Students give peer review using peer review checklist** • **Respond to peer**

	Peer review/ Responding to feedback workshop	SNUON improving your style 1 and 2 https://youtu.be/MAEKktZeHKs https://youtu.be/1jGGNjqaDgA	**review**
Week 13 May 25 May 30	Feedback on common errors/punctuation Academic grammar/structure tbd/articles etc	**Second draft for teacher review** SNUON proper article usage https://youtu.be/2lH_vAIMuEA Punctuation (Periods commas, semi colon) https://youtu.be/1MR3LFaoOXc https://youtu.be/wcfIMwCxnNA	• Face to face feedback on second drafts • Students respond to feedback using prompt questions
Week 14 June 1 June 6 (The Memorial Day)	Editing and proof reading **No Class**	Using literature review checklist for self-assessment	• Students perform self-assessment using literature review checklist
Week 15 June 8 June 13	Essay workshop Essay workshop	**Final essay due**	

Week 16 December 16th	Individual consultations on essay feedback and how to use what has been learned in the classroom to improve grades in other subjects, improve assessment literacy, and sustain a growth mind-set.	Self-assessment and goal setting reflection considering how to apply new skills to various applications.	Self-assessment and goal setting reflection considering how to apply new skills to various applications.

Appendix 5 Reflection questions (for pedagogic purposes, and example data)

Using feedback effectively

This activity is designed to help you to reflect on the feedback you received, and consider how this can help you to reach your goals.

If you'd like to learn more about how to boost your learning check here:

1. Barriers to the use of feedback:

a) View your feedback video and the grade. Is there anything you can't understand or feel the need to question?

For the feedback video, I first watched the whole video without taking any notes. I simply listened to the video while watching the screen. After the first view, I took some time to reflect on the comments I received and whether I understood it clear enough so that I would be able to fix the necessary areas in the next draft. I realized I did not 100% understand the feedback regarding 'conceptualization' in my introduction. I watched the video a second time the next day, but this time I had both my essay and video open at the same time. I took interactive notes on my final draft document while listening to the video and re-listened to areas where important suggestions were made. After this process, the feedback/comments/grade I received became organized in my head as I was able to thoroughly process and understand them. This was when the feedback given for my introduction became clear to me.

The phrase, "As much as MC tests are widely used in various educational settings" did not quite fit for a couple of reasons. First, this phrase was unclear and controversial to the first sentence of the essay which I had used to mention that assessments measure the extent to which students have retained knowledge. We are not arguing whether MC tests are used to retain knowledge or not, but rather the fact that retained knowledge is measured through a surface learning approach is an issue. So instead of saying, "As much as MC tests are widely used in various educational settings, it has become crucial to evaluate their construct validity and to measure

whether they assess deeper critical skills", I should replace the first half of the sentence to say something along the lines of tests should be used to assess critical thinking skills and thus we should measure whether they do so or not and fixing the part regarding 'retained knowledge'.

If we retain knowledge and we apply this to new problems in an exam setting, then this suggests we have gained knowledge!

I realized the importance of having an open-mindset at this point in time because if I were to have a closed mind-set, I think I would have refused to acknowledge or understand the feedback that I did not understand the first time I received it and would have not bothered watching it a second time. It also made me realize how one may give really valuable feedback but it is truly up to me to make use of it and transform the feedback into a stepping stone for further growth. Although the receiver of the feedback does not always have to accept the suggestions, it seems very important for the receiver to understand the feedback given and refrain from neglecting it just because one can't make sense of it (probably one of the reasons why you emphasized the point of asking questions about feedback by tagging you in our google docs!!). Therefore, I think it would be great for everyone to watch their feedback more than once and take notes on it so questions can be asked later.

b) What is your emotional reaction to the feedback? Is this reaction helpful? Harmful? How can you overcome this?

The process of receiving peer feedback and teacher feedback on my drafts was exciting and extremely helpful for me. Before I took this class, I would have definitely been stressed by all the comments I received. In Korea, having "red marks" all over your paper means a bad thing. It usually implies that there is something very 'wrong' with the paper and many may consider this as criticism rather than helpful suggestions. However, by the time we started on this essay assignment, I think the class environment was well-established to foster a very open-mindset and positive climate of feedback. Because it was always made sure that we understood not only the importance of feedback but also the fact that receiving such comments does not mean we are lacking, but is an opportunity for us to make our essays even better, I was able to very comfortably exchange honest opinions with my classmates regarding our essays. With peer interaction every class, I feel like everyone was assured that our classroom environment was safe/comfortable and because everyone knew people would not receive each other's feedback as criticism, a more effective peer review was able to be done. Knowing that feedback ≠ lower grades but actually "feedback → use of feedback → higher quality essays → better grades AND growth" is such a helpful mindset for myself as a student to have. I loved how there were a couple of enthusiastic people in the class who were willing to exchange feedback with me even if they weren't my designated partner. I was able to realize how everyone can at least contribute one new piece of feedback to my essay because each person has different views and opinions. When all this feedback is compiled and people utilize teamwork, a huge synergy effect can be achieved.

It is honestly so amazing that I can get a 20 minute feedback video from a professor for

not only my draft but also my final essay. I realize how valuable and rare of an experience this is from a SNU class and I am grateful for being able to GROW as a student through such feedback. In majority of my classes, I often did not understand why I got the grade that I got and after taking the midterm, we would move onto the next chapters that would be tested on the final without giving me a chance to know what I did not understand in the test, etc. (basically with no chance to fix my incorrect answers I must have acquired some false knowledge).

I think the feedback I received from my peers and the professor really pushed me to do better and motivated me to keep making my drafts better/fix the problems that were pointed out. It was a challenging yet worthwhile process.

2. Feedback tends to focus on corrections, but there are also many things you didn't know coming into this class that you have now learned.

a) What important things have you learned through this essay - (don't only rely on feedback, think about your own learning process as well/peer feedback, planning) etc.

Through this essay, I learned that no matter how many times I read and corrected my essay (self-review) there were points that I received in my feedback that I would never have even thought about. Having read my essay many times and knowing exactly what I am talking about in my arguments often leads to the possibility of writing a reader-responsible paragraph. I learned how I must always assume that the reader knows very little or nothing about my topic. It is also very important for me to clearly explain the studies that I have researched because I need to realize that I read or skimmed through the whole study (thus having a very good understanding of the main point), but the reader is relying solely on my 1-2 sentence summary/paraphrasing of the study done to support my point. Therefore, in order for me to write a strong argument/counter-argument, I must give the readers enough information on the type of study done and the main point that the study aims to prove.

Another important thing I learned through this essay was the importance on conciseness. The word count really helped me to cut down the unnecessary portions of my writing. I started my essay with 1400 words and progressively cut it down to around 1200. This required me to not only take out some arguments and studies that I took time to research, but also to do additional research to replace some of my arguments with totally new studies to make it better fit my overall thesis. Comparing my 1400 word version and the 1200 word version, the latter was much more clear concise and convincing. Thus, having a lot of research studies/words does not necessarily mean it is a thoroughly developed essay! Being concise and using only the sources needed to fully support your arguments seem to be more important.

Lastly, I learned that planning is more important than one thinks. I found that planning really helps with creating a critical argument (good critical analysis) in the actual essay because if one starts writing with no clear plan of what the argument and counter-argument will be, many times the argument is weak and can end up using logical fallacies.

3. Translating the feedback from the essay into goals for future essay writing and the literature review:

a) Did you achieve the goals you set for yourself after 2nd draft teacher feedback? Why/why not?

In my first draft, my main problems were regarding the use of anecdotal arguments and strawman argument. For example, I had used the same source to prove both the argument and counter-argument and I did not clarify that some sentences were a fact. My goal was to fix these flaws in my argument and thus, I had to do a lot more research. I think in my 2nd draft I focused on looking for studies that only support my argument that MC tests should not be used extensively in education. However, for my final draft I tried to actually delve into studies that supported the use of MC tests. People who have not taken this class yet may think that adding comprehensive arguments for the side you are arguing against will be detrimental in persuading readers to agree with your side. This is in fact not true, and after I researched more about the opposing side and incorporated it into my essay I was able to fix my strawman & anecdotal style arguments. I was very glad that I received feedback that I successfully fixed this area in my final draft feedback video.

b) If you had to write the essay again how would you approach it differently?

As mentioned above, I was able to fix the bigger problems in my essay regarding my arguments. However, this made me lose sight of some of the tedious areas I should have also paid attention to such as word choice and consistency in format. It was a shame that I lost marks because I forgot to put parentheses on a few published years in the works cited. Also, some expressions or words that I used seem to not fully fit with the context of my sentence.

If I had to write the essay again, I would definitely approach the way I researched about my topic differently. I would thoroughly research studies that support MC tests just as I did for studies going against the first time I research. This way, I would be more efficient in the research process and I would not have to re-do my research (like I did for this essay). In addition, having good studies that well support the opponent's argument will help me write the essay avoiding any strawmans. Also, I think I would pay more attention in being consistent in my academic conventions and use of synonyms through more thorough proofreading of the essay as a whole.

I had a hard time translating my thoughts into words and I think I tried to make my sentences exactly the way I wanted them the first time I wrote them. This proved to be very inefficient and I figured out that freely writing everything down first, and then progressively working from there as a starting point would be better.

c) What goals/skill to master will you set for your next essay/the future and how will you reach them?

In my future essay, I definitely want to master coherence and cohesion. It seems like I have good coherence and cohesion to some extent but it is not at the A+ yet. I believe that there is enough potential for me to grow and become better in this area. I find that I am receiving a lot of feedback on word choices and phrasing. For example, I used “in reverse” when I could have used “conversely”, and “wrong memory” could have been changed more clearly to “can induce the wrong memorization of the wrong item”. “Deteriorates the quality of learning” could have also been changed to “deleterious effect on learning”. In order to master these skills, first I must put effort into it. I found that I have a tendency to complicate the wording of the sentence but this in fact does not make it sound fancier or better. Simple wording seems to be best, thus I plan to try my best to use more common and simple wording to express myself. Second, I need the help of my peers and teacher to fully master this skill. I hope to build a strong relationship with my peers and exchange really helpful/thorough feedback. I am sure that my peers will be able to point out phrases that were difficult for them to understand or felt was awkward, regardless of their English skill. It was evident that when I worked really hard to give someone feedback, that person was also more likely to put more effort into giving others feedback! Thus, I hope to create this positive cycle to help me write an essay with better coherence and cohesion.

4. Are there any resources or help you need to reach these goals?

It is a shame that some people are not fully utilizing the valuable resource of teacher feedback that is given to us, but I think continued teacher feedback will really help me to reach these goals. I now fully realize and understand the concept of ‘zone of proximal development’. It is a definite given that I must put in the full effort myself for me to learn and grow, however, there are still limitations to this. Thus, I need guidance and this will take me to a new level of learning and development which will ultimately help me reach my goals. As a matter of fact, after watching my final draft feedback video and taking notes on areas I need to change to improve my coherence/cohesion, I was able to get an idea of my weaknesses and on HOW I could change it. This is super important because many times students are told “you need to fix this part” but not “how” or any suggestions regarding it. I loved how in the video, I was not only told “this word choice is not appropriate” but I was also told why it was not fitting and some suggestions on how it could be changed. I think repetition of such a process will aid me in my areas of weakness.

5. Think about the drafting and learning process over the semester:

Did you gain any important takeaways (important learning points) from the essay writing process? (i.e. first draft, peer review, teacher feedback, dialogue with teacher/peers, responding to feedback and the end result?

A) Having an open-mindset is crucial in the process of using feedback effectively. Watch feedback videos more than once, and ask questions if you still don't fully understand!!

    a) With a closed mindset, many times we do not take the time and effort to fully understand what the feedback is telling us. So, if a certain part of the feedback does not make sense, we neglect it and don't ask for further clarification. We don't need to fully accept the suggestions but we must at least fully understand the other person's point because it might end up being extremely helpful in fixing your essay to be the next level of critical thinking, cohesion, etc.

B) Positive cycle of feedback

    a) If I sincerely put in lots of effort in giving suggestions to other people's writing, then most likely such good feedback will also be returned for my essay. Thus, everyone should fully participate in this peer feedback process and make sure no one is at a disadvantage. Also the fact that everyone is aware of the importance of feedback through James' efforts really helps because we don't need to worry about someone taking in feedback the wrong/offensive way. Everyone seems to have something to contribute in fixing an essay despite one's level of English.

C) Feedback ≠ lower grades ; Feedback → use of feedback → higher quality essays → better grades AND growth

    a) We have to use the feedback to improve!! Just watching the feedback videos won't do anything on itself and the teacher did not spend 20 minutes of giving you suggestions just for you to listen and not do anything with it. I think this idea ties into the topic of my essay on how students must not only recognize a certain point but be able to APPLY it to foster effective learning.

D) When paraphrasing or explaining a study that has been done on your topic, I must be writer-responsible and give enough information/be clear in the study's main points, format of the study, etc.

    a) I have read all the studies and have become an expert to some degree on my topic after reading countless papers. However, I often forget that the readers have never seen this study before and write my argument in an unclear way (assuming the readers have read the abstract of the study).

E) Using many studies and facts does not mean it supports your argument better. Being concise/clear is more important and having a good balance with the opposing side and your side's argument is crucial. Always make sure you do thorough research on the opposing side because with a good counter-

argument, this will only strengthen your argument even more! (Don't think that using valid sources that support your opposing side will weaken your argument)

F) Trying to use fancier language and phrases tend to make the sentence more awkward. Keep it simple and avoid being too wordy.

6. Any other comments/requests? (talk about anything you like here)
I mentioned it above, but I really want to thank you again for the time you spend on giving individual feedback to each of us. Whenever I open my video to watch, I am amazed and excited that I can have 20+ minutes of a PROFESSOR's feedback. It seems rare that professors carefully read through students' papers, but going beyond reading our papers carefully, you make these videos which I am so thankful for. It really motivates me to do better in my final draft knowing that you have *chosen* to give us a chance to improve our essays using the feedback.

(From James)

Thank you, Judy, this is really one of the best reflections I've seen.

The reason for this is that you actually make reference to the feedback you received and discuss how it has helped you and how it can help you, as well as how you have learned from various other aspects of the course. You have also shown how this can be a challenging process that can also easily go wrong, and you've modelled how students can navigate this difficulty.

Appendix 6: Questionnaire questions and targets for data collection

Dear Students,

During the course we used Google Drive, Loom and feedback reflections, we had a peer review draft, a teacher feedback draft and final feedback with reflection and opportunities for further discussion:

1. Please write about your experience of these activities/feature of the course in relation to the way you engaged with feedback and used feedback to improve your work:

a. Peer review and teacher feedback through Google Drive (or any other method)
b. Loom for feedback/peer feedback
c. Feedback reflections and goal setting/checking cycles - and how they made you feel?

(This question is designed to address **RQ1 USM & Dialogue and technology)**

2. A) Did the above practices (Drive/Loom/Reflections/Dialog) influence your beliefs, behaviour, or way of thinking about and using and engaging with feedback?

B) In what ways?

C) Why do you think this is?

(RQ1) (USM and Dialogism and technology)

3. a) Google Drive enabled feedback (and reflections) to be like a two-way conversation, between peers, and between students and the teacher.

What was the role of this interactivity/dialogism in relation to the way you understood, engaged with and used feedback?

b) Why was this?

c) Were there any psychological or emotional aspects to the 'dialogic feedback environment' you experienced?

(RQ & technology-enhanced dialogism)

4. a) Please talk about your experience of screencast feedback (using Loom) in relation to your understanding of feedback, and your understanding of what good performance is:

b) Did this influence your ability to set goals and measure their achievement?

c) If yes, in what way? **RQ & Technology-enhanced dialogism)**

5. a) Please talk about your experience of answering reflective questions about your understanding of feedback, self-assessment and goal-setting and self-assessment of goal progress: **(RQ (S) (of the USM)**

5 b) How did this help you to engage with or use feedback, or engage with your learning? (If at all) **(RQ) (Self-assessment)**

6. Did you find any of the activities below motivated you to use feedback and do better work?

1. The use of Drive for submitting drafts and doing peer review/discussion
2. The use of Loom for teacher feedback
3. The ability to continue dialogue on feedback using drive after feedback is given
4. Writing feedback and goal setting reflections
5. Teacher comments on reflections
6. The ability to see peers work and have your work seen – an audience for your work

b) Why did these activities/features motivate you? Was there anything that demotivated you?

(RQ2 and 1) (Motivation)

7. The class utilised Google Classroom and Google Drive to post assignments:

    1. This allowed your work to be seen, and class members could see who did their work and who did not. How did this influence or effect you (if at all)?

    2. Students could see each other's work, and were able to access each other's teacher feedback – How did this influence or effect you (if at all)?

(RQ) (open feedback environment)

8. What are your biggest takeaways from the course so far (takeaways = learning points you find most valuable)?

(RQ1 and 2 I find this kind of question often leads to unexpected and interesting answers about students learning)

9. Are there any other comments you'd like to make? RQ and any aspect of the feedback practices.

Appendix 7 Interview questions (final draft)

Interview questions second draft:

Introduction:

So as you know I've been interested in understanding how I can encourage students to engage with feedback and use feedback effectively. Thank you very much for taking part in the survey, the answers are really helpful. In this interview, I want to see if I can learn more about how you engaged with and used feedback and why.

1. Can you explain the process of how you used feedback, engaged with feedback, and applied it to your learning and drafting process on the course?

   ! Remember to ask for examples and vignettes I can search for in drive wherever relevant!

(this question is designed to indirectly answer the research questions, but directly address the USM model and help develop it).

2. Can you explain how you came to understand what a good essay is, and what good academic standards are?

   (This is aimed at RQ1 and 2, but also at the U part of the USM model. This was covered by some of the discussion of loom and assessment criteria in the survey, but the survey directly asks about loom, there may have been other ways they understood this but haven't mentioned yet.)

3. Can you tell me about how you were motivated to use feedback and if there were any emotional factors involved?

   (this would give me the opportunity to hear more detail about some of the aspects of emotional journey that students raised and ask follow up questions – such as why and how)

4. Can you tell me about how you self-assessed your work, set goals, checked you reached your goals and reflected on feedback and your learning process?

   (this is aimed at RQ1 and 2 but also to find out explicitly about the S part of the diagram above)

   What was the role of the reflection assignment in this process? (if not mentioned)

5. The feedback environment (drive) enabled feedback (from peers and the teacher) but also dialogue. Could you tell me about your experience of this?

   (Students said – it was Easy/less stressful/less formal to ask questions and make comments – if this comes up ask why and ask for more detail)

6. We used Google drive and Loom for feedback, what difference do you think this made to your experience if at all?

7. We used Google classroom to submit drafts and homework so that our work can be seen by others and we can see others' work, what difference do you think this made to your experience if at all?

8. Can you talk about if your beliefs about the value of feedback from both peers and the teacher have changed over the course and why? (if not answered earlier and lower priority)

9. Is there any process you went through in using and engaging with feedback that we haven't discussed or is there anything else you would like to talk about?

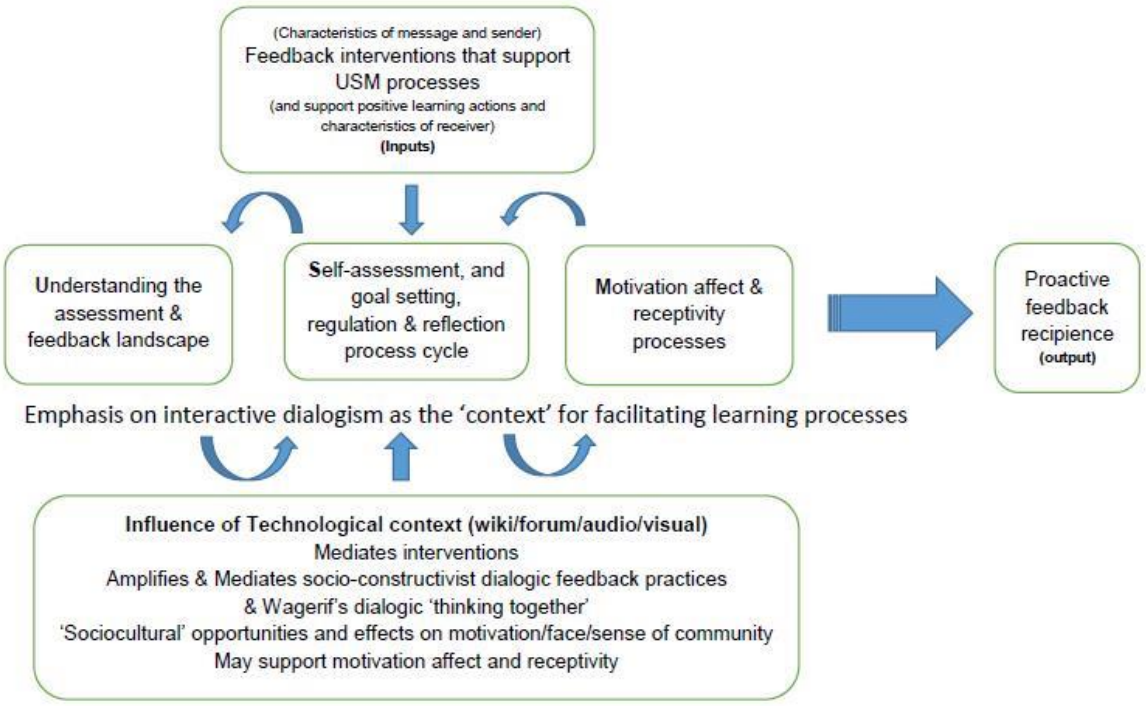
If there is any time allowing – it might be a good idea for each interviewee, to take a look at their reflection and identify if there is anything relevant they have said that could be further explained exemplified or deepened. This could form the basis of any additional questions if time allows.

I should use the interviews to find out

1. What interesting or unexpected areas have students talked about? – I'm hoping these questions will capture of that for more probing follow up questions.

2. What haven't the replies from the survey illustrated about the questions and the model? - I'm hoping that asking more about the model, and less about the interventions by asking broader questions about student engagement processes will help me to understand the model (and influence of the interventions) more holistically, and understand if there are details I've missed or things that are important to student recipience that I haven't accounted for, or understood. This also gives me the chance to ask for why and how as well as examples.

3. What questions can help me to make changes to my diagram or explain parts of my diagram?



Appendix 8 Example Survey data

Survey on feedback use and engagement Survey on feedback use and engagement

Dear Student, In my doctoral research I would like to learn more about the way that the feedback practices I used influenced (or did not influence) your use of feedback, and engagement with feedback, your understanding of assessment, your ability to self-assess, set goals and check you met them, your motivation and how much you welcomed feedback.

The feedback you give is extremely valuable to me, it will be completely anonymous and con~dential, and will only be used for research purposes. Please ~ll out the form if you consent to taking part, and you are free to withdraw consent at any time.

Please be honest about your experience, whether negative or positive. There is no answer that I am looking for other than your real opinions. Please write everything you want to say and please don't care about grammar or spelling. You don't need to be concise, academic or even care about mistakes.

Thank you so much for your help! Your teacher, James Wood

During the course we:

1. Used Google Drive for peer feedback, teacher feedback, and asking questions to the teacher (@jameswoodsnu@gmail.com). 2. Used Loom (screencasting) for the main teacher feedback. 3. We also had a peer review draft, a teacher feedback draft, and a feedback reflection with opportunities for further discussion. This left you with a portfolio of different drafts and feedback in Google Drive. 4. We used Google Classroom for submitting our homework as well as our different drafts. We could see who had completed homework and who had not, and be an audience for each other's ideas and writing.

1. Please talk about your experience of these activities/features of the course in relation to the way you engaged with feedback and used feedback to improve your work: *

1. The ways we use to give and get feedback make me feel easy and comfortable about the feedback. Before entering this class, I was afraid of advising someone, especially older and higher grade peer. I felt that advising someone needs a perfect certainty. I thought advice is not giving my idea, but giving the answer pointing out wrong point. However now, I learned that we can give feedback when we have opinion, advice and feelings. All this can help writer to reflect readers. Methods such as google classroom and google drive made us to give or get feedback anywhere anytime, and made giving feedback more easy and comfortable.

2. A) In what ways (if at all) did these practices (Using Drive/Loom/Reflections/Dialog) influence your beliefs, behaviour, or way of thinking about feedback? *

The function of communication in the practices made me think that feedback is a process of communication. I had experienced usually unilateral feedbacks. In the past, when we were writing, rather than talking with people freely and helping others, our writing were assessed with grades and ordered to revise to right way. Sometimes, I cannot understand why I got this grade and why this is a right way and what it really

means. All these problems is because feedback is unilateral and only from the superior people. However, the practices used in AE class made environment of freely talking with people regardless of position (whether superior or inferior). Also, I can ask and refute the feedback when I get feedbacks. Through this process, I can reflect and develop the feedback and eventually improve my writing.

2. B) Why was this? *

The practices like google classroom and google drive help us to give and get feedback to everyone and from everyone. We can communicate with others about the feedback using replies, mails, or post essays.

3. A) Google Drive enabled feedback (and reflections) to be like a two-way conversation (dialog), between peers, and between students and the teacher. How did this influence your learning/use of feedback or engagement with feedback? (if at all) *

I become fully understand the meaning of others' feedback. Talking with people about the feedback, I can know the intention of the

feedback and the feeling readers received from my writing suffciently. It made me actively reflect feedback and ask questions to others. Also, I can give feedback more freely because I know that I can develop my idea effectively talking with people about the feedback. I threw away the fear about giving right and perfect feedback. I feel free about giving any idea and feelings.

3. B) Why was this? *

It was good that I can talk much with professor using google and loom. In the classroom, professor should care about all the students in one class. So, the time which can be shared with one student is too short. However, the methods such as google made professor and students can contact with each other anywhere anytime outside the classroom. This opened enough opportunity to learn from and talk with the professor.

3. C) Were there any motivational or emotional aspects to this interactive/dialogic environment (if at all)? *

I don't hesitate to give feedback and reveal my feeling or position. I learned that all students have different feelings and difference is not a wrong thing. Difference is good opportunity to develop one's thinking and essays. This take-aways made me feel more freely and confidently about giving feedbacks.

4. A) Please talk about your experience of Loom feedback in relation to your understanding of feedback *

I can understand more easily about intention of the professor and the cause that my writing is wrong and how I should revise it. The loom video gave me a detailed way that I can develop my writing and writing skills. Also, it made me a strong goal to achieve about writing academic essays and develop my learning abilities.

4. B) Did this have any on influence your understanding of what good performance is, and your ability to set goals, and measure goal achievement in your work? *

Through loom feedback, I learned not the answer, the way to improve. So, I can try hard to develop my writing (achieve my goal). Detailed reason about why my writing have weaknesses and what direction should my essay go forward gave me a goal such as that I should deeply consider about counter-argument and I should use example to help understanding of the readers.

4. C) Why? *

One big advantage of Loom is that it can give more details and contexts about the feedback. When someone give feedback through writing, it can be easy to become revising rather than advising. However, speaking about the feedback can give students more about advising and feeling. I think that giving aspiration to students is more important rather than making students' present essay better by revising.

5. A) Please talk about your experience of answering reflective questions about your understanding of feedback, self-assessment and goal setting and considering your progress. *

I can deeply think about understanding of feedback, self-assessment and goal setting and considering my progress when answering the reflective questions. This made me a opportunity to reflect on my past attitude and develop my attitude of learning. It made me have growth-mindset. I try hard to ~nd ways that I can develop and to ~nd the weaknesses, I become honest of myself.

5.B) How did this help you to engage with or use feedback or contribute to learning (if at all)? *

I realized that I have weaknesses and I can overcome them and develop my ability of learning. Thus, I don't hide my weaknesses more. I confidently admit that I'm not perfect and have positive mind that I can grow more. I can think that here is not my limit, I can develop more because I'm not perfect, I'm lucky.

6. Did you find any of these activities motivated you to use feedback and do better work? *

Using Drive for submitting drafts Using Drive for peer feedback (compared to just doing it face to face) Using Loom to receive feeback The ability to continue a discussion using technology (dialogic environment) Writing reflections that tried to encourage meta-cognition (thinking about and evaluating learning) Teacher comments on reflections, A technological environment for the course, Google Drive, portfolios etc Considering Mindsets and Grit and considering how you can build a growth mindset and grit

6. B) Why did these activities motivate you? Was there anything that demotivated you? Why? *

The activates I checked made me feel that any idea is open to the class and the purpose of the class is to develop each students, not assess who is better comparing all students with strict criterions. However, I think real-name systems such as google drive can hesitate timid students not to actively participate in feedback process.

7. The class utilised Google classroom as a way to post assignments, this allowed your work to be seen, and class members could see who did their work and who didn't. Students were also able to see each other's work, and see each

other's teacher feedback. Please talk about your experience of this environment in relation to your use of feedback and engagement on the course. *

The fact that I can see others' various opinions and feedbacks made me to think widely. I can consider many different ideas and different subjects peers are interested in. Commenting and recommenting each ideas, I felt that the ~rst ideas developed through many perspectives. Open place that anyone can write and read the writings with different great students made students widen their perspective, experience various positions and understand different ideas. If some writing and comment can be anonymous, students can feel more free about speaking out their honest and unique ideas without concern of others assessing their idea.

8. What are your biggest takeaways from these feedback aspects of the course (learning points that you find valuable) *

My biggest take-away is that feedback is open to everyone, everywhere and everytime. It made me feel feedback more comfortable and easier. This led me to actively participate in feedback process. When I escaped from the fear of feedback, feedback was really interesting. I can experience many other perspectives, ideas and positions. I can also develop one feedback to better way talking with many people. Looking at my ability is growing is really happy.

9**. Is there anything else you'd like to say about the class activities and your course experience (anything at all is welcome)**

If feedback process is expanded from writing class into speaking, literature reading class etc., it will be have more positive influences to students. I think researching the ways to apply this teaching method to other class and subjects is meaningful and needed. Thank you. Good luck!

Appendix 9: Deleted table of effects of intervention (including out of scope data)

The table below sets out the main inductively derived findings from the study, and organises the data by the classroom practice being researched (in blue) and shows the relationship between the effects on the different categories of the USM model. For example, the 4th effect of dialogism reported by the students in the data (figure 1.) was that dialogistic peer feedback not only facilitated a better understanding of the feedback point, but also that groups were able to improve their understanding of a particular point through a collective discussion process. Participants revealed that this lead to them noticing a performance gap, attempting to improve their work, and then checking that the gap had been fixed again self reflectively, or with their peers or the teacher. Peers might then indicate that there was still something that could be better, the student would then try again, and consider again whether the problem was fixed. This is represented by the text in the second box below. Participants had also indicted that they felt motivated to reciprocate when they saw a lot of interaction in their work, or when they felt supported by their peer groups, the result in the 4th column is a feedback recipience behaviour of learning through peer feedback processes, and spending additional time on improving their writing product as well as improving their general understanding through the discussion.

Figure 1: Example of one effect of dialogism

Feedback landscape **Effect of dialogism 4**. Facilitated collective learning and mini-cycles of feedback and checking improved versions with peers – it was reported that peers would sometimes check authoritative sources to confirm points they wanted to make – thus a form of peer teaching/learning was taking place.	**Self-assessment, goal setting and regulation** Cycles of goal setting often followed the understanding something needed to improve – students did not report an explicit or formal process. Understanding the	**Receptivity motivation and affect** Students reported feeling the need to reciprocate when there was a lot of interaction on their work, or felt supported or touched by support and good wishes of "everyone"	**Feedback recipients** Facilitated learning through peer discussion – time on task (where the wider task is learning in general as well as the written

	feedback landscape and goal setting appear to be a tightly connected cycle		product) and doing additional research to inform peer discussion

From this example, it can be ascertained that through dialogic peer discussions participants reportedly gained a better understanding of the 'feedback landscape' this in turn led to a goal to improve the work, if students were sufficiently receptive and motivated to make a change, this led to feedback recipience behaviours: engaging in peer learning, improving their written product, synthesising knowledge by checking authoritative sources etc. Spending time on task etc.

This exemplification shows how the USM model can assist the understanding of the real life processes learners go through and how these processes might contribute to feedback recipience.

The full table below (figure 2) gives an overview of all significant findings related to the classroom practices under investigation, and a deductive analysis of how they fit the USM model to produce feedback recipience broadly answering three three research questions. Each theme is separately introduced with examples of evidence for each theme from the raw data in the following section 4.2.

Figure 2: Tabular summary of the effects of the classroom practices on the USM processes

Understanding the feedback landscape	**Self-assessment, goal setting and regulation**	**Receptivity, motivation and affect**	**Feedback Recipience behaviour**
Impact of dialogism			
Dialogism 1. Peer feedback as a conversation improved understanding of peer and teacher feedback points	This stimulated a response to feedback Whereas non dialogic feedback is	Students were more motivated to respond to feedback when they understood it	Not ignoring feedback (which is a reportedly common

	often ignored		response to feedback that cannot be fully understood)
D2. Peer feedback as conversation allowed collaborative development of vague feedback points into actionable feedback	When students understood they needed to make a change they set the goal of improving the point they now understood needed to be improved	Peers were more motivated to give peer feedback (including unfinished thoughts) if it could be a conversation – also reported lowering the cultural and emotional barriers to engagement in peer feedback	Engaging in more peer review discussions and processes
D3. Fostered a sense of audience and 'writer responsibility'	Understanding what the audience did not understand led to the development 'writer responsibility goals'	Students were motivated to do better work by a sense of audience – knowing others would read their work.	Promoted more engagement in feedback cycle
D4. Facilitated collective learning and mini cycles of feedback and checking improved versions with peers	Cycles of goal setting often followed the understanding something needed to improve – students did not report an explicit or formal process.	Students felt the need to reciprocate when there was a lot of interaction on their work, or felt supported or touched by support and good wishes of "everyone"	Facilitated learning through peer discussion – time on task (where the wider task is learning in general as

	Understanding the feedback landscape and goal setting appear to be a tightly connected cycle		well as the written product)
D5. Facilitated multiple mini cycles of peer feedback, improvement, checking and peer feedback	When students understood they had a problem, they improved upon it (set a goal), and checked again with peers/themselves or the teacher that it had sufficiently improved – multiple cycles	Feeling supported encouraged students to keep going through the mini feedback cycles – (sometimes 3 or 4 times).	Facilitated full mini cycles of feedback use and engagement
D6. Improved understanding of task criteria and what good performance is	This helped them to understand an improvement needed to be made on their work	Understanding how work can be better stimulates attempts to make it so.	Students can improve their work when they know what improvement looks like
D7. Allowed students to model superior thinking/learning strategies or avoid making similar mistakes	Stimulated goal setting/self-assessment	Seeing peers improve their work was motivating. Students were also motivated not to make similar mistakes.	Students used peer feedback activities to improve learning
D8. Students learned from giving peer feedback – checking tentative	Students 'simulated' improvements to their own work or	Students were motivated by giving peer feedback, they	Students used feedback

information against authoritative sources etc.	things to avoid in their own work in the process.	understood importance and effort involved.	processes to synthesise reliable new knowledge
D9. Google Drive technology allowed students to make a comment or question on a highlighted section of work and ask a question.	Students could get help to achieve their goals of improving their work more easily (did not abandon goals due to a lack of help in reaching them)	Students felt that Drive comments were a less formal less of an imposition on the teacher/peer, therefore they felt more incline to ask questions or seek help.	Students more proactively pursued dialogic feedback practices
D10. Google drive technology facilitated peer feedback effectively – available any time any place anywhere on any device		Encouraged participation – participants reported receiving notifications which linked them straight into the discussion they were having **But** One student complained they might feel stuck in an 'endless loop of activities' thus the system may need 'do not disturb settings'. Two other students	Enhanced time on task and engagement in peer /group feedback activities

		complained that they were not able to do synchronous feedback and that this would allow more productive discussion than asynchronous feedback. (Time management issue)	
R1. Introduction of the terms mindset, grit etc. helped learners to engage with feedback after feeling disappointed with their result	This helped them to set goals from their feedback – adopting learning goals rather than performance goals.	**Receptivity to feedback** **Emotional feedback recipience**	
		The teacher creating a conducive atmosphere for feedback was deemed important – positive beliefs about feedback – make students value the learning that occurs around the process of writing rather than the product.	Engagement with peer feedback and teacher feedback
R2. Ideas of mindset grit, zpd helped learners to come to their own accounts of how learning occurs from	Helped them to set goals based on feedback	Common negative emotional reaction (fear of feedback) to the feedback	Feedback engagement

feedback, this helped them to understand the rationale for feedback.		caused by cultural beliefs and practices as well as emotional barriers -- reflecting on growth mindset reportedly helped – students become positive about engaging with feedback processes	
R3.		Peer feedback as a conversation- helped to reduce cultural and emotional barriers to engaging in peer feedback activities – perception that they were overstepping cultural boundaries regarding comparative seniority etc reduced due perception that feedback as discussion is a form of positive collaboration rather than assertion, correction or blame.	Positive experiences of peer feedback and feedback engagement gave rise to positive beliefs about the power and importance of feedback for the future.

R4.		Dialogism improved interpersonal relations – helped face to face interaction – openness and orientation towards collaboration etc	More engagement in peer feedback processes
R5.		Gift economy – students put more effort into peer feedback of those who reciprocated – formed their own peer groups	Some students encouraged each other to engage in unsolicited extra peer feedback activities
	Impact of reflection task/self-assessment goal setting and regulation		
T1.	Students reported benefits of reflection task – consolidated knowledge, considered mindset and grit, and what goals they needed to carry forward even if they could not be directly applied to a written	Motivated students by noticing what they learned, how they improved, and how they could do better in the future. Also helped students to reflect on mindset and grit and examine their progress as evidence	A form of feedback engagement in itself – Reportedly promoted beliefs regarding longer term feedback recipience

	product.	**But** One student complained about the time this took (4 hours in one case)	
	T2. Giving peer feedback helped students to self-assess their own work, and apply the criteria and aspects of the curriculum to their own work	Giving peer feedback helped students to realise the effort that goes into the peer review they received – this encourages them to act on the feedback they received, and to make sure they are not making similar mistakes as their peers.	Students engage in peer feedback processes, and in turn become more engaged in using peer feedback and self-assessing their work
	T3. Participants reported that they were motivated by successfully completing a feedback cycle, when they perceived that they had been successful in improving their work or understanding after engaging with	Once students could recognise they had made progress this recognition helped them to develop positive beliefs and orientation towards engaging with feedback.	Students develop a more positive orientation towards feedback from positive experiences of engaging with it.

	feedback (self-assessment), they felt more inclined to engage with feedback in the future, and their confidence in the feedback process improved.		
Technology supported open folders			
Openness 1. Supported use of other students' work as both a model or cautionary tale – including students not in peer review groups – thus helped them to consolidate understanding of good practice	Goals to improve work and to avoid mistakes were stimulated.	Students were motivated to be seen to do good work, and to keep trying **But** Some students reported that they thought weaker students might be demotivated by negative peer pressure. One student reported negative motivation from seeing others "perfect essays" – tried harder as a result.	Students generated a form of self-feedback from assessment of others' work
O2. Allowed students to model each other's' engagement with feedback –	Goals to respond to feedback more effectively were	Modelling good learning strategies motivated students	Students considered how they

a new form of feedback recipience	stimulated	Students also reported being motivated by seeing other students' improvements due to engagement with feedback.	could improve their strategies for feedback engagement
O3. Students learned from each other's teacher feedback	Students compared teacher feedback with their own work and set goals for improving their own work	Gaining more information on how to improve next time motivated students, and helped them to believe they could achieve higher grades as the videos provided graphic examples of better performance	Students accessed additional useful feedback information as they wished
O4. Classroom and Drive supported dialogism and learning collectively, or learning from others' potentially educational 'artifacts' (Wagerif, 2013) or takeaways, effectively.	Others 'takeaways' encouraged student to modify their homework (a goal setting/modification cycle) or learn something for future essays.	Convenience and any time anywhere access motivated students to use the system and spend time on task **But** Use of technology demotivated two of the respondents	Technology supported "artifacts" were an extra source of input if students wished to use them – many reported that they did.
Screencast feedback			
Screencast 1. Felt conversational/dialogic – this	Students reported deeply	Students reported feeling connected	High engagement

aided understanding - the voice is a form of communication that cannot be matched by writing	understanding feedback – setting goals accordingly	to the teacher, or like the teacher was sitting next to them. “Soothing” “Connected” “not alone” **But** Some students reported initial negative reactions to screencast feedback were more severe because of the medium	with feedback
S2. Clearer, more in-depth, higher quality	Better understood what goals to set	Students valued the feedback, felt it too effort to make and felt grateful for it, this seemed to increase utilisation of feedback through the need to reciprocate effort	Students reported a high level of engagement with the screencast feedback
		Students felt screencast feedback demonstrated and proved teacher effort in reading each line of their work – motivated them to reciprocate effort.	Feedback engagement and use
S3. Feedback was replayable	Thoroughly		Students

– up to 4 times reported	understood feedback – time taken led to deeper absorption		replayed feedback
S4. Could be played back at different speeds		Motivated to listen again if it could be faster	Listened fast and slow
S5. Could be used to generate automatic YouTube subtitles which were highly accurate and helped a hard of hearing student to both see his essay being marked (with a moving cursor) and see what the teacher was saying about it.	Aided understanding for goal setting of deaf student	Highly impressed by being able to learn from conversational style feedback subtitles	High engagement with feedback
S6. Better facilitated feedforward	Understood what was wrong with work, understood why it was wrong, received information on how they could go about fixing it.	Students felt that because they could understand what the problem was, as well as how they could go about overcoming it, they were motivated not to ignore it	Feedback engagement.
But One participant complained that a weakness of screencast feedback is the fact it is not interactive (although google drive questions and face to face questions in class helped this issue)			

Appendix 10: Example interview

00:00:36PlayPause
So the first question I want to ask is What was your process of using feedback and engaging with feedback and playing it to your learning and drafting process, On the course.
Grace
00:00:46PlayPause
the process because it was the first time there was no formal structure.
Grace
00:00:58PlayPause
For this we were just figuring it out. as we were going so it took some time to get used to it at first. And also I tried really hard to find my rhythm of how I use this effectively. So I sort of have my shortcuts now. I'll access this from where before I do what, I try to organize all that into my conventional learning system.
Grace
00:01:32PlayPause
And so but the biggest part though is just the process of feedback and revision itself though it's. So it's so huge without even thinking of Google drive where all the technology that itself was so huge, and to root to find my personal rhythm of setting a time.

setting a time for feedback and making a habit. I think that was one of the biggest things that I found useful.

And really lasting.
James
00:02:13
Ok so what was it in the course or what we
What we did in the course that facilitated the lasting change?

Grace
00:02:22
the feedback it was so frequent you know we had many versions and many opportunities to revise and look at each other's work and do that. Most of the times when I was given feedback in other classes which is not often by the way it was only for example for one assignment we get one opportunity, one time for feedback and then not even really time enough time for revision. We don't even get feedback on the revision. Like was it revised well? so it was just a one time thing and many times including me, students just treat it as. The feedback it's always as, a huge final assignment in itself. Which means you just do it overnight

and ypu just want to get rid of it, so it's not really part of the process.

James
00:03:14
So it becomes Kind of superficial?

Grace
00:03:15
Right. Right. Like you just want to get rid of it. That's what I was. That's why everybody was going through the whole semester because we were just after that one feedback. There's no time for revision and then you just go into a new assignment. And the superficial feedback and then that was so it was just really just like a burden you just you want to get rid of just before the due date.

Grace
00:03:35

But the class, though because the feedback. Was frequent and we were working on one paper. And we were given more time and we were given more opportunity and it just became like a daily thing. Yeah. It became a daily thing that I think the advantage of that is obviously if you revise three or four times it's better than just no revision or just one time revision.

But for me the biggest advantage was
It made the process and the whole burden of it so light psychologically. Not only time wise and not only just in the productiveness but psychologically because as I said. In other classes the feedback that I have to give seems to me like like a huge assignment in itself that I have to take care of and because the feedback process became so daily. And it's not that serious you know if you just look at that one assignment one task that's you on Wednesday, one task that's due on Monday you're not really stressed out about too much because you know there are other chances. You know it's ongoing.

James
00:04:54
OK.

James
00:04:55
So because it's an ongoing thing it's less stressful.

Grace
00:04:59
Right. And it's less stressful and it's easier for me to become familiar and more accepting of this process which is really like really integrating into my daily.

James
00:05:13
So why was it that made you more accepting of basically the engagement with feedback process.
Grace

Just constant, I guess, constant.

Constant low level attention
James
00:05:28
Okay cool. So how did you understand what a good essay is and what good academic standards are.
James
00:05:41
Was there any aspect of the course that helped you to do that? Like the classroom practices or like what was it that helped you to understand that stuff?
Grace
00:05:52
For. For me personally. Academic writing as you always mentioned. The classes was focused more on academic than it was on English writing. And so I wish I actually hoped that the class, could even be translated into Korean or just be uploaded on the SNU ON system with Korean subtitles because this critical thinking, it applies not only to English writing but also for Korean academic writing, and works in any language so that focus on critical thinking and the academic part of academic writing was really useful. That's more it more than just the English you know.
James
00:06:36
Where did the understanding about the academic part come from?. Like. What. What were the processes that help you to understand what those critical or academic parts were?
Grace
00:06:49
Oh just for the. You mean like solid examples of what we did in class just to give a few examples. For me I found it really really hopeful that we could look at examples of other students writing, poor writing and good writing, and in the process of trying to evaluate that ourselves and then what I've found also really really hopeful was we can compare
Our evaluation with your evaluation, because the way that you evaluate is sort of like a standard that we want to really fix our mindset.
James
00:07:34
So how did you compare your evaluation with mine?

Grace
00:07:38
When you are teaching it in class. You were pointing out certain. Phrases or certain points about the essay that made it a good essay or and that made it that sort of raised problems. And I would look at my evidence for my evaluation. And by the way to do that I have to be really thoughtful about my evaluation in the first place. No if you just skim it, like oh year, it's not going to work. But I have my evaluation based on certain evidences just like I underline stuff and things and then I compare that with yours, and then I can think Oh I didn't, I overlooked it, I overlooked that part.
James
00:08:16
Was there anything about the feedback practices like the feedback you go on Google Drive or through Loom that helped with that?
Grace
00:08:25
LOOM was really really helpful too. And also google drive but just talk about a Loom first. Many times when we get feedback on writing it's more just like underline, and like a red pen like a little scribble, and we don't really get the context of why the professor thought this way, and how he or she interpreted this, this phrase, but loom, loom has the advantage of you underlining a certain. A certain Line that I wrote in the sentence that I wrote and you can give context you can give you thoughts more detail. About it. And we I know. That I know I also know the thought process that you're going through because you're just speaking and its being recorded
James
00:09:19
So going back to the question of how you came to understand what a good essay is and what good standards. What difference does loom make compared to text feedback?
James
00:09:31
When it comes to understanding standards and criticality, good essays.
(speaker)
00:09:36
It's also it's somewhat similar to what I said about you giving a demonstration of an evaluation of an exemplar essay of another student and I can compare that at the same. So in a similar way I when I watched the loom feedback I can compare how I would read mine. And how I process things and how I would evaluate it versus how an outsider at the same time a professor reads it and with thought process he or she goes through.

James
00:10:06
So it was another opportunity to do what you said before about right.
James
00:10:10
Like comparing your evaluation with mine you could do that with the loom feedback. So it kind of gave you more information about. Maybe some of the stuff that is usually implicit. OK good.
James
00:10:26
Anything else.
Grace
00:10:29
To add to that, The most valuable thing that I got from this process of you know what like what it means to become a good academic writer. It's not just the writing itself but we learn the skills set, to be able to look at something objectively and critically evaluate whether this is good writing or not whether I'm doing a good job or not. We're equipped with the skills.
James
00:11:01
What was it that gave you that skills set?
James
00:11:03
Like what aspects of the course and so are the things that I described. Now the skill to evaluate the skills we evaluate because. Most Koreans and actually even myself. Don't have that.
Grace
00:11:22
We don't have that skill.
(speaker)
00:11:25
So did you use the loom video, did you use other people's videos to help in that development process?
Grace
00:11:31
I didn't watch other people's videos but then I would read Google Drive comments that you make on other people's essays. Yeah I didn't really, I didn't watch everyone's video but I did that for some
Grace
00:11:44
So I did the open drive system make a difference?
Grace
00:11:48
Oh yeah because you can always just be it always open. You know you always have access to other people's

James
00:11:58
And what difference does it make if you have access to other people's writing?
Grace
00:12:02 (other people's writing)
That's also it's similar to like you giving us an example exemplar essay that you have from previous semesters. But at the same time I like it when I see my peers because we're going through a discussion and where we're giving feedback, feedback to each other every week so I can see the progress. In hers or his. I can see how your feedback is reflected in hers or his. I can see how other students integrate that feedback in their writing vs how I do it
James
00:12:40
Okay. And how did you self-assessed like erm. So can you tell me about how you self-assessed your work and set goals and checked You reached them, and reflected on feedback and on your learning process. Like what was your erm Process of Self-assessment. Goal setting. Checking.
Grace
00:13:07
Oh that's the from the process or from my final results.
James
00:13:13
Just for process like. Like erm when you were deciding, you set goals for example early in the course. How did you know if you'd reached them and how did you decide what to do about reaching the next goals and so on?
Grace
00:13:35
I can clearly see all the points that are improved when I compare the first draft with the last draft obviously. But it's easier to self-assess because I have all the middle Middle lines all the middle points and the process of how I reach from here to there. And I know exactly what feedback I got or what I keep to myself. And how I try to reflect it. Or whether whether or not I reflect it or no with or put effort into it or not. And constantly.
Because you gave us the rubric. And I would refer to that. With all of my drafts. And
Just set one goal like one little goal of 'Oh I think this paragraph maybe lacks logic' or I think they think the low flow from here to there. I think the introduction, we learned it in class, we learned how to write the introduction right, everytime we learn it, I would try to apply it.

James
00:14:49

Was there anything about the reflective reflection task that contributed to that?
Grace
00:14:55
Exactly so after we do that. And that's my. It’s Sort of writing a record of the reflection on Google Docs or anything. I write a record of how I try to apply it and that's also another really useful way for me to be equipped with the right skills to be able to evaluate myself because do I know how I even acquired those writing skills? Because sometimes you can just end up being like oh I don't know how I did it but I ended up with a good essay. But its not guaranteed that you're being able to read essay in the future unless you know how to do it. So really thinking and putting into words about how to do it.
James
00:15:40
You think the reflection helped you to develop transferable skills. Like transferable skills or skills you can take to take in the future to other tasks. OK so it helped you to make the knowledge more Declarative, do you know declarative knowledge?
Grace
00:16:00
right. right. Yeah.
James
00:16:03
To know what you know Right.
(speaker)
00:16:05
Meta cognition. First of all I can say I know exactly what skill that I have a acquired, what skill that I don't have. And I know my style of applying it
James
00:16:17
Ok.
James
00:16:19
So with drive we were able to have, you we know, I think a lot of classes do feedback from the teacher and they might also do peer review but maybe in many cases it's on paper or microsoft Word or something like that. But with drive we had, like, we could have longer conversations, with peers and with teacher. So what was your experience of, that, capability, to have dialogue?
Grace
00:16:51
It first of all the feedback makes sense. When it is written on paper and you don't even get the opportunity to ask the evaluator why they thought this way or my intention was this, or that, you don't have that opportunity to

convey and. We ends up not understanding the feedback at all. And ultimately we just ignore it. We don't apply it. We don't take it into our lives. But through this dialogue I understand, Why that person thought that way, more because we have the dialogue. So I can understand how how it looks like from outsiders and the reader's perspective.

James
00:17:33
How about with a teacher. You will able to have a dialogue with the teacher as well.

James
00:17:37
Right. like @Jameswoodsnu was it the same? Or anything else?

Grace
00:17:40
LIt is a similar process I think

James
00:17:51
Like we have office hours. Nobody comes to my office hours. I asked the other professors nobody comes to their office hours.

James
00:17:59
Is there anything different about the dialogue that we have and like, is there any difference between that and maybe asking in an email or making appointments see face to face?

Grace
00:18:12
For me personally I didn't visit the office, I didn't even write an email or anything because I thought the dialogue itself was sufficient and it was clear to me it was clear enough. I can see, especially from the loom you know, you see the room and that's sort of like a substitute for office hours. Without Loom though there will be a necessity for visiting or making appointments. But, I felt like I'm already having the office hours. With the dialogue and with the constant feedback giving and receiving.

James
00:18:59
We also use Drive and - oh I missed a question

(speaker)
00:19:09
I'm interested in people's emotional journeys regarding getting feedback and being motivated to use and engage with it. Can you tell me about your emotional journey?

(speaker)
00:19:26
I didn't take any feedback Personally, or even take it to be harsh. So I guess the emotional ups and downs weren't there for me. But Motivation-ally though it was really

encouraging. Because I know my goal. And my purpose for this, taking this class is reaching there, which is acquiring the skill set to. To be a good academic writer and whatever feedback that I am getting from my peers or from the professor. I know that it helps.

(speaker)

00:20:00

So what is it that makes it motivating then like knowing that it helps. Is there anything else that makes it motivating?

Grace

00:20:11

And also. Well first of all because you know it brings great benefit to me. But second the benefit is also just. In the sense of collective learning. I have a sense of collective learning when I know that. Constantly this group of four girls, you know we're reading each others and we're sort of. Overseeing each other's work all the time and we're doing it together and we know that everybody is not that good from the beginning and it is encouraging to see that everyone is progressing progressing. Just like me.

James

00:21:01

Ok. Did any of your beliefs about feedback or the value feedback from peers and from the teacher change over the course?

(speaker)

00:21:15

It did, it did but not so much, the value of the itself, but the value of frequent feedback.

Frequent small feedback. I always used to think you know the feedback really really big one is that we got at the end of a semester and they are they are important, but I have never really had the opportunity for having these small dialogue feedback and I really saw the importance of that. Because of the reasons that I already explained.

James

00:21:54

We use Google Drive. Well actually we've already talked about that.

(speaker)

00:21:59

We use Google Classroom to submit work. So you already had access to each of the folders but Google Classroom. I guess we use it instead of ETL we would have used the same way. But did it make any difference the fact that. Everybody submitted in the same place and therefore you could get access to each other's work. And also you could see when people submitted and if they submitted. Did that make any difference?

(speaker)
00:22:21
It did, it did a lot. If we were to use the board on ETL to submit work. Then you can see the time that you know the date that they submit. But it's open access to everyone even before the due date or after the due date. The open access. It's the same. But the thing about Google Classroom is you cannot see another student's reply unless you reply to first. Sometimes students make mistakes when leaving comments but those are mistakes, but it's usually you have to make a reply yourself before you can see others work. And I think that is useful because sometimes you can get lazy. They can open other people's work if you see ETL board the works the assignments that are handed in early. The clicks are really high because you can think you can see that everyone is just clicking and downloading and reading it off of it and sort of just making a variation of it.
(speaker)
00:23:28
People don't think in as much depth as they could. So I think that is a big advantage of Classroom and another is It's easier to have Dialogue there as well. Because classroom we have on the straight link with the connection with Google Docs and Google Drive. And we can even make comments in Google Classroom and that's all recorded and that's all just kept in one space.
James
00:24:05
Okay.
Grace
00:24:07
And is there any process that you went through in using and engaging with feedback that I haven't asked you about.
James
00:24:16
Or is there anything else you want to talk about.
Grace
00:24:20
With like regarding technology?
James
00:24:23
Regarding like the what happened in the course and how it influenced you. Basically you know I want to know about engagement and use of feedback. Is there anything else that you experienced that I haven't we haven't talked about that you think would be relevant. About the way that you used feedback and engage with feedback?
(speaker)
00:24:48

We also had in class time to get feedback and for discussion. And that really depends on how you use that time I think for other groups small groups it might be a different experience, but my group. They were really just really diligent students and I think it's really just like a one really just huge theme of dialogue
It just extends that sense of dialogue into the classrooms a dialogue going on in Google Docs. a dialogue going on through loom. and with you personally as well. You're going around to each students have. And we also have that dialgue extended between students and We can really just not be stressed about writing anything grammar or anything but we can really talk at that moment.
(speaker)
00:25:40
So have you do other class like classes in Korean or other Classes where there might be peer review or feedback. But do you have dialogue in those classes?
Grace
00:25:53
No.
James
00:25:54
So what's the difference between a class with dialogue and class without. The class with dialogue
Grace
00:26:01
And first without dialogue. I think like I said like I mentioned sometimes or most times it's really easy to just dismiss the feedback, not because you're hurt or just personally hurt but because you don't understand where it's coming from. And that's also because people don't know how to give good feedback. So it's both ways both ways and the absence of a dialogue just results in failure to give a good feedback and to receive a feedback and just there's no point in doing the whole process. I think even.
James
00:26:40
So the wrong message you sent out and the wrong message gets received.
Grace
00:26:44
And so you only to selectively just apply the feedback that you like or understand, and so all of the most part of I think goes to waste without dialogue but with dialogue and also because it was not only a one time feedback but because it was a process. We also had a group of students that were that were kept constant from beginning to end. It was much easier to process and understand where that person is coming from. Which ultimately helps me to be even equipped myself with the perspective of the reader. Oh

that's how they think oh that's how my sentence it looks like.

James

00:27:39

Ok. So that's all the questions I've got. Thank you so much!