Humanising feedback encounters: A qualitative study of relational literacies for teachers engaging in technology-enhanced feedback

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Modes of feedback such as audio or video are thought to foster relationality because they humanise feedback encounters. Few studies have examined teacher feedback literacies for relationality. This knowledge gap is significant as students want to be seen by their teachers and for their teachers to express care within the feedback encounter. Teacher feedback literacies are the knowledges, skills and dispositions needed to enhance and sustain a student-centred feedback process. Using a qualitative approach, our research question centred on what teacher feedback literacies and strategies are required to implement relational technology-enhanced feedback. We interviewed 10 higher education teachers with diverse characteristics and identified three teacher literacies for relational technology-enhanced feedback: socio-affective facilitates an awareness to student attitudes toward feedback and teacher self-expression; design empowers a consciousness of the logical arrangement and purpose of feedback to better prepare and engage students; and communication reflects the construction of a deliberate, empathetic message. The implications are for higher education institutions and teachers to consider how the relational can enable the strengths of feedback that can better support and encourage students' engagement with feedback.

Introduction

Feedback is best understood as a dynamic, social activity (Ajjawi and Regehr 2019) and one that can be a powerful force for learning (Hattie and Timperley 2007). Increasingly, feedback is being reframed as a relational and iterative process rather than an input or product. Further, technology-enhanced feedback approaches, such as audio or video, are being used to enhance teachers' intentional aims to convey a sense of care and emotion to students (Borup et al. 2014; Henderson and Phillips 2015; Cavaleri et al. 2019; Wood

2022). Technology-enhanced feedback affords teachers' awareness to emotional and relational cues, which are often subverted in traditional written modes of feedback, enhancing the human side of teaching (Borup et al. 2014). A shift away from the directive nature of feedback towards a focus on teacher-student relationality is found to increase affect, motivation and to foster trust between students and teachers (Mahoney, Macfarlane, and Ajjawi 2019). Trust is a central emotion for effective feedback processes; students' perceptions of a bond with their educator has been found to increase their engagement with feedback (Telio, Regehr, and Ajjawi, 2016). In this empirical work, we sought to understand how higher education teachers intentionally design and use technology-enhanced feedback within their taught online units to strengthen relationality with students.

By privileging the relational in feedback, we recognise that the attitudes, behaviours and emotions that students have towards feedback, and in response to feedback, matter in terms of their learning. Process-oriented, relational feedback aims to create comfort zones where students are willing to seek out feedback; it considers the quality of teacher-student relationships (Winstone and Carless 2020). It also re-positions the student in an active role in the feedback process and shifts teachers' roles to that of a dialogue partner – forming an 'educational alliance' (Telio, Ajjawi, and Regehr 2016). The shift to processual perspectives of feedback prompts a sharing of responsibility between students and teachers (Carless and Winstone 2020). Process-oriented feedback requires both parties to possess strong feedback literacies – with teacher feedback literacy necessary for creating assessment environments where students can mobilise their feedback literacies to appreciate and use feedback (Carless and Winstone 2020). This study focuses specifically on teacher feedback literacies. For the purposes of this paper, we are using Carless and Winstone's (2020, 4) definition of teacher feedback

literacy as "the knowledge, expertise and dispositions to design feedback processes in ways which enable student uptake of feedback and seed the development of student feedback literacy".

In the shift to emergency online education, students commonly indicated that they were "more reliant on getting feedback from teaching staff than in their previous mode of study" (Martin 2020, 10). We argue that attention to relational technology-enhanced feedback may be one way to humanise online feedback encounters, and to do so we need to understand the necessary teacher feedback literacies of technology-enhanced feedback. To this end, we asked: What teacher feedback literacies are required to implement relationally-oriented technology-enhanced feedback practices?

Feedback as a socio-affective process

It has been asserted that teaching is a relational activity (hooks 1994), and that feedback is an inherently social process (Esterhazy 2019). Early empirical research in psychology revealed that motivation and performance are substantially impacted by knowledge of performance (Ammons 1956). Since then, there has been increasing interest in a broader range of factors than feedback as information. Positive relationships between students and their teachers are crucial to meeting not only the academic and learning needs of students but also their socio-emotional needs (Lawrence et al. 2020). Teachers are responsible for bringing an awareness of the impact and importance of emotions as both a reflexive practice and as socio-cultural mediators within the feedback process (Ajjawi, Olson, and McNaughton 2021). Yet, when feedback is positioned as 'telling', teachers may remain blind to the socio-emotional costs of this 'telling' (Boud and Molloy 2013). It is now a widespread viewpoint that feedback processes should represent a dialogic cycle (Winstone et al. 2017). However, varied responses to feedback are impacted by

perceptions of teachers' care for their students and their progress (Carless and Boud 2018).

Technology-enhanced feedback

Technology-enhanced feedback typically refers to audio and video modes of feedback. Audio feedback is narration only, and there are several forms of video feedback: screencast only, talking head (e.g., webcam only), and a combination of the two (Mahoney, Macfarlane, and Ajjawi 2019). Screencast feedback consists of a recording of the teacher's computer screen or chosen window (e.g., a screen capture). Talking head video feedback is the recording of the teacher speaking to the camera and does not include a screencast. Combination video feedback, described by Borup (2021), enables an inset of the teacher to be displayed within the screencast.

Technology-enhanced feedback typically involves a media switch from electronically written feedback to an alternate modality, thus continuing to propagate a product or transmission conception of feedback. However, it has been suggested that technology-enhanced feedback may lessen many of the current criticisms of feedback (Cavaleri et al. 2019). Studies have shown that students rate the overall quality of feedback more highly when audio or video feedback information is provided compared to typed comments alone (Mahoney, Macfarlane and Ajjawi 2019).

Similarly, studies of technology-enhanced feedback, particularly video, consistently report higher levels of student engagement and rapport building than written comments even though the synchronous provision of technology-enhanced feedback often only simulates dialogue (Mahoney, Macfarlane and Ajjawi 2019). Wood (2022) found that through technology-enhanced feedback, students could identify (and see/hear) that their teachers cared about their learning and that they mattered. This is

likely because technology-enhanced feedback enables more social and teacher presence which is important in overcoming feelings of isolation (Thomas, West, and Borup 2017). Aspects of technology-enhanced feedback such as voice, tone, rhythm and facial expressions are thought to simulate a closeness or recognition of the other as an individual. Teachers who narrate or use video, are more likely to approach technology-enhanced feedback as an act of talking with the student, rather than written comments on work that is one step removed from the student. Students want to be seen by their teachers and for their teachers to express care (Ajjawi et al. 2022). This is significant as this more human side, or social presence, helps students form a "sense of belonging and involvement" (Borup et al. 2014, 235) and can positively influence students' motivation and self-efficacy (Ajjawi et al. 2022). Technology-enhanced feedback may lessen the level of psychological distance that exists within feedback encounters between students and teachers.

Teacher feedback literacy

While technology-enhanced feedback might foster affordances with regards to relationality, feedback (including technology-enhanced modalities) also requires good design which is a matter of teacher feedback literacy. Teacher feedback literacy is comprised of interrelated proficiencies – what teachers "need to know and be able to do" (Boud and Dawson 2021, 2) – to enhance and sustain a feedback process and build student awareness and engagement with feedback (Deneen and Hoo 2021). Three dimensions of teacher feedback literacy advanced by Carless and Winstone (2020) are: design of assessment systems and feedback processes, relationality which attends to students sensitively, and pragmatics to do with feedback practicalities. These three dimensions were identified through a critical literature synthesis. Thus, an empirical

study of teacher feedback literacy is important if we are to embed a relational approach to feedback that builds stronger relationships between teaching staff and students, and to build feedback cultures of trust and care.

Method

We used a qualitative research approach, drawing from in-depth, semi-structured interviews conducted between April - May 2021. Ethical approval was obtained from the Faculty of Arts and Education Human Ethics Advisory Group (HEAG): HAE-21-031.

Participants and recruitment

Participants were higher education teachers from across the globe familiar with using technology-enhanced feedback approaches in their online teaching practice. The participant group was identified via purposive sampling and then via the snowballing recruitment method (Ritchie et al. 2014); the deliberate nature of the sampling meant that many participants had publications or presentations in academic forums, had received recognition for their teaching practices, and/or held leadership positions in the field. This sampling frame would ensure that the participants had rich experience of the phenomenon under study. The call for participants was advertised via professional social networks (e.g., AdvanceHE and Higher Education Research and Development Society of Australasia newsletters; LinkedIn and Twitter). Participants were selected to promote diversity in discipline, gender, and teaching cohort (e.g., undergraduate or postgraduate) to capture a broad range of literacies and practices. See Table 1.

Table 1. Participant Attributes (n=10)

Pseudonym	Pronouns	Country (of current higher education institution)	Years teaching (total)	Discipline	Student cohort – undergraduate (UG)/postgraduate (PG)
Alannah	she/her	New Zealand	15	Health/Medical	UG
Anthony	he/him	Australia	14	Health	PG
Bryant	he/him	Australia	20	Political Science	UG
Farah	she/her	Oman	12	Foundation/English Language Skills	UG
Ishaan	he/him	United Kingdom	10	Biochemical Engineering	PG
Marisol	she/her	Australia	12	Education	PG
Michael	he/him	South Korea	22	Foundation/English Language Skills	UG
Otto	he/him	United Kingdom	30	Education	PG
Sena	she/her	Canada	11	Education	PG
Tod	he/they	United States of America	6	Health	UG

Data collection and analysis

Each participant took part in one in-depth, semi-structured interview. Interviews were conducted in English by the first author. We developed an interview guide to elicit participant literacies and experiences with using audio-video feedback. Interviews covered the topics of each participant's teaching background and context, their use of technology-enhanced feedback, thoughts on and examples of rapport-building online, their professional development, and time for participants to discuss anything additional. Interviews took place via Zoom and were recorded and then transcribed.

Data collection and analysis occurred simultaneously (Creswell and Creswell 2018) with the analysis oriented towards identifying teacher relational feedback literacies. We conducted framework analysis of the interview transcripts (Ritchie et al. 2014), with regular discussion amongst the team. The framework analysis method is commonly used by qualitative researchers and was developed to facilitate methodical and transparent data management (Ritchie et al. 2014). We started with a thorough review of the range and depth of the interview notes and transcripts. We took an inductive approach and proceeded to code the data according to key concepts beginning with open coding, which entailed taking note of ideas suggested by participants and participants' spoken words. We then documented common responses and looked for shared influences (e.g., personal decision to deploy technology-enhanced feedback), intentions (e.g., building connections), processes and affects (e.g., marking efficiency and demonstrated care) as well as responses of conceptual interest (e.g., bloody-mindedness). A mind map was used to maintain an index of initial codes.

Relevant phrases were then moved into a new document, a coding table, which constituted the code, descriptive sub-code, a definition of the sub-code, and relevant quotes. Discussing interpretation amongst the team allowed for an analytical and critical look at the data and enabled familiarisation, data reduction and refinement as suggested by Ritchie et al. (2014). Reviewing and defining of feedback literacies was a recursive process whereby the developing literacies and associated strategies were reviewed by the team in relation to the research question, coded data and data set. The research team met several times to interpret concepts and to give them meaning beyond the semantic surface of the data and to discuss and describe what the data were about.

Findings

We start with describing participants' orientation towards feedback as being for learning, then present the three interrelated feedback literacies for relationally oriented technology-enhanced feedback: socio-affective, design and communication. The performative nature of technology-enhanced feedback means that there was emphasis on the message. However, for all our participants the purpose of feedback was to primarily foster deeper engagement with the learning materials and foster student growth and development. Participants also discussed their reflexive responsibilities as feedback providers and dialogue partners which conveyed a learning orientation towards feedback. In addition, feedback played a key role in demonstrating care for and relationship-building with students. We describe each feedback literacy and its associated strategies in turn with illustrative quotes.

Orientation towards feedback for learning

Participants described that it was their responsibility to provide feedback that fostered: 1) dialectical thinking, a generative approach to learning that invokes creative and

critical thinking and "widens the horizons" (Sena); 2) a "growth mindset" (Alannah) which promotes "self-reflection" (Alannah) empowering students to "solve their own problems and get insight into their own gaps" (Alannah); 3) "receptivity to the feedback" (Tod) which aims to "cultivate a culture of curiosity and acceptance of the feedback" (Tod) and "increase [students'] feedback literacy" (Otto) by empowering them to recognise when feedback is happening, "what feedback means" (Michael) and, in turn, "generate internal feedback" (Otto); 4) progress within and beyond higher educationthrough feedback that bypasses the focus on grades and instead aims to "prepare[s] people in the field of [deidentified specialty] education" (Tod); 5) lastly, participants explained the importance of feedback clarity and closing the feedback loop: "feedback should be feeding-forward somewhere or having some value that students see is going to influence the future assignment" (Marisol). This orientation to feedback coupled with the following feedback literacies were reported to be used during technology-enhanced feedback.

Socio-affective literacy

This teacher feedback literacy consists of strategies that bring an awareness to student emotions during feedback as well as teacher self-expression. This is exemplified through Michael's understanding that students were "very nervous about [receiving feedback] and screencast feedback actually made them more nervous than normal" (Michael). acknowledged that students, particularly first-year undergraduate students, may transition into university with uncertain or negative perceptions of feedback: "It may feel to the student like it's all critical, right? Especially when they first start getting feedback" (Michael). Participants spoke about the importance of relationality for fostering feedback for learning. Sena spoke about enabling "students to feel safe and to

feel part of the community" and "to feel connected". Otto described himself as a "compassionate educator" who seeks to understand his students. The socio-affective dimension operates to build student engagement with feedback and involves the strategies of self-disclosure, cohesion and empathy.

Self-disclosure

Self-disclosures meant that teachers were being open and shared experiences that may have impacted their personal, professional and/or academic journey. Participants self-disclosed to build a personal connection with students and to promote engagement. For example, Tod shared: "When we do the obesity and chronic diseases section, I show them a picture of what I looked like in high school at 240 pounds" (Tod). They reported that promoted insight: "It's kind of like an ah-ha moment with them" (Tod). Sena disclosed how she facilitated "personal connections" through the appropriate sharing of her personal life: "Oh, you are doing this. I don't know a lot about grade eight, but you know, when my son was in grade eight, this is what he did…" (Sena)

Cohesion and a more embodied presence

Presence was the extent to which participants identified with their students, reducing the psychosocial distance between them. One participant described it as "engendering a sense of homophily", a bond with others and sense of cohesion. In her feedback videos, Alannah advised that "pathologists feel that the teacher is one of the same group. So, this is a professional identity formation thing, like I'm one of you; I have the same problems as you." Anthony used video feedback because it imparts the feeling that "we are [together], you are sitting here with me although you are not really, and we are going through [the assessment]" (Anthony). Marisol reported that technology-enhanced

feedback allowed for perspective-taking – she is "imagining the student watching me" and asks herself, "what would I say to the face of a student?" The ease with which teachers can link abstract notions of quality to specific parts of the work by showing or scrolling to a particular example enables students to "see their work" (Sena) through the eyes of their teacher.

Empathy

Bryant explained how differences in context and opinion could be rethought and presented with more empathy: "It's not a case of being pejorative and saying this is no good. You explain why it wasn't good and what they can do in that sort of positive frame." Participants recognised that students could view feedback as disparaging and impersonal when teachers provide feedback information that focuses on "correction" (Anthony). Anthony explained "Sometimes it's just a matter of saying 'I can see what you've tried to do. Here's another way you could have done it that would have done what we wanted to do.'"

Design literacy

The design literacy consists of strategies that are conscious of the logical arrangement, planning and purpose of feedback with an aim to better prepare and engage students. This is demonstrated in Ishaan's explanation

> I kind of said, 'oh, I'm just going to summarise' or you know, 'this is what I'm gonna talk about'… an example of the breakdown of how the videos would work… so they've got an idea of what's coming. And that was the same [strategy] for all of [the feedback videos]. The idea was to make them watch the video (Ishaan).

> The strategies include questioning and grade concealment.

Questioning

Questioning practices examined the 'how' and 'why' of a response or process within student assessment; participants demonstrated how questioning can be used not only for clarification or reasoning, but also for the purpose of relationship building by shifting the teacher's role from that of an authority figure to a 'dialogue' partner. Several participants stated that they asked students to think about "feedback [they have] received in the past about [their] assignments." (Anthony). Michael asked "students to think about earlier, reflective activities… what kind of personal promises did they try to make to themselves". This participant also described closing the feedback loop: "[I] look back on their first draft of the feedback [I] gave them and look at their second draft and see how they've enacted it on."

Grade concealment or delaying grades

Minimising the central role of grades in assessment and feedback, participants described grade concealment within their audio-video feedback to show they care about student learning. This was particularly true in the first few weeks of a unit as the aim of feedback served to provide students a low-stakes opportunity to improve. Farah explained her reasoning for deprioritising grades was to get students to "work well" and "to kind of get our relations very close". The intent was to build a culture of "asking questions and [an opportunity for] the students feeling more comfortable with the teacher" (Farah). Tod affirmed the grade concealment approach to providing relational technology-enhanced feedback; they asserted, "What we should aim to do is not just hand out As, Bs, Cs, Ds, whatever," continuing, "I don't teach to grade…" (Tod). Sena expressed a similar sentiment; for her and her students, the feedback process is about "seeing how they progress through the course". She wished there "were no grades"

(Sena). According to many participants grades were of little importance; their aims were to provide students "with the feedback [information] that allows them to move forward, to know their real progress, and to know their weaknesses and strengths" (Farah) and to "make sure the students understand the concepts" (Tod) relevant to their goals. Avoiding the mention of students' marks within the feedback video aimed to encourage deeper engagement with the feedback process and intended to support increased feedback encounters to occur outside of the provision of video feedback on summative assessment.

Communication literacy

The communication literacy considers the methods used to construct a deliberate, empathetic feedback message. The strategies involve tonality, structuring and personalisation. For Ishaan, the importance of this dimension was ignited by his own student experience

> I received feedback, as an undergraduate 20 years ago, and I just looked at it and think I didn't learn anything from my submissions. I had no idea of what I did right, what I did wrong. That is my driving force is to make sure the I teach students and tell them where they're going right and wrong. Because I never had that experience and it kind of pissed me off" (Ishaan).

Tonality

Tonality is not *what* is said, but *how* it is said; tonality is an emotional cue. Participants in disciplines such as education, tended to emphasise the importance of their tone of voice "should be conversational and friendly" (Marisol). In other disciplines, such as medical science, tonality was used to place importance on certain terms or ideas. Reflecting the affordances of technology-enhanced feedback and speaking to her

awareness of her tonality, Alannah reflected that she is "very direct, and I'm quite blunt" which can be "perceive[d] as challenging from the feedback receiving perspective." To buffer this Alannah stated: I don't make personal criticisms or such, but I do criticise the work." She expanded on her technique which was a combination of "filter[ing] [her]self" whilst remaining true to her ways of self-expression and her commitment to providing students with actionable next steps. Sounding enthusiastic was discussed by several participants through having "a genuine positivity that comes across" (Ishaan).

Structuring of the message

Some participant accounts brought attention to how their use of one strategy, such as questioning, could be problematic without some structure or scaffolding of the feedback message is arranged and how it flowed. This was illustrated by Otto's awareness of the importance of his video feedback sequencing through his student's negative emotional response. Otto revealed that he initially and haphazardly queried, "What did you do that for?" He admitted that the progression of his delivery was aimless and jarring for his student. His focus on the students' potential and awareness of what they "can do" because he has witnessed their good work "in action", was perceived as demoralising. Otto admitted: "I went straight into the criticism." What I would do now is remind myself to remind the student when they're listening to it, how to engage with it" (Otto). He continued, describing his approach as one where it's structured by saying "'you've done a really good piece of work here. I'm not going to spend time listing all of the excellent things you've done; just know that this is excellent. What I really want to get to is that I'm going to make two very critical points.'" (Otto). He professed that he "learned the hard way". Otto quickly clarified that

"I'm not saying feedback sandwich…What I'm saying is to rationalize your approach."

Unlike Otto, Ishaan encouraged the 'feedback sandwich' approach. He reflected

> It's encouraging, isn't it? You say 'Listen, you didn't do that very well, but this is good here.' But also, 'You didn't do it so well here. So, next time make sure you're doing it more along these lines.' I think that that's the guidance that students were looking for (Ishaan).

Ishaan gave an example of what he might say to a biochemical engineering student, starting: "'Having seen this document, I see it's good quality. I think you've done a good job'." He continued, "I would say, 'This is a good effort, but there are some holes and I'm going to go through those holes now.' Then there would be the bulk critique… [and] a kind of brief summary overall of what I thought" (Ishaan).

Personalisation of the encounter

Participants remarked on the importance of feedback providers bringing an understanding of their own and students' personal and professional experiences and academic and career goals because the "student needs to believe that the person has read their work" (Anthony). Sena explained that her postgraduate education students "describe their goals in the context of standards for teachers and frameworks for learning technology evaluation. ...and through those reflections, they actually say a lot about their background, where they're coming from, where they work, what is important to them" (Sena). Empowered with this knowledge, teachers can be more intentional with their feedback and can begin to close the feedback loop; Sena explained: "You see really where those weak points may be and what they want to achieve" (Sena). Marisol explained that she could personalise the feedback and think forward when she knew future units of study that the student will be undertaking: "When I'm teaching second

year, [I know] what units that are going to be coming in the future … [this] is useful

because I think students identify value in feedback if they know it's going to be relevant

to them at some point in the future" (Marisol).

Discussion

Our study shows that teachers reported using three key literacies when using

technology-enhanced feedback in a relationally intentional way. These are socio-

affective, design and communication.

Within the socio-affective literacy, engaging in empathy, self-disclosures, and a more

embodied presence require considered risk-taking by teachers. Participants

demonstrated that this risk was also an opportunity; it was an opportunity for teachers to

be empathetic, vulnerable, offer their own experiences, and build trust with students.

Our socio-affective dimension is aligned with the relational domain of teacher feedback

literacy that Carless and Winstone (2020) discussed. It is more recognised today that

"feedback serves an affective purpose" (Chan and Luo 2022, 68). Feedback processes

may evoke strong emotions in students (Carless and Winstone 2020), and our

participants were mindful of the potential emotional impact of their feedback practices

on students. Our participants also expressed an awareness that positive student-teacher

relationships can be key in establishing dialogue and easing self-esteem threats. As

Carless and Winstone (2020) acknowledge, "modelling and sharing of teachers' own

experiences of feedback…[is] a useful means of surfacing affective issues in responding

to feedback" (5-6).

Through questioning and grade concealment, our findings demonstrate how our

participants report using what we have labelled as design literacies. These strategies

were used to show care about students learning from feedback. Questioning aims to

probe, encourage, empathise, and engage students (Heron et al. 2021). This relational feedback strategy allows teachers to engage in feedback as talk through the creation of space for student reflection. Unlike the findings of Carless and Winstone (2020) and Chan and Luo (2022), our participants did not seem to prioritise grades as particularly useful for feedback processes, nor did they appear to use feedback to justify grades. Instead, they sought to downplay the grades in an attempt to engage students with feedback information and the work itself.

Carless and Winstone's (2020) design dimension is differently positioned; their dimension focuses on the ways in which teachers contribute to effective feedback processes through their design of curricula and assessment. This positioning appears to be aligned with Boud and Dawson's (2021) macro-level development and/or meso-level coordination and staging responsibilities. Many of our participants suggested that the feedback process would be improved if it could be made more dialogic and formative, indicating that sequenced assessments may better enable students to use feedback from one assignment to the next. However, due to our participants' varied levels of responsibility they were not all responsible for curriculum design. This may explain the difference in strategies that we identified compared with Carless and Winstone (2020). Instead, our design literacy strategies were aimed at managing the tensions between grading and feedback (Boud and Dawson 2021).

Our communication literacy involves strategies used to construct a care-full feedback message through attention to tone, scaffolding and personalisation. Similarly, This literacy aligns with a micro-level of "craft[ing] appropriate inputs to students" as identified by Boud and Dawson (2021, 6). Our findings highlighted that the personalisation of the feedback encounter emphasised the humanity of both the teacher

and student. This is important in the pursuit of engaged and relational pedagogy (Ljungblad 2021; MacKenzie et al. 2021). Personalised feedback interactions that affirm, elaborate, consolidate, and probe suggest an invitation for further conversation (Heron et al. 2021). Technology-enhanced feedback is perceived to be a more conversational, personalised and engaging means of communication than typed feedback comments (Borup et al. 2014; Carless and Boud 2018). Thus, whilst technology-enhanced feedback is primarily an 'input' approach to feedback that risks still being dominated by 'telling', there is more nuance in terms of the social processes of technology-enhanced feedback that is relationally oriented.

Higher education researchers have long debated the function and definition of feedback. The purposes and concepts of feedback can vary "depending on the learning environment, the needs of the learner, the purpose of the task, and the particular feedback paradigm adopted" (Chan and Luo 2022, 72). Chan and Luo (2022) found that teachers who opposed grades as feedback were more aligned to the belief of grades as assessment, indicating that grades do not indicate how to improve, they only demonstrate the outcome. The varied conceptualisations and implementation have implications for teacher feedback literacy (Chan and Luo 2022). As a result, teachers' perceptions of their orientations toward feedback matter because their orientations influence how they design and deliver feedback and what they believe feedback can achieve (Chan and Luo 2022). Like Heron et al., (2021), we support teachers' deliberate reflection of their orientations toward the purpose of feedback. Such deepened regard has practical implications for teacher feedback literacy (Chan and Luo 2022).

Conclusion, limitations and implications

Our research question centred on teacher feedback literacies and strategies required to implement relational technology-enhanced feedback. We interviewed ten higher education teachers across a range of disciplines and cohorts with technology-enhanced feedback experience to understand their reported feedback literacies. One limitation of this approach is that there might be discrepancies between participants' actual feedback practices and what they reported. It was not our intention to measure nor make claims of the efficacy of technology-enhanced feedback nor its ability to improve academic performance. It was also not our intention to produce generalisable findings, thus there may be additional literacies and strategies not identified here. Qualitative research samples are small, for good reason, and are justified when good purposive sampling has taken place (Ritchie et al. 2014).

Teaching is a performative act, and teachers engage 'audiences' to become active and reciprocal participants (hooks 1994). Relational pedagogy is an approach where teaching is understood as a social endeavour (Ljungblad 2021); it is an approach where positive teacher-student relationships are centred, which may aid in developing students' "confidence and faith to reveal what they do not fully understand" (Carless and Boud 2018, 1318). In our study, participants shared what they felt were their responsibilities as feedback providers and designers. Such responsibilities require building and fostering unique connections with students and positioning feedback as a relational undertaking rather than only as a "consequence of performance" (Henderson and Phillips 2015, 51). The differences in reported teacher feedback literacies in the literature and our research point to the situated nature of feedback literacies, which means greater attention to context is needed.

A key responsibility of teachers is to take on the role of a caring partner. As affirmed by our findings, such alliances may be initiated through shifting away from correction and judgement and placing increased attention to the socio-affective, design and communication literacies that show the students they matter. Care-full feedback is shown in how teachers were aware of the affective impact of the message. Making space for student engagement with feedback through design and empathetic communication was expressed by participants who supported the use of technology-enhanced feedback for this purpose; some expressed a revitalised enthusiasm for their feedback practice. It may be of interest to the field to explore the ways in which teacher feedback literacy varies and is influenced by teachers' roles and responsibilities. Future research might also seek to examine how teacher feedback literacies influence student feedback literacies in practice. We have shown that teachers were not just using technology-enhanced feedback to correct student work but were also using technology-enhanced feedback to express themselves, build rapport, establish social presence and convey appreciation more fully.

The implications of our study are for teachers to consider how the feedback process may change if we were to envision teacher feedback literacy and students' feedback literacy as an entwined and unified system. Incorporating and fostering rich interpersonal relationships with students through technology-enhanced feedback may be "a reciprocal rebellion that stands to empower both student and teacher" (MacKenzie et al. 2021, 39). We encourage educators to consider how their feedback practices might act to prioritise teacher-student relationality.

Acknowledgements

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