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Navigating the Terrain:

Emerging Frontiers in Learning Spaces, Pedagogies, and Technologies

Exploring students' perceptions and emotional responses to video and written feedback

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Effective feedback is crucial to foster student motivation, clarify expectations and promote self-reflection and accountability. Although evidence from research findings show that video feedback is effective, written feedback remains the dominant method used. This research uses a between-group design to examine students' perceptions of video and written feedback and their emotion on the feedback. A sample of 389 first-year undergraduate management students participated in a survey evaluating feedback for relevance, clarity, and helpfulness. Overall, all students were positive about the feedback they received with those who received video feedback giving higher ratings on the three areas. Comparisons between recipients of video and written feedback on positive emotions yielded significant differences that were not present when comparing on negative emotions.

Keywords: video feedback, written feedback, higher education, quantitative, survey, emotions

Background

Feedback is a critical component of the educational process. It provides learners with insights into their performance, highlighting areas of strength and identifying opportunities for improvement. Effective feedback enhances learning outcomes, fosters motivation, clarifies expectations, and promotes self-reflection and accountability (Hattie & Temperley, 2007). With advancements in technology, educators have explored various feedback formats, including written and video feedback. Understanding how different types of feedback impact student learning and performance helps educators tailor their feedback strategies to be more effective, resonate better with students and lead to improved learning outcomes (McCarthy, 2015). Studying student perceptions of feedback helps educators personalise and customise feedback delivery to match learning styles and preferences and contributes to the continuous improvement of feedback practices (Mahoney et al., 2019). Researching student perceptions of feedback aligns with a student-centred approach to teaching, when student voices and preferences are considered in shaping teaching and learning practices, an inclusive and responsive environment that empowers students to take an active role in their learning journey is created (Haughney et al., 2020). Although there is existing research on video feedback, reviews have identified three limitations – the majority of the studies are US and UK centric (Bahula & Kay, 2021; Mahoney et al., 2019), not many conduct research on business students (5 out of 58 reviewed by Bahula & Kay, 2021), and samples are small with only one study (out of 58) from Bahula & Kay (2021) and one study (out of 33) from Mahoney et al. (2019) had a sample size of greater than 200. This research will help address these three limitations.

Literature Review

Video feedback is valued for its ability to provide detailed information, including explanation of errors, suggestions for improvement and guidance on future steps, aligning with students' desire for clear, specific and actionable feedback (Berglund et al., 2015). Some evidence suggest that video feedback can shift the focus of feedback from surface-level mechanics or writing (such as grammar and syntax) to more substantive (such as conceptual and intellectual) aspects of performance, which may emphasize deeper academic skills such as argumentation, analysis and synthesis and may encourage higher-order thinking and critical analysis (Bahula & Kay, 2021; Mahoney et al., 2019).

The literature suggests that video feedback may enhance clarity and understanding (Henderson & Phillips, 2015). Research indicates that students primarily appreciate video feedback for its enhanced clarity and ease of understanding, the visual and auditory elements in video feedback helping to reduce ambiguity of feedback information (Mahoney et al., 2019). Limited research has found that video feedback can potentially offer greater

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depth of explanatory feedback, with video markers more likely to elaborate on points, provide specific details, and offer detailed comments on both strengths and areas for improvement (Mahoney et al., 2019).

Students perceive video feedback as helpful in understanding the feedback provided by markers (Berglund et al., 2015). Video feedback can provide students with greater insight into the assessment process, allowing them to understand markers' evaluations, feedback rationale, and suggestions for improvement more clearly and comprehensively, although this does not necessarily translate into better marks (Hilton & Rague, 2015).

Students' emotional responses to feedback remains an underexplored area with most research focusing on the resulting negative emotions such as sadness, shame, and anger (e.g. Ryan & Henderson, 2017) and the majority being qualitative research (e.g. Elbra-Ramsay, 2022). Building on the research by Henderson and Phillips (2015) that found video-based feedback induced both positive and negative emotions, this research seeks to respond to their recommendation to engage in experimental research on text and audio-visual feedback.

Research aims and hypotheses

This study aims to examine student perceptions of relevance, clarity, and helpfulness for two modes of feedback: video and written. As emotion has received less attention, we will also examine emotion in the context of receiving feedback. Based on previous research we hypothesised that:

- H₁: Students who receive video feedback will have more positive perceptions of the relevance, clarity and helpfulness of their feedback than those who receive written feedback.
- H₂: Students who receive video feedback will feel more positive emotion after viewing the feedback than those who receive written feedback.

Methodology

Students enrolled in a first-year undergraduate introductory course in management in semester 1 2023 received an email invitation to voluntarily participate in a Qualtrics survey exploring their perceptions of the feedback they received for their case study analysis report. Of the 656 students enrolled, 615 submitted the assignment with 362 receiving written feedback and 253 receiving video feedback. The type of feedback received was based on whether the marker was one of the 6 (out of 11) markers volunteering to trial video feedback. All 11 markers participated in a marking calibration meeting prior to marking the submissions. Video feedback markers received a one-hour training session on how to give video feedback (the structure and an example) and how to use Panopto to record it. All markers regardless of the type of feedback they gave have undertaken a separate one-hour feedback training session. The video feedback followed Henderson and Phillips' (2015) structure which included a salutation (conversational greeting), relational work (recognition and valuing of the student including personal circumstance and history), evaluative summary (general statement of evaluation), textual issues (grammar, punctuation, flow, formatting), commenting on the substance of the assignment with an emphasis on feedforward (engaging with conclusions, arguments, logic, justification, and literature, strengths, weaknesses, flaws, gaps, creativity and insights specifically on how to improve for future work), and valediction and invitation (congratulating or commiserating over the result or other personal message, and an invitation to continue the discussion of the feedback). The written feedback was composed of detailed annotations (using text, markings such as underlining, arrows or highlighting) on the students' report in Word (using track changes and comments) which covered the same items in the video feedback. The study received ethics approval from the University's Human Research Ethics Committee (No. 31328). For the purposes of this concise paper, data was drawn from the three areas – relevance, clarity and helpfulness, relating to feedback the student had received after submission of a written assessment. The 17 survey questions on feedback were adapted from Ali (2016), Ali et al. (2017), Ryan and Henderson (2017), Henderson et al. (2016), and Watson et al. (1988).

Results and discussion

A total of 389 students responded to the questionnaire - 238 received written feedback and 151 received video feedback. To test the hypothesis that students who received video feedback will provide more positive ratings for relevance, clarity and helpfulness than those who receive written feedback, an independent sample t-test was performed (see Table 1). Levene's test was performed to determine homogeneity of variances due to

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unequal sample sizes (Field, 2024). Results indicated that both groups were sufficiently normal for t-test analysis. For all three variables (relevance, clarity, and helpfulness), Levene's test showed equal population variances ($p > .05$). Comparison of these variables between the two groups using t-tests yielded significant results. Students who received video feedback had higher mean rank scores than students who received written feedback. Additionally, there were significant differences between the groups for ratings of relevance, clarity, and helpfulness.

Table 1

Comparison of Feedback Variables

Variables	Levene's F	Sig.	t-test	df	p	Cohen's D
Relevance	2.215	.137	-2.727	386	.007	3.74
Clarity	.200	.889	-2.047	384	.041	2.97
Helpfulness	.772	.380	-2.680	371	.008	7.08

On the variable **relevance of feedback**, the results indicate a significant difference between the two groups, the written feedback group ($M = 14.51$, $SD = 3.85$) and video feedback group ($M = 15.57$, $SD = 3.57$), [$t(386) = -2.727$, $p = .007$, $d = 3.74$]. The 95% confidence interval of the difference between means ranged from [-1.82965 to -.29676] and did indicate a difference between the means of the sample. The results show for all four questions under relevance of feedback, there was significant difference in the means between recipients' perceptions of written and video feedback. The questions include: *the feedback helped me achieve the learning outcomes of this unit* (Mean_{Written} = 3.38; Mean_{Video} = 3.66); *the feedback I received is relevant to the assessment task* (Mean_{Written} = 3.96; Mean_{Video} = 4.17); *the feedback helped me understand the required standard of performance* (Mean_{Written} = 3.60; Mean_{Video} = 3.81); and *the most important aspects of the assessment task were addressed by the feedback* (Mean_{Written} = 3.59; Mean_{Video} = 3.93). These results demonstrate that students who received video feedback had consistently higher mean rank scores for relevance of feedback than those who received written feedback. While this suggests that video feedback may be perceived as more effective in helping students understand learning outcomes, assessment requirements, and performance standards, it is important to note that individual students did not experience both feedback types. The difference in perception could be due to the nature of the video feedback itself, or it could be influenced by other factors such as the specific markers who volunteered to give video feedback or differences in how the feedback was structured or delivered.

On the variable **clarity of feedback**, the results indicate a significant difference between the two groups, the written feedback group ($M = 10.92$, $SD = 2.99$) and video feedback group ($M = 11.55$, $SD = 2.91$), [$t(384) = -2.047$, $p = .041$, $d = 2.97$]. The 95% confidence interval of the difference between means ranged from [-1.24265 to -.2503] and did indicate a difference between the means of the sample. The results show that for all three questions under clarity of feedback, there was a significant difference in the means between recipients of written and video feedback. The questions include: *the feedback was clear* (Mean_{Written} = 3.51; Mean_{Video} = 3.74); *the language used in giving the feedback was easy to understand* (Mean_{Written} = 3.92; Mean_{Video} = 4.11); and *the feedback was specific and clear that I understood what exactly to revise* (Mean_{Written} = 3.48; Mean_{Video} = 3.70). These results demonstrate that students who received video feedback had consistently higher mean rank scores for clarity of feedback than those who received written feedback. This supports previous research that video feedback may enhance clarity (Henderson & Phillips, 2015). However, the difference in perceptions could be due to other factors, including individual learning preferences, the specific content of the feedback or the communication style of the markers providing video feedback.

On the variable **helpfulness of feedback**, the results indicate a significant difference between the two groups, the written feedback group ($M = 32.02$, $SD = 6.93$) and video feedback group ($M = 34.03$, $SD = 7.29$), [$t(371) = -2.680$, $p = .008$, $d = 7.08$]. The 95% confidence interval of the difference between means ranged from [-3.48408 to -.53494] and did indicate a difference between the means of the sample. The results show that five out of the nine questions under helpfulness of feedback, there was significant difference in the means between recipients of written and video feedback. The questions include: *I found the feedback helpful as I can understand where I lost marks* (Mean_{Written} = 3.55; Mean_{Video} = 3.81); *the feedback will help improve my future performance* (Mean_{Written} = 3.68; Mean_{Video} = 3.91); *my teachers spent time helping students understand the*

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purpose of feedback, including how to use it (Mean_{Written} = 3.55; Mean_{Video} = 3.91); I feel I need guidance on how to best use the feedback to improve on my next assignment (Mean_{Written} = 3.42; Mean_{Video} = 3.66); and the unit is designed to have follow-up tasks that enable me to apply what I have learned from an initial task (Mean_{Written} = 3.72; Mean_{Video} = 4.05). The four items that showed no significant difference in the means include: I found the feedback helpful because I can go back and forth (Mean_{Written} = 3.60; Mean_{Video} = 3.70); the feedback will help me identify the gaps in my knowledge (Mean_{Written} = 3.61; Mean_{Video} = 3.72); the feedback directed me towards the most appropriate strategies for learning (Mean_{Written} = 3.33; Mean_{Video} = 3.47); and I am able to use the feedback in subsequent assignments (Mean_{Written} = 3.74; Mean_{Video} = 3.89). The results demonstrate that students who received video feedback had higher mean rank scores for some questions related to helpfulness of feedback than those who received video feedback, such as understanding where marks were lost and improving future performance. However, the lack of significant difference in some areas indicates that both formats have their perceived strengths. It is crucial to remember that there are separate groups of students rating different feedback experiences, not the same students comparing both formats. The results presented in this section support H1 that students who receive video feedback have more positive perceptions of the relevance, clarity, and helpfulness of their feedback than those who receive written feedback. This affirms previous findings that video feedback is an effective mode for clarity (Henderson & Phillips, 2015; Mahoney et al., 2019) and helpfulness (Berglund et al., 2015).

The results also revealed interesting patterns in students' emotional responses to different feedback formats. The positive emotions include enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, attentive while the negative emotions include scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, hostile, irritable (Watson et al., 1988).

Table 2

Descriptive information on the sample

Variables	Type of feedback	N.	Mean	St. Dev	Std. Error Mean
Positive emotions	Written feedback	235	27.42	9.26	.60433
Positive emotions	Video feedback	149	29.68	9.74	.78764
Negative emotions	Written feedback	230	21.43	9.99	.65875
Negative emotions	Video feedback	149	22.72	10.77	.88260

Table 3

Comparison of Positive and Negative Emotions (After viewing the feedback)

Variables	Levene's F	Sig.	t-test	df	p	Cohen's D
Positive emotions	.045	.832	-2.287	382	.023	9.46
Negative emotions	1.841	.176	-1.188	377	.235	10.30

Table 2 and 3 shows that students who received video feedback reported higher levels ($M = 29.68$, $SD = 9.74$, $t(382) = -2.287$, $p = .023$, $d = 9.46$) of positive emotions compared to those who received written feedback ($M = 27.42$, $SD = 9.26$). The results demonstrate that students who received video feedback had consistently higher mean rank scores for positive emotions than those who receive written feedback. The large effect size suggests a substantial difference in positive emotional experiences between the two groups. Interestingly, there was no significant difference in negative emotions between students who received video feedback ($M = 22.72$, $SD = 10.77$) and those who received written feedback ($M = 21.43$, $SD = 9.99$), $t(377) = -1.188$, $p = .235$, $d = 10.30$. This suggests that while video feedback may enhance positive emotions, it doesn't necessarily reduce negative emotions associated with receiving feedback. These results support H2 which stated that students who receive video feedback will feel more positive emotion after viewing the feedback than those who receive written feedback.

Conclusion

This study aimed to examine student perceptions of video feedback compared to written feedback in relation to relevance, clarity, and helpfulness, and emotions experienced with the feedback. The results indicate that undergraduate business students who received video feedback rated their feedback more favourably than students who received written feedback across the areas of relevance, clarity, and helpfulness. Additionally,

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students who received video feedback reported significantly higher levels of positive emotions after viewing the feedback compared to those who received written feedback, while no significant difference was found in negative emotions between the two groups. These findings suggest that video feedback may offer certain advantages in terms of student perceptions and positive emotional engagement. The higher ratings for relevance, clarity, and helpfulness indicate that students may find video feedback more accessible and actionable. The increase in positive emotions without a corresponding increase in negative emotions suggests that video feedback could enhance the overall feedback experience for students. However, it is important to interpret these results with caution due to several limitations of the study. Firstly, the between-groups design means that students did not experience both feedback types, limiting our ability to make direct comparisons of student preferences. Secondly, the markers who provided video feedback had volunteered to do so, which may indicate a greater commitment to their role or a particular aptitude for this format, potentially impacting the feedback received. Additionally, the large effect sizes observed suggest that factors beyond just the feedback format may be influencing the results. The findings of this study have important practical implications for educators. While incorporating video feedback could potentially enhance the feedback experience for many students, it's important to recognize that individual preferences and learning styles vary. A one-size-fits-all approach to feedback delivery may not be optimal. Educators might consider offering a choice of feedback formats or using a combination of methods to cater to diverse student needs and preferences. Future research could address the limitations of this study by employing a within-subjects design where students receive both types of feedback, controlling for marker effects, and ensuring consistency in feedback content across formats. Additionally, investigating the long-term impact of different feedback formats on student learning outcomes, engagement with feedback, and academic performance would be valuable.

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