Exploring Student Perceptions of Video-Based Feedback in Higher Education: A Systematic Review of the Literature

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This study provides a systematic review of the research on higher education students’ perceptions of the benefits and challenges of video-based feedback. Fifty-eight peer-reviewed articles from 2009-2019 were selected using the PRISMA framework and analyzed employing a constant comparative method. Overall, students preferred video-based over text-based feedback. Benefits cited for using video-based feedback included a more detailed, clearer, and richer quality of feedback, increased understanding and higher-order thinking skills, more personal, authentic and supportive communication, and making the feedback process more interactive. Challenges included decreased accessibility, the linear nature of video-based feedback, and evoking negative emotions.

Keywords: video feedback, assessment, higher education

INTRODUCTION

Feedback is critical to learning and typically offers communication about a gap between actual performance and desired outcomes (Carless, 2006; Hattie & Timperley, 2007). An evaluation of over 500 meta-analyses identified feedback as an essential contributor to student achievement (Hattie & Timperley, 2007). However, the study also reported a high degree of variance regarding the impact of feedback, suggesting that not all feedback positively impacted learning (Hattie & Timperley, 2007). Some feedback negatively affects learning (Kluger & DeNisi, 1996), highlighting the need for educators to think carefully about the quality and format of feedback.

Teacher-student conferences appear to be one of the best methods to receive feedback (Anson et al., 2016; Ryan et al., 2019) and clarify written comments (Sommers, 1989). Nonetheless, text-based feedback is the norm in higher education. Before widespread computer use, instructors offered handwritten comments on students’ assignments and tests (Sommers, 1982). However, many students found this feedback unhelpful because comments were illegible, vague, limited in providing guidance, excessively focussed on errors and omissions, or inconsistent with the assignment learning goals (Glover & Brown, 2006; Weaver, 2006).

With the advent of computers came digital submissions and digital feedback (Parkin et al., 2019). This shift in format helped overcome the challenge of deciphering illegible scratches (Glover et al., 2015; Hepplestone et al., 2011; Price et al., 2010). However, other problems remained, including lack of detail
(Pitt & Norton, 2017), the absence of pedagogical training for instructors (Richards et al., 2017), student difficulty in making connections between grades, feedback, and assessment criteria (Glover et al., 2015), and negative emotional responses elicited from feedback (Shields, 2015).

Li & De Luca’s (2014) review of 37 empirical studies on assessment feedback in higher education revealed that students want timely, personal, explicable, criteria-referenced, objective, and useful guidance. Some of these expectations could be met through training, however large class sizes challenge the effectiveness of text-based feedback. A number of instructors have recently experimented with alternative formats to provide high-quality, personalized feedback using video. This study provides a systematic review of the literature to explore student perceptions about using video-based feedback in higher education.

METHODOLOGY

Overview

We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Liberati et al., 2009) to conduct a systematic literature review on the use of video-based feedback in higher education. The PRISMA approach creates a reproducible, comprehensive, and reliable overview of a topic by identifying, screening, analyzing, and synthesizing primary research sources (Gough & Thomas, 2016). Article identification and screening involved establishing the selection and testing of search criteria on targeted education databases. Additionally, we scanned articles that met eligibility criteria in high-quality educational journals. The PRISMA framework uncovered 58 peer-reviewed articles focusing on student perceptions of video-based feedback in higher education.

Data Analysis

To establish the context of video-based feedback use, we collected and analyzed data on the year of publication, country, academic level, academic discipline, assessment type, media used, and length of video-based feedback. To assess student perceptions of video-based feedback, we started with five highly relevant articles. We discovered emerging themes by carefully reading the results and discussion sections and recording key findings. We then used a constant comparative method (Corbin & Strauss, 2008) to review and code the remaining 53 articles for consistency and alignment with emerging themes.

Context

The 58 articles reported in this study were published between 2009 and 2019, with a majority published since 2014. Most studies took place in the United States or the United Kingdom and primarily focused on undergraduate students. Key academic disciplines offering video-based feedback included education, language learning, humanities, business, and STEM. Screencasts were the principal video format used, followed by webcam videos of the instructor. The average video length was seven minutes and ranged between two and 26 minutes.

RESULTS

Overview

Overall, the vast majority of studies indicated that higher education students preferred higher video over text-based feedback. This preference was observed across multiple educational environments, including in face-to-face courses (Ali, 2016; Cranny, 2016; Crews & Wilkinson, 2010; Cunningham, 2019b; Denton, 2014; Ghosn-Chelala & Al-Chibani, 2018; Hall et al., 2016; Hope, 2011; Letón, Molanes-López et al., 2018; Marriott & Teoh, 2012; McCarthy, 2015; Moore & Filling, 2012; O’Malley, 2011; Özkul & Ortaçtepe, 2017; Sommers, 2013; Turner & West, 2013; Vincelette & Bostic, 2013; West & Turner, 2016), blended courses (Gonzalez & Moore, 2018; Henderson & Phillips, 2015; Schilling & Estell, 2014), synchronous online courses (Grigoryan, 2017), and asynchronous online courses (Alharbi, 2017; Edwards et al., 2012; Lowenthal & Dunlap, 2018; Mathieson, 2012).
Mixed results emerged regarding individual differences and preferences for video or text-based feedback. For example, Henderson & Phillips (2015) observed no relationship between demographic variables such as gender, degree level, or ESL ability and a preference for video or text-based feedback. However, McCarthy (2015) reported that male students and students under the age of 25 were slightly more inclined to prefer video-based feedback to text-based feedback. Two studies indicated that students preferred video-based feedback to articulate higher-level concepts and text-based feedback to communicate lower-level concerns such as grammar, spelling, and punctuation corrections (Elola & Oskoz, 2016; Silva, 2012). Finally, several researchers noted that video-based feedback was preferred over text-based feedback when provided general comments or solutions to the entire class (Crook et al., 2012; Letón et al., 2018; Robinson et al., 2015).

**Benefits**

*Detail, Clarity, and Understanding*

Henderson et al. (2019) argues that high-quality feedback needs to be detailed, clearly interpretable and understood to be optimally effective. Considerable evidence suggests that video-based feedback offered more detail to higher education students than text-based feedback (Ghosn-Chelala & Al-Chibani, 2018; Hyde, 2013; Mathieson, 2012; Mayhew, 2017; McCarthy, 2015; Özkul & Ortaçtepe, 2017; Ryan et al., 2019; Sommers, 2013; Turner & West, 2013). Furthermore, at least 24 studies indicated that the content of video-based feedback was easy to understand (Alvira, 2016; Armağan et al., Çelik, 2016; Borup et al., 2015; Cranny, 2016; Crews & Wilkinson, 2010; Crook et al., 2012; Cunningham, 2019b; Ghosn-Chelala & Al-Chibani, 2018; Griffiths & Graham, 2010; Hall et al., 2016; Kim, 2018; Lamey, 2015; Mayhew, 2017; Orlando, 2016; Robinson et al., 2015; Silva, 2012; Sommers, 2013; Turner & West, 2013; Walker, 2017; West & Turner, 2016).

Optimal feedback required that learners are engaged in more than one way (Henderson et al., 2019; Ossenberg et al., 2019). Students in this review commented that the multimedia features of video-based feedback increased understanding (Ali, 2016; Edwards, Dujardin, & Williams, 2012; Marriott & Teoh, 2012; Mathsen, 2012; Thompson & Lee, 2012). For example, pharmacology students stated that the synchronization of audio and video enabled them to understand calculations better (Flood et al., 2017). Media arts students claimed that screencast feedback was more suitable and aligned with the multimedia format of assignments. Cunningham (2019b) added that the audio component of screencast videos improved the processing of feedback. Video-based feedback was also considered less prone to misunderstanding due to audio and visual and vocal cues (Borup et al., 2015; Griffiths & Graham, 2010; Kim, 2018). Finally, Bissell (2017) reported that audio feedback reduced anxiety for one student with dyslexia.

**Higher-Order Thinking**

In a scoping review of the literature, Ossenberg et al. (2019) discovered that providing helpful feedback is a process involving skillful interaction to support future-focused learning and development. A number of studies in this review reported that video-based feedback stimulated higher-order thinking and revisions (Edwards et al., 2012; Lamey, 2015; Silva, 2012; Sommers, 2013). Many researchers indicated that video-based feedback helped student reflect and improve future work (Alharbi, 2017; Anson et al., 2016; Crews & Wilkinson, 2010; Deeley, 2017; Lamey, 2015; Mayhew, 2017; Robinson, Loch, & Croft, 2015; Turner & West, 2013; West & Turner, 2016). Edwards et al. (2012) observed that video-based feedback offered explanations and examples that helped students prioritize subsequent revisions (Edwards et al., 2012). Silva (2012) added that students perceived screencast feedback as critical in addressing thesis-related issues such as overall organization, establishing research questions, learning to provide supporting evidence.

**Engagement**

Historically, feedback has been considered a one-way transmission of information from the instructor to the student (Ajawiri & Boud 2017). However, contemporary philosophies support a more dynamic and dialogical approach (Killion 2015; Yang and Carless 2013). Nonetheless, learners are typically silent in the
feedback process (Ossenberg et al., 2019). Engaging students in the feedback process is challenging but highly sought after in higher education (Cunningham, 2019a; Hepplestone et al., 2011; Parkin et al., 2012). In this review, 18 studies reported that students felt more engaged when receiving video-based feedback (Ali, 2016; Alvira, 2016; Borup, West, & Graham, 2013; Cranny, 2016; Crook et al., 2012; Deeley, 2017; Ghosn-Chelala & Al-Chibani, 2018; Griesbaum, 2017; Hyde, 2013; Kim, 2018; Mathieson, 2012; Mathisen, 2012; Mayhew, 2017; Özkul & Ortaçtepe, 2017; Robinson et al., 2015; Soltanpour & Valizadeh, 2018; Thompson & Lee, 2012; Vincelette & Bostic, 2013). Students claimed that video-based feedback helped to increase their motivation (Alvira, 2016; Borup et al., 2013; Kim, 2018; Mathisen, 2012) and engagement in the revision process (Ali, 2016; Alvira, 2016; Özkul & Ortaçtepe, 2017; Robinson et al., 2015; S. Robinson, Centifanti, Brewer, & Holyoak, 2015). In several studies, students mentioned that the social connection they experienced motivated them to engage with the feedback (Borup et al., 2013; Mathisen, 2012; Özkul & Ortaçtepe, 2017).

Students manifested engagement with video-based feedback in several ways. First, numerous studies suggested that students typically viewed video-based feedback repeatedly (Cranny, 2016; Crook et al., 2012; Harper, Green, & Fernandez-Toro, 2015; Özkul & Ortaçtepe, 2017; Parton et al., 2010; Silva, 2012; Sommers, 2013; Vincelette & Bostic, 2013). Second, students spent more time reviewing video-based feedback relative to their standard practice of internalizing text-based feedback (Alharbi, 2017; Orlando, 2016; Turner & West, 2013; West & Turner, 2016). Third, students talked about the video more than text-based with their peers (Crook et al., 2012). Fourth, some evidence indicated that students paid equal attention to video-based feedback and grades (Hyde, 2013; Thompson & Lee, 2012). Fifth, students applied video-based feedback to revisions more than text-based feedback (Denton, 2014; Thompson & Lee, 2012; Vincelette & Bostic, 2013). Tangentially, two studies suggested that students thought that their instructors were more engaged when providing video versus text-based feedback (Anson, 2015; Hall et al., 2016).

**Personal**

High-quality feedback should be user-friendly and tailored to meet the needs of individual learners (Henderson et al., 2019; Ossenberg et al., 2019; Wiggins, 2012). Almost half the studies reviewed reported that video-based feedback was more personal than text-based feedback (Alharbi, 2017; Anson, 2015; Borup et al., 2013; Cranny, 2016; Crews & Wilkinson, 2010; Deeley, 2017; Edwards et al., 2012; Griffiths & Graham, 2010; Grigoryan, 2017; Hall et al., 2016; Harper et al., 2012; Henderson & Phillips, 2015; Hung, 2016; Jones et al., 2012; Marriott & Teoh, 2012; Mathieson, 2012; Mayhew, 2017; Moore & Filling, 2012; Orlando, 2016; Robinson et al., 2015; Ryan et al., 2019; Silva, 2012; Sommers, 2013; Thompson & Lee, 2012; Turner & West, 2013). Even video-based feedback to groups or the entire class, such as worked solutions or generic guidance, was perceived as personal (Robinson et al., 2015). Mayhew (2017) added that students rated screencasts with embedded video of the instructor more personal than the screencast alone.

**Affective Expression and Authenticity**

To date, limited research has been conducted on the role of emotions in providing feedback, possibly because text-based feedback does not typically convey emotions (Ossenberg et al., 2019). However, with video feedback, tone of voice and facial expression increases the likelihood that emotion will be communicated. Higher education students noted that video-based conveyed affective or emotional expression effectively. Students stated that videos revealed their instructors’ emotions accurately (Anson et al., 2016; Borup et al., 2014) and helped them judge the instructor’s authenticity (Borup et al., 2014). Students observed that hearing the instructor’s tone of voice helped support their learning experience (Bissell, 2017; Brereton & Dunne, 2016; Lamey, 2015; Moore & Filling, 2012; O’Malley, 2011; Thompson & Lee, 2012). Specifically, instructor tone of voice helped students perceive feedback as supportive and friendly (Brereton & Dunne, 2016; Thompson & Lee, 2012), increased understanding (Bissell, 2017; Lamey, 2015), and created a constructive opportunity for improvement (Moore & Filling, 2012; O’Malley, 2011).
Social Connection

Ossenberg et al. (2019) described ideal feedback as an interactive process that is responsive to the learner and reciprocal with the instructor. In nearly three-quarters of the studies reviewed (n = 43 studies), higher education students experienced increased social presence or connection when receiving video-based feedback. In general, numerous articles indicated that video-based feedback was more personal (n = 29 studies) and provided increased affective (n = 14 studies), cohesive (n = 15 studies), and interactive (n = 11 studies) expression. On the other hand, two studies reported no significant difference in perceptions of social connection between students who receive video versus text-based feedback (Borup et al., 2015; Borup, West, Thomas, & Graham, 2014). Furthermore, students in asynchronous online courses rated detailed text-based feedback as significantly more effective at establishing social presence than video-based feedback (Lowenthal & Dunlap, 2018).

Connection With Instructor

Higher education students commented that video-based feedback promoted group cohesion in several ways. First, students claimed that video-based feedback helped them feel closer to their instructor (Anson et al., 2016; Borup et al., 2014; Crews & Wilkinson, 2010; Griffiths & Graham, 2010; Lamey, 2015; Mathieson, 2012; Mathisen, 2012; Parton et al., 2010; Thompson & Lee, 2012). Second, this type of feedback rapport with their instructors (Thompson & Lee, 2012; West & Turner, 2016). Finally, with video-based feedback, students viewed instructors as more caring (Anson, 2015; Henderson & Phillips, 2015; Kim, 2018), encouraging (Anson, 2015; Henderson & Phillips, 2015; S. Robinson et al., 2015), supportive (Borup et al., 2015; Henderson & Phillips, 2015; Walker, 2017), and respectful (Griffiths & Graham, 2009).

Increased Interaction

A number of studies suggested that video-based feedback increased interaction even though communication with videos was unidirectional (Ghosh-Chelala & Al-Chibani, 2018). Students noted that video-based feedback felt conversational (Anson et al., 2016; Borup et al., 2014; Cranny, 2016; Silva, 2012; Thompson & Lee, 2012), promoted dialogue (Gonzalez & Moore, 2018), and encouraged open communication (Vincelette & Bostic, 2013). Some students remarked that video-based feedback felt similar to a face-to-face feedback meeting (Bissell, 2017; Gonzalez & Moore, 2018; Mathieson, 2012; Sommers, 2013). In a few cases, though, students reported that video-based feedback created an expectation of a conversation without providing the opportunity to actually have one (Lamey, 2015; Mathieson, 2012). For example, Borup et al. (2015) noted that video-based feedback inhibited further communication with their instructor because students believed they had to communicate with and lacked the confidence and technical proficiency to follow up.

Challenges

Accessibility Problems

In this review, several accessibility issues emerged as a result of using video-based feedback, including limited technical knowledge or equipment, finding video files, location, and pace of feedback. Some students did not know how to access video-based feedback (Thompson & Lee, 2012). Other technological challenges included video files that were incompatible with their devices (Ali, 2016; Deelley, 2017), slow download speeds or poor Internet connections (Hyde, 2013; McCarthy, 2015), poor audio quality (Ali, 2016; Hope, 2011; Lamey, 2015) or the absence of speakers or headphones (Hyde, 2013). Location was an issue for some students because they did not have headphones or an appropriate private space to listen to feedback (Borup et al., 2015; Hyde, 2013). Finally, the pace of video-based feedback was a concern for international students learning English because of limited listening skills (Kim, 2018). It is worth noting that the number of students who encountered technical, location and pace challenges in these studies was low.
Linearity of Video Format

With text-based feedback, a student can easily move from section to section by scrolling through a document. On the other hand, video-based feedback requires a student to listen from start to finish with limited navigational control. Therefore, students cannot easily keep track of suggestions unless they write them down. Many studies reported that higher education students found the linear nature of video-based feedback to be problematic. (Ali, 2016; Borup et al., 2015; Edwards et al., 2012; Gonzalez & Moore, 2018; Schilling & Estell, 2014; Silva, 2012; Sommers, 2013; Thompson & Lee, 2012). Students commented that they experienced difficulty scanning video-based feedback (Borup et al., 2015; Edwards et al., 2012; Thompson & Lee, 2012), thereby inhibiting the revision process (Borup et al., 2015; Thompson & Lee, 2012; Silva, 2012). Consequently, students had to repeatedly review videos to act on the feedback provided (Gonzalez & Moore, 2018; Schilling & Estell, 2014; Sommers, 2013) or take notes (Borup et al., 2015; Gonzalez & Moore, 2018). In one instance, students received feedback with a video of their instructor’s face only, making it challenging to match comments to the appropriate location in their submitted work (Henderson & Phillips, 2015). In one other case, when feedback included a video of the assignment, students struggled with oral comments unless annotations were provided (Thompson & Lee, 2012).

Negative Emotions

The evidence suggests that students enjoy the personal nature and authenticity of video-based feedback, which is often communicated through positive emotions. However, negative emotions can impact student perceptions. Seven studies reported that higher education students experienced negative feelings when receiving video-based feedback (Ali, 2016; Edwards et al., 2012; Hall et al., 2016; Henderson & Phillips, 2015; Hyde, 2013; Lamey, 2015; Sommers, 2013). Not all studies articulated the precise nature of the negative emotions observed. However, a number of studies indicated that students felt anxiety (Ali, 2016; Henderson & Phillips, 2015), nervousness (Edwards et al., 2012), discomfort (Hall et al., 2016; Sommers, 2013), awkwardness (Lamey, 2015), and, in one case, hesitancy to watch the feedback (Hyde, 2013). For some students, then, video-based feedback can be “scarily” personal (Henderson & Phillips, 2015).

SUMMARY AND FUTURE RESEARCH

In this study, we conducted a systematic review of 58 studies on the use of video-based feedback in higher education from students’ perspectives. In most studies, students preferred video over text-based feedback. Cognitive benefits of video-based feedback included increased detail, clarity and understating, higher-order thinking and engagement. Social benefits of video-based feedback included communication that was perceived as being more personal, affective, authentic, caring, supportive and interactive. Challenges experienced using video-based feedback centred on accessibility (limited technical knowledge or equipment, finding video files, location, and pace of feedback), the linear nature of video media, and negative emotion.

Based on this review, a number of research questions on the use of video-based feedback still need to be addressed. First, what is the optimal level of clarity and detail required and does that level vary according to the student's skill level? Too much detail could disengage students, and too little detail could bring about frustration. Second, what are the strategies used to engage students in higher-order thinking using a video format? Third, how does one maximize interaction and dialogue using a video format? Some software (e.g., Perusall©) permits students to add comments to videos. Fourth, to what extent should an instructor express emotion while giving feedback to optimize learning. Fifth, how can the issue of navigating video-based feedback be addressed so that students can record, find and integrate key suggestions? Finally, more research is needed on the extent to which contact and individual differences influence the effectiveness of video-based feedback.
REFERENCES


