International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2022, Vol. 18, Issue 2, pp. 46-67

Screencast Feedback: Can I Use It?

Avanelle Joseph-Edwards
The University of the West Indies Open Campus, Trinidad and Tobago

Roger Edwards
University of the Southern Caribbean, Trinidad and Tobago

ABSTRACT

This study examined student perceptions of screencast feedback and their learning behaviors following screencast feedback in an online graduate course. While there is widespread research on instructor feedback, there is far less literature focusing on video-based feedback and self-regulatory behavior within a Caribbean online learning environment. This case study addressed this gap by examining twelve management students' perceptions of screencast feedback on their online learning experience. Data were collected using visual documentation, student interviews and focus groups. The results suggest that students have positive perceptions of video-based feedback in adding value to the online learning experience. Emergent themes placed most value on the potential improved intimacy, communication, and timeliness of screencast feedback. The findings also corroborate preliminary research about the role video-based feedback plays in fostering self-regulated learning (SRL). This has implications for the design and development of instructor feedback to include video-based cues and feedback messages that promote SRL.

Keywords: *screencast feedback, video-based feedback, instructor feedback, self-regulated learning*

INTRODUCTION

There is strong consensus in the research literature that feedback is the single most powerful influence on student achievement (Hattie and Timperley, 2007). In fact, feedback contributes to a quality learning experience as it can improve motivation (Narciss, 2008), promote self-efficacy (Bobo, 2010), self-regulated learning (Nicol and Macfarlane-Dick, 2006; Hattie and Timperley, 2007), learning process, and outcomes (Shute and Zapata-Rivera, 2008) Nonetheless, students and teachers alike have lamented about the traditional written form of feedback (Brown & Glover, 2006; Hernández, 2012; McGrath et al. 2011).

Students claimed that written feedback lacks clarity, can be easily misinterpreted (Zhang and Kenny, 2010), is illegible at times, unclear, and of poor quality (Crook et al. 2012). Written feedback in an online learning environment can be even more challenging as students can ignore instructors' messages and fail to make meaningful revisions to assignments (Mathisen, 2012). Furthermore, while assignments may be meaningful and applicable to real-world contexts, the feedback primarily focuses on grades and metalinguistic errors (Glover and Brown, 2006; Ali, 2016).

The Caribbean higher education sector has shifted gears in its approach to teaching and learning by adopting a learning-centered approach to the design and delivery of online instruction. However, this paradigm shift has not transferred to assessment as students have bemoaned the timeliness of instructor feedback which does not mirror the immediacy of support received as in the face-to-face environment (Cain and Phillip, 2013; Singh et al. 2017).

Despite the promised gains of feedback enabling students to make active use of instructor insights to improve their learning in future learning tasks, little is known about how students' perceptions of feedback relate to their adaptive (change or improve upon a learning strategy) or maladaptive behaviors when it comes to self-regulation (Brown et al. 2016; Fatima et al. 2021). The situation is further compounded by the inherent weaknesses of written feedback to stimulate corrective behaviour to improve academic performance (Crook et al. 2012).

As such, other feedback modalities, such as video-based feedback, need to be explored so that technological affordances of that modality can be leveraged to support the understanding of self-regulatory behavior among online students. Although there has been emerging scholarship on the use of screen-capture technologies in the classroom (Moore and Filling 2012; Thompson and Lee 2012), there is a paucity of research on how it can be leveraged to stimulate self-regulated learning among students (Nicol and Macfarlane-Dick, 2006; Ibarra-Sáiz et al. 2020), particularly in the Caribbean context.

The current study therefore addresses this lacuna by exploring students' perceptions of screencast feedback. Furthermore, this study seeks to understand the relationship between feedback and learning for students. Specifically, this study will address the following questions:

1. How do graduate students perceive the potential of video-based feedback on improving the online learning experience?
2. What are the types and levels of instructor feedback provided?
3. What are online graduate students' perceptions of video-based feedback and their learning behaviours following receipt of feedback?

To respond to these research questions, the theoretical underpinning upon which this study is built is next presented. The methodology used to carry out the study is described, and the main results are presented and discussed.

LITERATURE REVIEW

Feedback

Feedback has traditionally been viewed through an objectivist lens (Mory, 2004) in which it was considered as something that was "transmitted" to the student. Conversely, in the social constructivist context, feedback provides students with "intellectual tools" that would aid in the construction of their own reality (Mory, 2004). Therefore, feedback is contemporarily viewed as "social and situated acts of meaning-making" (Mahoney et al. 2019 p.159). Thus, the feedback provided to students was expected to enable them to make their own revisions and, through dialogue, assist the learner in making his own new understandings (Evans, 2013). However, as Evans postulated, what constitutes quality feedback varies in higher education. Therefore, the type and depth of feedback are critical in determining its effectiveness and usefulness.

The type of instructor feedback provided is dependent in part on the ability of students to close the gap between current and desired performance. According to Hattie and Timperley (2007), feedback can occur at the task, process, self-regulation, and self levels. At the task level the feedback provided is corrective in that it indicates the degree of correctness, relevance, or completeness of the task. At the process level, the feedback centers on the strategies students use to identify errors. It therefore centers on how the information is processed by the learner. The self-regulation level of feedback addresses the student's ability to self-monitor, self-assess and act on the feedback information. Feedback at the self level includes personal remarks that are affective or praiseworthy. Hattie and Timperley (2007) contended that feedback at the personal level is least effective for

learning. In fact, feedback on the level of process and self-regulation were presented as the most impactful for learning, while feedback at the task level was considered to improve task confidence and self-efficacy only to the extent that the feedback provided sufficient depth.

Glover and Brown (2006) categorized feedback into three categories of depth. At the base level feedback indicated a problem. At level 2 corrective advice is given to the problem. At the highest depth level, an explanation of the problem is provided as well as an element of feedforward. It is only at this level were students able to self-regulate and close the gap between actual and desired performance.

Self-Regulated Learning and Feedback

There is extensive research that documents the value of self-regulated learning (SRL) and its contribution to academic (Zimmerman 2000; Liao et al. 2012; Dent and Koenka 2016; Alotaibi et al. 2017). Self-regulation can be termed as "self-generated thoughts, feelings, and actions for attuning one's learning goals" (Zimmerman & Moylan 2009, p. 29). Zimmerman and Moylan's (2009) self-regulated model categorized the recursive steps of SRL into three phases: the forethought phase, the performance stage and the self-reflection phase.

The forethought phase occurs before learning takes place and it refers to the goal setting and planning and sources of motivation that influence students' preparation and willingness to self-regulate. The performance phase refers to the learning strategies and processes involved during learning which impact how and the degree to which students persist when encountering challenges that can negatively impact on their learning (Greene 2018). The self-reflection phase occurs post learning. In this phase students interpret learning products created and processes used which can influence how they approach future learning tasks.

Despite the potential of SRL in improving academic performance, it has been noted that even the most adept self-regulator can experience difficulty in self-regulating across challenging learning contexts such as in online environments (Bol & Garner, 2011; Donker et al. 2014). There is therefore need to develop self-regulatory skills in students. The literature has highlighted that the development of self-regulated learning in students can be facilitated through metacognitive training, self-assessment, monitoring and by providing opportunities to practice self-regulation (Schunk and Zimmerman 1994; du Toit 2012; Timmers et al. 2016).

Instructional feedback is another instructional method used by educators to promote self-regulation (Suamuang et al. 2021). External feedback can take several forms – grades, scores, comments on student work. The aim of providing feedback goes beyond providing information about student progress or achievement towards a learning goal. Rather, it is hoped that feedback provided would prompt the learner to activate adaptive responses towards feedback such that he or she would achieve the learning goal (Hattie & Timperley, 2007). Therefore, in order for feedback to be meaningful to a student's learning experience, it should provide information that would feed forward (Lee and Horsfall 2010; Race 2014).

For students to act upon the information received, the feedback comments need to be detailed, personalized and usable (Ryan et al. 2019). Detailed comments should highlight the strengths and weaknesses of students' work and outline how to improve in future work. The comments should also be personalized such that the information provided is not generic from a statement bank but rather it should "respond directly to the learner's piece of work" (Ryan et al. 2019, p. 1509). Lastly, the feedback comments should be actionable by not only providing useful information for future learning tasks but also by indicating how the feedback information can be implemented to improve performance.

Regardless of the value of feedback in contributing to improved learning outcomes (Hattie & Timperley, 2007; Denton, 2014; Owen 2016), the effectiveness of the feedback depends to a large degree on students' perceptions (Brown et al. 2016). Many studies have been conducted comparing tutor perceptions versus student perceptions of feedback (Doan, 2013; Mulliner & Tucker, 2015; Dawson et al. 2018). Yet, an investigation on student's perceptions of the effectiveness of feedback to stimulate self-evaluation and prompt adaptive or maladaptive behavior has remained largely under-researched (Mulliner & Tucker, 2015). Additionally, most of the research centered on self-regulated learning focuses on the examination of learning processes (such as time management (Brown et al. 2016) and self-efficacy (Schunk & Greene, 2018) with little emphasis on the adaptive and maladaptive responses and attitudes students have toward external feedback (Brown et al. 2016).

Even fewer studies have explored self-regulation and feedback within an online learning setting (Moos & Azevedo 2008; Cho & Shen 2013; Delen & Liew 2016) or in the Caribbean context. Accordingly, this study aims to supplement these gaps in research.

Video-based Feedback

Most of the feedback produced in higher education is in written form (Marriott & Teoh, 2012) which often is misinterpreted and unclear (Crook et al. 2012; Zhang & Kenny, 2010). Thus, the inadequacy of written feedback gave rise to a surge of research articles that have proffered audio and visual modalities as alternatives. It was assumed that the new technologies will give students an edge which can assist them in engaging more effectively in feedback (Crook et al. 2012). Yet, others contend that the feedback protocols rather than the modality itself make other modalities, such as video feedback, more effective (Mahoney et al. 2019; Lowenthal, 2020).

The terms video feedback and screencast feedback have been used interchangeably among some researchers (Mathisen, 2012; Thompson & Lee, 2012; Turner & West, 2013) to mean an instructional tool whereby recorded material is placed online so that viewers can access it. The tool allows lecturers the ability to capture content from their local computers and display it on screen. In addition to video capturing, screencasting has narration and annotation capabilities enabling the lecturer to comment and explain what is on screen.

While research in written and audio feedback has been well documented, video feedback research is still largely unexplored (Mahoney et al. 2019). Notwithstanding, video feedback differs from other modalities in several ways. First, video feedback provides students with more feedback and greater detail (Borup et al., 2015; Henderson & Phillips, 2015). In addition, the feedback transcends metalinguistic errors and has the potential to provide substantive information to assist with performance improvement (Henderson & Phillips, 2015; Orlando 2016).

Another notable characteristic found in the literature stems from the reconceptualization of the term feedback. Feedback is now viewed as as "social and situated acts of meaning-making" (Mahoney et al., p.159). Thus, a common finding is that video feedback is more personalized and relational. It facilitates a dialogic exchange (Boud & Molloy 2013; Rowe 2017) or multidirectional exchange in which there are multiple channels of communication between instructor and student (Borup et al. 2015; Robinson et al. 2015; Mayhew, 2017; Lowenthal & Dunlap, 2018). However, though students perceived video feedback to feed-forward (Robinson et al. 2015; Bahula & Kay, 2020), leading to improvements in academic performance, several researchers posit that the feedback did not help students regulate their learning, develop better evaluative judgment (Mahoney et al. 2019), or even improve their performance (Turner & West, 2013).

Conversely students negatively perceived video-based feedback. For some, the feedback was linear in nature (Borup et al. 2015; Henderson & Phillips, 2015), inaccessible (Ali, 2016; Deeley,

2017), evoked negative sentiments (Borup et al. 2014; Henderson and Phillips, 2015), and was time-consuming (Marriott and Teoh, 2012; Mathieson, 2012). Despite these criticisms, some students were found to perceive video feedback as having a positive impact on their learning (Bahula & Kay, 2020; McCarthy, 2015). Yet, few studies have investigated students' perceptions on video-based feedback (Alan Hung, 2016; Borup et al. 2015; Brown et al. 2016).

THE RESEARCH METHOD

This study is descriptive and does not seek relationships between variables as its contribution to knowledge was constructed within the methodological aperçu of Park and Burgess (1921) that focuses on illuminating phenomena, rather than pursuing generalizability and hypothesis testing.

Research Design

The study utilized a social-constructivist lens, for which a case study seemed best suited. Moreover, this study sought to explore a complex phenomenon such as self-regulatory behavior (which is not easily discerned) in the context of video-based feedback. Furthermore, the literature indicates that case studies are ideal for investigating "how SRL shapes and is shaped by context" … and case studies will… "advance study of the interplay between individual and social processes as they unfold in authentic activity (Butler, 2011 p.347). The case study therefore allowed the researcher to retain the holistic and meaningful characteristics of the phenomenon under study.

The Research Sample

A "purposeful maximal sampling" (Creswell 2013a) process was used to ensure variability in the participants' age, prior educational experiences and learning strengths and challenges. Students were drawn from within a semester long master's level online course. The main premise was that the perception of the usefulness of video feedback would vary according to students' learning strengths and by extension SRL levels. Furthermore, it may lead to greater understanding of the ways video-based feedback can support a diverse group of students in the development of SRL.

Participants of the Study

The study was conducted in a master's level course in Management Studies in a university based in the Caribbean. Students in the *Compensation and Benefits* online course consisted predominantly of students of Black and East-Indian origin. Most of the students in the course fell in the middle and lower-middle income brackets. The majority were full-time adult employees. Female students accounted for over 60% of the student population for this course. The students were also of mixed academic ability, and they came from diverse academic backgrounds.

Of the total student population of 36 taking the course, 12 students (9 females and 3 males) were selected for the case study. A larger number of participants in this study would have diminished the researcher's ability to provide an in-depth picture of self-regulatory behavior in the context of video-based feedback (Creswell 2002). Moreover, the group was heterogeneous based on the maximum variation sampling method.

Context of the Study

The university in question was chosen for this study as it is a fully online university. In such a learning environment, students can feel socially isolated as the traditional instructional support that is frequent in face-to-face settings is often absent in the online learning modality. Thus, attaining self-regulation is challenging for online students (Bol & Garner 2011). Therefore, it was felt that this site would offer interesting insights as to student self-regulatory behavior in an online setting.

The Compensation and Benefits course was assessed by way of 100% in-course assessments in which formative and summative feedback was provided on assignments. For this study, the assessment consisted of a 300-word response to a discussion question. Video-based feedback had never been used as an instructional strategy in the institution and so, this class piloted the use of video-based feedback to support student learning and achievement.

DATA COLLECTION

Given that feedback is an interactive process in which the instructor and student co-create meaning, it is important to not only examine instructor feedback comments but also examine the student response and engagement with the feedback. Therefore, this study centers on the dissemination, receipt and action taken based on instructor feedback. Thus, following Stake's (1995) recommendation to use multiple sources of information from which to gather data, three sources were included in this study namely interviews, focus groups and visual documentation. This triangulation of data sources established trustworthiness of the study and it afforded a convergence of evidence around patterns and themes emanating from the data. Moreover, the multiple sources of data allowed for the researchers to create a story based on the participants' representation of their reality of the phenomenon. Students were invited by email to participate in the study then they were provided with an electronic consent form at the start of the semester. Those consenting to participate had a chance to win a US $10 gift certificate. Once data were collected, the principal investigator removed identifiers from the data and stored it in a password-protected computer. The files were also encrypted.

Semi-structured Interviews

In this study, data were collected using the following procedure. First, the departmental head in the Master of Management Studies programme together with the lecturer were contacted for approval to conduct the investigation and to receive contact information for potential participants. Upon receipt of the email addresses from the lecturer, an initial request for potential participants was made to 16 key informants. They were informed as to the purpose of the study, how the data would be used, and procedures to ensure anonymity and confidentiality. All invitations to participate in this research indicated that it was voluntary and allowed for withdrawal at any time. By being very transparent about the nature of the study and how the data will be used, it was felt that the interviews would seem less like a formal evaluation or an audit. The email invitations yielded 5 participants.

The student participants signed an informed consent form, then an interview was planned on an agreed-upon date with those who accepted the invitation. The interviews took place after students had completed and received screencast feedback on a discussion post.

The utilization of semi-structured interviews as the primary source of data is consistent with the research design of this study (Yin 2009). This approach allowed the investigator to adjust as needed to the interview structure. Open-ended questions were used to encourage the students' perspectives on video-based feedback, with a goal of maintaining a conversational experience.

To decrease social desirability and foster more candid discourse, the interviewer adopted two key approaches. First, the researcher probed for more information on responses, where necessary, and adopted a respectful and nonconfrontational tone. Secondly, the researcher listened, and asked follow-up questions targeted to the student experiences and perspectives. Specifically, students were asked the following:

- Their perceptions of the value of traditional feedback received at the institution
- How they traditionally use the feedback received
- Their perceptions on the value of video-based feedback

- General satisfaction with the format
- Perceptions on the usefulness/adequacy of the format, and
- Students' perceptions of instructor feedback and their learning behaviors in response to that feedback. Notably, to what extent did the feedback stimulate self-regulated learning.

An interview protocol was drafted to guide the interview. The interviews lasted between 20-30 minutes and were digitally recorded via Blackboard Collaborate (BbC). They were subsequently transcribed verbatim, and pseudonyms were used to protect the identity of the individual students. The principal investigator of this study interviewed all participants. Although the interviewer is affiliated with the institution, she had no previous contact with the students who participated in the study prior to the investigation. This measure of distance from the institution and the participants fostered greater objectivity in the recording and analysis of the data. Furthermore, although the interview could have resulted in socially desirable responses, the triangulation of data helped to strengthen the credibility of the research by corroborating the self-reported data against visual documentation.

Additionally, to reduce researcher bias and to establish confirmability and authenticity of the study, the guidelines of (Creswell, 2015), Stake (1995) and (Yin 2014) were adopted. All participants were emailed a copy of the complete analysis (including identity protected transcripts). The researchers wanted to corroborate the findings of the study, and elicit the reactions of the participants on fairness, accuracy, and representativeness of their online learning experience. Specifically, the researchers wanted to find out if the participants agreed with the factors identified as contributing to their online learning experience, whether any essential factors were omitted, or if their perceptions were misrepresented on any way. The participants were given one week to review the analysis and indicate in writing their agreement with the representation, identify any gaps and/or areas for improvement. A follow-up meeting was also proposed to further discuss their thoughts on the analysis. None of the five participants found fault in the accuracy and representation of the findings.

Focus Groups

The researcher gained entry to conduct the focus groups in like manner as the interviews. Twelve participants consented to participate in the focus group. The focus group members were distinct from those who participated in the individual interviews and therefore it allowed the researcher the ability to garner multiple views on the phenomenon. Having a relatively large number of participants reduced the 'exposure' of individuals given that focus groups operate in a less controlled environment in which participants have the freedom to have more 'uninhibited discussions' (Halcomb et al. 2007) on what may be challenging perspectives on sensitive issues related to the phenomenon (Hays and Singh, 2011). Furthermore, to diminish social desirability, the facilitator established rapport with the participants prior to the session and sought feedback on the process following the focus group.

The questions developed sought to gather an in-depth, rich understanding of each participant's perceptions and experiences with video-based feedback. Specifically, students were asked the following:

- How they use video-based feedback, and
- The impact of video-based feedback on motivation and the relationship with the instructor.

Like the interviews, a protocol was developed, and the focus group was recorded. Additionally, participants were then emailed a copy of the complete analysis (anonymized) to ensure the trustworthiness of the data collected. No participant found fault in the accuracy and representation

of the findings.

The principal investigator of this study moderated the focus group, having had no previous contact or interaction with the students and thus facilitated honest, open disclosure about the feedback.

Visual Documentation

The researcher gained entry to the site to collect visual documentation in the same manner as for the interviews and focus group. The instructor provided video-based feedback on a discussion forum question. After retrieving the assignments from the assignment dropbox in the Moodle Learning Management System (LMS), the instructor thoroughly read each student's assignment submission. Shortly thereafter, the feedback was recorded for each of the 12 students. The proximity of the recording to the reading of the assignment meant that the comments were specific and had a measure of immediacy. For the purposes of this research however, only the data collected from six of the assessment feedback were transcribed and examined. In addition to the five participants who were used in the interviews, the video feedback of a sixth student was also examined. The inclusion of a sixth person was to verify that the consistency of the feedback was maintained throughout.

*Technical aspects of Video-based Feedback***:** The video-based feedback was recorded using screencasting technology. Screencast-O-Matic was chosen because it is user-friendly to novices, free and web-based so that users need not download or install onto local computers. All the videos were recorded by the lecturer for the course. In each video students had the ability to view their assignment, hear the instructor's voice and see highlighted text identified by the pointer. All the videos were between 4-5 minutes duration. The recorded videos were saved in MP4 format and uploaded to the LMS for private retrieval by students. Moreover, the investigators of this study adopted a narrative structure which would inform the flow and content of the feedback presented via screencasting technology. As such, the structure used was adopted from Henderson and Philipps (2015). The video documentation protocol was also created to answer the research question: What are online graduate students' perceptions of video-based feedback and their learning behaviours following receipt of feedback?

The trustworthiness of the study was enhanced using multiple participants and methods to facilitate both data and methodological triangulation.

DATA ANALYSIS

Coding

Consonant with the case study research tradition, categorical aggregation, pattern identification and naturalistic generalization were used to analyze the data (Hays and Singh, 2011; Creswell, 2013b). A recursive process was adopted for the data analysis (Creswell, 2013a), for both the interviews and the focus group.

First, the transcripts from the interviews and focus group and video-based feedback were read (individually) in entirety to get a general sense of the overall meaning and ideas expressed. Memos were kept throughout the process to document the researcher's thinking and rationale as the data were collected and analyzed. Next, each datum was coded separately. An inductive coding method was followed to determine the codes (Corbin and Strauss, 2008).These codes were also grounded on the conceptual framework and the research questions for the study. When reading through the data, utterances that addressed students' perceptions of feedback were identified and coded. Table 1 gives an example of the coding used.

Table 1: *An example of coding from the Interviews*

Line numbers	Transcript 1	Code
85 - 89	PA1: Um, I think it would be, if I get video feedback, well, in my view, where we can probably see our tutors or course coordinators, I will feel much closer. The fact that we are doing distance learning, sometimes just getting the email and so on, or a post from your tutor, you sorta feel distant. But if you get those video feedback, you know you it sorta draws you closer to the area of study and you feel more connected to it.	Intimacy

The code list was checked for synonymy. Then codes on similar topics were clustered together, aggregated and turned into categories.

Next, the categories and corresponding codes of each of the data were assembled and analyzed for patterns. Interrelationships among categories were determined and the categories were refined. Themes unifying the related codes were determined and the data were searched again to find evidence confirming and disconfirming these themes. Figure 1 below provides an example of a portion of the coding map used in this study. The themes that emerged from each of the data sets were then compared and ultimately the final themes that emerged reflected the terminology used in the feedback and self-regulation literature.

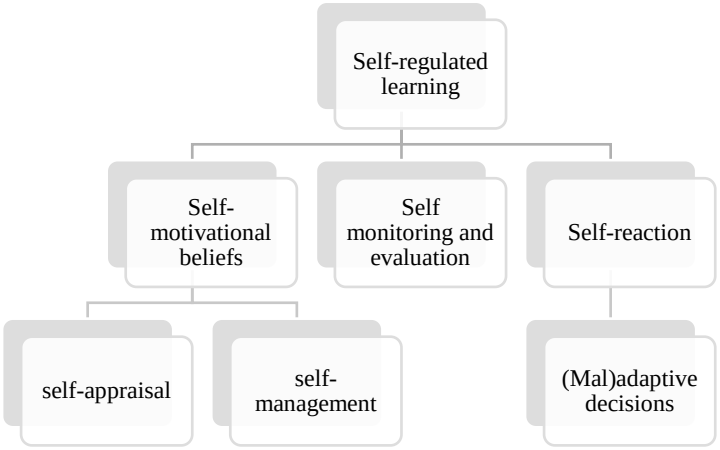

Figure 1: Coding Map of Self-regulated Learning Theme from the Focus Groups

Regarding the assessment feedback comments provided by the instructor, these were organized into categories for analysis. To ensure consistency in the categorization, the principal investigator was the sole researcher who did repeated analysis to minimize possible variation in interpretation. Furthermore, consistent with practice in another study (Gerardus Arts et al. 2016), comments were first categorized for depth [1-3] (Glover and Brown, 2006). Secondly, feedback comments were analysed based on the four levels described by Hattie and Timperley (2007): the task (understanding/performance of tasks), process (process involved in understanding/performance), self-regulation (metacognitive strategies) and self levels (praise and personal observations of

learner). To enhance the reliability of the analysis across all the data, two different coders assessed the data and verified the emerging categories and themes.

Following the analysis of the data, peer briefing was undertaken with the two researchers to establish credibility. The identified debriefer was knowledgeable of the research topic and research method. He had no affiliation to the institution under investigation nor was he involved in conducting the study in any way. He was provided with a copy of the complete analysis, and he questioned the researchers on issues surrounding the analysis and interpretation of data. The debriefing questions were patterned after Onwuegbuzie et al. (2008). In sum, the debriefing process enrichened the study design and researchers' interpretations by, "clarifying the findings, elucidating possible problems, assisting the researcher in keeping bias from unduly influencing the results, and, above all, helping the researcher understand the role that her/his bias is playing in the study" (Onwuegbuzie et al., 2010, p. 720)

RESULTS

This section is centered around the research questions for this study. The data provided is in summary form, and an analysis of each main theme is reported and discussed. Moreover, several participant quotes have been used to illuminate the voice of the participants in this qualitative study.

RQ1: How do online graduate students perceive the potential of video-based feedback on improving the online learning experience?

The first research question explored online graduate students' initial perceptions on the potential of video-based feedback in improving the online learning experience. The students expressed mixed views on the potential of video-based feedback. The emerging themes were *instructor-student relationship*, *timeliness*, and *technical issues*.

Instructor-student relationship

Of the five students interviewed in the case study, three expressed confidence in the ability of video-based feedback to positively impact the learning experience. One participant expressed the view that the physical distance imposed by the online modality of the learning environment can impair communication and thus, video-based feedback can assist in bridging this gap by fostering greater intimacy and communication:

> *Um, I think it would be, if I get video feedback, well, in my view, where we can probably see our tutors or course coordinators, I will feel much closer. The fact that we are doing distance learning, sometimes just getting the email and so on, or a post from your tutor, you sort of feel distant*. (Interview: PA 1, lines 85-89)

Another participant echoed similar sentiments:

> …*If you get those video feedback, you know you it sort of draws you closer to the area of study and you feel more connected to it... Because when you see these persons, when they are communicating, you can actually see them, you can hear what they are saying, and the whole matter of body language comes into play. So, I think it would be very, very, effective*. (Interview: PA 3, lines 192-195)

While these participants expressed confidence in video-based feedback, two others had some reservations:

> *I don't know if for me the video will make a difference. The comments on a document, I'm okay with that. I'm not sure what the, I can't think of right now what additional benefit the video will bring. Um, I'm not 100%...I can't, I'm not seeing it now. Because I like the written part*. (Interview: PA 2, lines 285-288)

> *For me there won't be any change because it's just another method of giving feedback. The relationship with the instructor comes through the synchronous sessions we have on BbC. The BbC is as face to face as you can get to an online session*. (Interview: PA 4, lines 231-233)

Timeliness

Time was a common factor expressed by students which could negatively impact on the learning experience. One student emphasized how it can affect the instructor's prompt delivery of feedback while the other highlighted its impact on the quality of feedback:

> *…The video isn't sent promptly then…it might slow me down in terms of accessing the file so that I can enhance my other work…* (Interview: PA 5, lines 120-122).

> *Well… there's a lot of times that the facilitators would have to take to do that if they're doing it individually. I don't know how many persons are in each class. But if they're doing it individually it would take a whole lot of time from them. So, I don't know, I mean, we're all human. So, after a while I don't know if it will become watered-down*. (Interview: PA3, lines 299-303)

Technical Issues

Internet connectivity was also raised as an issue affecting the effectiveness of video-based feedback in an online learning environment. One participant noted:

> *Well, the number one challenge (almost jokingly) with any online thing is probably the Internet connection. Uh, the same timing as it relates to the getting online and getting and accessing those comments or the video recording*. (Interview: PA4, lines 110-111)

RQ2: What are the types and levels of instructor feedback provided?

Depth of feedback

The assessment feedback from the screencasts was analysed and categorized. The comments were divided according to depth (Table 2). Most of the assessment feedback provided was at depth level 1 – indication, followed by corrective advice (depth level 2). Only 15% of all comments provided an explanation and/or feedforward (depth 3).

Table 2: *Distribution of comments across the three depths (n=60).*

Depth	**n**	**%**
Indication (Level 1)	30	50
Corrective advice (Level 2)	21	35
Indication/corrective advice + Explanation and/or feedforward (Level 3)	9	15

Types of feedback

Comments were also analysed at the task, process, self-regulation, and self levels. The results of the analysis are show in Table 3. Most of the comments comprised of feedback at the task and process levels. Feedback at the self level was at 20% whereas feedback regarding self-regulation was the least at 10%.

Table 3: *Types of Feedback (n=60)*

Category	**N**	**%**
Task	24	40
Process	18	30
Self-regulation	6	10
Self	12	20

RQ3: What are online graduate students' perceptions of video-based feedback and their learning behaviours following receipt of feedback?

The emergent themes from the study regarding student self-regulatory behavior are *motivation*, *self-monitoring*, *evaluation*, *invested effort*, and *attributions of success and failure*.

Self-motivational beliefs: The two dimensions of motivation that were highlighted as part of student self-regulatory behavior were self-efficacy and outcome expectation.

Self-efficacy can be described as the beliefs that one's efforts will have the desired results (Bandura 1994). Outcome expectation on the other hand relates to expected consequences of actions (Schunk 1990). For one of the students, self-regulatory behavior was expressed both in terms of self-efficacy and outcome expectation. The data revealed that this student had a low self-efficacy level and although she had set goals for herself, she realized that based on previous feedback, her future efforts would amount to nothing. She noted:

> *Whatever it is that your initial performance was for your first paper, they keep like that kind of a comment. And as I said it became a bit of an issue for me because, I couldn't get the understanding of where I was going wrong. And it's not that I haven't done my research, to, you know, to try to get a sense of the system otherwise*. (Interview: PA 2, lines 140-143)

On the contrary however, for several students, the positive comments from the feedback boosted their confidence levels and by extension had a positive impact on their self-efficacy:

> *The positive comments really boosted my motivation and confidence level, so I believe it was a fair balance of positive and negative feedback, comments…* (Focus group: PA 11, lines 142-144).
>
> *I am now motivated and now believe in the quality of my work based on the feedback I got yesterday* (Focus group: PA 03, lines 96-97).
>
> *I am more confident in producing the quality of work that is expected of a graduate student* (Focus group: PA 08, lines 99-100).

> *I am motivated because I actually heard what my lecturer was saying* (Focus group: PA 01, lines 62-63).

Self-monitoring and evaluation: The data revealed the screencast feedback prompted all participants to mentally track their performance (self-monitoring) and to judge the adequacy of their performance (self-evaluation) against set criteria. The participants noted:

> *I went immediately to my final project for the Compensation and the HR, and I immediately went in, and I scrolled through, and I listened back to the* (instructor's name called) *and I think I fixed it up nicely* (Focus group: PA 07, lines 178-180).

> *It really did help me, and I didn't realize that I was missing some little fine points that cause[d] me to lose some marks*. (Focus group: PA 05, lines 180-181).

> *… They assisted me in identifying my weak areas. Especially…where…it was pointed out to me what I actually needed to do to make what I was saying more robust or more on point* (Focus group: PA 10, lines 140-142).

> *I have used what he has given me to now go forward and to just improve my efforts.* (Focus group: PA 09, lines 97-98).

(Mal)adaptive decisions: (Mal)adaptive decisions refer to the (un)willingness of students to engage in future learning episodes by continuing or modifying existing learning strategies or by adopting defensive strategies in an attempt to avoid further learning (Zimmerman & Moylan 2009). The screencast feedback either fed forward to future learning cycles or it resulted in feelings of apathy. One participant noted as follows:

> *Um, definitely. I use it because, um, you know, once you make your posting and it's graded, that's it. But I use those recommendations…to do other work. So, for instance, if I am referred to, let's say, I put in a source that is more than five years old, in doing another assignment I'd ensure to look back on those comments and to use, uh, more frequent, recent sources. Um, I also look at it, so one tutor might send me some information, I'll always use it, for another course as well, as a means of guideline, in terms of structuring and so on*. (Interview: PA 1, lines 73-39)

On the other hand, another student felt that although she was in the habit of self-monitoring her progress towards learning goals, the feedback received served as a stumbling block to her progress:

> *Um, it really, it doesn't anymore. Initially it did. But it doesn't anymore because I find that no matter …I mean I still try to apply whatever I think I get from the feedback, because I have to interpret the feedback first. I try to apply it, but I find that they… it doesn't make a difference. I feel that the instructors just want to get to the end of the program.* (Interview: PA 2, lines 206-210)

DISCUSSION

Video-based Feedback and Online Learning Experiences

The findings of the current investigation suggest that online graduate students, to a large extent, perceive video-based feedback as a viable form of instructor feedback. The findings also provide further understanding of student self-regulatory behaviors following instructor video-based

feedback.

It is not surprising that the findings indicate that video-based feedback has the potential to increase instructor-student intimacy and communication as the online environment oftentimes breeds sentiments of isolation (Bol and Garner, 2011). The combined effect of voice and text enrichens the feedback and helps to establish instructor social presence. This finding is supported by other studies (Mathisen, 2012; Borup et al. 2014; Borup et al. 2015; Lowenthal and Dunlap, 2018) which found an improved sense of connection to the instructor via screencasts or other forms of video-based feedback. For example, Thompson and Lee (2012) concluded that "hearing the voice of the teacher going through the paper does give students the sense that they can ask more questions because it establishes a personal connection and rapport, creating a sense of availability" (p.10).

The degree of personalization of the feedback could also account for students' perceptions of intimacy with video-based feedback. It can be argued that though no verbal exchange between the instructor-student takes place via this feedback mode, it mirrors to some degree a conversation by the inclusion of visual cues, greetings, and praise (Thomas et al. 2017). Having such "dialogue" with the instructor can assist in closing the transactional distance present in online learning environments (Henderson and Phillips, 2015; Yılmaz and Keser, 2016).

Despite the potential benefits identified, participants suggested two potential weaknesses: timeliness and technical issues. Students suggested that developing feedback via screencast technology may be labor intensive and it can negatively impact on the quality of the feedback, given the sheer volume of recordings needed and it can delay students' ability to apply the feedback to future learning cycles. Other earlier studies in the Caribbean found that students voiced similar concerns as to the timeliness of feedback within the online environment (Cain and Phillip, 2013; Kerr, 2015; Singh et al. 2017).

Moreover, while there is widespread support in the literature for timely feedback (Weaver, 2006), what constitutes prompt feedback varies from instructor to student (Mulliner and Tucker, 2017). It is therefore critical that instructors provide clear guidelines as to their timeliness with feedback on assessments so that students do not set unrealistic expectations and make maladaptive decisions which could negatively impact on their academic success and learning experience on a whole.

Furthermore, one student perceived that the feedback quality would be diluted as teachers would spend an inordinate amount of time setting up the feedback via screencast and that the feedback message would lack substance. Evidence however suggests the contrary. Screencast feedback has been found to resolve issues relating to time efficiency in creating the videos and the quality of feedback received (Alan Hung, 2016; Crook et al., 2012; Lowenthal & Dunlap, 2018).

Video-based Feedback and Learning Behaviours

The feedback students received via screencast technology can aptly be summed as a "conduit" (Marriott and Teoh, 2012) for fostering student self-motivational beliefs, self-monitoring, evaluation, and self-reflection.

The study indicated that prior experience with instructor feedback was a determiner in students' perceptions of future feedback. Whereas some students attested to the fact that prior feedback boosted their motivation to learn, others had little confidence in video-based feedback boosting their confidence.

This finding is interesting since the narrative structure for feedback (Henderson and Phillips 2015) used in this study included elements of praise whereby the overall strengths of the assignment were highlighted for all participants. Furthermore, an analysis of the feedback comments revealed

20% of the feedback comments were of the personal/self type. The intention behind the salutations provided was to promote positive motivational beliefs in the students by providing praise and commendations so that they may be more open to receiving constructive criticism.

Nevertheless, it appears that these positive elements did little to motivate some students. Hattie and Timperley (2007, p.96) posit that personal feedback given is often "too diluted, too often uninformative about performing the tasks, and too influenced by students' self-concept to be effective". In fact, most of the praise received by students directed attention away from the task rather than to the effort or processes relating to the task and its performance. The findings of this study are consistent with research which reports that one's predisposition to instructor feedback can either boost motivational self-beliefs (Mathisen, 2012; Henderson and Phillips, 2015; Ali 2016; Johnson and Cooke, 2016) or encumber them within the online context (Malachowski et al. 2013; Henderson and Phillips, 2015; Cole et al. 2017).

Another key dimension of SRL that emanated from the study was improved self-monitoring and assessment levels. Following the video-based feedback, students made self-observations in which they monitored their progress towards goals, and they made judgments of their learning. This self-monitoring and evaluation process however would not have been achieved had the students not received evaluative summaries on their work and information to promote transferability thereby impacting on the enactment of SRL processes. However, only 15% of comments were at depth level 3 and an overwhelming 70% of comments were at the task and process levels. One possible explanation for this anomaly could be that all the students were at the graduate level who typically report higher levels of SRL (Artino and Stephens, 2009) and place a higher value on feedback than their undergraduate counterparts (Borup et al. 2015). Another consideration is that task and process feedback have an "interactive effect" (Hattie and Timperley, 2007) of improving self-efficacy and strategy finding, which in turn positively impact on self-regulation. Regardless, this finding is consistent with Geradus Arts et al. (2016) in which most comments were at depth levels 1 and 2 and at the task and process levels.

Aside from the positive impact video-based feedback had on students' self-monitoring and evaluation processes, students' SRL behavior in the self-reflection phase varied. On the one hand, students reported adaptive behaviors which enabled them to enact continued learning strategies or modify them. On the other hand, one participant resorted to defensive behavior to avoid further efforts. It is possible therefore that if one's self-evaluation is favorable, it would redound to adaptive behavior (Zimmerman and Moylan, 2009). However, such conclusions cannot be drawn from this study.

LIMITATIONS

The findings as presented are not without limitations. The research design and the small sample size of the study do not allow for generalizability. Notwithstanding, transferability was ensured by providing readers with enough detailed description of the research process, so that they can ascertain how applicable the findings can be from one context to another. Moreover, attempts were made to ensure trustworthiness through triangulation of data, member checking, peer debriefing and reflexive journaling of observations.

CONCLUSION

In general, the findings provide some insight in terms of Caribbean students' perspectives of the potential of screencast feedback and its impact on their learning behavior. It was purported to increase timeliness of feedback and improve the dialogue/connection between instructor-student. Moreover, video-feedback was reported to affect SRL processes in the forethought, performance, and self-reaction phases. The results of this study contribute to the development of understanding

of the online learning experience, and by extension, SRL behaviors among Caribbean online students. The adoption of screencast feedback as reported by the students, resulted in increased motivation, improved self-monitoring and evaluation behaviors and adaptive responses to learning cycles among most participants. However, it should not be concluded that a change in feedback mode would translate into improved feedback. Rather, emphasis should be placed on the feedback design, and include the nature of the assessment, to facilitate a dialogic exchange. This can be the focus of future research. Furthermore, little is known about how video-based feedback affects SRL in online contexts and so more research is warranted in this regard. Future research can extend this study by examining the causal relationship between screencast feedback and academic performance. In addition, it is still unknown what learning strategies are enacted following feedback and so future research can deepen understanding in this regard. Finally, there is a paucity of research on instructor feedback within online contexts in the Caribbean. Therefore, research in these areas is merited.

REFERENCES

Alan Hung, S.-T. (2016). "Enhancing feedback provision through multimodal video technology". *Computers & Education*, vol. 98, pp. 90–101. doi: 10.1016/j.compedu.2016.03.009.

Ali, A.D. (2016). "Effectiveness of Using Screencast Feedback on EFL Students' Writing and Perception". *English Language Teaching,* vol. 9, no. 8, p. 106. Available at: http://www.ccsenet.org/journal/index.php/elt/article/view/60976.

Alotaibi, K., Tohmaz, R. and Jabak, O., (2017). "The relationship between self-regulated learning and academic achievement for a sample of community college students at King Saud University". *Education Journal*, vol. 6, no.1, pp.28-37.

Artino, A.R. and Stephens, J.M. (2009). "Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online"*. The Internet and Higher Education*, vol. 12, no. 3, pp. 146–151.

Bahula, T. and Kay, R. (2020). "Exploring student perceptions of video feedback: A review of the Literature". In: 13th annual International Conference of Education, Research and Innovation., pp. 6535–6544. Available at: http://library.iated.org/view/BAHULA2020EXP.

Bobo, L. (2010). "Using video feedback to measure self-efficacy". *Journal of Instructional Pedagogies,* vol. 3, pp. 1–11.

Bol, L. and Garner, J.K. (2011). "Challenges in supporting self-regulation in distance education Environments". *Journal of Computing in Higher Education*, vol. 23, no. 2–3, pp. 104–123. doi: 10.1007/s12528-011-9046-7.

Borup, J., West, R.E. and Thomas, R. (2015). "The impact of text versus video communication on instructor feedback in blended courses"*. Educational Technology Research and Development*, vol. 63, no. 2, pp. 161–184. doi: 10.1007/s11423-015-9367-8.

Borup, J., West, R.E., Thomas, R.A. and Graham, C.R. (2014). "Examining the impact of video feedback on instructor social presence in blended courses". *International Review of Research in Open and Distance Learning*, vol. 15, no. 3, pp. 232–256. doi: https://doi.org/10.19173/irrodl.v15i3.1821.

Brown, E. and Glover, C. (2006). “Evaluating written feedback”. In: Innovative Assessment in Higher Education., pp. 81–91. doi: 10.4324/9780203969670.

Brown, G.T.L., Peterson, E.R. and Yao, E.S. (2016). “Student conceptions of feedback: Impact on self-regulation, self-efficacy, and academic achievement”. *British Journal of Educational Psychology*, vol. 86, no. 4, pp. 606–629. doi: 10.1111/bjep.12126.

Boud, D. and Molloy, E., (2013). “Rethinking models of feedback for learning: the challenge of design”. *Assessment & Evaluation in higher education*, vol. 38 no.6, pp.698-712.

Butler, D.L. (2011). “Investigating Self-Regulated Learning Using In-Depth Case Studies. In: Handbook of self-regulation of learning and performance”. Paris & Paris Turner Winne & Perry Zimmerman, pp. 346–360.

Cain, M. and Phillip, S. (2013). “An exploration of students’ experiences of learning in an online primary teacher education program”. *Journal of Online Learning and Teaching*, vol. 9, no. 3.

Cho, M.H. and Shen, D., (2013). “Self-regulation in online learning”. *Distance education*, vol. 34, no.3, pp.290-301.

Cole, A.W. et al. (2017). “Student predisposition to instructor feedback and perceptions of teaching presence predict motivation toward online courses”. *Online Learning Journal*, vol. 21, no. 4, pp. 245–262. doi: 10.24059/olj.v21i4.966.

Creswell, J.W. (2002). “Educational research: Planning, conducting, and evaluating quantitative”. New Jersey: Upper Saddle River

Creswell, J.W. (2013)a. “Qualitative inquiry and research design: Choosing among five Approaches”. Sage.

Creswell, J.W. (2013)b. “Research design: Qualitative, quantitative, and mixed methods Approaches”. Sage publications.

Crook, A. et al. (2012). “The use of video technology for providing feedback to students: Can it enhance the feedback experience for staff and students”? *Computers and Education*, vol. 58, no.1. doi: 10.1016/j.compedu.2011.08.025.

Dawson, P., Henderson, M., Mahoney, P., Phillips, M., Ryan, T., Boud, D. and Molloy, E. (2018). “What makes for effective feedback: staff and student perspectives”. *Assessment & Evaluation in Higher Education*, vol. 44, no. 1, pp. 1–12. Available at: https://doi.org/10.1080/02602938.2018.1467877.

Deeley, S.J. (2017). “Using technology to facilitate effective assessment for learning and feedback in higher education”. *Assessment & Evaluation in Higher Education*, vol. 44, no. 1, https://doi.org/10.1080/02602938.2017.1356906 43(3), pp. 439–448. Available at: https://www.tandfonline.com/doi/abs/10.1080/02602938.2017.1356906 [Accessed: 6 March 2022].

Delen, E. and Liew, J., (2016). “The use of interactive environments to promote self-regulation in online learning: A literature review”. *European Journal of Contemporary Education*, vol. 15, no.1, pp.24-33.

Dent, A.L. and Koenka, A.C., (2016). "The relation between self-regulated learning and academic achievement across childhood and adolescence: A meta-analysis". *Educational Psychology Review*, vol. 28, no.3, pp.425-474.

Denton, D.W. (2014). "Using screen capture feedback to improve academic performance". *TechTrends*, vol. 58, no. 6, pp. 51–56. doi: 10.1007/s11528-014-0803-0.

Doan, L. (2013). "Is Feedback a Waste of Time? The Students' Perspective". *Journal of Perspectives in Applied Academic Practice*, vol. 1, no. 2, pp. 3–10. Available at: http://jpaap.napier.ac.uk/index.php/JPAAP/article/view/69%5Cnhttp://jpaap.napier.ac.uk/index.php/JPAAP/article/download/69/pdf.

Du Toit, E., (2012). "Constructive feedback as a learning tool to enhance students' self-regulation and performance in higher education". *Perspectives in Education*, vol. 30, no.2, pp.32-40.

Evans, C. (2013). "Making Sense of Assessment Feedback in Higher Education". *Review of Educational Research*, vol. 83, no. 1, pp. 70–120. doi: 10.3102/0034654312474350.

Fatima, S., Ali, M. and Saad, M.I. (2021). "The effect of students' conceptions of feedback on academic self-efficacy and self-regulation: evidence from higher education in Pakistan". *Journal of Applied Research in Higher Education*, vol. 14, no. 1, pp. 180–199. Available at: https://www.emerald.com/insight/2050-7003.htm [Accessed: 2 March 2022].

Gerardus Arts, J., Jaspers, M. and Joosten-Ten Brinke, D. (2016). "A case study on written comments as a form of feedback in teacher education: so much to gain". *European Journal of Teacher Education*, vol. 39, no. 2, pp. 159–173. Available at: http://dx. [Accessed: 2 March 2022].

Glover, C. and Brown, E. (2006). "Written Feedback for Students: too much, too detailed or too incomprehensible to be effective"? *Bioscience Education*, vol. 7, no. 1, pp. 1–16. doi: 10.3108/BEEJ.2006.07000004.

Halcomb, E.J., Gholizadeh, L., DiGiacomo, M., Phillips, J. and Davidson, P.M. (2007). "Literature review: considerations in undertaking focus group research with culturally and linguistically diverse groups". *Journal of Clinical Nursing*, vol. 16, no. 6, pp. 1000–1011.

Hattie, J. and Timperley, H. (2007). "The power of feedback". *Review of Educational Research*, vol. 77, no. 1, pp. 81–112.

Hays, D.G. and Singh, A.A. (2011). "Qualitative inquiry in clinical and educational settings". Guilford Press.

Henderson, M. and Phillips, M. (2015). "Video-based feedback on student assessment: scarily Personal". *Australasian Journal of Educational Technology*, vol.31, no. 1.

Hernández, R. (2012). "Does continuous assessment in higher education support student Learning"? *Higher Education*, vol. 64, no. 4, pp. 489–502. Available at: https://link.springer.com/article/10.1007/s10734-012-9506-7 [Accessed: 2 March 2022].

Ibarra-Sáiz, M.S., Rodríguez-Gómez, G. and Boud, D. (2020). "Developing student competence through peer assessment: the role of feedback, self-regulation and evaluative judgement". *Higher Education*, vol. 80, no. 1, pp. 137–156. Available at: https://link.springer.com/article/10.1007/s10734-019-00469-2 [Accessed: 2 March 2022].

Johnson, G.M. and Cooke, A. (2016). “Self-regulation of learning and preference for written versus audio-recorded feedback by distance education students”. *Distance Education*, vol. 37, no. 1, pp. 107–120. Available at: http://dx.doi.org/10.1080/01587919.2015.1081737.

Kerr, A. (2015). “Online education and academic performance: The case of online tertiary students in the Caribbean”. *Caribbean Educational Research Journal*, vol. 3, no. 2, pp. 90–108.

Lee, H.W., Lim, K.Y. and Grabowski, B.L., (2010). “Improving self-regulation, learning strategy use, and achievement with metacognitive feedback”. *Educational Technology Research and Development*, vol. 58, no.6, pp.629-648.

Liao, H.A., Ferdenzi, A.C. and Edlin, M., (2012). “Motivation, self-regulated learning efficacy, and academic achievement among international and domestic students at an urban community college: A comparison”. *The Community College Enterprise*, vol. 18, no.2, p.9.

Lowenthal, P.R. (2020). “Video feedback: is it worth the effort? A response to Borup et al.” *Educational Technology Research and Development,* vol. 69, no. 1. Available at: https://doi.org/10.1007/s11423-020-09872-4.

Lowenthal, P.R. and Dunlap, J.C. (2018). “Investigating students’ perceptions of instructional strategies to establish social presence”. *Distance Education*, vol. 39, no.3, pp.281-298. https://doi.org/10.1080/01587919.2018.1476844 vol. 39, no. 3 pp. 281–298. Available at: https://www.tandfonline.com/doi/abs/10.1080/01587919.2018.1476844 [Accessed: 6 March 2022].

Mahoney, P., Macfarlane, S. and Ajjawi, R. (2019). “A qualitative synthesis of video feedback in higher education”. *Teaching in Higher Education*, vol. 24, no. 2, pp. 157–179. Available at: https://www.tandfonline.com/doi/full/10.1080/13562517.2018.1471457.

Malachowski, C.C., Martin, M.M. and Vallade, J.I. (2013). “An examination of students’ adaptation, aggression, and apprehension traits with their instructional feedback orientations”. *Communication Education*, vol. 62, no. 2, pp. 127–147.

Marriott, P. and Teoh, L.K. (2012). “Using Screencasts to Enhance Assessment Feedback: Students’ Perceptions and Preferences”. *Accounting Education*, vol. 21, no. 6, pp. 583–598. Available at: http://www.tandfonline.com/doi/abs/10.1080/09639284.2012.725637.

Mathieson, K. (2012). “Exploring student perceptions of audiovisual feedback via screencasting in online courses”*. American Journal of Distance Education*, vol. 26, no. 3, pp. 143–156. Available at: http://www.tandfonline.com/doi/abs/10.1080/08923647.2012.689166.

Mathisen, P. (2012). “Video feedback in higher education - a contribution to improving the quality of written feedback”. *Nordic Journal of Digital Literacy*, vol. 2, pp. 97–113.

Mayhew, E. (2017). “Playback feedback: The impact of screen-captured video feedback on student satisfaction, learning and attainment”. *European Political Science*, vol. 16, no. 2, pp. 179–192. doi: 10.1057/EPS.2015.102.

McCarthy, J. (2015). “Evaluating written, audio and video feedback in higher education summative assessment tasks”. *Issues in Educational Research*, vol. 25, no. 2.

McGrath, A.L., Taylor, A. and Pychyl, T.A. (2011). "Writing Helpful Feedback: The Influence of Feedback Type on Students' Perceptions and Writing Performance". *The Canadian Journal for the Scholarship of Teaching and Learning*, vol. 2, no. 2. Available at: https://ojs.lib.uwo.ca/index.php/cjsotl_rcacea/article/view/6903 [Accessed: 2 March 2022].

Moore, N.S. and Filling, M.L., 2012. "iFeedback: Using video technology for improving student writing". *Journal of College Literacy & Learning*, vol. 38, pp.3-14.

Moos, D.C. and Azevedo, R., (2008). "Self-regulated learning with hypermedia: The role of prior domain knowledge". *Contemporary Educational Psychology*, vol. 33, no.2, pp.270-298.

Mory, E.H. (2004). "Feedback research revisited". *Handbook of research on educational communications and technology*, vol. 2, pp. 745–783.

Mulliner, E. and Tucker, M. (2015). "Feedback on feedback practice: perceptions of students and Academics". *Assessment & Evaluation in Higher Education*, vol. 2938(February), pp. 1–23. Available at: http://srhe.tandfonline.com/doi/full/10.1080/02602938.2015.1103365.

Mulliner, E. and Tucker, M. (2017). "Feedback on feedback practice: perceptions of students and Academics". *Assessment & Evaluation in Higher Education*, vol. 42, no. 2, pp. 266–288. Available at: https://doi.org/10.1080/02602938.2015.1103365.

Narciss, S. (2008). "Feedback strategies for interactive learning tasks". *Handbook of research on educational communications and technology*, vol. 3, pp. 125–144.

Nicol, D.J. and Macfarlane-Dick, D. (2006). "Formative assessment and self- regulated learning: a model and seven principles of good feedback practice". *Studies in Higher Education*, vol. 31, no. 2, pp. 199–218. doi: 10.1080/03075070600572090.

Onwuegbuzie, A.J., Leech, N.L. and Collins, K.M., (2010). "Innovative data collection strategies in qualitative research". *Qualitative Report*, vol. 15, no. 3, pp.696-726.

Onwuegbuzie, A.J., Leech, N.L. and Collins, K.M., (2008). "Interviewing the interpretive researcher: A method for addressing the crises of representation, legitimation, and praxis". *International Journal of Qualitative Methods*, vol. 7, no. 4, pp.1-17.

Owen, L. (2016). "The Impact of Feedback as Formative Assessment on Student Performance". *International Journal of Teaching & Learning in Higher Education*, vol. 28, no. 2, pp. 168–175. Available at: http://proxy.lib.odu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=117547846&site=ehost-live&scope=site.

Park, R.E., Burgess, E.W. and McKenzie, R.D. (1921). *The City*. The University of Chicago.

Race, P., (2014). *Making learning happen: A guide for post-compulsory education*. Sage.

Robinson, M., Loch, B. and Croft, T. (2015). "Student Perceptions of Screencast Feedback on Mathematics Assessment". *International Journal of Research in Undergraduate Mathematics Education*, vol. 1, no. 3, pp. 363–385. doi: 10.1007/S40753-015-0018-6.

Rowe, A.D., (2017). "Feelings about feedback: The role of emotions in assessment for learning. In *Scaling up assessment for learning in higher education* (pp. 159-172). Springer, Singapore.

Ryan, T., Henderson, M. and Phillips, M. (2019). “Feedback modes matter: Comparing student perceptions of digital and non-digital feedback modes in higher education”. *British Journal of Educational Technology*, vol. 50, no. 3, pp. 1507–1523. Available at: https://onlinelibrary.wiley.com/doi/10.1111/bjet.12749.

Schunk, D.H. and Greene, J.A. eds. (2018). *Handbook of self-regulation of learning and performance*. 2nd ed. New York: Routledge.

Schunk, D.H. and Zimmerman, B.J., (1994). *Self-regulation of learning and performance: Issues and educational applications*. Lawrence Erlbaum Associates, Inc.

Shute, V.J. and Zapata-Rivera, D. (2008). « Adaptive technologies ». *Handbook of research on educational communications and technology*, pp. 277–294.

Singh, R., Cabralis, S. and Nathai-Balkissoon, M. (2017). “Blended Learning: A Critical look at the pilot implementation within the University of the West Indies (UWI), St. Augustine–Student & Teacher Perspectives”. *Caribbean Teaching Scholar*, vol. 7, pp. 3–24. Available at: files/7536/6350-7994-1-SM.pdf.

Stake, R.E. (1995). *The art of case study research*. Sage.

Suamuang, W., Suksakulchai, S. and Easter, M.A. (2021). “Relations between instructor feedback, self-regulation, assignment completion and academic achievement in Thai higher learning institutions”. *Malaysian Journal of Learning and Instruction*, vol. 18, no. 1, pp. 85–109. doi: 10.32890/mjli2021.18.1.4.

Thomas, R.A., West, R.E. and Borup, J. (2017). “An analysis of instructor social presence in online text and asynchronous video feedback comments”. *The Internet and Higher Education*, vol. 33, pp. 61–73. Available at: https://linkinghub.elsevier.com/retrieve/pii/S1096751617300301.

Thompson, R. and Lee, M.J. (2012). Talking with Students through Screencasting: Experimentations with Video Feedback to Improve Student Learning. *The Journal of Interactive Technology and Pedagogy*, vol. 1, no. 1, pp. 1–22.

Timmers, C.F., Walraven, A. and Veldkamp, B.P., (2015). “The effect of regulation feedback in a computer-based formative assessment on information problem solving”. *Computers & education*, vol. 87, pp.1-9.

Turner, W. and West, J. (2013). “Assessment for “Digital First Language” Speakers: Online Video Assessment and Feedback in Higher Education”. *International Journal of Teaching and Learning in Higher Educatio*n, vol. 25, no. 3, pp. 288–296. Available at: http://eric.ed.gov/?q=feed-forward+learning&ff1=dtySince_2010&id=EJ1029131%5Cnhttp://files.eric.ed.gov/fulltext/EJ1029131.pdf.

Yılmaz, R. and Keser, H. (2016). “The Impact of Interactive Environment and Metacognitive Support on Academic Achievement and Transactional Distance in Online Learning”. *Journal of Educational Computing Research*, vol. 55, no. 1, pp.95-122. Available at: http://jec.sagepub.com/lookup/doi/10.1177/0735633116656453.

Yin, R.K. (2009). *Case study research design and methods*. Sage Publications Inc.

Zhang, Z. and Kenny, R. (2010). “Learning in an online distance education course: Experiences of three international students”. *The International Review of Research in Open and Distributed Learning*, vol. 11, no. 1, pp. 17–36.

Zimmerman, B.J., (2000). “Attaining self-regulation: A social cognitive perspective.” In *Handbook of self-regulation*, pp. 13-39. Academic Press.

Zimmerman, B.J. and Moylan, A.R. (2009). “Self-regulation: Where metacognition and motivation Intersect”. In: *Handbook of metacognition in education*. Routledge/Taylor & Francis Group, pp. 311–328.