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Teachers' Use of Screencast Feedback to Improve Secondary Students' Writing

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2024

Abstract

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MPhil, Walden University, 2023

MS, Walden University, 2007

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Many students struggle with decoding and implementing feedback given to them on writing assignments. Researchers and instructors have used various technologies and strategies to improve students' uptake of feedback given on written assignments, one of which is a form of video feedback called screencasting. Research has been conducted on students' perspectives of screencasting feedback at the university level but has been more limited at the secondary level. The purpose of this qualitative single-case study was to explore screencast feedback as a strategy to support secondary students in their effort to improve their writing. The feedback triangle by Yang and Carless was used as the conceptual framework. Data from the interviews of secondary teachers grades 7-12 and postinterview reflection were analyzed using thematic analysis. The key finding was that secondary teachers' use of screencast feedback depended on different modes and access to technology, and included challenges with resources, time, and readiness. Participants targeted elements of writing and interpersonal exchanges to improve feedback uptake along with critical feedback practices such as being careful, being brief, signposting, and showing examples. They utilized cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. The results of this study may contribute to positive social change by providing stakeholders insight into the importance of purposefully using screencast for feedback to positively influence students' overall understanding and to improve teacher–student interpersonal relationships.

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Dedication

This is dedicated to all those before me, and all those who come after me. Pay it forward, do the unthinkable, try the impossible, and then think about resting.

Acknowledgments

Foremost, I would like to give thanks to my Higher Power, who has worked miracles throughout my life and has always made the impossible possible. Next, I must give thanks to my Imam (RA), who was the first to encourage me to pursue a PhD, along with my large and supportive family and community. To my parents, who raised me up to be a lifelong learner and to stay curious. To my dear father, who could always imagine me in this role (may God grant him a high place in heaven), and to my dear mother, who is my greatest fan and supporter. To the AAA clan, large, loving, and rambunctious. To each one of my sisters, who remain dynamic, unique, and phenomenal members of the tribe that supports me. To my husband, my hero, who took up many things like cooking, and to my children, Umair, Umar, Hannah, and Ahmad, who fanned my flames and cheered from the sidelines. To the Red in my heart, and all my besties and companions who stayed in touch especially at the right moments and who were never short of encouraging words. To the participants in this study for their time, passion, and insight that they readily shared. To the dynamic Jonathan in Walden enrolment, who was the first voice I heard starting the program, and to the encouraging Lindsay, my Walden advisor, whose words ("You've got this!") will follow me long after my graduation. Finally, to my eagle-eyed and ridiculously hilarious Walden team, Dr. Harland and Dr. Vangelder, my comrades in arms, for their exceptional guidance, support, and professionalism that made each moment of this journey something I will always remember. Thank you!

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Chapter 1: Introduction to the Study

It is common practice in education for a student to submit a writing assignment to their teacher in exchange for feedback that will provide suggestions on how they might better communicate their ideas. However, text-based feedback from a teacher can be easily misunderstood or misinterpreted due to a certain level of literacy needed for interpretation (Li et al., 2024; Penn & Brown, 2022). To address this challenge, some educators have used cutting-edge technologies to deliver a form of video feedback called screencast feedback (Henry et al., 2020). Although there has been prior research on students' perspectives on receiving screencasting feedback at the university level (Cunningham, 2019b), a body of research that includes university English language learners' experiences (Ghosn-Chelala & Al-Chibani, 2018), limited research has been conducted at the secondary level, according to my review of the literature. Previous studies that have focused on the use of screencasting feedback in higher education have reported student preferences that emphasized increased engagement, user-friendliness, and a generally positive reception of this feedback mode (Bahula & Kay, 2021; Cunningham, 2019b). Exploring electronic feedback (efeedback) strategies and determining the type of feedback that can contribute to the achievement of high school students may provide valuable insights for educators worldwide (Loncar et al., 2021).

In Chapter 1, I provide a concise overview of recent empirical literature relevant to the context of this study. This chapter will include a discussion of the identified problem, the study's purpose, research inquiries, and an exposition of the underlying conceptual framework. Furthermore, I will present an account of the qualitative

methodology that shaped the study, along with definitions for crucial terms and discussion of the underlying assumptions, scope and delimitations, and limitations of the study. The chapter will culminate with a rationale substantiating the study's importance and the potential influence it could have on effecting social change.

Background

Text-based feedback can be easily misunderstood or misinterpreted due to a certain level of literacy needed for interpretation (Leibold & Schwarz, 2015; Li et al., 2024; Mathieson, 2012; Orlando, 2016; Penn & Brown, 2022; Vincelette & Bostic, 2013). One way this has been addressed is using innovative technologies to provide efeedback, the modern-day successor of hand-written feedback (Kim, 2018). Chong (2019) described efeedback as a teacher's provision of corrective suggestions to students via word-processing, audio, or screen-capture software. Despite success with efeedback, a study on using audio-visual feedback revealed that university students faced challenges in understanding audio feedback due to low-level listening ability (Kim, 2018). Several higher education studies on the use of audio-visual digitized, and video feedback modes yielded findings that showed either student or teacher preference for more video and less text (Al-Husban et al., 2021; Kachare et al., 2021; Soellner et al., 2022; Zhang et al., 2022). One way to increase the use of video is to provide an emerging mode of computer-mediated human feedback (Ware & Warschauer, 2006), currently known as screencasting, where screen-capture software records annotations, commentary, and so forth for playback as a video (Ghosn-Chelala & Al-Chibani, 2018). It not only involves using "digital recordings of the activity on one's computer screen, accompanied by

voiceover narration" (Thompson & Lee, 2012, p. 1), but it can also include video of the presenter (Borup, 2015; Payne et al., 2022).

Screencasting usually involves a teacher recording their computer screen as they view a student's writing assignment and while they talk to the student directly about their work. The teacher could be explaining their feedback, providing instruction, or explaining how suggested corrections might be made. Students might see the teacher point to places on the screen, highlight text, or type/write on the screen. Some teachers also choose to have their webcam on so that students can view their facial expressions, which may help those who use lip reading to aide in understanding what the teacher is saying (Gruber & Bauer, 2020). Depending on the software teachers use, the video of the teacher's face is usually visible in one of the corners of the recording, so students can see their work being shared as well as the teacher's face (see Figure 1). Screencast feedback is an asynchronous method of providing feedback because the recording is viewed by the student after it was originally recorded.

Although screencasting has been examined in higher education (Soden, 2017), it is a less common mode of feedback used by secondary writing teachers. In one recent mixed-methods study, Henry et al. (2020) highlighted the potential that video technologies and computer-mediated feedback may have in secondary classrooms, but more research is needed. Secondary students may benefit from visualization strategies like those that instructors might provide in screencast feedback at the university level. Investigating efeedback practices and deciphering which types promote secondary student success might inform teaching practices globally (Loncar et al., 2021).

Figure 1

Example of Screencast Video of Instructor Providing Feedback on Student Writing
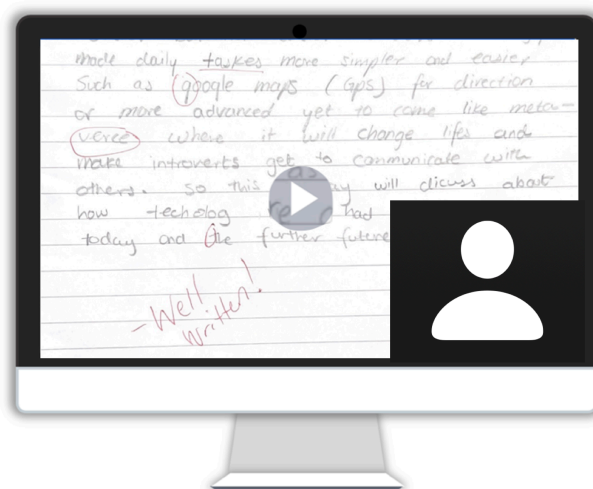
Problem Statement

The societal problem underlying this study was the difficulty many students have with decoding and implementing feedback (Li et al., 2024; Kim, 2018). One way this has been addressed is through the use of innovative technologies to provide screencast feedback (Henry et al., 2020). Although studies have been conducted on students' perspectives of receiving screencasting feedback at the university level (Cunningham, 2018, 2019b), including specifically of university English language learners' experiences (Ghosn-Chelala & Al-Chibani, 2018), little to no research has been done at the secondary level, according to my review of the literature. The results of studies focused specifically on using screencasting feedback in higher education revealed student preferences that highlighted improved levels of engagement, ease of use, and an overall positive response to this mode (Bahula & Kay, 2021; Cunningham, 2018; 2019a; 2019b; Ghosn-Chelala & Al-Chibani, 2018). Similar to other researchers, Ghosn-Chelala and Al-Chibani (2018)

found that students in an English as a foreign language college remedial writing class preferred screencast as feedback over traditional written feedback. Because students struggle with how to best decode feedback, there is a need to improve understanding of how secondary teachers use screencast feedback to support students in improving their writing. That was the research problem addressed in this study.

Purpose of the Study

The purpose of this qualitative study was to explore screencast feedback as a strategy to support secondary students in their efforts to improve their writing. To accomplish this purpose, I collected data from two sources. First, I interviewed secondary teachers who used screencasting to provide feedback to students. Second, I had teachers fill out a postinterview reflection on a screencast they had previously provided to a student.

Research Questions

To address the problem and purpose of this study, I developed the following research questions (RQs) to guide my investigation:

RQ1: What are the experiences of secondary teachers using screencast as feedback to support writing?

RQ2: What aspects of feedback do secondary teachers choose to focus on during screencasting and why?

RQ3: What are the reasons for the choices secondary teachers make when delivering screencast feedback?

Conceptual Framework for the Study

The conceptual framework for this qualitative study was the feedback triangle by Yang and Carless (2013). Yang and Carless designed the framework as an approach for using dialogic feedback and to foster productive student learning. Discovered through an extensive literature review, the framework includes three dimensions that focus on the *cognitive* (content), *social-affective* (interpersonal negotiation), and *structural* (organization) elements of the feedback process. The cognitive dimension is the intellectual content or subject of the feedback and is what teachers communicate to students regarding the identification of issues, and suggestions and resources to be applied in future writing. For the social-affective dimension, Yang and Carless described how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment. The third dimension addresses the structural aspect and refers to how the disciplinary practices in conjunction with institutional policies determine how the feedback process is arranged and what resources are mobilized in providing feedback. Yang and Carless's feedback triangle informed the development of the interview guide and the collection and analysis of data for this study. I found the feedback triangle helpful in answering the RQ. Because research has shown the importance of video-based feedback in the cognitive, social-affective, and structural dimensions, I used the framework to explore screencast feedback as a strategy to support secondary students to improve their writing. A more detailed explanation of how the framework was used in the study is provided in Chapter 2.

Nature of the Study

To accomplish the purpose of this study, I conducted a qualitative study, using a single-case study research design. Case study is an empirical method in which a researcher "investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2018, p. 15). Each case must have boundaries such as time and place, time and activity, or definition and context (Baxter & Jack, 2008). The case in this research was bound by screencasting as feedback (definition). The units of analysis were three different secondary teachers' provision of feedback on writing (context). A single-case study aligned best with my study because this design is intrinsically bounding, and is particularly well suited for the use of observations, interviews, audiovisual materials, documents, and reports of case descriptions and case-based themes to explore the experiences and perceptions within a very specific group or environment (see Merriam & Tisdell, 2015).

I use my professional learning network to recruit participants to locate teachers online who used screencasting for feedback. Participants were recruited and informed about the study through my own professional learning network and across several relevant social media platforms. For inclusion in the study, participants had to be (a) secondary teachers (Grades 7–12) who (b) had at least 1 month of experience using screencast for feedback or had made a minimum of one screencast feedback video on high school students' writing. A hallmark of case study research is the requirement of, and reliance on, multiple data sources, which strengthens credibility through triangulation

(Baxter & Jack, 2008; Yin, 2018). I collected two sources of data. First, I conducted a 60-min, audio-recorded interview with each participant during which they answered questions and also were given the option to share and answer additional questions about a student screencast. I conducted the semistructured interviews on the Zoom platform. The second data source that I collected was a postinterview reflection that participants completed up to 1 week after their interview date. Initially, I analyzed the data within each unit of analysis. After examining the data within each unit of analysis, I then conducted an analysis across the data sources, all three interviews, optional sample student screencasts, and postinterview reflections. More details about the methodology are provided in Chapter 3.

Definitions

Cognitive feedback: The element of the feedback process that involves correcting issues related to content, concept, technique, strategy, procedure, and so forth in student work (Yang & Carless, 2013, p. 288). In this study, cognitive feedback referred to what teachers choose to focus on during their screencast, which was about the content area subject matter or related to the structure or organization of the writing, and elements such as grammar or mechanics.

Feedback uptake: The final and actionable stage for learners in the feedback literacy process, which involves the "understandings, capacities and dispositions needed to make sense of information and use it to enhance work or learning strategies" (Carless & Boud, 2018, p. 1318). In this study, feedback uptake referred to a student's action toward implementing the feedback given in screencasts.

Interpersonal negotiation: A process of compromise or agreement that "promotes dialogue, interaction, and trust" (Gredler & Harland, 2022 p. 41). In this study, interpersonal negotiation referred to the back-and-forth process of feedback between a teacher and student.

Screencasting: The use of "digital recordings of the activity on one's computer screen, accompanied by voiceover narration" (Thompson & Lee, 2012, p. 1) which can also include video of the presenter (Bahula & Kay, 2021; Borup, 2015; Garnham & Taylor, 2019; Madson, 2017; Mahoney et al., 2019; Payne et al., 2022; Whitehurst, 2021). In this study, screencasting included the screenrecording of a teachers screen, along with a video of teacher giving an explanation of what errors to correct.

Secondary teacher: In the context of this study, an educator who teaches students in Grades 7–12.

Social-affective feedback: A type of feedback where emotions are engaged and where part of the feedback process itself is viewed as a "social practice in which the management of relationships represents a source of emotions influencing learners' ways of studying" (Yang & Carless, 2013, p. 289). In the context of this study, social affective feedback referred to conversations and actions of a teacher that were social or emotional in nature, including their facial expressions and tone while providing screencast feedback. Social-affective is also related to the decisions teachers make while providing screencast feedback to preserve the relationship between student and teacher.

Structural feedback: An element of the feedback process that is concerned with the "timing, sequencing and modes of feedback, allied to resources for generating and

providing feedback" (Yang & Carless, 2013, p. 290). In this study, structural feedback referred to the mode, which is screencasting, that teachers used to deliver feedback, as well as how often teachers chose to use screencasting; structural feedback also encompassed the institutional resources that contributed or hindered teachers' use of screencast feedback.

Assumptions

I based this study on several assumptions. The first assumption was that the interviews and postinterview reflections would yield data that captured the phenomenon of screencast feedback as a strategy to support secondary student writing. This assumption was important because it highlighted the credibility and reliability of this study. The second assumption was that participants would provide thoughtful and honest responses that offered insight into the phenomenon of screencast feedback through their interviews and postinterview reflections. This assumption highlighted the level of credibility and reliability of this study. The third assumption was that participants would not be inhibited in sharing their true thoughts and deep reflections on the postinterview reflection despite the absence of the interviewer. These asynchronous responses were important for providing deeper insight than that provided by the interviews.

Scope and Delimitations

Certain boundaries established the scope of this study. The boundaries for this study included the screencast feedback experience for a secondary teacher teaching seventh through 12th grades. This study was bound by the purpose of the study, which was to explore screencast feedback as a strategy to support secondary students to improve

their writing. Therefore, screencasts about feedback not related to writing were not in the scope of the study, and, therefore, teachers who used screencasting for other reasons were not eligible to be participants. As the conceptual framework, Yang and Carless's (2013) feedback triangle defined the scope of the study. The three dimensions of the feedback process in Yang and Carless's feedback triangle defined the scope of participants' experiences in using screencast feedback to support student writing. However, I also included in the data analysis elements of feedback not aligned to the triangle that emerged.

The delimitations of this study involved the resources, the time, and the selection of secondary writing teachers for the study. In terms of participants, this study was limited to three secondary teachers with experience using screencast feedback, and who were matched by use on writing content and grade level. The study was further narrowed because my time and resources as a single researcher was limited.

Limitations

A barrier to conducting interviews was the recruitment of participants. One challenge that occurred was that with the use of screencasting being new to secondary classrooms, it was difficult to find participants. In this case, I had a minimum of three plans for recruitment using my professional learning network. This process included first directly emailing teachers; then posting digital flyers on social media; and, finally, recruiting via Walden University's participant pool. I recruited internationally to open the study to as many participants as possible. I also set aside time and communicated with Walden's Institutional Review Board (IRB) about how I could best protect my

participants. The Zoom interviews I conducted were audio recorded, and participating teachers had the option to keep their cameras off. In these cases, I was restricted to voice quality and tone and was not able to read participants' expressions or body language. One final set of limitations related to my assumptions as the researcher. These included my expectation that participants in their interviews or postinterview reflections would provide thoughtful and honest responses that offered insight into the phenomenon of screencast feedback. I was limited to what participants chose to provide by way of their responses. The second limitation was that I assumed that participants' responses would not only be true but an accurate depiction and reflection of their experience.

Significance

The results of this study address the identified research gap by providing insight into the experiences of secondary teachers' use of screencast as feedback to support student writing. The root of the problem was that secondary students have shown an inability to understand and then act on feedback (Kim, 2018). Therefore, the results from this study may clarify how and whether screencasting can be used to improve and highlight positive aspects of student-teacher interaction to help feedback learning occur more efficiently and to improve feedback uptake. Increased understanding of how secondary teachers use screencasting may inform other secondary teachers, administrators, curriculum coordinators, and technology designers on the best ways to meet the needs of students. Improved secondary education may positively effect social change as teachers expand their knowledge of, and experience with, feedback modalities that could advance student writing progress in secondary classrooms.

Summary

In this Chapter 1, I offered a concise overview of recent empirical literature that was relevant to the context of this study. This section also encompassed a discussion of the identified problem and the study's purpose, research questions, and conceptual framework. Additionally, I provided information on the fundamental qualitative methodology that shaped the study, along with definitions of crucial terms and discussion of the underlying assumptions, scope and delimitations, and limitations of the research. The chapter concluded with a discussion of the study's significance and the potential impact it may have on positive social change. In Chapter 2, I review key literature related to the study topic. The chapter begins with an overview of my literature search strategy, which is followed by more details on the conceptual framework for this study. In the literature review, I provide an overview of feedback practices of teachers for secondary student writing, which I categorize as cognitive, social-affective, and structural practices. In the final section of the literature review, I explore teachers' use of video technology to improve student writing, highlighting different modes and considering in detail screencast feedback as a standalone element.

Chapter 2: Literature Review

The societal problem on which this study was based, is that students struggle with decoding and implementing feedback about their own writing. Text-based feedback can be easily misunderstood or misinterpreted due to a certain level of literacy needed for interpretation (Li et al., 2024). The purpose of this qualitative study was to explore screencast feedback as a strategy to support secondary students in their effort to improve their writing. Current literature establishes the benefits and evolution of feedback practices that range from written (Bozorgian & Yazdani, 2021), oral (Dorji, 2021), automated (Zhu et al., 2020), online (Qutob & Madini, 2020), and game-based (Lawrence & Sherry, 2021), to screencast modalities (Henry et al., 2020). There are studies which have highlighted the challenges with written corrective feedback (e.g., Ellis, 2012; Khanlarzadeh & Nemati, 2016; Lee, 2020; Truscott, 2010) and opened opportunities for technology mediated feedback such as screencasting (Henry et al., 2020). Although it has been studied with teachers and students in higher education, the literature shows a diminutive understanding about the use of screencast feedback in secondary classrooms where teachers provide feedback on students writing assignments. The research problem addressed in this study was to improve understanding in how secondary teachers use screencast feedback to support secondary students in improving their writing. The information gathered from this research study may help provide researchers and educators with better understanding of how screencasting might be used to improve and highlight positive aspects of student-teacher interaction and the occurrence of more efficient feedback uptake.

Chapter 2 begins with a review of my literature search strategy and an overview of the conceptual framework for this study. The literature section provides an overview of feedback practices of teachers on secondary student writing, categorized as cognitive, social-affective, and structural practices. The final section presents teachers' use of video technology to improve student writing, highlighting a comparison of different modes and finally a deep exploration of screencast feedback as a standalone element.

Literature Search Strategy

The literature review for exploring screencast feedback as a strategy to support secondary student writing was sourced from peer-reviewed journals and practitioner journals. The databases and search engines used included Academic Search Complete, Education Source, ERIC, Google Scholar, SAGE Journals, Science Direct, and Taylor & Francis Online. I access these resources from Walden University Library. Table 1 shows the keywords used in a variety of combinations in the search for this literature. The reference list and citation list of some articles were used to further deepen and develop the review and irrelevant studies were removed and stored. After examining the applicable articles in each search, they were saved and stored in three locations, a literature review matrix, in a folder on a computer desktop, and printed, sorted, and stored in color-coded binders. The search for literature in this study was iterative, ensuring saturation with many inquiries continuing until the same sources reappeared and or the same authors were referenced.

Table 1

Literature Search Terms

Topic	Search term	
Population: secondary students	High school students OR secondary education OR student attitudes OR college preparation programs OR secondary school students	
Population: secondary teachers	High school teachers OR high school teacher attitudes OR high school teaching OR secondary education OR secondary education research OR Secondary school teachers	
Teaching writing (learning to write)	Writing education OR creative writing education OR creative writing education or technical writing education OR writers' workshops OR English composition OR English grammar education OR exposition (rhetoric) OR composition (language arts) OR writing (composition) OR writing instruction	
Feedback (cognitive)	Feedback (psychology) OR psychological feedback OR dialogic theory (communication) OR formative evaluation OR academic discourse OR computer-assisted instruction OR revision (written composition)	
Feedback (social–affective)	Dialogic teaching OR teacher–student relationships OR teacher–student communication OR emotions--social aspects OR emotions OR socialization OR learning motivation	
	Feedback (structural technology, timing, mode, sequencing)	Computers in education OR multimedia systems in education OR digital learning OR asynchronous communication
	Technology for English writing	Audiovisual aids in English language education
Screencast	Asynchronous learning OR computer uses in education OR instructional innovation OR video technology	

Conceptual Framework

The conceptual framework underpinning this study was the feedback triangle by

Yang and Carless (2013), which served as a lens to capture teachers' perceptions of their

use of screencasting feedback to support and improve secondary student writing. Based

on emerging ideas at the time regarding dialogic approaches to feedback (Beaumont et

al., 2011; Carless et al. 2011; Nicol 2010; Price et al., 2011), and this identifying a need

in higher education for the enhancement of dialogic feedback processes, Yang and

Carless (2013) began the development of this framework by adopting a definition of feedback from Askew and Lodge (2000) as "all dialogue to support learning in both formal and informal situations" (p. 286). This definition of feedback was used to critically analyze relevant literature on feedback in higher education, and the themes that arose from this synopsis shaped the three dimensions of the feedback triangle (Yang & Carless, 2013). Yang and Carless developed three dimensions of feedback based on themes identified in the literature. They are the cognitive (content), social-affective (interpersonal negotiation), and structural (organization) elements of the feedback process. Figure 2 shows the three dimensions of the feedback triangle. Next, I will discuss the dimensions, implementation, and rationale for using this framework in this study.

Figure 2

Three Dimensions of the Feedback Triangle
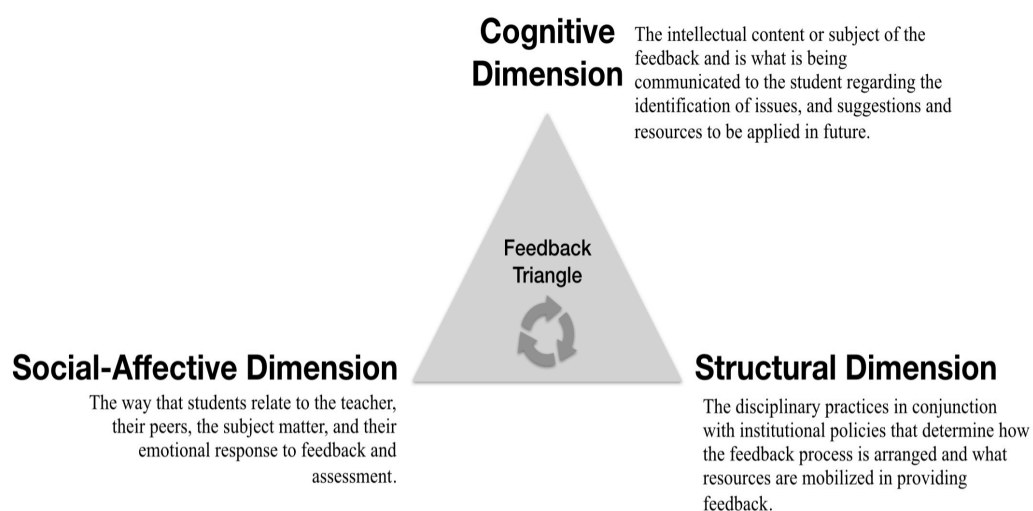
Note. Adapted from "The Feedback Triangle and the Enhancement of Dialogic Feedback Processes," by M. Yang and D. Carless, 2013, *Teaching in Higher Education*, *18*(3), p. 287 (https://doi.org/10.1080/13562517.2012.719154). Copyright 2013 by Taylor & Francis. Reprinted with permission (see Appendix A).

Cognitive Dimension

The cognitive dimension is the intellectual content or subject of the feedback and is what is being communicated to the student regarding the identification of issues, and suggestions and resources to be applied in future (Yang & Carless, 2013). Cognition, perhaps the more widely researched of the three dimensions, can also include how higher education students engage with teacher feedback (Cheng & Liu, 2022), particularly when ensuring accountability or providing instruction (Gredler & Harland, 2022) with

possibilities for cognitive understanding to develop over time (Carless, 2020). In context of this proposed study, the cognitive dimension related to when secondary teachers used screencasting to address aspects of a writing task that need improvement. For example, a teacher may support students by using screencasting to talk and point to errors contained in a writing assignment and how to correct and move forward toward successful implementation of desired feedback. Most of the empirical research on feedback is focused on the cognitive dimension, or what instructors say to students in their feedback.

Social-Affective Dimension

For the social-affective dimension, Yang and Carless (2013) describe how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment. Recent research applied this concept and addressed how affective reactions resulting from teacher feedback underscored emotional triggers in higher education students bringing about positive emotions like happiness and excitement and negative emotions like frustration and distress (Li & Curdt-Christiansen, 2020; Mahfoodh, 2017). Likewise, Gredler and Harland (2022) discovered a variety of themes relating to social-affective feedback from doctoral faculty toward capstone writers that revealed a preference for faculty to use words of celebration, humor, positive peer pressure, and other positive feedback to increase motivation. In this study, the social-affective dimension pertained to incidences where secondary teachers use words, text or body language to encourage, compliment, praise or discipline students to support the improvement of their writing task. For example, a teacher may use certain encouraging words or phrases while screencasting like "well done" or "good job" to support students

in their belief and ability to improve their writing. This is the least studied of the three dimensions.

Structural Dimension

The third dimension addresses the structural aspect and refers to how the disciplinary practices in conjunction with institutional policies determine how the feedback process is arranged and what resources are mobilized in providing feedback (Yang & Carless, 2013). Relating to this dimension, recent studies have identified the need for more research on technology-supported or enhanced feedback (Al Husban et al., 2021; Carless, 2011; Kachare et al., 2021; Soelnner et al., 2022; Zhang et al., 2022). Studies showing the relevance of the structural dimension in the dialogic process and impact on higher-education student experiences are also growing in number (Gredler & Harland, 2022, La Rocca, 2021). The structural dimension in this study, was in reference to the secondary teachers who used the mode of screencasting as a medium to give students feedback on their writing. For example, when a secondary teacher records a screencast showing a student writing task they may use a variety of embedded tools like markup, highlighting, signaling, and voiceover to instruct the student on how to improve the assignment. Additionally, if teachers discuss school or district policies that influence their ability to use screencasting, that fits into the structural dimension.

Implementation in Previous Research

The feedback triangle (Yang & Carless, 2013) was limited in application to two other research studies. However, both studies were conducted recently and managed to yield thick data with implications for desirable future implementation as a result. Using

mixed-methods tools, La Rocca (2021) attempted to facilitate communication between students and teachers by activating additional forms of feedback that concern socioaffective and organizational aspects using a sample size of 41 higher education students as part of a master's degree course in network communication. The findings suggested that through dialogic and circular feedback, it is possible to build a teaching/learning context in which teacher and students can receive information on teaching and learning and actively participate in the educational process. A year later, Gredler and Harland (2022) explored how and why online faculty use technology when advising doctoral capstone writers by conducting a general qualitative study with 10 doctoral faculty. The results of this study revealed nine themes that fit well within the three dimensions of the Yang and Carless (2013) feedback triangle with no outliers. Collectively, these studies used the feedback triangle to provide a model for bringing to the forefront forms of feedback that are often in the background (La Rocca, 2021) and being harbingers in highlighting the importance of enhancing communication, increasing motivation, and promoting self-regulation in the social-affective domain (Gredler & Harland, 2022). More specifically, the Gredler and Harland study show a precedent for using this framework to consider connections between technology and feedback such as modes, preferences, procedures, and barriers.

Rationale for Use of the Feedback Triangle

The feedback triangle was developed as a structural mechanism to monitor present and ensuing trends in feedback research (Yang & Carless, 2013) and is particularly well suited to this study as it provides a clear structure, and operational

language around three major aspects of the dialogic feedback process. The structural dimension in particular was useful in aligning the research problem (decoding) and the purpose (use of enhanced technology) to explore screencast feedback as a strategy to support secondary students to improve their writing. Both RQs were developed to be answered well within the scope of the cognitive, social-affective and structural domains. These three dimensions each aligned with specific aspects of feedback and helped me to determine what secondary teachers focus on and why, and what were the perceptions of secondary teachers using screencast as feedback to support writing. The study also benefitted from this conceptual framework as the feedback triangle helped to define the parameters of the study by keeping the focus on what was already known about the dialogic process and inherent nature of feedback. Additionally, the three dimensions allowed for powerful reciprocity between dimensions (Yang & Carless, 2013) which worked well for this qualitative study since I explored teachers' perceptions and found there was overlap among the dimensions.

The Yang and Carless (2013) feedback triangle informed the methodology design of my study. For data collection, along with themes I found in the literature review, I considered the framework as I developed interview questions. During data analysis, I used thematic analysis. As I reviewed the data sources and read text segments I kept in mind the three dimensions in the feedback triangle framework (see Yang and Carless, 2013) and what I learned in the literature to allow verbiage to influence the development of codes. Using the areas of the triangle helped focus the coding process for analysis. Furthermore, the structural domain of the feedback triangle allowed for the novel

structural mode of screencasting to be highlighted and investigated within and beside other aspects of the feedback process.

Feedback Practices of Teachers for Secondary Student Writing

Secondary feedback practices include written (Bozorgian & Yazdani, 2021), oral (Dorji, 2021), automated (Zhu et al., 2020), online (Qutob & Madini, 2020), game-based (Lawrence & Sherry, 2021), and screencast (Henry et al., 2020). Generally speaking, despite findings on mistakes in language learning and corrective feedback, these practices have failed to reach consensus on desirability (e.g., Ellis, 2012; Khanlarzadeh & Nemati, 2016; Lee, 2020; Truscott, 2010) with written feedback bearing the brunt of the controversy highlighted in a prominent debate due to ambiguous findings between Truscott (1996, 1999) and Ferris (1999, 2004). Unfortunately, the scant amount of research for discussion in the secondary context was apparent in reviews of the literature on written corrective feedback (Abalkheel & Brandenburg, 2020), effects of learners' responses to teacher written feedback (Rong et al., 2021), second language writing teachers (Zheng et al., 2022), and second language writing expertise (Lee & Yuan, 2021). For the purpose of this study, I organized empirical research studies that highlight feedback practices of teachers on secondary student writing by the Yang and Carless (2013) feedback triangle dimensions: cognitive, social affective, and structural.

Cognitive Feedback Practices

The cognitive dimension of the feedback triangle represents the intellectual content or subject of the feedback and for writing assignments, includes what edits and improvements the instructor, tutor, or teacher wants the student to consider and learn

from (Yang & Carless, 2013). Traditionally, it is instructor-provided written feedback that is given to students, although with technology advances some instructors are moving to various ways to provide multimodal feedback. Seminal written feedback studies established a precedent and raised concerns regarding which errors should be corrected, when, and by whom and in short, settled on the teacher as a feedback source along with the self and peers (Hendrickson, 1978). In early feedback studies, the process by which second language learners responded to bidirectional nature of feedback, and edited their errors was viewed as evidence of their learning (Corder, 1967). However, ambiguous findings in early written feedback literature (Ferris, 1999, 2004; Truscott, 1996, 1999) brought about doubt in the effectiveness of the written feedback practice. Regardless, early doubts did not prevent written feedback practices from becoming the most widely used practice with the bulk of research on the topic using that doubt to leverage ambiguities to find out what works best (Zheng et al., 2022).

Building on Schmidt's (1990) noticing hypothesis, some authors propose that corrective feedback is identified as the noticing of and response to a gap in the learner's language output, which usually includes efforts on the part of the instructor to support the learner in filling that gap (Karim & Nassaji, 2020; Rastgou et al., 2020). The void addressed in feedback in secondary writing usually refers to granular aspects of the mechanics and structure of writing sentences, paragraphs, or essays (Elfiyanto & Fukazawa, 2021) which falls within the cognitive domain of the feedback triangle (Yang & Carless, 2013). The body of work on secondary feedback covered a variety of

responses including but not limited to direct/indirect, focused/unfocused, a range of grammar and mechanics topics, features of an essay, and building arguments.

Direct/Indirect and Focused/Unfocused Feedback

Cognitive feedback examined in the literature, is often parsed into categories, either direct versus indirect feedback (Bitchener & Ferris, 2012; Reynolds & Teng, 2021) or focused versus unfocused feedback (Lee et al., 2021). The first category, direct feedback, is when a teacher tells a student exactly what should be done to enhance the writing task (Bitchener & Ferris, 2012; Reynolds & Teng, 2021), and indirect feedback is when a teacher indicates only the location of the error requiring the student to self-correct (Ellis, 2009; Ferris, 2010; Reynolds & Teng, 2021). The earliest empirical research comparing the effectiveness of direct versus indirect feedback did not show a difference in students' grammar improvement (Ellis, 2009; Ferris, 2010). However, more recent research showed improvement in writing for students who received indirect feedback over those who received direct feedback (Zarei & Mousavi, 2016). Using a one-way ANOVA Zarei and Mousavi (2016) found that 78 Iranian secondary and university students who received indirect feedback on lexical collocations, outperformed direct feedback and peer feedback groups. Further, indirect feedback not only showed higher levels of improvement when compared to direct feedback, it is also known to be used more often by secondary teachers. In a year-long study using content analysis on 518 Taiwanese students' written sentences, Reynolds and Teng (2021) revealed secondary teachers' were more likely to give indirect feedback on verb-noun collocations when compared to direct and metalinguistic feedback. However, it was clear from the extant

literature that more in-depth direct and indirect feedback research is needed to make claims regarding which method is more effective.

The second category, focused versus unfocused feedback, usually involves one or two items or targets for correction like subject-verb agreement and verb tense (Lee et al., 2021), versus many targets for correction (Yunus, 2020). Using individual interviews and classroom observations over the course of a school year, Lee et al. (2021) conducted a mixed methods design to investigate the focused feedback practices of two teachers in Hong Kong who both used preselected error types in grammar to provide feedback on student writing tasks. Data indicated that students improved their written accuracy and engagement with revision when given focused feedback. These results support the efficacy of focused over unfocused feedback and corroborate other research in higher education (see Ellis et al., 2008; Frear & Chiu, 2015).

The impact of both direct/indirect and focused/unfocused feedback has been studied together in higher education for improving second language writing accuracy. Early higher education studies, investigating only one or two grammatical structures (focused feedback) along with direct feedback have shown ambiguous results with some being positive (Rummel & Bitchener, 2015; Sheen, 2007) and others (Pashazadeh, 2017; Shintani & Ellis, 2013) showing no improvement over control groups. While these studies add understanding to the gap, little to no studies have explored the combination of direct/indirect and focused/unfocused feedback in secondary classrooms.

Grammar and Mechanics

Other research in the cognitive domain of feedback, is related to secondary teachers addressing a wide range of grammatical, lexical and language skill errors (Pearson, 2022; Thi & Nikolov, 2021) with most feedback focusing broadly on grammar and mechanics. Some feedback for correction is generically labelled as *grammar correction* (Lira-Gonzales & Nassaji, 2020; Van der Kleij, 2020) or *grammatical accuracy* (Rastgou et al., 2020) while other grammatical feedback has a very specific target for correction such as word choice (Yunus, 2020), collocation errors (Reynolds & Teng, 2021), and English articles (Bozorgian & Yazdani, 2021). Targeted language features based on students' individual needs was part of the Lee et al. (2021) focused versus unfocused study where the feedback given to students by two teachers in Hong Kong contained various grammar targets. The specific grammar topics included a story task correcting subject-verb agreement and verb tense, a leaflet with punctuation and spelling highlighted for correction, a debate speech assignment looking for punctuation and inversion errors, and a persuasive letter with punctuation and agreement as the basis for feedback.

Lee et al.'s (2021) data indicated that students improved their written accuracy and engagement with revision. These results parallel a Bhutanese study where using a two-way ANOVA, Sherpa (2021) targeted past tense and articles specifically as language features for correction with 45, Grade 8 English as a second language learners in a study exploring the effects of direct and indirect feedback. The findings showed that indirect feedback groups outperformed the direct feedback and control groups (Sherpa, 2021).

Thus, research has shown that feedback on grammar and mechanics yield better results when the grammar topics are narrowed or focused.

Features of an Essay

In a writing context, secondary teachers have also used diverse features of an essay as a focal point for correction. This form of feedback for writing is used to evaluate a combination of features such as organization and content (Elfiyanto & Fukazawa, 2021; Ganapathy et al., 2020), accuracy and complexity (Rastgou et al., 2020; Toledo et al., 2021), and style and flow (Henry et al., 2020; Potter & Wilson, 2021). Often, this feedback can be accompanied by other elements to enhance the assessment process. From in-depth interviews with 15 Grade 12 Bhutanese students, Dorji (2021) conducted an action research mixed methods study exploring the use of written and oral feedback, along with mini revision lessons based on the features of an argumentative essay to improve academic writing skills. The results revealed that the mini revision lessons covering the features of an essay and the oral and written feedback were effective strategies that helped students improve their quality of writing (Dorji, 2021).

In a parallel Lebanese study, using a mixed-methods design with 28 Grade 8 second language learners Ghaffar et al. (2020) explored teacher and student co-constructed rubrics for feedback on features of an essay. This procedure involved student participation in the criterion development that was later used along with teacher feedback to evaluate student essays (Ghaffar et al., 2020). Data revealed that students improved their writing significantly, along with promoting assessment for learning and enhancing participation (Ghaffar et al., 2020). These practices are similar to research where a

teacher uses statements from a rubric or scale to give feedback to a student (Sedlacek, 2021; Toledo et al., 2021). The literature showed that secondary writing feedback that focused on features of an essay positively impacted student performance especially when feedback was dialogic in nature as seen with mini revision lessons and co-constructed rubrics.

Development of Arguments

Similar in some ways to features of an essay, but also very different, another aspect of cognitive feedback that secondary teachers give students is related to building arguments (Qutob & Madini, 2020). Feedback in this category could contain a persuasive planning tool (Finch & Willis, 2021), comparison model of arguments students have been exposed to (Lee, 2020), situational feedback encouraging argumentation strategies (Lawrence & Sherry, 2021), and contextualized supportive feedback to help students to revise scientific arguments (Zhu et al., 2020). One detailed example of feedback focused on building arguments was examined by Finch and Willis (2021), who used a planning tool based on Carless (2007) to feed forward and transform the criteria of the assessment into directions on the planner. The directions later served to guide practice that after students wrote their argumentative essays, was used as criteria by their teachers to give feedback resulting in satisfaction of the assessment (Finch & Willis, 2021). Collectively, these studies showed that feedback not only includes marks on a completed assignment, but also includes model writing, or exemplars, and that rubrics, and criteria that are shared in advance with secondary learners provided structure that aided in understanding expectations for their writing.

Social–Affective Feedback Practices

The social-affective dimension of the feedback triangle focuses on the emotional responses of students to feedback and assessment, and how these same students relate to their teachers, peers, and the subject matter (Yang & Carless, 2013). Research has categorized some of these responses as feedback practices that demonstrate or elicit positive and or negative emotion (Chen & Nieminen, 2024; Chong, 2022; Geng et al., 2022; Lee & Yuan, 2021; Qutob & Madini, 2020; Shen & Chong, 2022; Van der Kleij, 2020; Yu & Yang, 2021), motivation (Lutfiyyah et al., 2021; Selvaraj et al., 2021), and praise (Zhou et al., 2022). The role of social-affective elements in secondary feedback practices are either non-existent or so minute that they are often highlighted in systematic reviews of literature as marginalized where there is a call for more dialogic approaches (Shen & Chong, 2022), an affective or emotional direction (Chen & Nieminen, 2024; Geng et al., 2022), emotional engagement (Chong, 2022), motivation to learn (Selvaraj et al., 2021) the use of technology to impact motivation (Lutfiyyah et al., 2021), and improvement in the mismatch between positive perceptions of praise and insufficient praise practice (Zhou et al., 2022).

Despite the results of systematic reviews that revealed the occasional drawback of feedback where students can be demotivated (Selvaraj et al., 2021), some studies have revealed student preferences for positive feedback to increase motivation in learning (Qutob & Madini, 2020). In a mixed methods research design Qutob and Madini (2020) investigated Saudi English as a foreign language learners' preferences for corrective feedback on written assignments from 114 female seventh-grade students. The results of

this study revealed students' requests for an increase in positive comments from the teacher when correcting, the use of a variety of methods to motivate learning, and the use of happy faces, three stars, or other rewards as forms of positive feedback (Qutob & Madini, 2020). Social-affective elements also appeared in Lee and Yuan (2021), who explored the expertise of three writing teachers from different schools in Hong Kong. One teacher revealed her determination to adopt conferencing as a feedback strategy to improve writing as it was the best way to get students to share their innermost feelings (Lee & Yuan, 2021).

Emotions and feelings were also a primary focus in a qualitative study conducted by Van der Kleij (2020) using 23 participants from one secondary English classroom in Australia. Students were required to use a feedback engagement enhancement tool to not only record their feelings and emotional reactions from feedback that was given by teachers and peers, they also engaged with completing a detailed reflection of their own emotions related to the evaluation itself (Van der Kleij, 2020). Despite teacher and student preferences, the role of social-affective elements in learning has not been the focus of many studies and usually only appears briefly in the research as interesting secondary findings. Therefore, more research exploring social-affective elements is needed in the secondary context.

Structural Feedback Practices

The structural dimension of the feedback triangle is defined by the mode that is used to deliver the feedback and what resources are used in that process (Yang & Carless, 2013). The manner by which secondary writing feedback can be delivered, which goes

beyond written feedback, and includes automated responses (Lee, 2020; Potter & Wilson, 2021; Yu & Yang, 2021; Zhu et al., 2020), oral and audio discussions (Lee & Yuan, 2021; Lefroy, 2020; Van der Kleij, 2020; Yunus, 2020), and less common modes of feedback such as game-based feedback (Lawrence & Sherry, 2021), use of an online medium (Kao & Reynolds, 2020; Qutob & Madini, 2020), video technology, and screencasting (Henry et al., 2020). Despite the variety of techniques used to deliver feedback, reviews of the literature have called upon researchers to continue examining computer-assisted (Geng et al., 2022), and computer-mediated technologies (Shen & Chong, 2022) to provide feedback. This is due to the fact that with technology instructors have the ability to deliver immediate diagnostic feedback and also because the use of technology supports researchers in increasing the complexity of data sources for evaluation (Geng et al., 2022).

Automated Feedback

Within the structural dimension lies a form of feedback known as automated, which usually evaluates a task via artificial intelligence, with the use of software or an online platform, and delivered instantaneously after task completion (Deeva et al., 2021). An example of automated feedback providing opportunities for immediate feedback can be seen in the large-scale implementation of an automated system highlighted in Potter and Wilson (2021) who analyzed 114, 582 students in Grades 4–11 over a course of 2 years in the state of Utah. A state-branded feedback system used an automated scoring engine to provide essay ratings and qualitative feedback statements for six traits of writing for students, resulting in a large-scale positive impact on writing performance

(Potter & Wilson, 2021). A similar automated feedback example with positive results, albeit a smaller sample size, using a case study design, Lee (2020) revealed the ways six 14–15 year-olds cognitively engaged in writing while using an automated content essay feedback in a Hong Kong secondary school, with findings indicating that the automated system helped students enrich content and language in writing. Zhu et al. (2020) also examined automated scoring technologies to support an online science curriculum of 374 U.S. seventh to 12th-grade students to revise scientific arguments. This task-specific system was able to generate generic (general suggestions for revision) and contextualized (content specific suggestions for revision) feedback which was more efficient in supporting performance gains than generic feedback. (Zhu et al., 2020). The strength of these studies lies in that the mode of automated feedback naturally lends itself to be used in larger populations, over longer periods of time, or both which in turn supports filling a gap for computer-mediated technologies for feedback.

Oral and Audio Feedback

Oral feedback, which involves the direct spoken interaction between a teacher and a student, often comes in the form of in-person conferences or discussions. These discussions could foster social-affective elements as previously mentioned in the case of Lee and Yuan (2021) who found that using teacher–student conferences as a feedback strategy not only improved writing, but also led to students sharing their innermost feelings. The results of this study align with other recent research (Ha et al., 2022) revealing the importance of the social interactions and affective experiences as part of teacher repertoire (Lee & Yuan, 2021). Likewise, using both student and teacher

questionnaires exploring written corrective feedback, Yunus (2020), reported the experiences of three Malaysian teachers and 64 students who all preferred to engage in teacher group feedback discussions and individual student conferences to explain errors. Another study involved the use of oral feedback combined with the use of a student reflection booklet. Exploring the use of oral feedback, Van der Kleij (2020) looked at the experiences of 23 participants from one secondary English classroom in Australia. These students received oral feedback on their writing from their teacher and were required to record their feelings and emotional reactions to this feedback inside of a booklet to later reflect upon. The results showed that the combination of oral feedback with the reflection booklet supported student engagement with feedback on their writing (Van der Kleij, 2020). In a similar fashion, using a qualitative questionnaire and interviews, Lefroy (2020) revealed that 14–15-year-old English students preferred audio over written feedback for formative assessment. The results included student experiences supporting audio feedback due to its social and relational mode (Lefroy, 2020). Collectively, the results of these studies showed dialogic oral feedback to be an integral component of the feedback process overall from the perspectives of both teachers and students in secondary environments.

Online Platforms and Game-Based Feedback

At the secondary level, there was little research on writing teachers' use of online platforms and game-based systems to give feedback. One of the few instances was highlighted by Kao and Reynolds (2020) who analyzed data from 518 Taiwanese high school students' writings and their teachers' feedback which was provided to students via

an online writing platform over the course of a year. Teachers were able to assign tags to errors that were selected from the database and students were able to make corrections based on the tags they received (Kao & Reynolds, 2020). The results of the study did not focus on the effectiveness of the writing platform on student writing performance, rather the types of feedback teachers gave and errors the teachers made while using the platform were analyzed (Kao & Reynolds, 2020). Another example appeared in Qutob and Madini (2020) who implemented closed and open-ended questionnaires to investigate the use of an online platform called Padlet to give feedback on weekly written assignments to 114 Saudi female pupils in the seventh grade. The results included student preferences for receiving corrective feedback using electronic devices. Likewise, evaluating the use of Google Docs, an online platform that allows for real-time editing and updating, Neumann and Kopcha (2019) examined a peer-then-teacher feedback process on the development of argumentative letters written by 21 sixth- and seventh-grade Language Arts students from the Pacific Northwest. The results implied that teacher feedback impacted achievement scores more than peer feedback when using Google Docs (Neumann & Kopcha, 2019). There is a dearth of research on the effectiveness on the use of online platforms to give secondary writing feedback. Therefore, methodological studies that investigate this structural mode is needed to fill the gap.

Game-based feedback, another less common mode to deliver correction, was used to analyze the development of arguments for 114 U.S. seventh graders for English writing on the topic of climate change (Lawrence & Sherry, 2021). Students were able to drag statement cards into bins titled "fact," "solution" or "other opinion" and this game

action would allow them to progress to different levels of the game while building arguments on the topic of climate change (Lawrence & Sherry, 2021). The results revealed that after using the game to receive feedback and writing advocacy letters, students developed argumentation strategies that were not as effective when applied to complex situations (Lawrence & Sherry, 2021). Further exploration in research is needed to determine whether game-based feedback could support secondary students when writing.

Screencast Feedback

An emerging mode for feedback delivery is called screencasting, which involves using "digital recordings of the activity on one's computer screen, accompanied by voiceover narration" (Thompson & Lee, 2012, p.1) which can also include video of the presenter (Bahula & Kay, 2021; Borup, 2015; Garnham & Taylor, 2019; Madson, 2017; Mahoney et al., 2019; Payne et al., 2022; Whitehurst, 2021). While screencasting has been examined in higher education (Soden, 2017), it is a less common mode of feedback used by secondary writing teachers. However, in one mixed methods study, Henry et al. (2020) explored the use of digital conferencing using Screencastify with 42 sixth-, seventh-, and eighth-grade students and their teachers in Illinois. Students attending a writing workshop were able to receive feedback from their teacher using Screencastify and reported that the signaling on the screen and the ability to watch the video repeatedly were the primary advantages of this mode of correction (Henry et al., 2020). The results highlighted the potential video technologies and computer-mediated feedback may have in secondary classrooms, but more research is needed.

Based on current research there is a trend and need toward focused, oral, social-affective aware, and technology-mediated feedback. Even though there is little to no research on screencast as a form of feedback in the secondary context, it is a mode that aptly allows for expression of the three dimensions of the feedback triangle by Yang and Carless (2013). Research in this area may inform education stakeholders about whether this innovation could be used to provide quality feedback that positively influences secondary student writing.

Teachers' Use of Video Technology to Improve Student Writing

Research found almost exclusively in higher education, reveals teacher perceptions of feedback being underused and underappreciated by students (Winstone & Carless, 2019). In response, there appears to be a willingness, on the part of instructors, to trial alternative mediums that will enhance student engagement and satisfaction (Mahoney et al., 2019; Penn & Brown, 2022; Xu et al., 2019). Several higher education studies have explored early versions of video feedback, defined as a type of feedback which only shows the head and shoulders of the instructor (Henderson & Phillips, 2015). However, as newer, more enhanced versions of video feedback were developed, this early form was later labelled "talking head" video (Mahoney et al., 2019). An exploration of systematic reviews revealed that these videos have diminished in popularity as there are very few studies published past 2017 which feature talking head videos as feedback to support student writing (Bahula & Kay, 2021; Mahoney et al., 2019).

Therefore, the bulk of the most recent higher education studies analyzing the use of video technology to improve student writing are characterized as explorations of

screencasting as feedback (Maharani & Santosa, 2021; Yiğit & Seferoğlu, 2023),

comparisons of written feedback and screencasting (Bush, 2021; Soltanpour &

Valizadeh, 2018), and a comparison of screencasting with web-cam screencasting (Zahro,

2023). The consensus from the literature on using video feedback include teacher

perceptions that it is easier, faster, and more personal while student perceptions reveal it

is more engaging, preferred, has better quality, is more personal, and addresses higher-

order thinking (Cunningham, 2019; Bahula & Kay, 2021; Ryan et al., 2019; Wood, 2021.

Explorations of Screencasting as Feedback

Several studies have explored the use of screencast as feedback to support writing

and have revealed that this mode helps students to seek out and improve uptake of

feedback (Wood, 2021), use of self-regulated writing strategies (İnan-Karagül & Şeker,

2021), and student ability to implement process approach (Maharani & Santosa, 2021).

Overall, for both students and teachers the majority of the experiences (Van der Zijden et

al., 2021), implications (Mali & Santosa, 2021; Pachuashvili, 2021), applications

(Lowenthal, 2021; Rybakova, 2020), and perceptions (Zubaidi, 2021) are positive. In a

qualitative instrumental case study of 13 South Korean undergraduates writing a 1200

word essay, Wood (2021) discovered that screencasting appeared to help students

understand and enact feedback, set and achieve goals, and encouraged trust and

motivation to engage with the feedback from their instructor. These results parallel a

larger Turkish mixed-methods research study of 135 undergraduate English language

teaching students who reported a significant increase in self-regulated writing strategies

after several phases of screencast feedback (İnan-Karagül & Şeker, 2021). Both studies

show the positive influence of screencasting on promoting student autonomy. Similar results were also found in a descriptive qualitative study of 31 Indonesian sophomore university students enrolled in an essay writing course for argumentative writing where Maharani and Santosa (2021) found that the use of screencasting made a crucial contribution for implementing process approach and building arguments. Additionally, as research shows, delivering feedback via a dual-mode such as screencasting, cognitive load is minimized (Pachuashvili, 2021) which assists students in processing and breaking down complex and challenging elements (Maharani & Santosa, 2021).

Comparisons of Written Feedback and Screencasting

According to the literature, when screencast feedback is compared to written feedback it is largely described as having a social affective and cognitive influence on the feedback process (Cavaleri et al., 2019; Love & Marshall, 2022). Social affective elements are mentioned as positive results in feedback research. For example, studies have shown the relationship students form with instructors is positively influenced (Marshall et al., 2020) and that instructor social presence is enhanced (Love & Marshall, 2022). Students perceive the screencast feedback mode as pleasant (Bush, 2021), personal and supportive (Ali, 2016; Cavaleri et al., 2019), facilitative of communication (Harper et al., 2018), and as having cognitive and motivational benefits (Vatansever & Toker, 2022). In a longitudinal mixed-method study of 80 authentic papers from 20 Australian undergraduate students, Cavaleri et al. (2019) discovered the multimodal format, conversational tone, verbal explanations, and personalized feel of screencasting allowed for more successful engagement with feedback especially for students of lower

English proficiency. These results parallel another mixed-methods research design comparing the written and screencast feedback of 63 Egyptian students' content, organization and structure of writing (Ali, 2016). The results revealed that the students who received screencast feedback outperformed students who received written feedback, with students perceiving screencast feedback as being more clear, personal, specific, supportive, multimodal, constructive and engaging (Ali, 2016). Collectively, through qualitative and quantitative measures these studies show that the social affective elements of screencasting feedback has a connection with better performance.

Likewise, several studies have also shown there is a positive cognitive influence of screencast feedback as a mode. This method allows students to become more successful implementing their teachers' feedback in revisions (Dongmei & Li, 2020; Yiğit, & Seferoğlu, 2023) and is an effective practice for English language learners (Özkul & Ortaçtepe, 2017). Moreover, when compared, it is significantly superior and significantly outperforms written feedback (Soltanpour & Valizadeh, 2018), leading students to excel beyond their written feedback counterparts regarding overall writing experience (Xie et al., 2022). In a quantitative study of 43 undergraduate students at a public online university, Yiğit and Seferoğlu (2023) investigated the effect that screencasting had on feedback use in an online environment. The results showed a significant difference between the students who received screencasting feedback versus those who received written feedback with the former becoming more likely to uptake feedback on subsequent assignments (Yiğit, & Seferoğlu, 2023). Similar results were found in a rare instance of screencast feedback research in a secondary school. In a mixed

methods sequential explanatory design, Xie et al. (2022) investigated 90 intermediate Grade 12 high school Chinese students who received conventional written feedback and screencast feedback. The results showed that the group who received screencast feedback excelled in writing performance beyond the group who received written feedback (Xie et al., 2022). Together, these studies highlight the connection between screencast feedback as a mode that encourages uptake and implementation of feedback. In contrast, there is a small portion of screencast versus written feedback research with results that were either inconclusive (Penn & Brown, 2022), showing no difference (Matthews, 2019), or students had a preference for a different mode (Bakla, 2020). In comparison to the body of research, these studies are outliers that present opportunities to further investigate the positive and negative influence of screencasting feedback.

Summary and Conclusions

Data from study results in the last 5 years showed that teacher and student perceptions of technology-mediated feedback has helped shape its use and evolution in the writing classroom. Through the lens of the feedback triangle by Yang and Carless (2013), feedback practices have developed a dialogic focus especially with the use of screencast feedback. Although it has been studied with teachers and students in higher education, the gap that remains is a diminutive understanding about the use of screencast feedback as a strategy to support secondary students to improve their writing. This gap is important to address as researchers and educators may be provided with better understanding that may help determine how screencasting might be used to improve and highlight positive aspects of student-teacher interaction and the occurrence of more

efficient feedback uptake. This information may in turn inform stakeholders such as secondary teachers, administrators, curriculum coordinators, and technology designers to use the findings from this study to implement decisions and foster environments that better understand the factors that influence meeting the needs of students.

Several themes aligning with the feedback triangle by Yang and Carless (2013) emerged from my review of the literature on existing feedback practices in secondary classrooms. Research that fell within the cognitive domain was generically labelled as *grammar* correction (Lira-Gonzales & Nassaji, 2020; Van der Kleij, 2020) or *grammatical accuracy* (Rastgou et al., 2020) while other grammatical feedback had a very specific target for correction such as word choice (Yunus, 2020), collocation errors (Reynolds & Teng, 2021), and English articles (Bozorgian & Yazdani, 2021). In the social affective dimension research categorized some of these responses as feedback practices that demonstrated or elicited positive and or negative emotion (Chen & Nieminen, 2024; Chong, 2022; Geng et al., 2022), motivation (Lutfiyyah et al., 2021; Selvaraj et al., 2021), and praise (Zhou et al., 2022). The structural domain included feedback categorized under automated responses (Lee, 2020; Potter & Wilson, 2021), oral and audio discussions (Lee & Yuan, 2021; Lefroy, 2020), and less common modes of feedback such as game-based feedback (Lawrence & Sherry, 2021), use of an online medium (Kao & Reynolds, 2020; Qutob & Madini, 2020), video technology (Bahula & Kay, 2021; Mahoney et al., 2019), and screencasting (Henry et al., 2020). Very few examples in each of the above listed categories included secondary students.

While several studies on screencast feedback contained examples of the experiences (Van der Zijden et al., 2021), implications (Mali & Santosa, 2021; Pachuashvili, 2021), applications (Lowenthal, 2021; Rybakova, 2020), and perceptions (Zubaidi, 2021) of teachers and students, the research has also primarily focused on higher education, with little research from secondary education classrooms. I explored technology-mediated writing feedback practices in general, and the phenomenon of screencast feedback practices specifically. I have extended on current research by exploring screencast feedback as a strategy to support secondary students to improve their writing using an exploratory single-case study research design which includes the research method of interview. Data from my study may improve understanding because it goes beyond what is already known about the dialogic process and inherent nature of feedback and technology's role in the process.

In Chapter 3, I include a description of the research design and rationale, role of the researcher, methodology, trustworthiness and ethical procedures. I give details about recruiting participants, obtaining data, and analyzing data. I address issues related to trustworthiness including credibility, transferability, dependability, and confirmability. Last, ethical procedures are carefully outlined and disclosed in this chapter.

Chapter 3: Research Method

The purpose of this qualitative study was to explore screencast feedback as a strategy to support secondary students in their effort to improve their writing. In Chapter 3, I include a description of my research design and rationale, my role as the researcher, the methodology I employ and address issues of trustworthiness and ethical procedures that I implemented. I give details about recruiting participants, collecting data, and analyzing data. I address issues related to trustworthiness including credibility, transferability, dependability, and confirmability. Last, ethical procedures are carefully outlined and disclosed.

Research Design and Rationale

In this section I describe the research design for this qualitative case study and the rationale for the methodology. The following RQs were aligned to the problem, purpose, conceptual framework, and methodology of this study:

RQ1: What are the experiences of secondary teachers using screencast as feedback to support writing?

RQ2: What aspects of feedback do secondary teachers choose to focus on during screencasting and why?

RQ3: What are the reasons for the choices secondary teachers make when delivering screencast feedback?

Rationale for Research Design

The research paradigm for my study was a qualitative study, using an exploratory single-case study research design. Case study is defined as an empirical method that

"investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2018; p.15). In case studies, each case must have boundaries and is used to answer exploratory questions and has disciplinary roots that can be theoretical, empirical, sociological, or historical (Baxter & Jack, 2008). It can also have a focus in phenomenology, constructivism, anthropology, or psychology (Merriam & Tisdell, 2015). This design is intrinsically bounding, and is particularly well suited to use observations, interviews, audiovisual materials, documents, and reports of case descriptions and case-based themes to explore the experiences and perceptions within a very specific group or environment (Merriam & Tisdell, 2015).

A qualitative exploratory single-case study design, defined by Baxter and Jack (2008) as a study exploring situations where an intervention has no clear single set of outcomes, aligns best with my study. In this study, I explored the phenomenon of using screencast feedback as a strategy to support secondary students to improve their writing. Yin (2018) proposes binding a case to keep it from being too broad and to limit the scope and objectives that are analyzed within the study. In case studies, each case must have boundaries such as by time and place, time and activity, or definition and context (Baxter & Jack, 2008). The case in this research was bound by screencasting as feedback (definition) and three different secondary teachers providing feedback on writing (context). The case included two types of data: (a) interview data from three teachers, which in some cases included an optional audio of teachers sharing and explaining a student screencast, and (b) a postinterview screencast reflection completed by the

participants on their own time (see Figure 3). The different data types allowed for

triangulation. One of the ways triangulation can occur in a study is when data sources

vary based on the times the data were collected, with the variance in time revealing

atypical data or similar patterns (Thurmond, 2001).

The purpose of using both the interview and the postinterview reflection for each

participant was to increase confidence in the findings of the study results, and to yield

information-rich data of the real-world experience from a representative sample

population (Yin, 2018). In considering a representative sample, Baker and Edwards

(2012) posited that a single-case may be sufficient, or a single interview could be

adequate to highlight what is possible in the data. Using two sources for data collection

can reveal themes that can be found across these sources and subsequently strengthen the

results. This research design also allowed me to employ a strategy that was ideal for

qualitative inquiries, which is to use purposive sampling, ensuring that participants with

qualifying experience are invited to participate (Ravitch & Carl, 2019). Therefore, a

qualitative exploratory single-case study design was the approach most suited to this

study.

Initially, I had considered using a multiple-case study design which is defined by

Baxter and Jack (2008) as a case study which allows the researcher to analyze within and

across each setting to understand the similarities and differences between the cases. As I

explored my possibilities, and evaluated the likelihood of multiple data sources, I decided

against this option. Even though my study would be considered robust and reliable

(Baxter & Jack, 2008) it could also then become time consuming. Additionally, the data

source I considered for a multiple-case study was a source of data that was unlikely to receive IRB approval as it involved sharing the screencasts of minors. At this point I realized I could still have a reliable and robust study using a single-case study design.

Figure 3

Units of Analysis Within the Single-Case Study Design
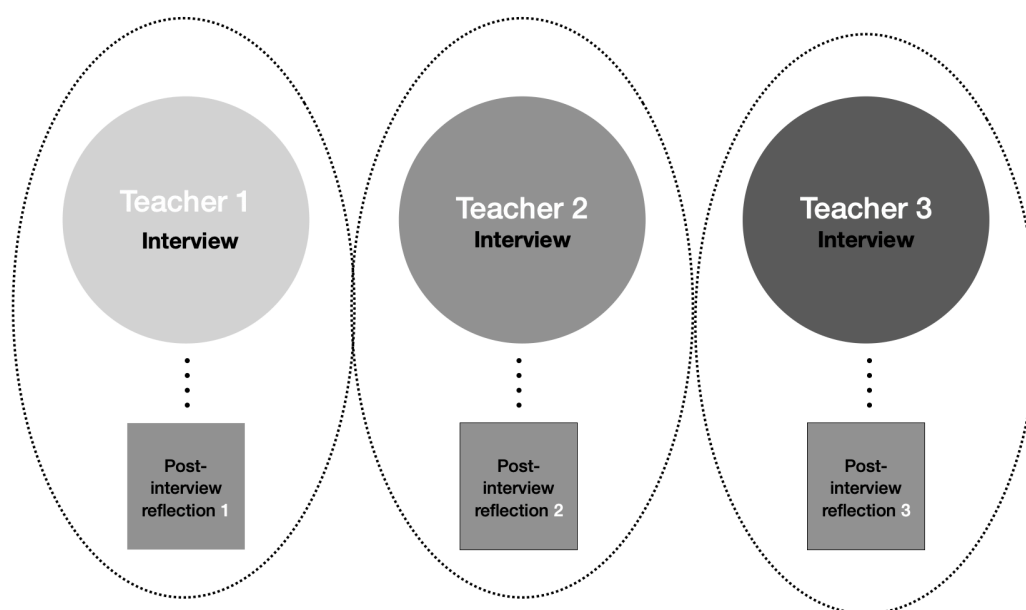
Considerations of Other Designs

I was able to consider alternative qualitative designs for my study which included grounded theory, phenomenology, and ethnography. Initially, I explored grounded theory which is a method that looks to see which theory, grounded in fieldwork, emerges from systematic comparative analysis (see Merriam & Tisdell, 2015; Patton, 2014). This approach was not an appropriate choice for my RQ as a theory was not being generated. Phenomenology was another viable approach that I considered because the participants all share the same lived experience (Merriam & Tisdell, 2015) as teachers in a secondary

setting using screencast as feedback. However, I was not trying to explain the phenomenon of screencasting, rather my study was looking into the perceptions of the participants who use it and how screencast feedback had helped them to support their students writing. I also considered ethnography as an approach with its roots in anthropology and an in-depth focus on how the culture of a group of people explain their behaviors and perspectives (McCormack, 2014; Ravitch & Carl, 2019). Ethnography was not an approach that I could use because one of the primary conditions for this approach would not be met. Even though the participants in my study were secondary teachers with similar experiences, they would not necessarily share the same culture, norms, behaviors, and beliefs of a culture-sharing group which is required of ethnographic study (Ravitch & Carl, 2019).

Role of the Researcher

In my role as researcher and observer, it was important to note any biases and how they were managed in my study. A key component of keeping these biases in check was my reflective journal and member checking of my impressions of what my participants shared. The topic of my study was not only one that I was familiar with, it was also a practice that I enjoyed engaging in and felt positive about. If not checked, this positive outlook on screencasting feedback could impact how I viewed my data and ultimately my results. I managed these biases by maintaining and sharing my reflective journal as I completed my study.

From my perspective, even with this known bias, I felt my role as researcher did not conflict with my present position as a secondary English teacher because I was not

employed at any of the possible sites, none of my participants were my subordinates, and I did not have a supervisory role in any capacity related to my study or participants. To be more transparent, I do have a secondary professional role as a technology trainer which widens my professional learning network and served as a source for participant recruitment. Even in this role though, my technology training sessions were not conducted at the same time of recruitment, and participation in my study was noncoercive and voluntary. In both my roles as a secondary English teacher and as a technology trainer I used screencast for feedback but there was no foreseeable conflict having used this method of feedback and conducting my study.

Methodology

In this section, I give details about the methodology for this study including descriptions of participation selection, recruitment, participation procedures, instrumentation, an interview guide, reflective journals, data collection and a data analysis plan. In addition, I discuss trustworthiness and ethical considerations of this study.

Participant Selection Logic

The target population for this study included secondary seventh- through 12th- grade teachers who had experience using screencast as feedback on student writing. The target population size was three. According to Creswell and Clark (2017) purposeful sampling includes selecting individuals based on their knowledge or experience of the phenomenon. Despite the number of participants in my study being low, the use of multiple data sources helped yield thick, rich data and therefore had a high chance for my

results to reach saturation or the point in data analysis where information is repetitive and no longer new (see Guest et al., 2006). Because I was not using a grounded theory approach, the traditional definition of theoretical saturation did not apply in my study.

Participant selection required both inclusion and exclusion criteria. For inclusion in the study, participants were limited to (a) secondary teachers (Grades 7–12) who (b) had at least 1 month of experience using screencast for feedback or had made a minimum of one screencast feedback video on high school students' writing. My sample size was three teacher participants and the recruitment process was through online professional learning networks with an education focus. I had three plans for recruitment using my professional learning network. This process included emailing directly first, then social media, then recruiting via the Walden participant pool. I was also recruiting internationally to open the study to a wide variety of participants. Participants were known to meet the criteria once they had responded to the invite and self-selected that they fit the inclusion criteria on a form, prior to the interview. Additionally, I asked teachers for their school email address so that I could confirm that they currently were employed as a secondary teacher. I also used the beginning of the interview to confirm that the participant had experience with creating screencasts before beginning the interview.

Instrumentation

For my exploratory single-case study, there were two data sources. Each of the instruments that were used in data collection were researcher-designed. They included (a)

interview protocol, and (b) a postinterview screencast reflection. Table 2 shows the data

sources aligned to the RQs and Yang and Carless' (2013) feedback triangle.

Table 2

Research Questions Aligned to Data Sources and Feedback Triangle Dimensions

Research question	Interview question	Postinterview reflection question	Feedback triangle dimension
RQ1: What are the experiences of secondary teachers using screencast as feedback to support writing?	1–7	1–3, 6	Structural
RQ2: What aspects of feedback do secondary teachers choose to focus on during screencasting?	8–10	4, 6	Cognitive
RQ3: What are the reasons for the choices secondary teachers make when delivering screencast feedback	11–16	5, 6	Social–affective

Interview Protocol

The interview protocol was the first instrument I designed and was a

semistructured interview guide that went through multiple revisions (see Appendix B).

Several colleagues in the field of education with advanced degrees tested these questions

to help ensure alignment and their feedback was incorporated. The questions in the guide

were directly aligned with my three RQs and the three dimensions in the feedback

triangle framework (see Yang & Carless, 2013). I based the guide on the refinement

procedures as recommended by Castillo-Montoya (2016) and Jacob and Ferguson (2012)

in an effort to produce effective qualitative interviews. The guide included introductory

questions for rapport building, an opening ensuring the participant fits the inclusion

criteria key questions, key questions, a voluntary invitation to share a screencast sample,

and closing statements. This interview guide was based on the opinions of Merriam and

Tisdell (2016) who regarded interviews as a source of data that provides the researcher with non-observable perspectives about a specific phenomenon. To demonstrate the sufficiency of the data to answer the RQs, I have shown alignment between the 16 interview questions and the RQs. As shown in Table 1, interview questions 1-7 were designed to provide data to answer RQ1 and are aligned with the structural and social-affective dimensions in the conceptual framework selected for this study which is the feedback triangle by Yang and Carless (2013). The structural dimension refers to how the disciplinary practices in conjunction with institutional policies determine how the feedback process is arranged and what resources are mobilized in providing feedback (Yang & Carless, 2013). Therefore, the IQs 1-7 were designed to better understand the mode, such as what software or applications the teachers use, how often they used this method of feedback and general success and challenges they had in the implementation of this type of feedback. The social-affective dimension, describes how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment (Yang & Carless, 2013). These first IQs helped me gather information about the experiences of secondary teachers using screencast feedback on student writing and how that experience shaped their perspectives of screencast feedback.

IQs 8-10 were designed to provide data to answer RQ2 and are aligned with the cognitive dimension of the feedback triangle by Yang and Carless (2013). The cognitive dimension is the intellectual content or subject of the feedback and is what is being communicated to the student regarding the identification of issues, and suggestions and resources to be applied in future (Yang & Carless, 2013). Questions 8-10 focused on

gathering information about what content, subject, or aspects for correction on students' writing teachers would make the focus of the screencast feedback. Therefore, these questions were designed to elicit what teachers were saying in their screencasts and how they choose to use that time to provide feedback; for example, grammar, mechanics, organizational structure, tone, or style. Finally, IQs 11-16 provided information to answer RQ3 and were aligned with the social-affective dimension of the feedback triangle by Yang and Carless (2013). The social-affective dimension, describes how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment. Therefore, the last set of questions in the interview protocol 11-17 focused on the reasoning behind the choices teachers made when providing screencast feedback with specific attention on how they used praise, tone, facial expressions and other strategies to build relationships with students in hopes that students would be able to uptake the feedback.

Postinterview Reflection

The postinterview reflection was completed individually by participants after the interview. The form had questions that were different from those the interview protocol, but focused on the same content areas in an effort to reveal the same or different information previously given by the individual participant (see Appendix C). Participants had up to a week to respond to the reflection, and this semi-iterative exchange gave participants the opportunity to construct well-formed responses at their convenience. Participants also used the postinterview reflection as a chance to revise previous answers from the interview and to provide more thoughtful, relevant data (see Fritz &

Vandermause, 2017; Gibson, 2010; Seidman, 2006). Asking participants additional, general questions at a time after the interview helped to triangulate the results (Thurmond, 2001). The postinterview reflection instrument has a total of six questions that were open-ended and were not specifically aligned to any single RQ or dimension of the feedback triangle. However, the chance for participants to reflect supported robust triangulation revealing either confirmation of previous answers, or a difference.

Procedures for Recruitment, Participation, and Data Collection

Once I received IRB approval, I began recruitment. There were two pathways for recruitment that included consent for each. An initial invitation digital flyer was shared via email (see Appendix D) to individuals who were believed to fit the study's inclusion criteria. These individuals were identified through my online professional learning networks with an education focus. The email included the letter of consent in the body and invited individuals to read about participant criteria, purpose, interview procedures, voluntary nature of the study, risks and benefits, lack of payment, privacy, and ability to reach contacts and ask further questions. After reading the information recipients could either respond to the email by typing "I consent" or ask for more information about the study, or not respond at all. If recipients consented to participate they received a follow-up email to choose an interview time and date.

The second pathway for recruitment started with posting a digital flyer on social media. The digital flyer advertised the study and was hyperlinked to an online form that had several parts featuring self-select inclusion criteria questions that individuals advanced through based on their answers. The sections of the recruitment form began by

featuring a yes or no option for inclusion criteria. If recipients did not meet either of the

inclusion criteria they landed at the end of the form thanking them for their time and

willingness to complete the form, but were told they unfortunately did not meet the

study's criteria requirement. If the recipient answered 'yes' to both the inclusion criteria

questions they continued through the form and read through the same informed consent

that was used for email participants and was given details about the study which are the

number of required participants, purpose, interview procedures, voluntary nature of the

study, risks and benefits, lack of payment, privacy, and ability to reach contacts and ask

further questions. After reading the information, recipients either responded to a question

saying "I consent" or "I do not consent." If they consented, the form allowed them to

share their work email for me to follow-up via email with a request to choose an

interview time and date (the request for a work email vs personal email was to ensure

teachers were actually employed at a secondary school). If they did not consent, they

were thanked for their time and the form was completed without asking for any private

details. Once I had three consenting participants I closed the online form.

      The procedures for participation included additional steps. Once three participants

volunteered and consented to participate for my study via the recruitment form, I

individually sent each an email invite that mentioned four important aspects. The first

was to invite them to schedule their one time 60-min Zoom audio-recorded meeting

where I conducted the semistructured interview. Additionally, participants were informed

about an optional opportunity to share a sample student screencast during the interview.

They were also notified of the postinterview reflection as part of the study that should

take no more than 15–20 min of their time and should be completed within a 1 week time frame after the scheduled interview. Overall, participants were asked to share no more than 90–95 min of their time to participate and contribute to the study including the 10–15 min to review my interpretations of their answers from the interview and postinterview reflection shared with them in one- to two-page document. An email outlining all of these steps were shared with the three qualifying participants that had volunteered.

The procedures for data collection related to the interview, began with audio recording a semistructured virtual interview with 16 questions (see Appendix B) with each volunteer using an online platform Zoom. During the interview there was an optional opportunity for participants to share their screen and show a sample student screencast feedback created. If participants shared a sample, they were asked questions about this screencast sample. At the end of the interview participants received an email with a link to the postinterview reflection form that had six questions (see Appendices B and C). Participants had up to 1 week to respond to the postinterview reflection form. Both the interview and the postinterview reflection form were considered data sources. Since the student sample was optional, if it was shared during the interview the information from the sample was counted as part of the interview responses.

The interviews held over Zoom were audio recorded via Zoom software and converted and stored locally on my computer directly after. A back-up audio recording was also in process on a separate mobile device using the app Audio Record Pro. Both recordings were only available on the password protected devices and later stored in the

same password protected location. Although I had my webcam on during the interview,

participants had the option to either have their cameras on or off. Whether participants

had their cameras on or off, having the meeting audio-recorded with a backup allowed

me greater opportunity to engage fully, give eye contact, read emotions if applicable,

make sure the participant remained comfortable if applicable, and possibly probe for

further information (see Novick, 2008; Opdenakker, 2006). Audio recording also gave

me the freedom to take notes for review at a later time. Distance was not an issue, using

Zoom to conduct the interviews eradicated that along with it being cost effective (Novick,

2008; Rubin & Rubin, 2012). At the end of the interview and I gave an open invitation

for any follow-up questions if necessary.

I then downloaded the audio file onto my password protected computer and my

committee members later had access to de-identified raw data via the data management

software Dedoose. I uploaded the audio recordings to Kaltura for transcription. Once

Kaltura made a text file of the audio, I copied and pasted it into a Word document. I then

began preparing the transcript for data analysis. Ensuring accuracy of the transcript,

which can sometimes be under described and mentioned in research as a minor

independent logistics issue (Cibils, 2019) was in my study a detailed process which

included listening carefully to the audio recording multiple times and checking the

transcript given by Kaltura line by line. Transcription software can be flawed with errors

found due to sound quality, accents, pronunciation, and so forth (Burkholder et al., 2020).

I not only checked for errors but also took the opportunity to take copious notes in my

reflective journal on changes in pitch, tone, and or any emotion or otherwise that had

significant implications but was missed during textual rendering of the interview (see

Cibils, 2019). Then, the notes taken during the interview, and the notes taken during the

transcription process were added into Dedoose. These notes came from my reflective

journal, especially those noting my first impressions after the interviews. Summaries of

the interview and postinterview impressions were formatted into a one to two-page

document for each participant and was emailed to them for member checking (see

Carlson, 2010).

There were additional procedures for data collection of the second data source,

the postinterview reflection. Once a participant had completed the reflection, I

downloaded the results and added their answers into a Word document. A one- to two-

page master file with my interpretations of the interview and the postinterview reflection

was sent for member checking to each participant to highlight any disparities. Reviewing

this document, and confirming or denying the accuracy of my impressions, took no more

than 10–15 min of the participant's time. Appendix E provides examples of postinterview

reflections and corresponding interview excerpts and codes.

Data Analysis Plan

For this qualitative study, I used thematic analysis. Thematic analysis is the

process of identifying patterns or themes that can be either semantic (explicit) or latent

(underlying; Braun & Clarke, 2006; Maguire & Delahunt, 2017). In my first round of

coding, I used open coding or initial coding which is appropriate for all qualitative

studies and particularly useful for "remaining open" to the development of possible

categories contained in the data especially when there are multiple sources of data

(Saldaña, 2021; p.148). As I reviewed the data sources and read text segments I kept in mind the three dimensions in the feedback triangle framework (see Yang and Carless, 2013) and what I learned in the literature to allow verbiage to influence the development of codes. All codes identified in this stage were tentative and provisional and could be changed or reworded as analysis progressed (Saldaña, 2021). In the second cycle, I grouped codes into categories by identifying patterns that led eventually to temporary themes. From the temporary themes, I reviewed the data and codes for emerging themes to answer the RQs. From the start of this process, the open coding used in the first round of coding highlighted parts of the interview and postinterview reflection form that was explored further for patterns or themes that were either explicit, latent, or both.

I used the qualitative coding software Dedoose in my final capstone study. Dedoose was an exceptional choice in that it was user friendly, had a colorful and engaging interface, and was affordable. It also allowed for initial coding where a researcher can prepare, organize, and explore their data. This software featured the ability to develop categories for data, and also specialized in basic coding for interviews. It further developed my category system beyond basic coding and put data through a second cycle of fine coding. Another software alternative would be ATLAS.ti which is a powerful software option that offers the same features as Dedoose, along with the ability to visualize data using graphics, audio, video, and geospatial formatting (ATLAS.ti, n.d.). Either of these would be contenders for choice in my study. At this time, I decided on the latter option as it appeared to be more user-friendly with a simpler interface.

The single case for this study was bound by the phenomenon of providing screencast feedback. A *unit of analysis* is defined as a phenomenon occurring in a bounded context (Baxter & Jack, 2008; Miles & Huberman, 1994). The embedded units of analysis for this proposed study and context were bound by the three secondary teachers teaching seventh through 12th grade. I first conducted an analysis of the data that I collected within each unit of analysis, including data from the interview, any discussions about an optional sample student screencast, and the postinterview reflections. Therefore, initially, I analyzed the data within each unit of analysis. After examining the data within each unit of analysis, I then did an analysis across the data sources, of all three interviews, optional sample student screencasts, and postinterview reflections. I was looking to see if the codes and categories were consistent across the units of analysis and noted any differences. The resulting themes answered each of the RQs.

Issues of Trustworthiness

There were several trustworthiness issues important to discuss in relation to this proposed study. A key factor of qualitative research is addressing trustworthiness. As a researcher, it was important for me to incorporate necessary procedures and approaches to ensure rigor as my study unfolded (see Ravitch & Carl, 2021). This approach helps the reader build confidence in the results, it will also allow for the study to be viewed as research that accurately portrays the phenomenon in question. The strategies that I used in my study to ensure trustworthiness were: ensuring interview questions were tested in the field, sending transcripts for member checking, using peer debriefing for data

analysis, rich descriptions from interviews, and maintaining a reflective journal

throughout the research process (Burkholder et al., 2020). Below I describe in more detail

how I was able to increase trustworthiness by addressing credibility, transferability,

dependability, and confirmability.

In an effort to ensure quality, trustworthiness and credibility in qualitative

research it is imperative to engage in a variety of valid, person-centered practices

(Ravitch & Carl, 2021). One such strategy would be to employ relational ethics as

espoused by Ravitch and Carl (2021) which requires inquiring into the relational

dynamics between researchers and participants and commitment to understanding of the

need to allow yourself to become vulnerable. This openness in research perspective

allows an investigator to be sensitive to issues related to consent, boundaries,

transparency, and so forth.

Credibility

Specific strategies that were beneficial to my qualitative research study, and that

helped to address trustworthiness were reflective of the quality criterion as shared by

Shenton (2004). Of the criterion listed, despite all being quite useful, there were some

that suitably enhanced and appropriately fit my research study. In the category of

credibility, the first criterion is random sampling or snowball sampling which will

address bias if purposeful sampling is used. The next is *triangulation* or the use of

different methods. One way to use different methods will be to combine the use of focus

groups and interviews, which will help to establish credibility. My study used both an

interview and postinterview reflection for triangulation. My interview protocol included

iterative questioning, and probing follow-up questions to "elicit detailed responses" and or allow "contradictions to emerge" (Shenton, 2004; p. 67).

Additionally, due to the emerging nature of my research study, frequent debriefing sessions with my peers helped to guide it. These sessions brought about different perspectives and enhanced the reflective commentary. One final and essential consideration for credibility is the use of member checks for data collected. As a researcher I entrusted the final data and interpretations to be evaluated by the participants themselves, this allowed for accuracy of data and served to bolster my study's credibility (Shenton, 2004). In further support of this, according to Madill and Sullivan (2018), member checking is often referred to as the gold standard of qualitative research validity checks. Motulsky (2021) validates this gold standard as it is an integral and critical strategy for establishing credibility.

Transferability

Transferability refers to how well the findings in research can be applied to other studies (see Merriam & Tisdell, 2015). In this study, I communicated clearly my process leading up to and beyond the emergence of themes and this will allow another researcher to conduct a similar study. Describing the number and demographic of my participants, data collection methods, and approvals that were given throughout the study helped determine transferability. Additionally, by using purposive sampling albeit with inclusion criteria, and allowing participants to join globally help in maximizing variety of participants (see Merriam & Tisdell, 2015).

Dependability

Dependability describes how replicable a study is over time (see Merriam & Tisdell, 2015). Through detailed descriptions and evidence of the data collection methods, analysis, and reporting a study can achieve dependability (Burkholder et al., 2020). One of the strengths of my study was the data collection method where participants completed an interview and then later completed a reflection. This separation in time allowed the data given in the interview and then later in the reflection to provide future researchers dependability in the data I collected. I also described how all aspects of my study were aligned and provided evidence of the data and analysis and how it answered the RQs (see Ravitch & Carl, 2016). This study was presented in such a way that future investigators could very well duplicate the process. The resources, supports, RQs and data collection tools, such as the interview guide and reflection form were all included in the study for possible review.

Confirmability

Confirmability refers to how objective a study is and ensures that the results are a product of the participant and not the researcher (Shenton, 2004). By carefully listing the limitations of the study and giving detailed descriptions of the methods helped show transparency. Additionally, by keeping an audit trail and a reflective journal of the choices I made throughout the study also confirmed the results (Cronin, 2012, Orange, 2016). I was also reflexive about my assumptions and identified where there may be bias during data collection and analysis (Shenton & McKenna, 2004; Houghton et al., 2013; Shenton, 2004).

Ethical Procedures

For this study, followed ethical procedures by submitting an application to the IRB at Walden University. The first ethical procedures I had in place were related to the treatment of human participants. There are many measures to be taken by researchers, to protect the privacy of participants in a study, to minimize harm and respect others. One of the first measures I took was undertaking the suggestions of the IRB, as it helped from the onset to allow me as the researcher to "conceptualize what 'harm'—a key concern of IRB committees—might mean and look like in the proposed study" (Ravitch & Carl, 2021; p. 197). Thereafter, ensuring informed consent and even assent (agreement by minor), is documented prior to participation. Taking measures to guarantee confidentiality and anonymity by using synonyms and managing "data to safeguard participants identities" are just a few of the ways I protected privacy (Ravitch & Carl, 2021; p. 214). James and Busher (2007) shared growing concern when using the internet as the medium of investigation in respect to authenticity of email interviews. They concluded that if "educational researchers cannot be sure that they have carried out trustworthy research, then this raises questions regarding its benefit in developing a society's knowledge base" (James & Busher, 2007; p. 110).

As a researcher I was conscious that these measures fit the research design and appropriately safeguarded participants. Therefore, all aspects of recruitment, consent, and data collection steps are outlined below and throughout my study. To ensure privacy during the study, I stored the collected data on my personal computer and gave access only to supervising faculty at my university. After the study, I secured the data in a secure

password-protected location on my personal computer where it will remain for 5 years.

To prevent readers from deducing a participant's identity, names and demographic details

of participants such as gender, ethnicity, and number of years in their position was not

kept, and was redacted from all files, and does not appear in the final results of this study.

Participants was recruited as individuals via social media, and I did not partner with any

organization nor was the raw data shared with a transcriber, translator, or anyone outside

my Walden supervisors. At the end of my doctoral program, this study was published

using ProQuest and made accessible to a community of fellow scholars.

To my knowledge, there were no psychological, economical, or legal risks

needing acknowledgement in my study. Participants were recruited through my social

learning networks, and though, I was known to my participants in a professional role, I

acknowledge there was no conflict of interest and I ensured this by not recruiting

participants that were my subordinates. Further, the nature of the study did not in any

way harm my participants professional reputation. The participant recruitment process

was non-coercive and voluntary. Participants were allowed to join the study on their own

accord and there was no compensation for participation.

The informed consent given to participants was tailored using language and

participant-friendly terms, including the study purpose, data collection procedures, and

gave clear details on inclusion criteria, time commitment for voluntary participation, and

any conflicts of interests. Invitees were given enough time to review the study

information and ask questions before asked to consent. The informed consent also clearly

gave assurance that a participant had the right to withdraw from the study at any time and

the declination would not have any negative impact. It included the number of

participants that I was seeking, any foreseeable risks or discomforts, mentioned briefly

the benefits of the research to society, that there will be no compensation for

participation, and ensured that privacy will be maintained by keeping the data in a

password-protected secured location for 5 years. There was also a statement that the data

would not be used for any other purpose other than research. Last, the consent form was

free of language that would waive the participant's legal rights, invited the participant to

keep a copy, and included how the participant could contact either the researcher for

general questions about the study, or the university's Research Participant Advocate if

they had questions about their rights as a participant.

Summary

The methodology chapter of this study included a rationale for my research design

and approach, an in-depth description of my role as a researcher, my participant selection

and recruitment process, instrumentation that was created for this study, and my data

analysis plan. To address issues of trustworthiness, the chapter also included credibility,

transferability, dependability, and confirmability. Chapter 4 will include details about the

setting, demographics, data collection, data analysis, evidence of trustworthiness, and

results of this qualitative single-case study.

Chapter 4: Results

The purpose of this qualitative study was to explore screencast feedback as a strategy to support secondary students in their effort to improve their writing. To accomplish this purpose, I collected data from two resources. First, I interviewed secondary teachers who used screencasting to provide feedback. Second, I had teachers fill out a postinterview reflection on a screencast the teacher had previously provided to a student. In this chapter I will report the results of this qualitative single-case study. It includes the setting, demographics, data collection, data analysis, evidence of trustworthiness, results, and a summary.

Setting

The setting for this qualitative study was completely online. Participants were recruited via email and were known to me through my social learning networks. Individuals who volunteered for the study were located in the United States and the United Arab Emirates, so interviews were conducted via Zoom at a time and location that was convenient to the participant. Therefore, there was no single setting for this study. Despite normalization, several conditions may have influenced the interpretation of study results. These variables may include the length of time participants had used screencast feedback, how long ago it occurred, how many screencast feedback videos they had experience making, whether or not they had received training on screencast feedback software, their own ability and intuitiveness to the use of this technology, and other variables in this regard. Consequentially, participants may have had different experiences.

Demographics

The participants for this study included three female teachers. Their screencast feedback experience ranged from 1 month to 5 years, with two of the participants having years of experience. Teacher participants ranged in overall teaching experience between 11 to 21 years, and each taught across the same secondary levels from Grades 9 to 12. They each also varied in content areas and were designated as teachers of Spanish, physics, and English (see Table 3).

Table 3

Participants' Teaching Experience, Current Content Area, and Grade Level

Participant identifier	Teaching experience (years)	Screencast feedback experience	Current content area
P1	21	5 years	Spanish
P2	19	5 years	Physics
P3	11	1 month	English

Data Collection

I received IRB approval (no. 01-10-24-0026888) on January 11, 2024, and began recruiting participants soon afterward. For this qualitative study, I collected data from two sources. One source was interviews of secondary teachers who used screencasting to provide feedback. At different times, I sent out emails to individuals from my social learning networks and the first three people I contacted met the criteria and volunteered to participate. P1 was contacted 1 month earlier than P2 and P3. Due to my knowledge of a teacher's holiday, I delayed my last two invitations for 1 month. I subsequently booked virtual interviews in zoom at times convenient to the participants. I conducted a total of

three virtual interviews in Zoom from my home office using the interview protocol

described in Chapter 3. I audio recorded in two ways. I used the embedded record feature

within Zoom, and I also used the Voice Record Pro app as a backup recording. Interviews

ranged between 52 and 99 min. I also collected data from a postinterview reflection.

Unless noted, data were collected as described in Chapter 3. Additionally, no unusual

circumstances occurred during the data collection process, unless explicitly stated.

Interviews

Interview with P1 occurred on February 4, 2024, and lasted 52 min. My next

interviews with P2 and P3 occurred on March 3, 2024, and lasted 99 and 71 min,

respectively. For transparency and clarity of reporting, Table 4 lists the three participant

pseudonyms, the date of each interview, the time each occurred, and the duration of each

interview.

Table 4

Interview Dates, Times, and Duration

Participant identifier	Interview date (2024)	Interview start time (GST)	Interview duration	Postinterview completion date (2024)
P1	February 4	6 p.m.	52 m 56 s	February 4
P2	March 3	1 p.m.	99 m 38 s	March 10
P3	March 3	9 p.m.	71 m 19 s	March 10

Note. GST = Gulf Standard Time.

To prepare interview data for the data analysis phase, I transcribed audio to make

written transcripts by using Kaltura software and bringing the text file into the word

processor Microsoft Word. I reviewed the transcripts and listened to the audio and edited

the transcript for accuracy. I replaced all name references to de-identify the written

transcripts thus protecting participant confidentiality.

Asynchronous Interviews

Another source of data included asynchronous interviews. I emailed each

participant a link to an online survey with a list of seven reflective journal prompts which

they returned to me within 1 week. I was collecting this data source between February 4,

2024, and March 10, 2024. I prepared the asynchronous interview data for analysis by

downloading the survey results as an Excel file and then brought the Excel file data into

MS Word. I compiled the answers to be reviewed and coded along with its corresponding

transcript.

Member Checking

Once I reviewed the transcripts and postinterview reflection forms, I developed a

one- to two-page document to send to each participant to review for accuracy. This

document outlined my impression of both the transcript and postinterview reflection, as

described in Chapter 3. It also provided me an opportunity to ask follow-up questions

related to specific areas where I needed clarification. I heard back from all participants,

and none of them requested any edits or clarification. For P1, I clarified with her via

email about how long she had been teaching and how many screencast videos had she

made. I took this information into consideration during data analysis. Next, I uploaded

the Microsoft Word file of each transcript and postinterview reflection into Dedoose in

preparation for coding.

Data Analysis

I used both open coding recommended by Saldaña (2021) and thematic analysis as advised by Maguire and Delahunt (2017) for this exploratory single-case, qualitative research study. I conducted coding by bringing the Microsoft Word file of each transcript and postinterview reflection into Dedoose. To track in the coding process, I developed a codebook, as described by DeCuir-Gunby et al. (2011; see Appendix F). Initially, in the open coding process, several codes were apparent in the transcripts and reflection forms. As I reviewed the data sources and read text segments, I kept in mind the three dimensions in the feedback triangle framework (see Yang & Carless, 2013) and what I learned in the literature to allow verbiage to influence the development of codes. As I further engaged in iterative data coding, new codes and categories emerged, and I experimented with coding hierarchy and rearranged the codes developing the code tree further.

To begin the data analysis process, I coded the interviews first. I looked in depth at excerpts from each participant and compared the codes across the units of analysis across all participants. Next, I coded the postinterview reflection form and compared those codes across units of analysis. Last, to code within units of analysis, I compared excerpts from the interview and excerpts from the postinterview reflection form. This was done for each participant individually to triangulate the data and see if participants confirmed previous findings or brought new information. Throughout the data analysis process, I fine-tuned the codes to reflect alignment with the three dimensions of the feedback triangle (Yang & Carless, 2013), which were structural, cognitive, and social-

affective. I frequently revisited the codes and their definitions reorganizing my structure

and continued to include, remove, or rearrange based on how well they fit the evolving

code tree and themes. I ended up with a total of 56 codes, which I then organized into 11

categories with six subcategories. These resulted in six themes. Each theme was aligned

to a construct based on the feedback triangle framework (Yang & Carless, 2013). Table 5

includes the final number of themes, categories, and codes for all data sources.

Table 5

Themes, Categories, and Codes

Theme	No. of categories grouped with the theme	No. of subcategories	No. of codes
1. Secondary teachers' use of screencast feedback depends on different modes and access to technology.	2		10
2. Teachers face challenges with resources, time, and readiness when implementing screencast feedback.	1	4	9
3. Teachers target elements of writing and interpersonal exchanges to improve feedback uptake.	2	2	13
4. Teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake.	1		4
5. Teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety.	3		14
6. Teachers believe that the use of screencast feedback has a positive influence on students' overall understanding and on teacher–student interpersonal relationships.	2		6
Total	11	6	56

When I compared the data within each unit of analysis, I found that participants

confirmed the ideas they shared in the interviews in the second data source, the

postinterview reflection. This shows triangulation that the ideas represented by codes,

although provided in a different format, and separated by time, held consistent for each

participant. For example, P1 had excerpts from both the interview and postinterview reflection that were coded as understanding content. In the interview, P1 mentioned that when she would give students "pointers" in written feedback, students would not get the sound of the word. With screencast feedback, students understood more. Later in the reflection she mentioned that a video was essential because screencast feedback allowed students to not only "read along" while receiving the feedback but were also able to get "clarification" and "hear pronunciation" in her content area of Spanish (see Appendix E).

When referring to barriers, P2 spoke in her interview about challenges with noises in her environment when it was time to record, especially at school. Later, in her reflection she mentioned the importance of "time and place" and that finding a "suitable time and place" at school was difficult due to a "busy school schedule and heavy workload". Additionally, with excerpts coded under uptake, P3 revealed in the interview a success story of a student who "fixed her spelling mistakes and punctuation" from a screencast feedback. Later in the reflection, P3 said that overall students "improved their writing considerably."

Another example of triangulation when comparing data across sources was when excerpts from P3 was coded as always first in regard to positioning positivity in a screencast feedback. P3 mentioned that in her experience, using key words and phrases such as "like" and "love how you do this" in a screencast feedback gave students a "sense of pride." Later, she reflected and produced a similar response where she stated in her reflection that it was important to give "lots of positive feedback" especially at the beginning of a screencast and this was so that students could see that the teacher

"appreciated" their work and effort. For an in-depth view and comparison across units of analysis, see Appendix E.

From each theme, categories and codes were derived. The first theme, secondary teachers' use of screencast feedback depends on different modes and access to technology, is subdivided into two main categories and further into 10 additional codes. This theme applies to data matching the structural dimension of the feedback triangle (Yang & Carless, 2013) and includes the categories of mode to create or deliver and access to technology. The codes of platform, email, link, cloud service, and application were put into the mode to create or deliver category. The category of access to technology included the codes institution, peers, training, device, and savviness. Table 6 provides an exemplar quote from both data sources that best describes data that were coded in that theme. All of the quotes in the following tables are from the participant interviews, unless otherwise stated.

Table 6

Participant Responses Corresponding to Theme 1

Theme	Category	Example quote
Secondary teachers' use of screencast feedback depends on different modes and access to technology.	Mode to create or deliver	"Whenever I share the link with the student on ScreenPal, I still see how many times students viewed the comments." (P2)
	Access to technology	"Basically, I mainly use my MacBook and my iPad." (P2)

Excerpts coded in the first theme, secondary teachers' use of screencast feedback depends on different modes and access to technology, highlight that teachers' screencast experience included using software or a program to create or deliver the feedback. Also,

according to this theme teachers needed access to technology to do so. P2 shared that she needed a device like a MacBook or iPad. These statements reveal the use of technology as a fundamental aspect of using screencast feedback.

The second theme, teachers face challenges with resources, time, and readiness when implementing screencast feedback, has one category and is subdivided further into four subcategories and then further into nine additional codes. This theme applies to data matching the structural dimension of the feedback triangle (Yang & Carless, 2013) and includes the larger category of challenges and barriers and subsequent categories of resources, time, diverse learning needs, and readiness. The codes cost of software and video storage were applied to the category of resources. The category time included the codes consumption and time frame, and diverse learning needs had the code student receptiveness, student number, and student need. The category readiness included the codes personal and environmental. Although, all participants faced a variety of challenges, the challenge of student receptiveness was only exclusively mentioned by P1 in both the interview and postinterview reflection form. P1 mentioned facing a challenge with some student who would not open or view the screencast feedback. This was not considered as discrepant data as it fell within a theme and category shared by other participants. However, it is highlighted here as a unique experience not mentioned by the other participants. Table 7 provides an exemplar quote from both data sources that best describes data that were coded in that theme.

Table 7

Participant Responses Corresponding to Theme 2

Theme	Category	Example quote
Teachers face challenges with resources, time, and readiness when implementing screencast feedback.	Challenges and barriers (time consumption)	"I would love to be able to do it for all the 130 students that I teach. But it's not possible." (P3)
	Challenges and barriers (environmental readiness)	"Actually, sometimes the noise around me because I really wanted a calm room, especially when I want to record the video. While being in school [there are] noises around you." (P2)

Excerpts coded in the second theme, teachers face challenges with resources, time, and readiness when implementing screencast feedback, captures the challenges and barriers teachers faced when implementing screencast feedback. P3 shared the difficulty she had with making screencast feedback for all of her students and stating due to the large number of students she had it was just "not possible" to do so. P2 brought light to the issue of the environment for recording may not always be appropriate. She admitted that "noise around me" was often a barrier that she faced due to the business of the school. These examples put into perspective some of the hurdles teachers needed to face and overcome in order to deliver this type of feedback.

The third theme, teachers target elements of writing and interpersonal exchanges to improve feedback uptake, is aligned with data matching both the cognitive and social-affective dimensions of the feedback triangle (Yang & Carless, 2013). This theme is subdivided into two main categories elements of writing and interpersonal exchanges and further into two subcategories and 13 additional codes. The category of elements of writing includes the codes mechanics, syntax, linking words, sentence types, word order,

organizational structure, vocabulary, informal language, and reasoning/arguments. In the

category of interpersonal exchanges, the subcategories leveraging encouragement and

positioning positivity were applied. The codes humor and shrinking mistakes are found in

the subcategory of leveraging encouragement. The subcategory positioning positivity

includes the codes always first and with negative feedback. Table 8 provides an exemplar

quote from both data sources that best describes data that were coded in that theme.

Table 8

Participant Responses Corresponding to Theme 3

Theme	Category	Example quote
Teachers target elements of writing and interpersonal exchanges to improve feedback uptake.	Elements of writing	"Whereas the word order in writing their sentences is a little bit more something that they need to think about. They need to process. I think it's easier if they see that thinking process with the video that they can have access to." (P1)
	Leveraging encouragement	"Because this is the essence, let's say, of the video. Because they will remember it forever. Remember that they are hearing you, they are seeing you…If you don't write the good words, they will not like to open the video next time. Right, Or not. This will discourage them…because the teacher will only highlight my mistakes. She will not see the effort I put…I have also to appreciate this…So that they will always be encouraged and excited to open the link to start the new journey." (P2)
	Positioning positivity	"No student, no kid loves redoing work. They hate redoing things. But if you really praise them for the things that they do, do well, it gives them that boost of confidence. It makes them feel good. I don't want them to feel completely bad about their work." (P1)

Excerpts coded in the third theme, teachers target elements of writing and interpersonal exchanges to improve feedback uptake, not only addresses cognitive elements of the feedback such as the elements of writing, but also social-affective elements of feedback as well. While P1 addressed word order with her students to help them with writing assignments in Spanish, P2 focused on leveraging encouragement by saying "good" things because otherwise they will "not like to open the video" the next time feedback is given. Additionally, knowing when and where to say positive things is also an important aspect of giving screencast feedback. P1 addressed the idea of positioning positivity and claimed that no student "loves redoing work" but if you give them praise it will "boost their confidence". These statements highlight how giving correction is important when giving screencast feedback, but being encouraging and positive are just as necessary.

The fourth theme, teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake, is aligned with data matching both the cognitive and social-affective dimensions of the feedback triangle (Yang & Carless, 2013). This theme has one main category critical feedback practices and is further divided into four additional codes. The category critical feedback practices, include the codes being careful, being brief, signposting, and showing examples. Table 9 provides an exemplar quote from both data sources that best describes data that were coded in that theme.

Table 9

Participant Responses Corresponding to Theme 4

Theme	Category	Example quote
Teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake.	Critical feedback practices	"Showing them some examples of where they're going wrong and telling them what they need to use." (P3)

Excerpts coded in the fourth theme, teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake, highlight the skills teachers employed to make their screencast feedback successful. P3 admitted that one of her critical practices was to show students "examples of where they are going wrong" along with making the time to verbally state and explain "what they need to use" in order to uptake the feedback and make corrections. These statements are examples of how teachers employed these critical practices during high stakes situations for student improvement.

The fifth theme, teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety, is aligned with data matching the cognitive, structural, and social-affective dimension (Yang & Carless, 2013), and is subdivided into three main categories structural motivations, cognitive motivations, and social-affective motivations. These categories are then further divided into 14 additional codes. The category of structural motivations include the codes time saving and asynchronous. The category of cognitive motivations include the codes simplification, referencing, uptake, repetition, guidance, conveyance, enhancement, and

visualization. The category of social-affective motivations include the codes

psychological safety, encouragement, relationship building, and personalization. Table 10

provides an exemplar quote from both data sources that best describes data that were

coded in that theme.

Table 10

Participant Responses Corresponding to Theme 5

Theme	Category	Example quote
Teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety.	Social–affective motivations	"It could be something like that where screencast feedback videos are really important. Because now you already have something going on with that student, You already have a relationship. You're handing a video over to a student that knows you, that might even respect you, care, care about what you have to say and respect the feedback that you're giving." (P2)

Excerpts coded in the fifth theme, teachers utilize cognitive, structural, and social

affective motivations to simplify learning, save time, and enhance psychological safety,

indicate how teachers expressed the different motivations that shaped their use of

screencast feedback. In sharing motivations that were social-affective in nature P2

admitted that this type of feedback was "important" because it extended and enhanced the

physical relationship already in existence with a student. When giving them these videos

students may already "know you…respect you…care about you" in such a way they

"respect" the feedback you are given which improves chances of student uptake when it

comes to correction.

The sixth and final theme, teachers believed that the use of screencast feedback has a positive influence on students' overall understanding and on teacher–student interpersonal relationships, is aligned with data matching the social-affective dimension (Yang & Carless, 2013), and is subdivided into two main categories overall understanding and interpersonal relationships, and further into six additional codes. The category of overall understanding include the codes uptake, results and understanding content. The category of interpersonal relationships include the codes relationship building, appreciation and communication. Table 11 provides an exemplar quote from both data sources that best describes data that were coded in that theme.

Table 11

Participant Responses Corresponding to Theme 6

Theme	Category	Example quote
Teachers believe that the use of screencast feedback has a positive influence on student's overall understanding and teacher–student interpersonal relationships.	Overall understanding	"They remembered what I said in the video. And they did well in their coming exam. Can you imagine?" (P2)

Excerpts coded in the sixth theme, teachers believe that the use of screencast feedback has a positive influence on student's overall understanding and on teacher–student interpersonal relationships, gives insight about what elements teachers believed screencast feedback had an influence on. Overall, students improved, and as P2 admitted, students did so because they "remembered" what was said and then later in the exam recalled the information and this led them to do "well in the coming exam". This example

explains the power and reach teacher believed screencast feedback displayed when they used it.

During data analysis, I actively looked for areas of discrepant data that did not align with existing codes or themes. While this data did not present disconfirming cases, as Burkholder et al. (2020) described, it did present additional insights. In total across both data sources, I linked 400 participant excerpts to these 54 codes. Both data sources were represented across all themes. A total of 14 excerpts representing 11 codes were found in the postinterview reflection form and they were savviness, student receptiveness, environmental (readiness), time consumption, shrinking mistakes, always first (positioning positivity), showing examples, enhancement, personalization, psychological safety, understanding, and uptake. The codes found in the postinterview reflection form reinforced the first data source and no new codes were developed. Table 12 shows the code occurrence per participant, theme, and data source.

Table 12

Code Occurrences per Participant, Theme, and Source

Participant	No. of codes in the interview data (no. of codes in the postinterview reflection form)						Total no.
	Theme						
	1	2	3	4	5	6	
P1	11	23 (1)	13 (1)	4	39 (1)	14 (1)	108
P2	10	13 (2)	21 (1)	13	48 (3)	26	137
P3	15 (1)	19 (1)	26 (1)	13 (1)	50	28 (1)	156
Total	No. (%)						
	37 (9%)	59 (15%)	63 (16%)	31 (8%)	141 (35%)	70 (17%)	401 (100%)

When analyzing code occurrences per participant, theme, and source, I assigned 141, or 35% of the 401 codes, to Theme 5, which focuses on how teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. In their interviews and postinterview reflections, teachers shared more about their experiences in this category than any other. The second highest percentage of codes, which was 17% (or 70) of the 401 codes was assigned to Theme 6, which highlights that teachers believe that the use of screencast feedback has a positive influence on student's overall understanding and on teacher–student interpersonal relationships. Individually, P3 had the highest number of coded excerpts which were 156 compared to P2 and P1 who had 137 and 108 coded excerpts respectively. Each theme had at least one coded excerpt from the postinterview reflection form, with theme 2 and theme 5 both having the highest number of excerpts in this category which were four each. Overall, both theme 5 and 6 which had the highest number of occurrences are also the two themes that had a higher number of coded excerpts or data matching the social-affective dimension (Yang & Carless, 2013). This information indicates the importance that social-affective elements have in screencast feedback experiences.

Evidence of Trustworthiness

I upheld issues of trustworthiness in a number of ways. In this section I will describe how I ensured credibility, transferability, dependability, and confirmability. First, I ensured credibility and internal validity by following refinement procedures and ensuring that prior to data collection, the interview questions were field-tested to

eliminate misunderstanding when presented to participants in interviews. I did this

following the strategies suggested by Castillo-Montoya (2016) that I described in Chapter

3. I organized it by sharing the questions with education professionals and after their

review, revising and modifying the questions as suggested. Thereafter, I conducted a trial

interview and made additional necessary adjustments. I believe the review and the trial

interview refined the interview questions and made them easier to understand by

participants. The questions were also left open-ended to allow for the participants to

respond freely and openly without being directed in their responses.

After finalizing the protocol and obtaining approval from the IRB, I conducted the

interviews in a friendly and inviting manner. I listened carefully to participants, recapping

and gently following up on answers to establish trust and ensure honest answers to the

questions which promoted deeper conversation (see Rubin & Rubin, 2012). Second, I

sent my impression of their responses back to each of the participants for member

checking as recommended by Carlson (2010) and Houghton et al. (2013) to ensure

accurate interpretation of their responses. I received responses from all three participants

confirming my interpretations were correct. This included an additional insight from a

follow-up question I asked one participant which I included in the data analysis process.

Next, I chose an analysis process that aligned with exploratory single-case study design

according to Saldaña (2021) which increases the readers trust in both the process and

results. Finally, Shenton (2004) suggested increasing credibility by relating research

findings to prior literature in the field, and that has been done to a great extent in Chapter

5.

Next, I ensured transferability and external validity in three different ways. The first was based on suggestions by Merriam and Tisdell (2015) where I described in detail all the factors defining this study so that readers could decide and trust the results for themselves. Second, in the results section and also suggested by Merriam and Tisdell (2015), many quotes and excerpts are included from the participants themselves in their own words. Sharing their exact words provides rich, thick descriptions of their experience and the phenomenon and allows the reader to understand from their point of view. Finally, by using purposive sampling albeit with inclusion criteria, and allowing participants to join globally helped in maximizing variety of participants (see Merriam & Tisdell, 2015). Participants hailed from two different countries, were teachers from three different subject areas and this helped in maximizing variety of participants (see Merriam & Tisdell, 2015).

Additionally, I improved the dependability of this study in a variety of ways. First, as suggested by Ravitch and Carl (2021), throughout the data collection process and as described in the methods section, all procedures across participants were kept consistent. Second, the three RQs were aligned with the feedback triangle framework and methodology of this study as outlined by Merriam and Tisdell (2015). Last, participants completed an interview and a postinterview reflection form at two separate times. This helped in triangulating the data and to increase confidence in the findings of the study (Yin, 2018).

I also increased confirmability throughout my study in three different ways. First, I kept a researcher journal throughout the data collection process to minimize bias as

suggested by Cutcliffe and Mckenna (2004). As recommended by Orange (2016), I recorded my thoughts, expectations, and surprises on procedural issues and these along with code tree changes were stored electronically and shared with my researcher chair members. Second, as suggested by Spall (1998) my committee members were given the opportunity to scrutinize and provide an independent perspective on my analysis and findings. Third, I actively sought discrepant codes and outliers that did not align with the framework as suggested by Bashir et al. (2008).

Results

In this section, I have organized the results by RQ and the themes that answer them. For each I include a code occurrence table aligned with themes listing the codes and visually representing the data and a code tree for each theme. The summary is at the end of all results.

Research Question 1

RQ1 was, What are the experiences of secondary teachers using screencast as feedback to support writing? As part of data analysis, I determined that themes 1- 6 answered this RQ. The discussion that follows is organized by these themes.

Theme 1: Secondary Teachers' Use of Screencast Feedback Depends on Different Modes and Access to Technology

The first theme that answered RQ1, was secondary teachers use of screencast feedback depends on different modes and access. Figure 4 shows the categories and codes for this theme. This theme has two associated categories 10 codes.

Figure 4

Code Tree for Theme 1 (Structural Dimension)
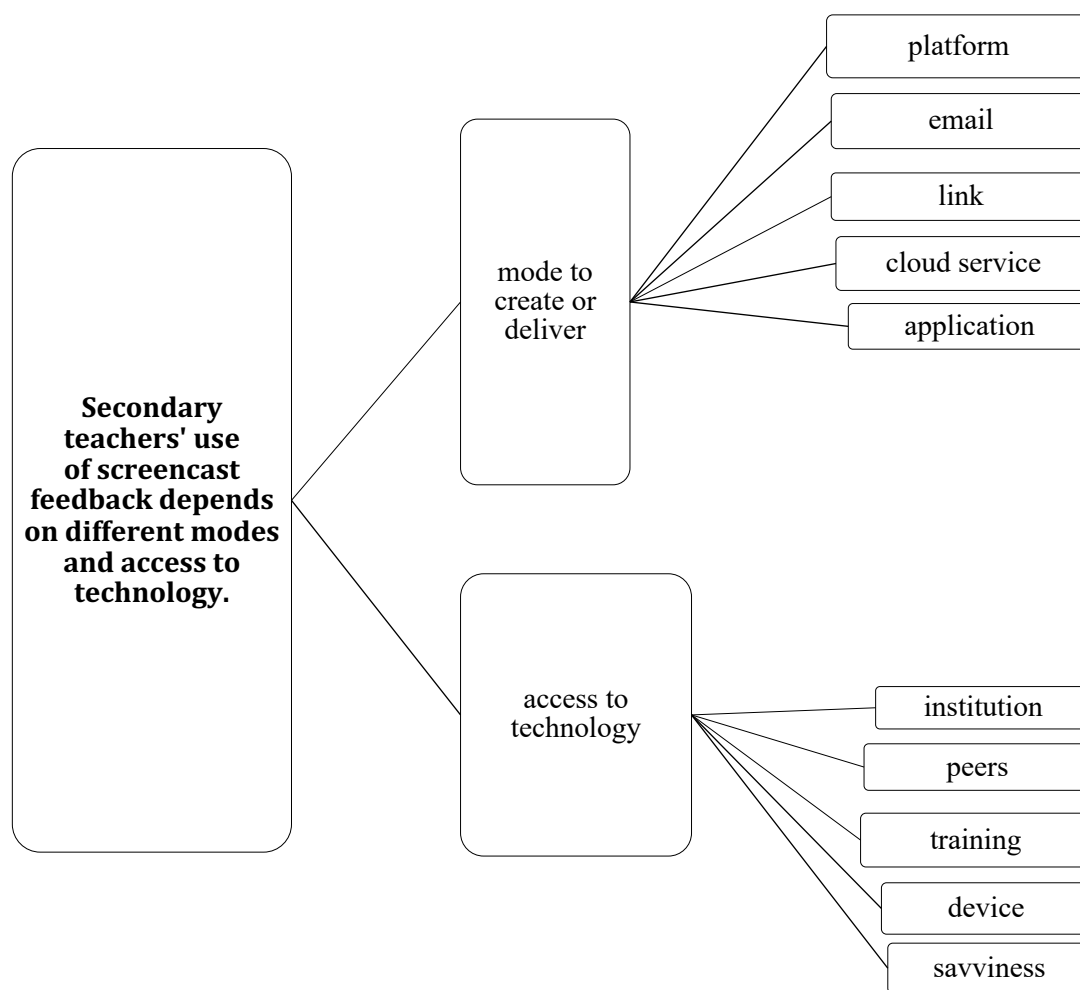
Mode to Create or Deliver. The first category for this theme was mode to create

or deliver and was made up of five codes: platform, email, link, cloud service, and

application. These codes were applied to data excerpts that mentioned the mode teachers

used to create or deliver their screencast feedback. All three participants and interview

data contributed to these codes. I tagged a total of 37 codes in this theme with the highest

occurrence assigned to the code that reflected teacher savviness or skill with technology

(see Table 13).

Table 13

Code Occurrence Aligned With the Influence of Modes and Access to Technology on the

Use of Screencast Feedback

Category	Code	No. of occurrences of code	Total no.
Mode to create or deliver	Platform	8	16
	Email	2	
	Link	3	
	Cloud service	2	
	Application	1	
Access to technology	Institution	3	21
	Peers	2	
	Training	5	
	Device	1	
	Savviness	10	
			37 (overall)

Platform. There were 16 codes in the category mode to create or deliver from all

participants who described the variety of resources required and their experiences to

make screencast feedback. Some experiences had challenges associated with them, others

brought insight. The first mode used for screencast feedback was the use of a platform.

P2 described her experience and said she shared a link with students from the web

application ScreenPal. P1 also used the same platform and highlighted how she used a cloud service and moved from one platform to another:

> I've used two different platforms. I've used Screencastify as one of the applications. That one I used it through Google Classroom, and then I used ScreenCastomatic, which is now ScreenPal… And that one I also use through Google Classroom and through Canvas.

These statements highlight the flexibility and willingness teachers needed to use a screencast feedback platform.

Email. Teachers also used email as a mode to deliver their feedback. For example, P3 described sharing her screencast feedback via email, and P2 echoed her experience by stating how her use of email brought about insight:

> It was very short video. It was like less than a minute… So that's why I was able to upload it in the e mail. The size of the video wasn't that big. But just at that moment, I realized, or I recognized the power of screen recording that instead of just annotating, even though it was my handwriting, but just like to hear my voice, it made it much faster, easier, and more, as I always say, personalization of learning [of] students.

Application. The use of applications was another way teachers delivered feedback. Teachers moved fluidly through different modes to create or deliver their feedback and this was based on need or by necessity. P2 described a time when she was challenged with technical issues and used a combination of applications in an effort to get the video to her students. She stated,

> It's just like small, either technical or time, let's say challenges. But later on it becomes like more natural. And even sometimes I record[ed] the screen of my phone, then I share[ed] the recordings over the Whatsapp group of the class or just like upload on…teams.

Even when challenged, teachers would go to great lengths to continue to give screencast feedback to students showing a high level of belief in this type of feedback and a high level of motivating factors to continue through despite challenges.

Teachers also delivered their feedback by sharing a link to the video source. For P2 sharing the feedback via a link had benefits beyond a quick way to share it with students. By using a link on a certain platform, she was able to take note of how many times students viewed the screencast feedback, and also use the comment feature to keep the communication going beyond the classroom walls:

> Whenever I share the link with the student on ScreenPal, I still see how many times students viewed the comments. And also you can type the comment or the feedback, whether it was a student or the teacher that also keeps the communication going on.

These excerpts, referring to the mode to deliver or create, reveal that teachers' belief in the use of screencast feedback allowed them to demonstrate a certain level of flexibility and a high level of motivation just to make this type of feedback accessible to their students.

Access to Technology. Another category for this theme was access to technology, which was made up of five codes: institution, peers, training, device, and savviness.

These codes were assigned to data excerpts that aligned with what factors shaped teachers' ability to use screencast feedback technology. All three participants and both data sources contributed to these codes.

Institution. I tagged 21 codes from all participants who shared how access to screencast feedback technology shaped their experiences and frequency of use (see Table 13). The first code of institution referred to the school where a teacher was employed. For example, P1 mentioned that the platform she was using to give screencast feedback was made available through her school district and this free of cost access encouraged her to use it quite often:

> We had access to Screencastify. So I've always liked to use all the different
> things, especially if it was free. So when the district I was in offered Screencastify
> for free, I was like, yeah, I can use it. So I did use it as much as possible,
> especially during that time we were online.

Peers. Access from peers and training also shaped the participant use of screencast technology. P3 had a different experience from P1 and her unique access to the technology led her to be more inclined to use this type of feedback:

> I'm usually the type of person that goes for something that I know other
> colleagues use. And it works well because I don't have much time, like outside of
> school, to trial things myself. It's always nice when someone like recommends
> something what works well for them, that's when I will take that idea and use it
> myself. Because it just saves that time from trial and error because I just don't
> have that. I'm so overloaded with work. That's why ScreenPal…was suggested to

me and I heard it was good. And I watched a tutorial. I thought this is doable. I

just wanted something simple, easy and effective.

Device and Training. P2 contributed to the next two code categories which was

that she needed her personal devices, a MacBook and iPad, in order to create screencast

feedback and highlighted that she had participated in professional training that led her to

reignite her interest in screencast feedback as she had experience from previous years:

Basically, I'm an Apple professional learning specialist. Last year I have attended

one of the APL (Apple Professional Learning) sessions. It was engaging and

exciting to use ScreenPal after the session… I attended [the session] so that I

refresh my memory about what and how to use it. Then since then I started using

and integrating that [and] my students really love it.

Savviness. P3 contributed to the last code in this category which emerged as

savviness and which took into account teachers' practical knowledge, background, and

understanding of how to create screencast feedback. P3 admitted that her lack of skill and

knowledge in technology often led to her making mistakes and wasting time. Her initial

experience was shaped by reservations to use something new and was a stark difference

from the experience of P1 who had prior knowledge on how to use screencast feedback

technology. P3 shared her thoughts on feeling inadequate as follows:

I know a good mentor and she told me how to use it. It was a bit daunting at first,

but she sent me a link of a tutorial on how to use it step by step. And I thought it

looked pretty easy. But, you know, sometimes you feel things look easy. But

when you do it, you're faffing around (disorganized and ineffective) for ages and

you make mistakes.

The above excerpts coded as savviness occurred more frequently, held the highest

number of excerpts tagged in this theme, which in turn showed teachers thoughts on how

their skills and experiences played a role in their screencast feedback use. According to

the teachers in this study, they indicated a variety of experiences, resources, training, and

mindsets that contributed to and shaped their ability to use screencast feedback with

students.

Theme 2: Teachers Face Challenges With Resources, Time, and Readiness when Implementing Screencast Feedback

The second theme that answered RQ1 was teachers' challenges with resources,

time, and readiness when implementing screencast feedback. Figure 5 shows the

categories and codes for this theme. One main category, four subcategories, and nine

codes made up this theme.

Figure 5

Code Tree for Theme 2 (Structural Dimension)
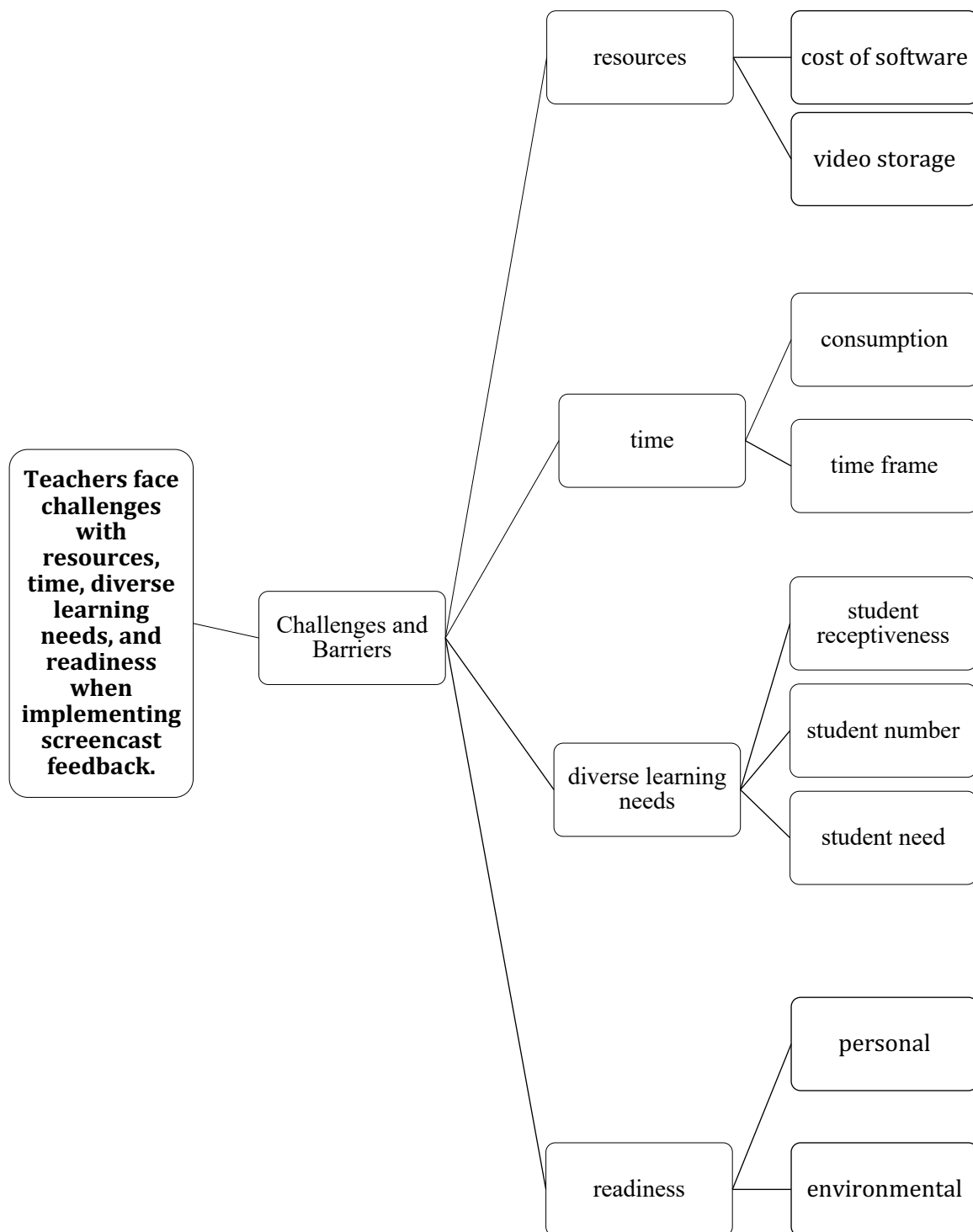
Challenges and Barriers. The first category for this theme was challenges and barriers and was made up of four additional subcategories resources, time, diverse learning needs, and readiness. These categories included nine codes: cost of software, video storage, consumption, time-frame, student receptiveness, student number, student need, personal, and environmental. These codes referred to data excerpts where teachers shared the challenges they faced with screencast feedback. Both data sources, and all three teachers contributed to these codes highlighting a variety of challenges. I tagged a total of 58 codes from all participants under this category. The code with the highest occurrence was in the subcategory of time consumption (see Table 14).

Table 14

Code Occurrence Aligned With the Challenges of Implementing Screencast Feedback

Category	Subcategory	Code	No. of occurrences of code	Total no.
Challenges and barriers	Resources	Cost of software	4	59
		Video storage	5	
	Time	Time-frame	1	
		Consumption	22	
	Diverse learning needs	Student need	12	
		Student number	8	
		Student receptiveness	2	
	Readiness	Environmental	2	
		Personal	3	
				59 (overall)

Cost of Software. There were many issues regarding the use of screencast feedback, and in the subcategory of resources the first code was the cost of software. P1

referred to not having to pay for the cost of the software, and how this encouraged her use of it:

> I just saw that it was a good tool. We had access to Screencastify. So I've always liked to use all the different things, especially if it was free. So when the district I was in offered Screencastify for free, I was like, yeah, I can use it. So I did use it as much as possible, especially during that time we were online.

Video Storage. Video storage is the second code under the subcategory of resources. P1 mentioned "being able to save those videos" while P2 mentioned using a certain application to have "all the recordings in one place". This same concern about how to manage the video files before or after creating screencast feedback was also shared by P3 who shared about the files accumulating and not knowing what to do with them.

> Like files…It would be quite a lot. I think. I would have to delete as I'm going, but then I would like to keep a record for myself too. I think that would be one other challenge is doing it for all the students and then having to store these files somewhere in an organized manner. And probably, I mean, it's doable for sure, but not for all the students.

Being able to manage the file storage especially as the videos accumulated in amount and size, became one of the challenges teachers faced when attempting to create screencast feedback especially over a long period of time. Despite this challenge, teachers reported still using screencast feedback and managed this by being selective with the students who received it.

Time Frame and Consumption. The next subcategory of time is further subdivided into two codes which are consumption and time frame. P1 mentioned being selective about when to use this type of feedback and managed her use of it by choosing "certain assignments" and completing this feedback for students "maybe twice" within the time frame of a single semester.

Teachers used screencast feedback within a certain time frame to address the challenge of consumption or how long it took to create this type of feedback and for how many students. P3 mentioned she could not "Do this for all students" and discussed being selective about which students would receive it "due to the fact it would take a very long time." P1 also shared this exact sentiment and admitted that the "amount of videos that had to be done" especially for a large class of students would be "really difficult with time right now." She expands on her explanation and expresses that the challenge of time did not deter her from attempting to use this feedback type. She states that she faced,

> [I faced] challenges like the feedback itself…I have…a lot of students, it's really
>
> difficult to do that personal one-on-one video for each and every one of them at
>
> one time. I had a class of like 32 students sitting down and giving feedback in a
>
> recorded form. And [I did it] I guess it was because I was seeing it as something
>
> bigger.

Student Need and Student Number. Diverse learning needs was another subcategory within the challenges and barriers that teachers faced. The codes in this subcategory are student need, student number, and student receptiveness. The number of students code correlated with the challenge of how long it would take to give screencast

feedback to a class of students, and the code of student need became the way teachers addressed the time factor. They gave screencast feedback to select students. P3 admitted that she had to "target" due to the time it would take and she would therefore create this type of feedback for students she identified as those who are "going to really benefit". P2 shared her concern about the same challenge:

Sometimes to be honest, I don't provide feedback to all students. Because in every class there must be a small number of students, let's say, who really need to have this personal or one-to-one feedback. I focus on these students.

Participating teachers used screencast feedback to address the needs of students and to differentiate and give support to those students in a classroom who may need additional help beyond other students.

Student Receptiveness. The next code under the subcategory of diverse learning needs was student receptiveness. Only one participant shared about this challenge. Student receptiveness referred to student ability to appreciate or use the screencast feedback. Though only P1 shared about this challenge, and it was mentioned by her in depth in both the interview and the postinterview reflection form. This gave insight on how the challenges faced by teachers were in most cases the same and in this case it was different, but a challenge none the less. She gave details and stated,

One of the problems was that not all students focused on the feedback. Providing feedback whether it's in written or in screencast format, helps the students with their strengths and weaknesses. However, if they do not take the time to go over the feedback, it defeats the purpose and hinders the learning experience.

Environmental and Personal Readiness. The last subcategory under challenges and barriers was readiness which was further subdivided into personal and environmental codes. Readiness referred to the challenges teachers faced personally or in their environment that hindered them when creating or delivering screencast feedback. This subcategory and specific challenge was mentioned by P2 only who faced issues with personal readiness because she "didn't like to hear" her own voice and so would avoid listening to her finished screencasts. P1 addressed the code of environmental readiness by describing the challenge of where and when would be the right time to record a screencast feedback:

> Actually, sometimes the noise around me because I really wanted [a] calm room, especially when I want to record the video while being in school [there are] noises around you. Because I don't have really that super thick noise cancellation. Sometimes I have to find a quiet place and then record. Sometimes after school…at work you're tired, but still you want to record something, especially those who want to see my face.

In this category, a wide variety of challenges emerged. Some challenges were personal, while some were related to technology, storing of large files, or students not being receptive to the feedback. These excerpts reflect the challenges and barriers teachers experienced with screencast feedback, while at the same time admitting to continue to use and see the value of screencast feedback despite the issues associated with it.

Research Question 2

RQ2 was, What aspects of feedback do secondary teachers choose to focus on? As part of data analysis, two themes emerged to answer this RQ. The discussion that follows is organized by these themes.

Theme 3: Teachers Target Elements of Writing and Interpersonal Exchanges to Improve Feedback Uptake

The third theme that answered both RQ1 and RQ2 was teachers' targeting of elements of writing and interpersonal exchanges to improve feedback uptake. Figure 6 shows the categories and codes for this theme. Two main categories made up this theme. There was a total of 15 codes.

Figure 6

Code Tree for Theme 3 (Cognitive and Social-Affective Dimensions)
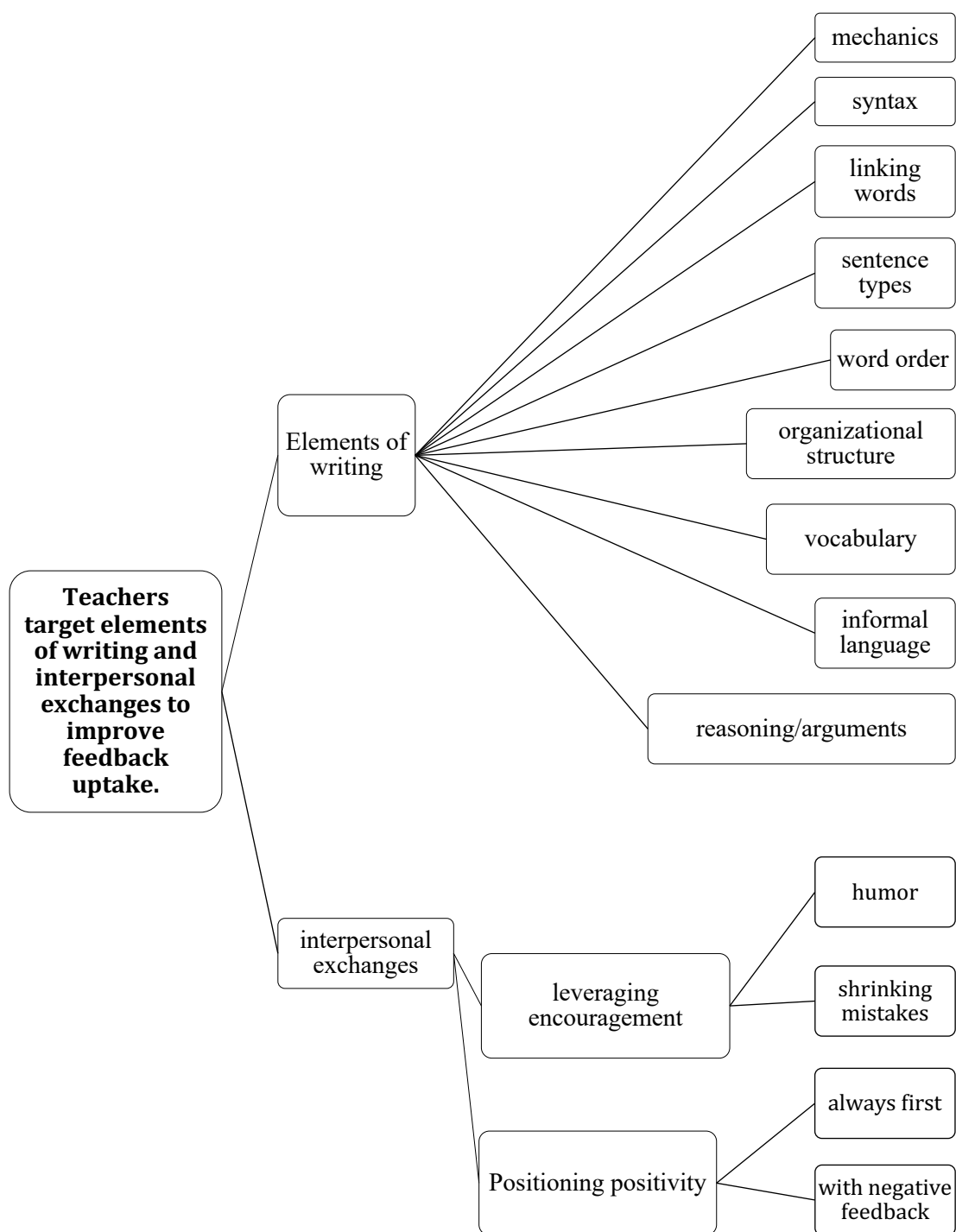
Elements of Writing. The first category for this theme was elements of writing and was made up of nine codes: mechanics, syntax, linking words, sentence types, word order, organizational structure, vocabulary, informal language, and reasoning/arguments. These codes refer to data excerpts where teachers explicitly stated the writing elements they were giving feedback on for correction. All three teachers and interview data contributed to these codes. I tagged a total of 63 codes from all participants under this category, and the code with the highest occurrence was positioning positivity in the category of interpersonal exchanges (see Table 15).

Table 15

Code Occurrence Aligned With the Targeting of Elements of Writing and Interpersonal Exchanges to Improve Feedback Uptake

Category	Subcategory	Code	No. of occurrences of code	Total no.
Elements of writing		Mechanics	8	30
		Syntax	3	
		Linking words	1	
		Sentence types	2	
		Word order	5	
		Organizational structure	4	
		Vocabulary		
		Informal language	4	
		Reasoning/arguments	1	
			2	
Interpersonal exchanges	Leveraging encouragement	Humor	5	33
		Shrinking mistakes	9	
	Positioning positivity	Always first	9	
		With negative feedback	10	
				63 (overall)

Mechanics. There were 30 codes in the category elements of writing from all participants who shared the writing elements that were the focus of their screencast

feedback. P1, P2, and P3 all addressed mechanics and vocabulary as targets students needed to make changes on. In a sample student screencast shared during the interview with P3 she addressed mechanics, punctuation, and spelling errors to the student. She also found time to be encouraging and shrink the student's mistakes:

There are a lot of punctuation errors where capital letters are not being used correctly. Also, punctuation, your full stops are being used in the wrong places. Capital letters are not being used. And these are all I understand because it was a timed essay, so you were under pressure. So I feel like if you had enough time to proof read at the end, you could have fixed all these errors. You had a few spelling errors as well, like the word little. I'm not sure what this says.

Word Order and Syntax. Word order and syntax was addressed by P1 who described her belief that it was easier for students to see the process and explanation of word order items they need to correct in a video format:

Whereas the word order writing their sentences is a little bit more something that they need to think about. They need to process. I think it's easier if they see that thinking process with the video that they can have access to.

Reasoning and Arguments. P2 and P3 addressed reasoning and arguments as elements of writing that they focused on when creating screencast feedback. P2 describes what requirements students needed to meet in the process of reasoning and building arguments during the writing portion on physics exams:

Actually, part of justification [is needed in] the answers. Because in physics, when they explain something, we have variables in physics, right? The question

will put a scenario for students. They have to explain what would be the correct explanation. Then the student has to write a paragraph justifying their answers.

Linking Words. P3 alone addressed linking words and mentioned that if for example her students were not using linking words she would "highlight" the element needed for correction. Additionally P3 addressed sentence types, and described what errors were common that students would make in their writing that needed correction in a screencast feedback:

Sentence types I find very important because a lot of them use simple sentences throughout [their writing]…[I focused on] teaching them how to use complex sentences...and relative pronouns and just like make them [to] elongate their sentences. Because a lot of them use simple sentences. Just teaching them different sentence types.

Organizational Structure. Additionally, P3 addressed organizational structure in writing with her students. She mentioned that going over organizational structure in a screencast feedback because "a lot of students don't get the [organizational] structure right" and went on to further say if students did not correct this issue and went to sit their exam they "would struggle in the exam."

Informal Language. The last code in this category was addressed by P2 and is assigned as informal language that she addresses in screencast feedback. This informal language appears in student writing during an exam or writing assignment and comes from the real world examples given in class. She explains,

While I explained the lesson, usually I give them some real-life examples. Okay, like for example, we have a lesson, we have a Gaussian surface, it's very difficult thing. But I told them like it's like onion layers. It covers everything or it's like a water melon. And then the charges are like seeds. And then you count whatever is inside, whatever seed outside. You don't count it. Can you imagine when you have a student in the exam say like watermelon seeds or something like [they] are including my words [in their writing from] when I was explaining or making the idea clearer or easier or closer to their understanding. Sometimes [in feedback I correct this] this is informal or just like an example to make it easier for you, but you have to say the specific [words]. Or sometimes when they want to say, for example, charges, but they say electricity, no, you have to mention the specific word.

These excerpts and examples highlight the experiences of the participants and encompasses the writing elements that teachers gave feedback on for correction. These elements became the target of the feedback and while some participants addressed the same elements in writing others were distinct. However all participants, despite the fact that they each were teaching a different content area, addressed essential elements of writing that are normally found in writing content classes.

Interpersonal Exchanges. The next category for this theme was interpersonal exchanges and was made up 33 codes and two additional subcategories: leveraging encouragement and positioning positivity. The first subcategory, leveraging encouragement was made up of 14 additional codes: humor and shrinking mistakes while

positioning positivity was further subdivided into 19 codes for always first and with negative feedback. These codes were aligned to data excerpts where teachers placed a focus on using encouragement within the screencast feedback. Both data sources and two participants contributed to these codes. The code with negative feedback had the highest number of occurrences and is aligned with data excerpts representing the social-affective dimension (Yang & Carless, 2013).

Humor. The code of humor emerged with P2 and P3 both mentioning sharing "jokes" in the screencast feedback as a way to have "banter" with students especially when giving critical feedback and to lighten the mood when helping them recognize their mistakes. P2 admitted that humor was a good tactic and shared her reasons why: "The physics subject is a difficult rigid subject so [I do it] with a sense of humor sometimes when giving feedback." P3 was in agreement about using humor and admitted, "I think as I got more comfortable with [screencast feedback], I definitely had a few more jokes in my videos where I would just have some banter."

Shrinking Mistakes. In reference to shrinking mistakes P2 shared her experience with making the mistakes of her students seem small so that they would be willing to fix them. Shen mentioned,

Of course, sometimes I [fake them out], I told them that it's a common mistake, although it's the first time I see such a mistake in my whole life. But it's a common mistake. [I say to them] Every year students, they do mistakes in this question. But after knowing that trick, I'm going to say they will never, ever get it wrong, although it's a story that I made it up.

Positioning Positivity. The second subcategory for this theme was positioning positivity and was also made up of two codes: always first and with negative feedback. These codes were aligned to data excerpts where teachers mentioned how they would position positivity within the screencast feedback. All three participants and both data sources contributed to these codes. Each participant mentioned starting screencast feedback with saying something positive.

Always First. P3 mentioned her personal practice of starting by saying something positive. She believed this was an important part of her feedback process and said, "Because you don't want to start a screencast negatively and put them down straight away. I definitely focus on the good things that they've done." Later she mentioned,

I would just be really positive. And I'd just say that first line really grabbed my attention. I loved how you used the rhetorical question. [I would] Just say [to the student] 'it really made me think about the topic that you're going to discuss in your essay. Really well done. I feel like you grabbed my attention with that first sentence, and it made me want to read…amazing job. I love how you do this'. Like those key words "like," "love", "well", it gives them a sense of pride of their work, like the good things that they have done.

P2 had the same sentiment when it came to positioning positivity and starting screencast feedback on a positive note. She mentioned, "I always start with good evaluation or good impression, let's say. Then I follow it [up]. How can it be better?"

With Negative Feedback. The last code in the positioning positivity subcategory was with negative feedback. This code was applied to excerpts where teachers shared

their personal preferences when giving critical feedback. P2 admitted that it is essential to include positive comments when giving negative feedback. She stated,

> I always give stars, good job. Even if the mark wasn't that high. Even like I always look at the progress, at the improvement. Last exam you scored, let's say 30 out of 100. But this exam you scored 60 something. Excellent. Keep it up. Good job. And with the stars and the smiley faces, "keep up the great work." "Well done." "I'm so proud of you." like these things.

P3 shared the same sentiment and stated that focusing on negative feedback can be damaging to a student's mindset. She stated,

> It's not just [about] focusing on negative things because that can…really put them in a negative space and not want to redraft it and not want to do it because you've only focused on the negative. Giving that praise makes them…want to impress you as well. They want to have good marks.

To add, P2 declared, "It's very important, never, ever give negative feedback without supporting it with a positive thing.…" These excerpts highlight the importance teachers placed on positioning positive statements especially with negative feedback to ensure the feedback process was encouraging and supported student uptake and receptiveness.

Theme 4: Teachers Believe that Critical Feedback Practices Such as Being Careful, Being Brief, Signposting, and Showing Examples Improve Student Uptake

The fourth theme that answered both RQ1 and RQ2 was teachers' belief that critical feedback practices such as being careful, being brief, signposting, and showing

examples improve student uptake. Figure 7 shows the one category and four codes

associated with this theme.

Figure 7

Code Tree for Theme 4 (Cognitive and Social-Affective Dimensions)
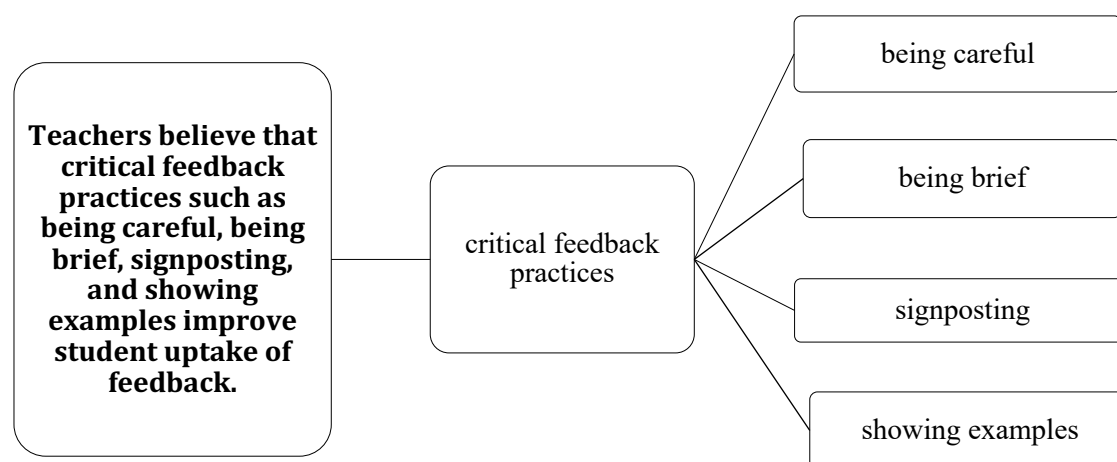
Critical Feedback Practices. The one category for this theme was critical

feedback practices and was made up of four codes: being careful, being brief,

signposting, and showing examples. These codes were given to data excerpts where

teachers shared essential practices when giving critical feedback. All three participants

and both data sources contributed to these codes. I tagged a total of 31 codes from all

participants under this category, and the code with the highest occurrence was being

careful (see Table 16).

Table 16

Code Occurrence Aligned With the Belief That Critical Feedback Practices Improve

Student Uptake of Feedback

Category	Code	No. of occurrences of code
Critical feedback practices	Being careful	11
	Being brief	2
	Signposting	9
	Showing examples	9
Total		31

Being Careful. Being careful was a code that emerged and was highlighted by all

participants as a real concern if ignored especially during screencast feedback. P2

mentioned the power a teacher has over her students and the detrimental effect if certain

things are shared carelessly. She said,

> By the way, sometimes we underestimate feedback. I also learned that students,
>
> they pay attention to things that I didn't know. Teacher's words are really
>
> powerful. [And] because words from teachers are really powerful…You may
>
> [unknowingly] destroy a student because of a word.

P2 elaborated on why being careful was such an important aspect when developing

screencast feedback. She mentioned the how the screencast video lives beyond the

moment it is watched and stays in the student's memory. She declared,

> Because this is the essence, let's say, of the video. Because they will remember it
>
> forever. Remember that they are hearing you, they are seeing you. They
>
> remember your handwriting. If you don't write the good words, they will not like
>
> to open the video next time. Right, or not. This will discourage them because

[they think] the teacher will only highlight my mistakes. She will not see the effort I put. She will not see that I tried myself. I did not copy the answer from my friends, for example. [As a teacher] I have also to appreciate this. So that they [will] always be encouraged and excited to open the link to start the new journey.

Being Brief. In this category of critical feedback practices, only P3 mentioned being brief, while all participants mentioned being careful, signposting, and showing examples. In regard to keeping the screencast time short and being brief, P3 states her opinion, "Talking too much doesn't work. I think if I'm talking sometimes even through verbal feedback, they can get confused." She goes on to add the reason she feels strongly about keeping the feedback short. She confides, "They [students] would just switch off even in the video, even though they would love the video feedback that would get boring for them, they wouldn't want to listen to you moan about their essay for like 10 min." Even though P3 was the only teacher to mention this practice she returned to her opinion on this matter multiple times to share her experience with what worked or did not work with students.

Giving Examples. The next code that emerged was giving examples. When focusing on giving examples in screencast feedback P3 discussed how giving examples are important when using screencast feedback and could be used to improve understanding and even extend practice. She stated,

I would probably give examples. Like actual examples in the video, typing or writing…and I would write one so she could physically see it and then [I would] give her a sentence starter to maybe do hers next time. I think that really works.

Signposting. Signposting was another preferred method and approach used during screencast feedback videos. P3 stated she would use signposting because, "It just gives them [the students] a bit of a focus on what I'm focusing on so they can see what I'm focusing on rather than trying to guess where I'm looking." These excerpts reflect the value of essential practices teachers employed when giving critical feedback for student success, uptake, and receptiveness.

Research Question 3

RQ3 was, What are the reasons for the choices secondary teachers make? As part of data analysis, two themes emerged to answer this RQ. The discussion that follows is organized by these themes.

Theme 5: Teachers Utilize Cognitive, Structural, and Social Affective Motivations to Simplify Learning, Save Time, and Enhance Psychological Safety

The fifth theme that answered both RQ1 and RQ3 was teachers' use of cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. Figure 8 shows the categories and codes for this theme. There were three main categories 14 codes.

Figure 8

Code Tree for Theme 5 (Structural, Cognitive, and Social-Affective Dimensions)
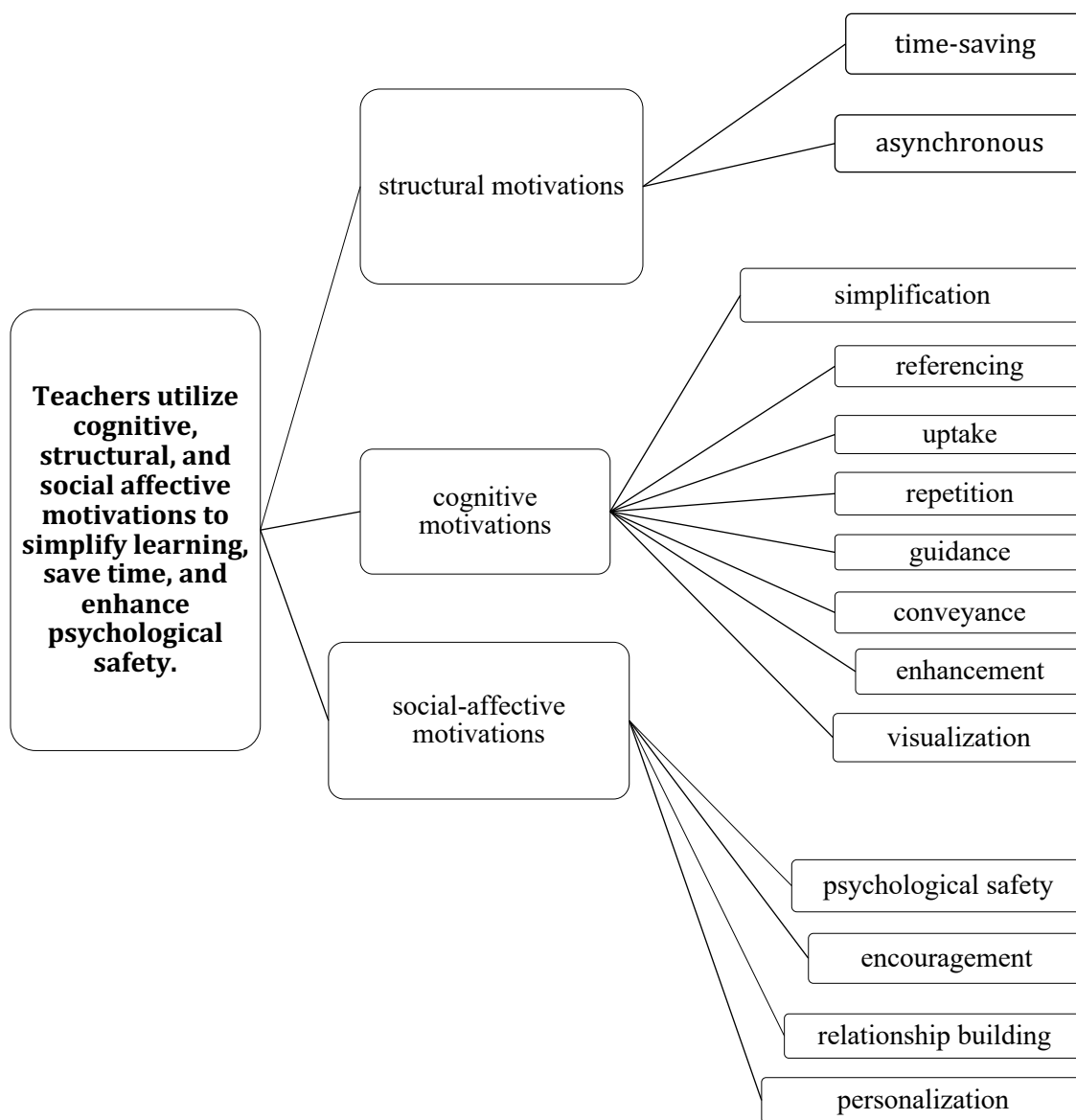
The three categories for Theme 5 was structural, cognitive, and social-affective motivations and was made up of 14 codes: personalization, simplification, referencing, uptake, repetition, time saving, guidance, asynchronous, encouragement, conveyance, relationship building, enhancement, psychological safety, and visualization. These codes refer to data excerpts where teachers shared their motivation for using screencast feedback. All three participants and both data sources contributed to these codes with excerpts showing they agreed that screencast feedback was a way to communicate asynchronously, personalize feedback, enhance learning, encourage students, build relationships, and improve uptake. I tagged a total of 141 codes and this was the theme with the highest number of codes from all participants. Overall, the code within this theme with the highest occurrence was relationship building which was aligned to the category of social–affective motivations (see Table 17).

Table 17

Code Occurrence Aligned With the Use of Cognitive, Structural, and Social-Affective

Motivations to Simplify Learning, Save Time, and Enhance Psychological Safety

Category	Code	No. of occurrences of code	Total no.
Structural motivations	Time-saving	4	16
	Asynchronous	12	
Cognitive motivations	Simplification	4	42
	Referencing	5	
	Uptake	12	
	Repetition	3	
	Guidance	7	
	Conveyance	2	
	Enhancement	5	
	Visualization	4	
Social–affective motivations	Psychological safety	8	83
	Encouragement	23	
	Relationship building	27	
	Personalization	25	
			141

Structural Motivations. There were 16 coded excerpts in the category structural motivations, 42 coded excerpts in the category of cognitive motivations, and 83 coded excerpts in the category of social-affective motivations. The category of structural motivations had two codes which were time-saving and asynchronous.

Time-saving. P2 and P3 believed that screencast feedback saved them time versus giving feedback in other formats. P3 stated,

Sometimes it takes a long time to give written feedback and they [the students] don't understand, but I just feel like it didn't take that long. It took about a minute or 2 min to do it and then send it. And that can be very beneficial for the students.

P2 concurred and shared that screencast feedback saved her time, effort, and was more beneficial to her students. She recounted her experience:

> But just at that moment, I realized, or I recognized the power of screen recording that instead of just annotating, even though it was my handwriting, but just like to hear my voice, it made it much faster, easier, and more, as I always say, personalization of learning students.

Asynchronous. The next code under the category of structural motivations was the excerpts aligned with the idea that screencast feedback was asynchronous, had no borders, and was useful inside and outside the classroom walls. P2 expressed her opinion:

> Also, I always hear from teachers, there are some boundaries. Of course, there are some boundaries between teacher and students. Whenever you walk out of the classroom door, it's for me, with technology and specifically screen recording, you can be with students at any time or at anywhere.

In these excerpts, participants described their structural motivations for using screencast feedback due to its ability to maximize their time as teachers and to reach students even when they are not in the classroom.

Cognitive Motivations. There were 42 coded excerpts in the category cognitive motivations. This category had eight codes which were simplification, referencing, uptake, repetition, guidance, conveyance, enhancement, and visualization. The codes in this category of cognitive motivations have excerpts that were focused on the cognitive benefits teachers derived from using screencast feedback. These elements served to motivate them to continue using this mode.

Simplification. The code simplification was aligned with excerpts where participants explained that their experience with screencast feedback simplified the correction. P3 recounted that, "You can simplify things when speaking [using] the tone of your voice. And [you can] speak slowly and make them [students] understand." P3 echoed this thinking stating:

> All students have different personalities and you speak to them all differently. Like sometimes some students are really weak at understanding what you're saying verbally too. I may slow down how I say things, what I say. I'll probably slow it down. I'll use easy words. I'll give other words.

These examples capture a teachers' willingness to engage in practices like simplifying their language use or giving easy examples to support student understanding in corrective feedback.

Referencing. The next code which was referencing included excerpts that mention the student's ability to refer to or access the screencast feedback in such a way that it made a difference in their learning. Only P2 contributed to this code and she stated that screencast feedback was helpful because,

> They [students] can refer back to it [screencast feedback]… Because I always say that it should be assessment for learning whenever students submit a piece of work, whether it was written, assignment, lab, report, or even quiz. Students should receive feedback to learn from their mistakes and then amend their work. Sometimes I asked them to rewrite the assignment and then amend their

submission based on the feedback. Feedback is an integral part in their assessment or learning journey. Let's say it's really useful.

Uptake. All three participants contributed to the next code which was uptake. P3 shared about her thinking process and cycle that led to student uptake. She explained,

I focus more on the feedback. What was correct, what was incorrect? How to improve, how to amend and resubmit to enhance their learning to improve their scores. When you put this goal, when you have students who really appreciate the effort you put, okay, that will simultaneously drive you to keep recording.

In a lengthy, but powerful recount P3 discusses the power of her voice in the video which she believed led to improved uptake and student correction. She stated,

To be honest, all of them that I've done so far have been successful. Like they were all able to understand the feedback better. They all made an effort to make it better. How? Sometimes you give written feedback and you don't talk to the student, but you give their paper back and you ask them to redo it and they've done the same thing [made the same mistakes]. It wasn't the case this time, which was nice to see like they actually made an effort to make those changes. I think maybe because they felt like I directly spoke to them about it when I never [did], it was just feedback…instead of written [feedback] it [was] video, but maybe they felt like they were spoken to, and that they had to make those changes to get a better grade. When you are spoken to by someone, you take things more seriously rather than just... reading something someone wrote. I just feel like all of them made those changes and made an effort. I think because they thought I put a lot of

effort in doing this video. They didn't want to disappoint me either. They made

that effort to make those changes. I feel like they take it more seriously.

These examples include teacher experiences that showcase student uptake. The latter

excerpt where P3 added insight into why she believed student uptake was improved held

the unique concept that spoken words held more power than written words and student

uptake was influenced by the fact she spoke to them.

Repetition. For the code repetition, all three participants agreed that screencast

feedback was a powerful way to support student learning. P2 mentioned it was a

successful form of feedback because students "can rewind". This sentiment was echoed

by P1 who stated,

Repetition is a big thing with learning the language. So with Screencastify, using

it over and over again, I believe, and just repeating to them…you need to do it this

way. You need to do it that way. I believe that would help.

These examples highlight what participants believed to be an important advantage that

screencast feedback had over written feedback; the ability to repeat an explanation

verbatim.

Guidance. Guidance was the next code in this category which referred to excerpts

where participants shared their experience of using screencast feedback to guide students

on their learning journeys. P1 shared that screencast feedback worked for students

because they would have "…their own little recording of correcting them and guiding

them." This sentiment was echoed by P3 who recounted her opinion that, "..it's just like

me being there giving them that feedback…" These statements reveal teachers experience using screencast feedback to guide and manage the learning even from a distance.

Conveyance. Conveyance was the next code that emerged and only P3 contributed to this code, but she consistently mentioned being able to use screencast feedback to send or convey an overall message that even though they were receiving critical feedback, the chance to improve was a good opportunity for future success. She explained, "I want them to know that it's not all bad and there's just certain improvements that they need to make to make it better." This statement summarizes P3 motivation to use this type of feedback to send a positive message.

Enhancement. The next code was enhancement and was assigned when all three participants expressed how this mode would add to or improve their students learning or chances of success. P2 explained her thoughts and stated,

> Achieving the main goal of my recorded feedback videos is the best thing. Students now feel more confident writing their exams, assignments, and lab reports... as they know where and what exactly to focus on... The whole process enhanced their academic achievement, and they became more confident and proud to celebrate their successes.

P2 concurred and extended this idea by expressing that her motivation for using screencast feedback was also to enhance and extend the learning experience beyond her busy schedule as a teacher. She expressed that she wanted to "…give them that extra support. As teachers don't have time, like time is limited as a teacher because you have full time-tables, lunchtimes, you're busy doing revision…"

These statements put into perspective the belief that teachers held about screencast feedback and its ability to make change and extend their reach beyond normal limits.

Visualization. The last code in the cognitive motivations category was visualization. These codes were assigned to excerpts where P1 and P2 shared that their reasoning and justification for using screencast feedback included its ability to help visualize the learning process. P1 expressed that "Students are visual, they need to see, they need to listen, they need to have all sorts of forms of input." Later she extended her response and added,

> I guess [students are] technology oriented, or they're constantly stuck with their technology. Giving them something like this where they can look at it when they want to, listen to it when they want to, just giving them those different options.

P2 concurred with this idea and explained that she uses screencast feedback because students need their teachers "to be either visual or to be able to hear [their] voice." Collectively, these statements give insight into the experiences of participants and reveal their motivations to make learning experiences visual in an effort to improve understanding and student uptake.

Social–Affective Motivations. There were 83 coded excerpts in the category social-affective motivations. There were more coded excerpts in this category than in any other category in this theme. This category had four codes which were psychological safety, encouragement, relationship building, and personalization. The codes in this category of social-affective motivations have excerpts that were focused on the social-emotional motivations teachers employed when creating or delivering screencast

feedback. These elements were highly motivational and served to inspire them to start using and continue using this mode.

Psychological Safety. The first code in the category of social-affective motivations was psychological safety which was an important factor mentioned by all three participants and referred to screencast feedback creating an environment where students felt safe to make mistakes. P2 said her students shared their perspective and mentioned,

> "Your way of telling me my mistakes" [made me feel like it was] safe to do
>
> mistakes because I will know how to improve [and] to correct my mistake." Some
>
> students, they told me that "Miss now we [all] like to do mistakes. To hear from
>
> you about it."

P1 added to and extended the above ideas about psychological safety by recounting, "I think in a good way, it did shape [our learning environment] where it was easier to address things in front of the class because I've already addressed things individually." These excerpts reflect that teachers' social-affective motivations for using screencast feedback included students' feelings and personal awareness about their learning environment. By taking into account and attempting to manage complex and sensitive perspectives when using a feedback mode, shows the extent to which teachers would go to improve uptake and understanding in their subjects.

Encouragement. The next code of encouragement was assigned to excerpts that reflected when all three participants used screencast feedback to encourage students to make progress. P1 shared her process,

> I usually try to make sure that students know that I'm very proud of them. I'm
>
> proud of them trying, which is one of the things that's really difficult when
>
> they're learning a language. I'm proud of them of just putting themselves out
>
> there and taking the chance on learning that part did not change.

Later, P1 extended her response and shared that if during a screencast feedback students

were encouraged by their teacher they "would look forward to other feedback." Likewise,

P3 concurred and stated that she encourages students in her screencast feedback. She

expressed, "I don't want the students to completely lose confidence in their work." These

statements outline how encouraging students is a hidden but essential aspect that teachers

take into perspective when creating or delivering screencast feedback.

    Relationship Building. The next code relationship building was the code within

the theme of social-affective motivations that had the highest occurrence within all the

coded excerpts. This code referred to statements that all three participants would make

about how they were motivated to use screencast feedback and how it shaped the existing

relationship or building the relationship they had with students. P2 mentioned the

advantage that teachers have when it comes to using screencast feedback and relationship

building. She explained,

> Maybe teachers have an advantage because they've already broke down the
>
> divide between that student. So the student is willing to listen to them…It could
>
> be something like that where screencast feedback videos are really important.
>
> Because now you already have something going on with that student. You already
>
> have a relationship. You're handing a video over to a student that knows you, that

might even respect you, care about what you have to say and respect the feedback

that you're giving.

P3 agreed and extended the ideas above by sharing that screencast feedback was

influential because of the existing relationship between her and her student. She

mentioned,

They know I'm just talking to them. It's just me. Rather than giving these scary

words that they don't understand, I think that's why it [is successful]. You have a

bond with your students already, and that bond shows within the feedback that

you give them.

Though there were many excerpts assigned to this code, the few statements above capture

the insight of the teachers regarding how to use the existing teacher to student

relationship to one's advantage and also to improve that relationship through screencast

feedback.

Personalization. The last code in this category was personalization. It had the

second highest number of occurrences within this theme and referred to excerpts where

all three participants shared their motivation for using screencast feedback was because

this feedback mode was highly personalized. P3 shared her thoughts,

As teachers [we] don't have time. Time is limited as a teacher because you have

full time tables, lunchtimes, you're busy doing revision…there's just not enough

time. But you want to give those students that time and I feel like this is like the

perfect way to give them time that personalized one to one. I think that's

important.

P2 echoed this sentiment by adding with screencast feedback teachers have a chance to highlight "what [students did] wrong or celebrate their excellent answers [and] to see [their teacher] that made it more personalized from heart to heart." These statements summarize how teachers were highly motivated to use screencast feedback due to its ability to be used to personalize the learning experiences of their students.

Theme 6: Teachers Believe that the Use of Screencast Feedback Has a Positive Influence on Students' Overall Understanding and on Teacher–Student Interpersonal Relationships

       The sixth theme that answered RQ1 and RQ3, was teachers believe that the use of screencast feedback has a positive influence on students overall understanding and on teacher–student interpersonal relationships. Figure 9 shows the categories and codes for this theme. There are two main categories and four codes associated with this theme.

Figure 9

Code Tree for Theme 6 (Cognitive and Social-Affective Dimensions)
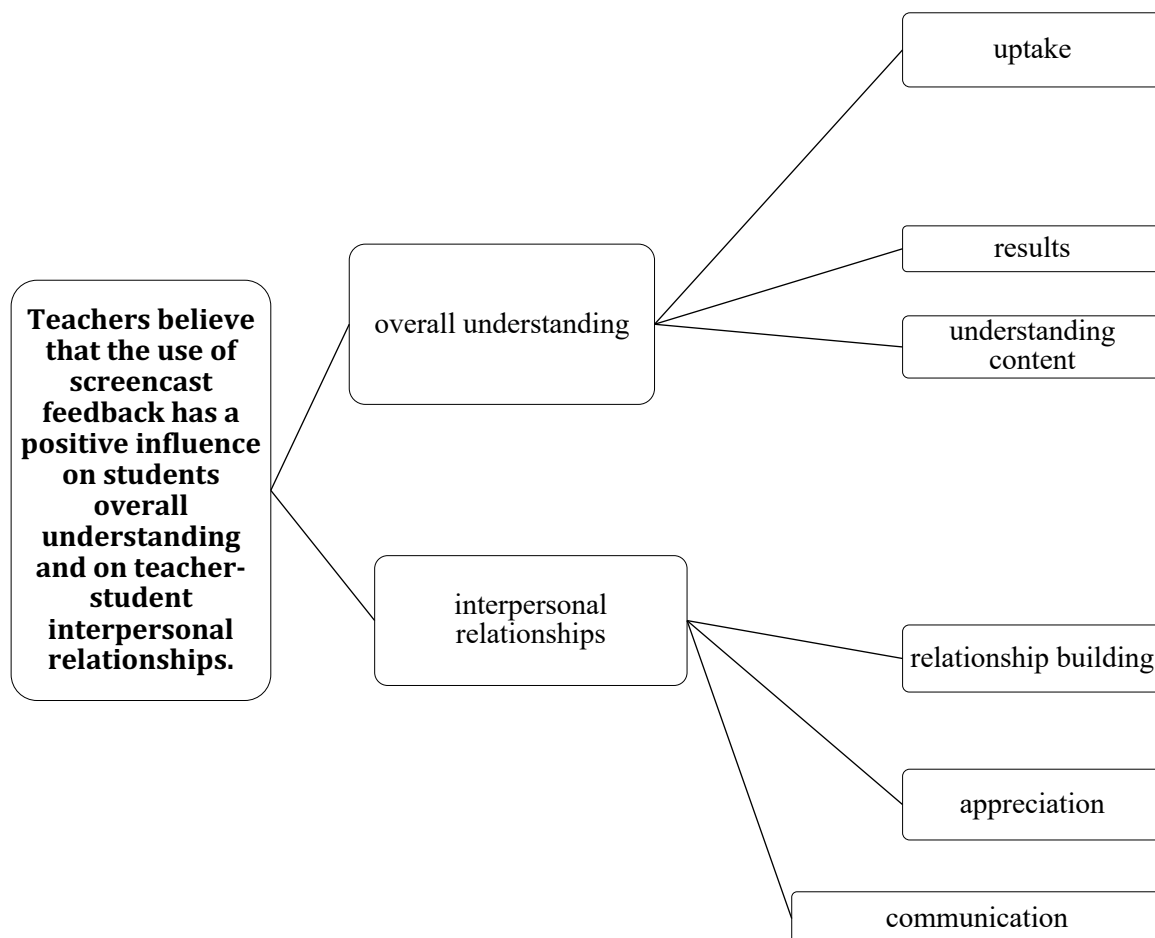
Overall Understanding and Interpersonal Relationships. The categories for

this theme was overall understanding and interpersonal relationships and was made up of

six codes: uptake, results understanding content, relationship building, appreciation, and

communication. This is the only section where all three participants contributed fully

across all codes in unanimous agreement. Both data sources also contributed to these

codes. These codes were assigned to data excerpts where teachers shared what their

screencast feedback had an influence on. I tagged a total of 70 codes from all participants

under these categories and the code with the highest occurrence was in the subcategory of

interpersonal relationships and the code was communication (see Table 18_.

Table 18

Code Occurrence Aligned With the Belief That the Use of Screencast Feedback Has a

Positive Influence on Students' Overall Understanding and on Teacher–Student

Interpersonal Relationships

Category	Code	No. of occurrences of code	Total no.
Overall understanding	Uptake	9	31
	Results	8	
	Understanding content	14	
Interpersonal relationships	Relationship building	13	39
	Appreciation	11	
	Communication	15	
			70

Overall, there were 31 coded excerpts in the category overall understanding, and 39

coded excerpts in the category of interpersonal relationships. The category of overall

understanding had three codes which were uptake, results, and understanding content.

   Uptake. The first code in this category uptake was assigned to excerpts from all

three participants and refers to experiences teachers had with witnessing student uptake

of the corrective feedback. P3 shares her experience with student uptake and states,

"[there was] feedback I received from the students about how much they preferred video

feedback and how it helped them improve their writing considerably." P1 added to this

sentiment and stated that the use of screencast feedback had a positive influence on

uptake as it, "helps them focus on what they need to focus on specifically." P2 adds that

due to screencast feedback her students "did well in their coming exam." These statements summarize teacher's experiences with screencast feedback and the variety of ways they have seen it improve student chances of uptake for correction.

Results. The next code in this category is results and was applied to statements that all three participants made about what they perceived as the relationship between screencast feedback and students results. P2 exclaims, "They remembered what I said in the video, and they did well in their coming exam. Can you imagine?" She went on further to add, "Since it has impacted my students learning and I saw an increase in their marks…I was encouraged to invest in time to give them this feedback." P1 agreed that screencast feedback improved results and added, "I believe that it helps them grow in their language acquisition, which is what I expect them to do." Teachers saw results with their students and believed that through the use of screencast feedback students found success in their learning goals.

Understanding Content. The next code in this category is understanding content. This code was applied to excerpts that all three participants shared regarding their experiences with students who showed that through screencast feedback content was understood. P1 explains her personal experience and success,

> I believe…being able to provide feedback using the language (Spanish) really helped students better understand the task. With screencast feedback, they can not only read along while receiving the feedback but were able to also listen to specific words for pronunciation and clarification.

P3 concurred and stated, "to be honest, all of [the screencast feedback] that I've done so far have been successful. Like they were all able to understand the feedback better." These statements capture teachers deep-rooted belief that their students understood the content more when they were using screencast feedback.

Interpersonal Relationships. The last category in this theme is interpersonal relationships and it has 3 codes relationship building, appreciation, communication. In this category, all three participants contributed to each code and there was a higher occurrence of codes overall in this category within this theme.

Relationship Building. The last code which is relationship building was applied to excerpts that mentioned the positive influence screencast feedback had on relationship building and how the relationship between teacher and student changed once this mode was used. P2 shares that after using screencast feedback students shared that "they feel that they are special to the teacher." She further extended her response by stating once she started using it students told her that they "feel more comfortable as if you are my personal, private tutor." P1 agreed on this perspective that screencast feedback had a positive influence on relationship building with her students and added, "when they hear you giving them praise [in the screencast feedback], when they see that that praise is just for them, it makes it special at that particular moment." P3 puts these ideas further into perspective and believes the relationship building between her and her student not only improved but the influence of screencast feedback made students not want to disappoint her as a teacher. She explained, "I just feel like all of them made those changes and made an effort. I think because they thought I put a lot of effort in doing this video. They didn't

want to disappoint me either." These statements capture the experiences of participants

and portrays the positive influence the use of screencast feedback had on building

relationships with their students.

Appreciation. The first code appreciation refers to statements participants made

about students appreciating the time, effort, and consideration teachers put in when

creating or delivering screencast feedback. P2 shares how screencast feedback made the

relationship with her students "stronger because students appreciate the time, the effort,

[and] the feelings I put [into the feedback]". P3 agreed on this perspective and extended

the idea that students are not just appreciative they may feel guilty if they don't

reciprocate the effort. She explained,

> I feel like because you're making these videos, they know you're taking time out
>
> of your personal time to help improve their writing. You're making a whole video
>
> and I just feel like there's a certain guilt. They want to impress their teachers…
>
> and that's a good thing because it makes them actively… address the feedback
>
> that I give and make those changes. So it's a good thing.

These statements accurately summarize the experiences participants shared about

evidence of student appreciating the effort it took to give them personalized feedback.

Communication. In reference to the next code which is communication. P3

mentioned that screencast feedback is a communication tool that can be used for success.

She shared,

> They know I'm just talking to them. It's just me. Rather than giving these scary
>
> words that they don't understand, I think that's why it [is successful]. You have a

bond with your students already, and that bond shows within the feedback that

you give them.

Later, she further expanded on her response and added, "When you are spoken to by

someone, you take things more seriously rather than just writing." P1 concurred and said,

It could be that door that opens that bond, that door that opens for

communication...Knowing that I'm here for you. [Screencast feedback] could take

it a little bit further than just me being the teacher and you being the student.

P2 added, "And also you can type [a] comment [on the platform about] the feedback.

Whether it was a student or the teacher [this could] also keeps the communication going

on." These excerpts highlight that through their experiences teachers believed screencast

feedback had an influence on the communication between themselves and their students.

Results in the Context of the Conceptual Framework

The results of this study are aligned with the conceptual framework used for this

study by Yang and Carless (2013) who proposed three dimensions of the feedback

process. Findings in relation to cognitive (content) dimension showed that teachers

believed that targeting specific elements of writing along with signposting and showing

examples improved student uptake. Teachers also utilized cognitive motivations to

simplify learning and believed that screencast feedback had a positive influence on

students overall understanding. Findings in relation to the social-affective (interpersonal

negotiation) dimension showed that teachers targeted interpersonal exchanges and critical

feedback practices such as being brief and being careful to improve student uptake.

Teachers utilized social-affective motivations to enhance psychological safety and

believed that screencast feedback had an overall positive influence on teacher–student interpersonal relationships. Findings in relation to the structural (organization) dimension showed that teachers use of screencast feedback depended on different modes and access to technology. Teachers also faced challenges with resources, time, and readiness. Last, teachers utilized structural motivations to save time. I actively looked for areas of discrepant data that did not align with existing codes or themes. I was attentive, but no discrepant or unusual data surfaced.

Summary

Based on data analysis, themes emerged that were used to answer the study's RQs. The two themes or key findings for RQ1 were secondary teachers use of screencast feedback depends on different modes and access to technology and teachers face challenges with resources, time, and readiness when implementing screencast feedback. Both themes are aligned with data matching the structural dimension (Yang & Carless, 2013). For RQ2, I found that teachers target elements of writing and interpersonal exchanges to improve feedback uptake and teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake. Both themes for RQ2 are aligned with data matching the cognitive and social-affective dimensions (Yang & Carless, 2013). For RQ3, I found that teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. This theme was aligned with data matching the structural, cognitive and social-affective dimensions (Yang & Carless, 2013). The second theme in RQ3 was teachers believe that the use of screencast feedback has a positive

influence on students overall understanding and teacher–student interpersonal

relationships. This theme was aligned with data matching the cognitive and social-

affective dimensions (Yang & Carless, 2013). Chapter 5 will include interpretations of

the findings, limitations of the study, recommendations, implications, and conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative study was to explore screencast feedback as a strategy to support secondary students in their effort to improve their writing. The feedback triangle framework is an approach for using dialogic feedback and to foster productive student learning and includes three dimensions the cognitive (content), social-affective (interpersonal negotiation), and structural (organization) which are elements of the feedback process (Yang & Carless, 2013). To accomplish the purpose of this study, I conducted a qualitative study using a single-case study research design and used purposive sampling, ensuring that participants with qualifying experience were invited to participate (see Ravitch & Carl, 2019). I had two data sources, the first being three semistructured interviews conducted online, and a postinterview reflection form completed by each participant up to a week after the interview. For inclusion in the study, participants were limited to (a) secondary teachers (Grades 7–12) who (b) had at least 1 month of experience using screencast for feedback or had made a minimum of one screencast feedback video on high school students' writing. The results of this study may support improved secondary education and may positively affect social change as teachers expand their knowledge of and experience with feedback modalities that could advance student writing progress in secondary classrooms.

The key findings for this study were centered on three RQs and themes that emerged from data analysis. The two themes or key findings for RQ1 were secondary teachers use of screencast feedback depends on different modes and access to technology and teachers face challenges with resources, time, and readiness when implementing

screencast feedback. Both themes are aligned with data matching the structural dimension (Yang & Carless, 2013). For RQ2, I found that teachers target elements of writing and interpersonal exchanges to improve feedback uptake and teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake. Both themes for RQ2 are aligned with data matching the cognitive and social-affective dimensions (Yang & Carless, 2013). For RQ3, I found that teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. This theme was aligned with data matching the structural, cognitive and social-affective dimensions (Yang & Carless, 2013). The second theme in RQ3 was teachers believe that the use of screencast feedback has a positive influence on students' overall understanding and on teacher–student interpersonal relationships. This theme was aligned with data matching the cognitive and social-affective dimensions (Yang & Carless, 2013).

Interpretation of the Findings

The exploration of screencast feedback as a strategy to support secondary students to improve their writing was viewed through the three dimensions of the feedback triangle, cognitive, social-affective, and structural. A detailed interpretation with specifics will follow in an effort to avoid generalizations. Even though there is little to no research on screencast as a form of feedback in the secondary context, it has been examined in higher education and that research will be used as a reference unless otherwise stated. I interpreted these results in relation to the themes that emerged, organized by RQ, and the key finding for each.

Research Question 1

A review of the literature revealed that teacher perceptions of the use of screencast feedback as a mode to improve writing helps students to seek out and improve uptake of feedback (Wood, 2022), use self-regulated writing strategies (İnan-Karagül & Şeker, 2021), and shows student ability to implement process approach (Maharani & Santosa, 2021). Overall, literature on screencast feedback for both students and teachers show the majority of the experiences (Van der Zijden et al., 2021), implications (Mali & Santosa, 2021; Pachuashvili, 2021), applications (Lowenthal, 2021; Rybakova, 2020), and perceptions (Zubaidi, 2021) are positive. The findings of this study extend the current literature, because the secondary population of my study differs from the higher education population in the literature, and data from teachers in my study perceived their screencast feedback experiences as positive as well. Additionally, when reflecting on specific cases with students, participants in this study recognized that screencast feedback depended on different modes and access to technology and that there were some challenges with resources, time, and readiness when implementing screencast feedback. This may mean that due to the overall positive reception from participants and their reported positive responses from students in using this mode, and despite small challenges, screencast feedback could be further explored as an educational technology tool to use in secondary classrooms to improve student writing.

Research Question 2

Elements of Writing

Data from this study supported existing research. Participants targeted elements of

writing and interpersonal exchanges in screencast feedback to improve uptake. This

reflects a dialogic approach to feedback in the cognitive domain as Yang and Carless

(2013) described. The data showed participants in this study focused on mechanics,

organizational structure, word order, reasoning/arguments, and a variety of other

elements of writing when implementing screencast feedback. These study findings

confirm prior research where the majority of the literature came from higher education

and focused with language learners. These topics targeted mechanics (Pearson, 2022),

organization and content (Elfiyanto & Fukazawa, 2021), word choice (Yunus, 2020) and

building arguments (Qutob & Madini, 2020; Zhu et al., 2020).

Leveraging of Encouragement and Positioning of Positivity

Additionally, participants in this study focused on leveraging encouragement and

positioning positivity during interpersonal exchanges within the screencast feedback.

This focus supports prior research that examined social-affective feedback practices such

as positive or negative emotion (Chong, 2022), motivation (Shen & Chong, 2022), and

praise (Zhou et al., 2022). This study extends what are, as participants described in detail,

ways they would leverage encouragement through using humor and shrinking mistakes.

They also shared techniques for how to position positivity in the screencast feedback.

Participants discussed taking an "always first" approach when giving critical feedback. In

this, they always give positive feedback first and immediately. They also shared their

perspective that they found it important to give positive feedback along with negative feedback. Though positive and negative emotion is addressed in prior research (Chong, 2022), the details from this study bring new insight through the specificity of their technique. Additionally, this study extends what is known due to the reason that almost none, or very little, prior research was conducted in a secondary setting.

Critical Feedback Practices

Participants in this study described how they believed that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake. This result supports prior research, specifically in the area of signposting in the secondary context where in one mixed methods study, Henry et al. (2020) explored the use of digital conferencing using Screencastify with 42 sixth-, seventh-, and eighth-grade students. Students attending a writing workshop were able to receive feedback from their teacher using Screencastify and reported that the signaling on the screen and the ability to watch the video repeatedly were the primary advantages of this mode of correction (Henry et al., 2020). Results from my study extend understanding, showing that teachers capitalize on signposting knowing that it is a critical element that makes screencast feedback unique and beneficial for students. Participants discussed the cognitive and social-affective elements they targeted when implementing screencast feedback and the positive reception and improved uptake from students.

In other ways, study data extends what is understood as each participant in this study described their screencast feedback experiences and related stories in which they directly identified reasons and justifications for being brief and being careful during

critical feedback. This specific connection, which could be interpreted as best practice for screencast feedback was not discussed in this regard in previous research.

Research Question 3

Motivation

This study confirmed existing research in the following ways. In a review of literature on motivation, the role of social-affective elements in secondary feedback practices are either non-existent or so minute that they are often highlighted in systematic reviews of literature as marginalized. In those studies there are calls for more dialogic approaches (Shen & Chong, 2022), an affective or emotional direction (Chen & Nieminen, 2024; Geng et al., 2022), emotional engagement (Chong, 2022), motivation to learn (Selvaraj et al., 2021) the use of technology to impact motivation (Lutfiyyah et al., 2021), and improvement in the mismatch between positive perceptions of praise and insufficient praise practice (Zhou et al., 2022). In this study, participants reflected on their personal practice and shared structural motivations for using screencast feedback. These reflections included references to it saving time and being asynchronous; social-affective motivations such as psychological safety, personalization, and relationship building; and cognitive motivations such as repetition, simplification, and uptake. When comparing literature results and the results of this study, the topic of motivation is addressed (Selvaraj et al., 2021), however, addressing the idea that teachers could have cognitive, social-affective, and structural motivations for using screencast feedback has not been addressed in prior research. This may be an opportunity for researchers to broaden the topic of motivation in technology mediated feedback.

Overall Understanding and Interpersonal Relationships

Last, this study supported prior research that found consensus on using video feedback to include teacher perceptions that it is easier, faster, and more personal, while student perceptions reveal it is more engaging, preferred, has better quality, is more personal, and addresses higher-order thinking (Bahula & Kay, 2021; Cunningham, 2019; Ryan et al., 2019; Wood, 2021). Likewise, participants in this study believed that the use of screencast feedback positively influenced students' overall understanding and interpersonal relationships with their teachers. Participants recounted how students had improved uptake, better results, and increased understanding of content. Interpersonal relationships were also cited to improve with the use of screencast feedback in regard to relationship building, appreciation from students, and communication. These insights may mean that the use of screencast feedback in secondary classrooms could be used to ensure students not only improve uptake and understanding for writing content but see and value the social-emotional aspects involved in that process.

Limitations of the Study

Limitations may affect the trustworthiness and transferability of this study. They are factors that are beyond my control and for this study several limitations existed concerning the research design, experience, and participants. In regard to research design and the postinterview reflection, the responses from participants were applicable, but lacked depth. Because the form was completed on the participant's own time, there was no regulation of how much depth they would share in the form. However, the second data source did provide a valid way for the data to be triangulated. Another limitation, as with

any basic qualitative research methodology, there exists the possibility for unintentional researcher bias. In Chapters 3 and 4, I acknowledged this bias and explained how I attempted to mitigate it by keeping a reflective journal, field testing the questions, sharing my interpretations of the interviews, and being transparent in all methodological choices.

A second limitation of this study was related to experience. Participants in this study may have used screencast feedback as long as 5 years and others only 1 month. The benefit of this experience is that it allows for participant reflection, while the disadvantage is that time may alter their perceptions. A further limitation involving participants in this study was that it only included females, and male teachers may have reported different experiences.

Recommendations

Recommendations for further research are based on study results and limitations of the study. The first recommendation is related to RQ1 and the finding that secondary teachers use of screencast feedback depends on different modes and access to technology and teachers face challenges with resources, time, and readiness when implementing screencast feedback. More research needs to be done about technology mediated feedback practices in secondary classrooms in general, screencast feedback in particular, and both focused on practices to support writing, so that deeper understanding can be gained about the mode, access to technology, and challenges and barriers teachers need to overcome for successful implementation of screencast feedback.

The second recommendation is related to RQ2 and the study finding that teachers targeted elements of writing and interpersonal exchanges to improve feedback uptake.

These participants also believed that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake. More research needs to explore secondary specific elements of writing, interpersonal exchanges that are more likely to happen in the secondary context, and critical feedback practices within this population so that deeper understanding can bring insight about what are best practices for successful implementation of screencast feedback.

The third recommendation is related to RQ3 and the study findings that teachers utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. Additional research could be done to see if the caution and importance teachers feel about the psychological safety of students is felt and understood by students when receiving screencast feedback. The findings also include that teachers believe that the use of screencast feedback has a positive influence on students overall understanding and on teacher–student interpersonal relationships. Therefore, this study should be extended by focusing on motivation, overall understanding, and interpersonal relationships while using screencast feedback within the secondary context so that new perspectives might be included in an area where there is a significant absence of data. Additional research would also contribute to the development of articulating best-practices of teachers when using screencasting.

A fourth recommendation is to conduct research using other data sources or methodologies. This case study used two data sources, however a reflection from students on their screencast experience might deepen triangulation. Additionally, an analysis of the actual screencasts in question as a data source and not as part of the interview might

increase understanding of teacher and student perceptions compared to what has actually transpired in the feedback. Other study designs are also recommended, such as but not limited to, a quantitative study that focuses on content analysis of data excerpts.

The last recommendation is related to the limitations of this study. This study was conducted with three female teachers teaching different subjects located internationally. A study that focused on a more even mix of male and female teachers as participants might possibly yield greater insight. The focus on interpersonal relationships that emerged in this study may have different outcomes when the gender of teachers and students are managed as part of the study. Therefore, this study should be replicated focusing on teachers in the same subject, across different cultures, mixed genders for both teachers and students, and possibly with the same population of students to determine if results are similar.

Implications

This study will contribute to positive social change in several ways. First, at the individual level, this study addressed a gap in the literature where explorations on this topic have little to no reference point and were limited to studies only in the higher education context. This study also contributes to knowledge and possible best practices teachers can employ for improved uptake and understanding regarding secondary writing in any subject. This study largely addressed social-affective elements of the feedback process and will contribute to practices at the teacher level to improve and manage interpersonal relationships during critical feedback. Overall, for teachers, this study

contributes to the field of educational technology and design and can support knowledge and practice for designing and improving the feedback process.

Further, this study may also help secondary students benefit from technology mediated feedback that could improve uptake and results. This study also contributes specifically to the social-affective element of feedback and its implication on student mental health as well as possible improved feedback uptake. There is also potential for change at the organizational level where educators and institutions could close performance gaps by using a mode that improves overall understanding, and that highlights the social-affective aspect of the feedback process. This could influence the way educators and institutions design, plan, and implement the feedback process that takes place on a larger scale. This study also contributes to the conversation and implementation of applications and software that facilitate screencast feedback in classrooms. This study may also advance knowledge in the field of educational technology and design as the results could be used to further the development of software, applications, and practice that make the use of screencast feedback easier for both teachers and students.

The study may have deeper implications. The information gathered from this study may help provide researchers and educators with better understanding of how screencasting might be used to improve and highlight positive aspects of student-teacher interaction and the occurrence of more efficient feedback uptake. Another contribution that this study makes to positive social change is in relation to improved professional practice concerning best practices in feedback. This study could be the catalyst for

improvement and support of secondary teachers to expand their knowledge of and experience with feedback modalities.

Conclusion

The societal problem addressed in this study is that students struggle with decoding and implementing feedback (Li et al., 2024). One way this has been addressed is through innovative technologies to provide screencast feedback (Henry et al., 2020). The research problem addressed in this study was to improve understanding in how secondary teachers use screencast feedback to support students in improving their writing. While an exploration has been studied of the student perspective of receiving screencasting feedback at the university level (Cunningham, 2018, 2019b) and specifically of university English language learners' experiences (Ghosn-Chelala & Al-Chibani, 2018), little to no research had been done at the secondary level. I concluded several key findings related to this exploratory qualitative case study. First, secondary teachers use of screencast feedback depends on different modes and access to technology. Next, teachers face challenges with resources, time, and readiness when implementing screencast feedback. Also, teachers target elements of writing and interpersonal exchanges to improve feedback uptake. Additionally, teachers believe that critical feedback practices such as being careful, being brief, signposting, and showing examples improve student uptake. Teachers also utilize cognitive, structural, and social affective motivations to simplify learning, save time, and enhance psychological safety. Last, teachers believe that the use of screencast feedback has a positive influence on students overall understanding and teacher–student interpersonal relationships. In this study,

teachers shared an overall positive response to the use of screencast feedback in their secondary classrooms.

However, research regarding screencast feedback in the secondary context is diminutive and more needs to be done with this population as studies in higher education have revealed that students perceive screencast feedback as pleasant (Bush, 2021), personal and supportive (Ali, 2016; Cavaleri et al., 2019), facilitative of communication (Harper et al., 2018), and as having cognitive and motivational benefits (Vatansever & Toker, 2022). This study may contribute to positive social change by raising awareness of the perceived potential outcomes of screencast feedback use in secondary writing environments. Additionally, it may provide insights for administrators, teachers, and parents into how well the use of this modality can improve uptake, results, and even interpersonal relationships.

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Appendix A: Permission to Use the Feedback Triangle Graphic

Safwa Abdul-Aziz
To: [REDACTED]
Fri 4/12/2024 8:41 AM

Dear Authors,

It is a pleasure to ask permission to use the feedback triangle graphic in my dissertation. My study is the Use of Screencast Feedback to Improve Secondary Writing and I used this approach for my conceptual framework. The graphic has been attached below and I look forward to your response.

Best regards,
Safwa
Candidate for Phd Educational Technology & Design

YANG, Min [C&I] [REDACTED]
To: Safwa Abdul-Aziz
Fri 4/12/2024 12:30 PM

Dear Safwa,

Thank you for your interest in using our framework in your PhD study. We are pleased to grant you the permission. Wishing you success in your study.

Best regards,
Min

Min Yang
Department of Curriculum and Instruction
Education University of Hong Kong

在 2024年4月12日，12:41，Safwa Abdul-Aziz <[REDACTED]> 写道：

CAUTION: External email. Do not click links or open attachments unless you recognise the sender and know the content is safe.
警告：外來電郵。 如不認識寄件者，或不確定內容是否安全，切勿按下任何連結或開啟任何附件。

Appendix B: Interview Protocol

Introductory script:

Thank you for your interest in participating in my research study. Before we get started, I wanted to share a bit about myself and why I am doing this study as part of my doctoral research. For my background, I am an English teacher with over 5 years of screencasting experience. I have personally used screencasting with my students and have tried many different technologies as I enjoy working on improving feedback to students.

I wanted you to know that I have a specific definition of screencasting, which involves using digital recordings of the activity on one's computer screen, voiceover narration, and a video of the presenter. As you answer my questions today, please keep this definition in mind.

Thank you so much for volunteering to participate in this interview today. I so appreciate your time and expertise. I am looking forward to seeing the world from your point of view. I want to understand the meaning of your experience, to walk in your shoes. Will you become my teacher and help me understand?

I will be audio recording our interview today so that I may make a transcript, so that I can be sure to have an accurate record of what you share with me today.

Before we get started do you have any questions?

[START RECORDING]

Background, Screening, and Introductory Questions

Before we get started with the official interview, I'd like to learn a bit more about you and your experiences about screencasting.

- *I am interested to know, how did you hear about my study?*
- *What grade and subjects do you teach?*
- *How long have you been teaching?*
- *How much experience do you have with screencast feedback?*
- *How do you create your screencast feedback? (platform)*
- *How do your students view the screencast feedback you give them?*

Option A: *Thank you, Let's go ahead and move into the interview questions.*

Option B: *Thank you so much for your willingness to participate. But after talking with you, I'm not sure you have the depth of experiences on screencasting that I need to answer my research questions. Thank you for time.*

Table of Interview Questions:

Transition Statement: *My first group of questions relate to your **experiences with screencast** feedback.*

RQ #1	Interview Questions (IQs)	My Notes & Alignment to framework/literature
What are the **experiences of secondary teachers** using screencast as feedback to support writing?	IQ 1: *How did you learn about screencast feedback?*	These questions are aligned with the **structural and social-affective dimensions** in the conceptual framework selected for this study which is the feedback triangle by Yang and Carless (2013). The structural dimension refers to how the disciplinary practices in conjunction with institutional policies determine how the feedback process is arranged and what resources are mobilized in providing feedback (Yang & Carless, 2013). The social-affective dimension, describes how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment (Yang & Carless, 2013).
	Prompts:	
	IQ 2: *How often do you use screencast feedback?*	
	Prompts: With whom?	
	IQ 3: *What made you want to use screencast feedback with your students?*	
	Prompts: What do you feel you're able to accomplish differently in screencasts compared to how you've previously given feedback on student writing?	
	IQ 4: *How do you introduce screencast feedback to your students?*	
	IQ 5: *What challenges have you faced with screencast feedback?*	
	Prompts: How did you overcome these challenges? What would you do differently next time?	
	IQ 6: *Recall a specific time that you found success with providing screencast feedback. Can you tell me about it?*	
	Prompts: How did your actions contribute to the success of this screencast? How did the student contribute to the success of this screencast? Do you feel the student's writing improved as a result of the screencast feedback? How so?	
	IQ 7: Overall, what are your student's reactions to the screencast feedback you provide to them?	

| | Prompts: When you are planning or making your screencast feedback and thinking of your students reaction to it, what are your thoughts? | |

Transition Statement: *Now that you've shared about your experiences, I like now to move to questions related more to what you **choose to focus on in your feedback**.*

RQ #2	Interview Questions	My Notes & Alignment to framework/literature
What aspects of feedback do secondary teachers **choose to focus on**?	IQ 8: *What are your thoughts on what a good example screencast feedback should include?*	These questions are aligned with the **cognitive dimension** in the conceptual framework selected for this study which is the feedback triangle by Yang and Carless (2013). The cognitive dimension is the intellectual content or subject of the feedback and is what is being communicated to the student regarding the identification of issues, and suggestions and resources to be applied in future (Yang & Carless, 2013).
	Prompts: Why have you found that to be important to include? What writing elements don't translate well in screencast feedback?	
	IQ 9: *When creating screencast feedback what elements of writing do you usually give feedback on?*	
	Prompts: Which elements such as, grammar and mechanics, organizational structure, tone, and style etc do you give feedback on?	
	IQ 10: *What have you learned about what works and doesn't work when it comes to constructive feedback?*	
	Prompts: Why do you think ___X___ works/doesn't work?	

Transition Statement: *My last set of questions are related to the **reasons for the choices** you make when delivering screencast feedback.*

RQ #3	Interview Questions	My Notes & Alignment to framework/literature
What are the **reasons for the choices** secondary teachers make	IQ 11: *I noticed you mentioned using _____ to create your screencast feedback. Can you tell me why?*	These questions are aligned with the **social-affective dimension** in the conceptual framework selected for this study which is the feedback triangle by Yang and Carless (2013). The social-affective dimension, proposed by Yang
	Prompts:	
	IQ 12: *In your sample screencast the focus of your feedback was _____. What was the reason you focused on _____?*	

when delivering screencast feedback?	Prompts:	and Carless (2013) describes how students relate to the teacher, their peers, the subject matter, and their emotional response to feedback and assessment.
	IQ 13: *How do you think screencast feedback shapes the relationship you have with your students?*	
	Prompts: What actions from you the student influences that relationship? Why is that?	
	IQ 14: *Describe any successes or challenges you've had in using screencasts to help students accept critical feedback.*	
	Prompts: In your experience, how well have students been able to apply screencast feedback to improve their writing?	
	IQ 15: *Share with me your experiences with providing praise about students' work in screencast feedback.*	
	Prompts: How did that change your future screencasts? -What did you learn about yourself or your students through that experience? -*What did you hope to achieve by giving praise in your sample screencast?*	
	IQ 16: *How are your body movements, facial expressions, or social cues different or the same from one screencast to the next?*	
	Prompts: You mentioned that you change X from one screencast to another, can you please share why? What impact does these changes have on the feedback and yourself?	

Optional: Share Student Screencast Artifact

There is an optional opportunity for you to share a sample screencast feedback you have created. Whether you share or not will not adversely affect the study. Would you like to share a sample?

(View or not view the sample and ask any questions regarding the sample)

If a Student Screencast will be shared:

Thank you for having the video ready. Before you share the student sample, I would like to mention that during the video I will be taking notes for later reflection. So please excuse me as my attention during the time you are playing the vide, may be divided.

Two required questions per participant:

1. **Considering what you have shared in our interview and now watching the sample do you have any additional insights or comments?**

2. **How is this sample different or similar to other student screencasts (if applicable)**

Sample Questions:
- ***I noticed here you did*** *[what]. What was your thinking there? (Structural)*
- ***I'm curious about why you choose****....can you share more about the context of this feedback strategy? (structural)*
- *I noticed **you focused primarily on [writing element] with this student**, do you remember **if the student improved in this area after the screencast**? (structural/cognitive)*
- *After listening to this with me, what insights or comments do you have about **the tone of voice you used and how you were speaking to the student?** (social affective)*
- *Would you say this sample you shared **is typical for the types of screencasts** you provide to your students? How so?*

Is there anything else about screencasting that we have not yet had a chance to discuss?

- o *What have you learned about your teaching practice through all of this?*
- o *What have you learned about yourself through all of this?*
- o *Do you have anything else to add?*

Closing Script: *Thank you so much for your time today. I really do appreciate you sharing your thoughts with me.*

I am now sharing a link to a post-interview reflection form for you to complete at your convenience which will take 15-20 minutes of your time and can be submitted within a one week timeframe from this date.
In the event that you have questions later you have access to my email and can send them at any time. I will also be sending you the documents of my interpretation of what we discussed within a few weeks as we agreed. Thank you for your time.

Goodbye.

Appendix C: Postinterview Reflection

Thank you so much for volunteering to complete this reflection today. I so appreciate your time and expertise. I am looking forward to continuing our conversation and seeing the world from your point of view. I want to further understand the meaning of your experience and to walk in your shoes. Please do the following:

Reflect deeply on one or more recent screencast feedback videos you have created for students about their writing and complete the questions below.

For this study, the definition of screencasting Involves using digital recordings of the activity on one's computer screen, voiceover narration, and a video of the presenter. As you answer my questions today, please keep this definition in mind.

Name:

What went well? Why? **(RQ1)**

What problems did you experience? Why? **(RQ1)**

What could you have done differently? **(RQ1)**

What **information** did you want your student to take away from the feedback? **(RQ2 + cognitive)**

What **key statements** did you make that you feel would have an influence on your relationship with this student? **(RQ3 + social affective)**

Thank you for your responses. Is there anything else you would like to share about your experiences with, choices or reasons for using screencasting feedback? **(All RQs)**

Appendix D: Participant Recruitment Email

Shared in **email** to individuals identified on professional networks

Caption: There is a new study about the experiences of <u>secondary teachers and their screencast feedback experiences with their students</u> that could help <u>teachers, administrators and other stakeholders</u> better understand and help <u>their secondary students</u>. For this study, you are invited to describe your experiences <u>with screencast feedback in your secondary classroom</u>.

Volunteers must meet these requirements (seeking 3 people):
- Secondary teachers grades 7-12
- At least 1 month experience using screencast feedback OR one sample feedback on student writing

Appendix E: Postinterview Reflections, Interview Excerpts, and Codes by Participant

Participant	Post-Interview Reflection Q1- What went well?	Interview Excerpt	Code
P1	I believe for me being able to provide feedback using the language [Spanish] really helped students better understand the task. *With screencast feedback, they can not only read along while receiving the feedback, but were able to also listen to specific words for pronunciation and clarification.*	Yes, definitely because I teach Spanish. *When I give them pointers in writing, they don't get the sound of the word, they don't get the sound of the sentence structure. But with the video, it's easier for me to give them that repetition and give them the word pronounced correctly so that they can use it moving forward.*	Understanding content
P2	Enhanced students' attainment: achieving the main goal of my recorded feedback videos is the best thing. *students now feel more confident writing their exams/ assignments/ lab reports/... as they know where & what exactly to focus on... the whole process enhanced their academic achievement and they became more confident & proud to celebrate their successes.*	*But since it has impacted my students learning and I saw an increase in their marks, let's say I was encouraged to invest in time to give them this feedback,*	Enhancement/results
P3	The feedback I received from the students about how much *they preferred video feedback and how it helped them improve their writing considerably.*	She definitely did improve. *She found out what the correct spelling mistakes were. She fixed her punctuation. She actually went out of her way to add more similes and more metaphors in her descriptive writing,* because one of their targets were figative language and describing a famous person. And they had to use very descriptive language to describe this person. She didn't use as much in her first draft, and in her second draft, she used it quite a lot.	Uptake

Participant	Post-Interview Reflection	Interview Excerpt	Code
	Q2- What problems did you experience? Why?		
P1	One of the problems was that not all students focused on the feedback. Providing feedback whether its in written or in screencast format, helps the students with their strengths and weaknesses. *However, if they do not take the time to go over the feedback, it defeats the purpose and hinders the learning experience.*	So I think overall they were very receptive. *There was always one or two that wouldn't open, wouldn't even look at the feedback. You always have those students that you wish you can find another way to reach them.*	Student receptiveness
P2	Time & place: *finding the suitable time & place to record these feedback videos was a challenge in some cases due to busy school schedule and heavy workload.*	Actually, sometimes the noise around me because *I really wanted calm room, especially when I want to record the video while being in school [there are] noises around you. Because I don't have really that super thick noise cancellation. Sometimes I have to find a quiet place and then to record.. sometimes after school…at work you're tired, but still you want to record something, especially those who want to see my face.*	Environmental (readiness)
P3	I could not do this for all students, I would need to select or target students due to the fact it would take a very long time.	I would love to be able to do it for all the 130 students that I teach. But it's not possible.	Time consumption

Participant	Post-Interview Reflection	Interview Excerpt	Code
	Q5- What key statements did you make that you feel would have an influence on your relationship with this student?		
P1	Providing positive feedback to encourage them and to have them understand that their efforts are valuable and that I am proud of them	That's where the feedback falls into place and a good screencast will actually have that first tell us what's working, what's doing great, what's wonderful. And also addressing those little areas where we need to improve, giving that overall feel, especially when we're working with students, like secondary students, giving that overall feel of you're doing an awesome job, let's get you even better.	Encouragement
P2	Students felt that it is a safe learning environment and it is okay to do mistakes. Students felt that I'm their personal tutor and that I'm giving them my full attention especially when watching my feedback videos while being at home.	But just to make it like safe environment as we always say, like students should be encouraged and excited to see the feedback… Your way of telling me my mistakes. I felt like safe to do mistakes. That it is okay to do mistakes because I will know how to improve it, how to correct my mistake. It is okay. Some students, they told me that miss now we like to do mistakes. To hear from you about it. Yeah. Such moments. It stays here.	Psychological safety
P3	Lots of positive feedback to start with so they can see I appreciate the hard work they have put in.	(saying) "I love how you do this". Like those key words "like", "love", "well", it gives them a sense of pride of their work, like the good things that they have done.	Always first (positioning positivity)

Appendix F: Codebook

Theme 1: Secondary Teachers use of Screencast Feedback Depends on Different Modes and Access to Technology

Category	Code
Mode to create or deliver (applied to data excerpts that mentioned the mode teachers used to create or deliver their screencast feedback)	Platform (refers to the references teachers made in using a platform to create or deliver feedback)
	Email (refers to the references teachers made in using email to create or deliver feedback)
	Link (refers to the references teachers made in using a link to deliver feedback)
	Cloud service (refers to the references teachers made in using a cloud service when delivering feedback)
	Application (refers to the references teachers made in using an application when creating or delivering feedback)
Access to technology (assigned to data excerpts that aligned with what factors shaped teachers' ability to use screencast feedback technology)	Institution (access from institution or school)
	Peers (received access to screencast feedback technology from peers)
	Training (received access to screencast feedback technology from a training session)
	Device (needed a device or which devices were needed to create or deliver screencast feedback)
	Savviness (takes into account teachers' practical knowledge, background, and understanding of how to create screencast feedback and refers to excerpts where teachers mentioned their savviness or lack thereof when creating or delivering screencast feedback)

Theme 2: Teachers face Challenges with Resources, time, and Readiness when Implementing Screencast Feedback

Category	Subcategory	Code
Challenges and barriers (referred to data excerpts where teachers shared the challenges they faced with screencast feedback)	Resources (refers to the resources that teachers mentioned they faced challenges with when creating or delivering feedback)	Cost of software (excerpts where teachers mentioned that due to the cost of software they faced challenges using or continue using it for screencast feedback)
		Video storage (excerpts where teachers mentioned that due to video storage on their devices they faced challenges using or continue using screencast feedback)
		Time-frame (applies to challenges teachers faced or where they mentioned the limited time-frame in which they attempted to deliver or create screencast feedback)
	Time (refers to challenges and the time barriers teachers faced when creating or delivering feedback)	Consumption (applies to challenges teachers faced or where they mentioned the amount of time that screencast feedback consumed and which made it difficult to create screencast feedback for all their students)
		Student need (this was applied to excerpts where teachers mentioned the diverse learning needs of students and how this was a challenge when deciding who would receive the feedback. Usually, students who were determined to need it the most.)
	Diverse learning needs (refers to the challenges teachers faced with the diverse learning needs of students, how many students teachers were responsible for, and how and whether students were receptive to the screencast feedback)	Student number (the number of students a teacher had in her classrooms or were responsible for was a challenge. This is applied to references teachers made about how many students she had and how she could not complete screencast feedback for all of them)
		Student receptiveness (this is applied to excerpts

		where a teacher mentions the challenge she faced with students who were not receptive of the screencast feedback)
	Readiness (applies to personal and environmental challenges teachers faced when creating or delivering feedback)	Environmental (refers to times teachers mentioned their environment was not ready for recording a screencast feedback)
		Personal (refers to excerpts where teachers mentioned they had personal reasons for not being ready to record a screencast feedback)

Theme 3: Teachers Target Elements of Writing and Interpersonal Exchanges to Improve Feedback Uptake

Category	Subcategory	Code
Elements of writing (refer to data excerpts where teachers explicitly stated the writing elements they were giving feedback on for correction)		Mechanics (refers to specific references to spelling, punctuation, and or grammar correction by teachers that was covered in the screencast feedback)
		Syntax (refers to specific references to syntax correction by teachers that was covered in the screencast feedback)
		Linking words (refers to specific references to linking word correction by teachers that was covered in the screencast feedback)
		Sentence Types (refers to specific references to sentence type correction by teachers that was covered in the screencast feedback)
		Word order (refers to specific references to word order correction by teachers that was covered in the screencast feedback)
		Organizational structure (refers to specific references to organizational structure correction by teachers that was covered in the screencast feedback)
		Vocabulary (refers to specific references to vocabulary correction by teachers that was covered in the screencast feedback)
		Informal language (refers to specific references to informal language correction by teachers that was covered in the screencast feedback)
		Reasoning/arguments (refers to specific references to reasoning or argument building correction by teachers that was covered in the screencast feedback)
Interpersonal exchanges (were aligned to data excerpts where teachers placed a focus on using encouragement and being positive	Leveraging encouragement (applied to excerpts where teachers discussed using elements of encouragement	Humor (refers to when teachers made references to using humor to encourage students during screencast feedback)

within the screencast feedback)	like humor and shrinking mistakes as a critical screencast feedback practice)	Shrinking mistakes (refers to when teachers made references to shrinking mistakes to encourage students during screencast feedback)
		Always first (was applied to statements teachers made about giving positive feedback first when creating screencast feedback)
	Positioning positivity (were aligned to data excerpts where teachers mentioned how they would position positivity within the screencast feedback)	With negative feedback (was applied to statements teachers made about saying something positive along with negative feedback when creating screencast feedback)

Theme 4: Teachers Believe that Critical Feedback Practices such as Being Careful, Being Brief, Signposting, and Showing Examples Improve Student Uptake

Category	Code
Critical feedback practices (given to data excerpts where teachers shared essential practices when giving critical feedback)	Being careful (applied to excerpts where teachers shared a critical practice of being careful of the words they say when giving feedback)
	Being brief (applied to excerpts where teachers shared a critical practice of being brief and making the correction short and taking less time when giving feedback)
	Signposting (applied to excerpts where teachers shared a critical practice of signposting and using highlighting when giving feedback)
	Showing examples (applied to excerpts where teachers shared a critical practice of showing examples when giving feedback)

Theme 5: Teachers Utilize Cognitive, Structural, and Social Affective Motivations to Simplify Learning, save time, and Enhance Psychological Safety

Category	Code
Structural motivations (were assigned to excerpts where teachers shared their structural motivations for creating and delivering screencast feedback)	Time-saving (referred to statements where teachers shared they were motivated by the fact that screencast feedback saved time)
	Asynchronous (referred to statements where teachers shared they were motivated by the fact that screencast feedback was asynchronous and could be used anywhere and anytime especially outside the classroom)

Cognitive motivations (were assigned to excerpts where teachers shared their cognitive motivations for creating and delivering screencast feedback)	Simplification (referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for simplification of ideas)
	Referencing (referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for referencing)
	Uptake (referred to statements where teachers shared they were motivated by the fact that screencast feedback improved uptake)
	Repetition (referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for repetition of ideas and concepts)
	Guidance (referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for guidance especially with complex ideas and concepts)
	Conveyance referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed them to convey messages and errors for correction)
	Enhancement referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for enhancement of ideas or concepts)
	Visualization referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for visualization especially with complex ideas and concepts)
Social-affective motivations (were assigned to excerpts where teachers shared their social-affective motivations for creating and delivering screencast feedback)	Psychological safety referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for them to create a safe place for students to make mistakes.
	Encouragement referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for them to be an encouraging positive presence in a live format)
	Relationship building referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed teacher-student relationship building)
	Personalization referred to statements where teachers shared they were motivated by the fact that screencast feedback allowed for personalization and the ability to target specific students and their needs)

Theme 6: Teachers Believe that the use of Screencast Feedback has a Positive Influence on Students Overall Understanding and on Teacher-Student Interpersonal Relationships

Category	Code
Overall understanding (were assigned to data excerpts where teachers shared that screencast feedback had an influence on the overall understanding of students)	Uptake (was applied to statements teachers made about screencast feedback having a positive influence on student uptake)
	Results (was applied to statements teachers made about screencast feedback having a positive influence on student results)
	Understanding content (was applied to statements teachers made about screencast feedback having a positive influence on students understanding content)
Interpersonal relationships (were assigned to data excerpts where teachers shared that screencast feedback had an influence on the teacher-student interpersonal relationship)	Relationship building (was applied to statements teachers made about screencast feedback having a positive influence on teacher-student relationship building)
	Appreciation (was applied to statements teachers made about screencast feedback having a positive influence on student appreciation)
	Communication (was applied to statements teachers made about screencast feedback having a positive influence on teacher-student communication)