

18

Commenting with Camtasia: A Descriptive Study of the Affordances and Constraints of Peer-To- Peer Screencast Feedback

Mary Lourdes Silva

ITHACA COLLEGE, UNITED STATES

Recent research on written, audio, and screencast feedback has focused on teacher feedback and student attitudes and perceptions regarding the quality of feedback in the different modalities. Unexplored in the literature is the use of screencast feedback in peer-to-peer feedback. The objective of this exploratory study is to discover how first-year writing students from two separate research writing courses use a range of semiotic resources to provide feedback; determine whether students prioritized higher-order (i.e., audience, purpose, organization) or lower-order (i.e., word choice, syntax, grammar) rhetorical concerns in their feedback; and understand student attitudes and perspectives about feedback in written and audio/visual modalities. Results show that students used multiple semiotic resources to meet their communicative goals. In the analysis of lower and upper classmen in one class, findings show that upper class students were more advanced in their feedback strategies. In the second class in which the feedback from two essays was compared, majority of students addressed higher-order concerns in generic terms and focused on lower-order concerns; however, students demonstrated a modest improvement in feedback quality. Survey results reveal that students valued receiving screencast feedback initially, citing it as more personal and comprehensive; however, as a resource for revision, screencast feedback presented various limitations. Although students preferred the written modality for revision, it was predominantly within the audio/visual modality that students addressed higher-order rhetorical concerns, although in generic terms. This study aims to expand our knowledge about peer feedback and explore the limitations and affordanc-

es of screencast feedback.

Les recherches récentes sur les feedbacks réalisés par écrit ou par des moyens audio ou vidéo se sont intéressées aux feedbacks opérés par les enseignants ainsi qu'aux attitudes et perceptions des étudiants quant à la qualité de ce feedback en fonction des différentes modalités. Mais l'usage de la vidéo dans les feedbacks entre pairs n'a pas été exploré. L'objectif de l'étude exploratoire que nous présentons est de découvrir comment les étudiants de deux cours distincts d'initiation à l'écriture de recherche utilisent une gamme d'outils sémiotiques pour fournir un feedback, de déterminer si les étudiants priorisent les éléments rhétoriques de haut niveau (par exemple: audience, but, organisation) ou ceux de bas niveau (par exemple: choix des mots, syntaxe, grammaire) dans leurs feedbacks, et de comprendre l'attitude des étudiants et leurs perspectives au sujet des modalités écrites et audiovisuelles. Les résultats montrent que les étudiants ont recours à de multiples ressources sémiotiques pour atteindre leurs objectifs de communication. Dans l'analyse des meilleurs et des moins bons d'une des classes, les résultats montrent que les meilleurs étudiants sont plus avancés dans leurs stratégies de feedback. Dans l'autre classe, dans laquelle les feedbacks de deux essais ont été comparés, la majorité des étudiants ont exprimé des remarques concernant les éléments d'ordre supérieur dans des termes génériques et se sont focalisés sur les éléments d'ordre inférieur. Cependant les étudiants ont fait preuve d'une légère amélioration de la qualité de leur feedback. Les résultats de l'enquête montrent que les étudiants apprécient de recevoir d'abord un feedback audiovisuel, le considérant comme plus personnel et plus global. Cependant, en tant que ressource pour procéder à la révision des textes, le feedback audiovisuel présente de nombreuses limitations. Bien que les étudiants préfèrent la modalité écrite pour la révision, c'est majoritairement par la modalité audiovisuelle qu'ils émettent leurs remarques de haut niveau rhétorique, même si c'est dans des termes génériques. Cette étude vise à améliorer notre connaissance des feedbacks entre pairs et à explorer les limites et les intérêts du feedback audiovisuel.

1. Introduction

Recent research on multimodal assessment has discussed the pedagogical im-

plications of student-generated criteria to evaluate multimodal composition (Adsanatham, 2012). Scholars agree that assessments should focus on a rhetorical understanding of composition (Borton & Huot, 2007; Odell & Katz, 2009; Shipka, 2011); and instructors as well as students should use Web 2.0 technologies in assessment to improve students' metacognitive skills and "[re-cast] assessment as integral to the learning process . . ." (Wyatt-Smith & Kimber, 2009, p. 86). However, unexplored in the literature is discussion about the method of assessment itself as a multimodal activity. In digital environments, whether through marginal comments in Microsoft Word or Google Docs, rubric assessments, progress reports, email exchanges, or discussion forums, alphabet text has been the predominant modality used for formative, summative, or self-assessment of student projects. By only focusing on print-based discourse or face-to-face oral communication, we ignore the affordances of making meaning and connections across different multimodal and multimedia contexts. We also fail to see the limitations of face-to-face oral communication as governed by the temporal and sequential logic of speech (Kress, 2005), in which students are not able to go back and "hear and see" their thinking in time, whereas in other modalities like audio or audio/visual digital recordings, students can experience their thinking as a tangible learning artifact that could be reflected on, analyzed, archived, or repurposed. Framing assessment as a dynamic multimodal activity allows instructors to re-imagine traditional forms of assessment such as teacher feedback and peer-to-peer (P2P) feedback.

1.1 Research on Multimodal Teacher Feedback

For decades, teachers have experimented with providing feedback in multiple modes with mixed results. A face-to-face teacher/student conference is arguably the most optimal method of teacher feedback (Lerner, 2005) where teachers can elaborate on their goals and expectations and students can respond (Frank, 2001). However, this method of feedback is not ideal for large class sizes, contingent faculty working at multiple locations, online distance education courses, non-traditional students, and students with divergent learning needs.

Research on teacher feedback has found that students frequently fail to understand teacher comments and expectations (Thaiss & Zawacki, 2006). In a meta-analysis of feedback, Hattie and Timperley (2007) conclude that effective feedback must answer three questions: "Where am I going? (What are the goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make

better progress?)” (p. 86). The three questions correspond respectively to the terms feed up, feedback, and feed forward. The most common form of teacher response is feedback, which often functions as a rationale for the summative grade (see also Glover & Brown, 2006), rather than feed forward, which includes strategies and instructions for further revisions or subsequent writing tasks. Feedback is powerful so long as students actively engage with it and do not overlook the feedback in search for their grade (Dean, 2007). Feedback in the form of praise, on the other hand, seldom addresses the three fundamental questions for effective feedback.

In recent years due to the integration of audio-recording software on smartphones, laptops, and desktop computers, audio feedback has become more popular with instructors. However, audio feedback is nothing new. In the form of analog cassette tapes, it dates back to the early 70s (Coleman, 1972). Anson (1997) found that teachers valued this mode of feedback because in less time they could provide more comprehensive feedback. For instance, teachers could reference the class context (e.g., past assignments and class discussions), provide helpful strategies, and answer students’ concerns about their writing. In more recent studies on student attitudes about (digital) audio feedback, researchers found that students valued personalized and comprehensive feedback (Gould & Day, 2013; Merry & Orsmond, 2008; Rotheram, 2007; Trimmingham & Simmons, 2009). In online courses, researchers found that the use of audio feedback not only personalized feedback, it created a social presence and sense of community online and increased student involvement (Ice, Curtis, Phillips, & Wells, 2007).

Research in audio/visual feedback in the form of video files (i.e., screencast feedback) is relatively new, as screen-capture software (e.g., Camtasia) prices continue to be relatively high for the average person—available at <http://www.techsmith.com> for \$299 (Windows) or \$99 (Mac). Free alternatives have become more popular (e.g., Jing and Screenr); however, the 5-minute limit can deter some from considering these alternatives. Furthermore, limited Internet speed and storage space for large media files are everyday constraints for many instructors. Screen-capture software, such as Camtasia, allows users to record audio as well as all screen movement and activities, such as scrolling, typing, clicking, and web surfing. Early adopters of these technologies, however, have reported positive results regarding student attitudes and perceptions about screencast feedback (Brick & Holmes, 2008; Marriott & Teoh, 2012; Silva, 2012; Stannard, 2008; Thompson & Lee, 2012; Vincelette & Bostic, 2013). One possible reason that students have responded positively to audio/visual feedback is based on Mayer’s (2009) principle of multimedia learning, which asserts that students learn better

from words and images than from words alone.

In one study on student expectations of video and written feedback in a large undergraduate course, Kerr and McLaughlin (2008) found that students valued the quality of screencast feedback better than those who had only received written feedback. Thompson and Lee (2012) explain that screencast feedback allowed instructors to provide in-depth explanations and that students responded more to global issues in their writing (see also Silva, 2012). Vincelette and Bostic (2013) also found that students made more macro-level changes in their writing and communicated a preference for screencast feedback for micro-level issues as well.

1.2 Research on Peer-to-Peer (P2P) Feedback

Research in P2P feedback indicates that with proper training, students can provide constructive and descriptive feedback (Beach & Friedrich, 2006). In one study of high school students, Simmons (2003) reported that after students obtained proper training, which included modeling and discussions about constructive feedback, students no longer defined editing as peer feedback. However, Simmons also found that students continued to praise text without substance. Based on the findings of a study on forward-looking written feedback, Duncan (2007) reported that students focused more on surface-level issues and provided vague praise “at the expense of clear practical advice on how to improve the quality in subsequent work, or at least clarify issues in the students’ minds” (p. 278). Hovardas, Tsivitanidou, and Zacharia (2014) also reported that less experienced peer reviewers provided less critical, descriptive feedback and more positive commentary.

There are several pedagogical benefits to concentrating efforts to improve P2P feedback. First, students learn to perform the simultaneous roles of reader and writer. Nicol (2010) contends that when students construct feedback rather than receive it, students learn to actively engage with multiple texts (i.e., peer texts, assignment guidelines, rubric, etc.) and construct their own assessment criteria. Hovardas et al. (2014) add that students engage in a process of triangulation in that they must review their own feedback, their peers’ feedback, and expert feedback. This process of triangulation could facilitate metacognitive thinking and transfer of learning in students. Moreover, students learn to gauge their weaknesses and strengths among a community of their peers, thereby allowing students to develop their self-efficacy and agency as writers.

Much of the research on P2P feedback has examined student feedback in written modalities. There is scant research on P2P feedback in audio or audio/

visual modalities. In one study on P2P audio feedback, Reynolds and Russell (2008) compared audio feedback to written feedback. They wanted to assess whether students who provided audio feedback focused more on higher-order concerns (e.g., content, organization, audience, purpose) than those who gave written feedback. Lower-order writing concerns related to surface-level issues such as grammar, spelling, punctuation or word choice. Results of their analysis of student audio feedback show that students addressed higher-order concerns more and gave more specific comments. However, students preferred to give written feedback, expressing that it was easier, more comfortable, and more efficient to organize their thoughts and communicate in writing. In addition, it took longer to process audio feedback. Although Reynolds and Russell reported success using audio feedback, Trimmingham and Simmons (2009) found that some students did not listen to their feedback with draft in hand, which could be problematic, particularly if reviewers leave visual cues in their feedback to assist with revision. This problem would not be an issue in screencast feedback.

Excluded from research on screencast feedback is an exploration of the affordances and constraints of particular semiotic modalities (Kress, 2003), such as vocal inflections, cursor and scrollbar movements, highlighting, and recorder pausing. Furthermore, literature on student use of screen-capture software to administer P2P screencast feedback is non-existent. One objective of the present study is to explore the interrelationship between the mode of feedback and higher and lower-order concerns in P2P feedback. The present study answers the following questions:

1. When students provide screencast feedback, what do students prioritize: surface-level issues (lower-order concerns) or macro-level rhetorical issues (higher-order concerns)?
2. How do students use the semiotic resources available across multimodal/multimedia environments (i.e., Camtasia, Google Docs, computer) to construct their peer feedback?
3. What are student attitudes and perspectives about the use of screen-capture software to provide peer feedback?

2. Methods

2.1 Participants

A mixed method design was used to conduct a semester-long descriptive study of student use of Camtasia to provide P2P screencast feedback on drafts produced in Google Docs. Participants (N=19) were from two parallel

classes from a second-semester first-year research writing course at a private college in New York. In Class 1, the majority of student participants were second-semester freshmen and sophomores (first and second-year students); however, a junior (third-year) and senior (fourth-year) were enrolled and participated as well. In Class 2, all participants, but two juniors, were freshmen and sophomores.

2.2 Task

During the first half of the semester, students reviewed two separate source-based essays using Camtasia. The peer review of each essay occurred approximately three weeks apart. In class, students received two non-consecutive days of training on how to provide effective feedback and received a set of questions to guide their feedback for each essay. With Camtasia, students were advised to pause the recording while reading. At the end of the semester, a total of 19 student participants completed a satisfaction survey online about the use of Camtasia and Google Docs to conduct P2P feedback. The survey also asked students to reflect on their roles as reviewers and writers and to comment on their priorities within the different modes of feedback.

2.3 Data Analysis

Data analysis was an iterative process of reviewing video and audio data, marginal comments on drafts, survey results, and field notes. Thirteen students submitted 34 videos totaling 137 minutes and averaging 4 minutes with a range of 11 minutes. Each video was transcribed in Google Docs and coded for higher-order concerns and lower-order concerns. Reynolds and Russell (2008) define higher-order concerns as comments that address macro-level rhetorical issues (e.g., content, organization, audience, and purpose). Lower-order concerns are defined as comments that address writing mechanics and surface-level issues. Using a grounded theory approach (Glaser and Strauss, 1967), higher-order and lower-order concerns were further divided into two sub-categories: specific versus generic comments. Specific comments engaged with concrete claims and evidence in the text and offered concrete steps or strategies for revision. Higher-order generic comments alluded to rhetorical matters, such as audience, purpose, ethos, and logos, yet were not associated with specific claims or evidence within the student text. For instance, students often asked peers to “provide more examples and elaborate more” without linking the comment to any given claim. As for lower-order generic comments, students might say “proofread for grammar er-

rors” or “double-check your sentences.” In addition to higher and lower order concerns, evident in P2P screencast feedback was evidence of modeling (i.e., verbally communicate corrections or modifications), summarizing (i.e., summarize the student writer’s claims and evidence), and praise (i.e., compliment the student writer’s general effort or specific rhetorical move).

A total of 225 comments were coded. The unit of analysis was determined by triangulating three streams of multimodal discourse. First, a great majority of the time, students paused the video recorder in order to continue reading and conclude oral commentary. Second, students highlighted or scrolled to relevant text. Last, the content and purpose of each comment demarcated the boundaries between comments. A single screencast comment often included a combination of codes, in other words, higher-order specific (HOS), higher-order generic (HOG), lower-order specific (LOS), lower-order generic (LOG), modeling, summarizing, and praise. However, for statistical purposes, each code was only assigned once per comment (see Appendix for sample coding sheet). Unlike electronic feedback in which a single comment is determined by conspicuous boundaries such as a Microsoft Word comment bubble, or written feedback, in which summative commentary may be represented as a single paragraph, determining the boundaries of screencast comments is far more subjective and unexplored in the literature.

Within Excel the total number for each of the seven codes was calculated and graphed across the two classes. With the first data set, a comparative analysis of lower and upper classmen feedback was conducted ($n=7$) because the majority of HOS and modeling commentary (a more advanced form of feedback) came from the junior and senior students in the course. In Class 2, class standing was not a marker for advanced forms of feedback. For this data set, a comparative analysis of P2P feedback between Essay 1 and 2 was conducted.

3. Results and Discussion

In both data sets there was evidence of advanced forms of feedback (i.e., higher-order feedback and modeling). In the first data set of lower and upper classmen (Class 1) in which the junior and senior students produced a total of 60 comments combined and the 5 lower classmen produced a total of 60 comments combined, findings show that the upperclassmen were nearly three times more likely to provide HOS commentary and six times more likely to provide modeling commentary (see Figure 18.1). These findings are not too surprising since we would expect upper classmen (i.e., juniors and seniors) to have more reading and writing experience; however, the two juniors in Class 2

did not demonstrate advanced forms of feedback. A number of reasons might explain the differences, such as choice of field of study, prior coursework or preparation, student motivation, student confusion about the goals of P2P feedback, and/or unfamiliarity with Camtasia.

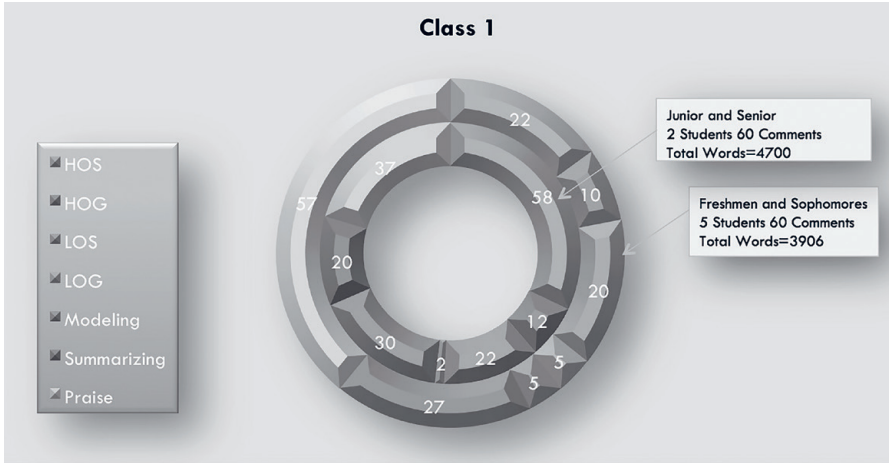


Figure 18.1. Types of Feedback in Class 1

Because class level was not relevant in Class 2, commentary from Essays 1 (n=49) and 2 (n=56) were compared instead (N=105 comments). Results show a positive shift, with students providing HOS commentary 24% of the time in the first essay and 48% of the time in the second essay (see Figure 18.2 for total number of feedback types for each essay). There was a modest improvement in modeling, from 16% to 20%. What was common in student feedback of Essay 1 was emphasis on lower-order concerns, such as syntax, sentence clarity, and word choice, even within a visual/audio modality. Half of the feedback in Essay 1 consisted of HOG commentary and LOS commentary. On the other hand, students equally prioritized higher-order concerns, such as purpose, audience expectations, structure, rhetorical appeals, and assignment guidelines; student discussion of these rhetorical matters, however, was non-descript, and generalized. In Essay 2, only 32% and 25% of total feedback consisted of HOG and LOS commentary, respectively. A slight decrease in HOG and LOS commentary may suggest improvement in student feedback as well as a slight shift in students' priorities after several weeks of class instruction. Student praise also decreased from Essay 1 to Essay 2, from 80% to 77% of total feedback. Unlike written modalities, where praise is represented in comments like "Good Job," with audio/visual feedback, praise often involved summary of the students' major claims, evidence, and objectives, all positive signs of

students managing their reading of text. In general, a decrease in praise in the same allotted time would indicate that students now prioritize higher-order concerns. In longer more focused screencast videos, however, it could illustrate that it is important for students to position themselves as facilitators rather than as evaluators. In fact, in Class 1, the junior and senior students provided praise commentary 62% of the time in their data set. Within an audio/visual modality, praise may be one way in which students attempt to personalize feedback, establish a social presence (Ice et al., 2007), and mitigate the expectation to “criticize” student writing. Students can exploit semiotic resources, such as vocal inflections, speech tempo, hedges, gestures, and pauses to reduce the social discomfort of a critique and communicate empathy, all of which are not accessible to students within the margins of a Word document.

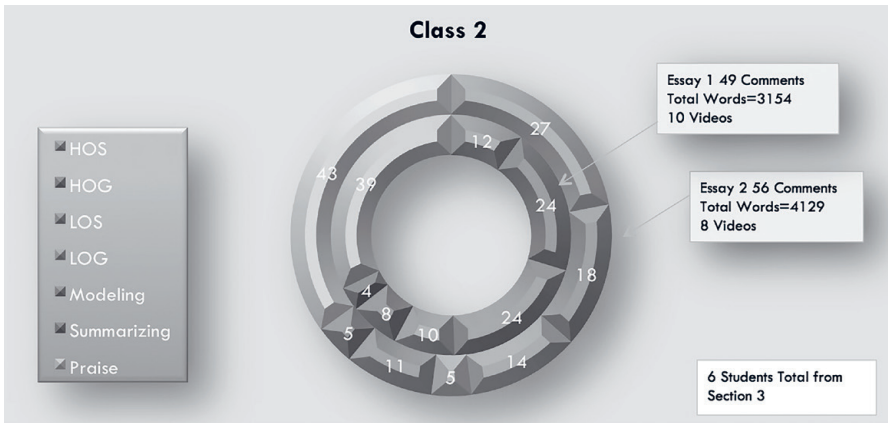


Figure 18.2. Types of Feedback from Essay 1 to Essay 2 in Class 2

3.1 High-Order Generic and Higher Order Specific Comments

Reynolds and Russell (2008) report that students in the written modality were more apt to focus on lower-order concerns; while in the audio modality, students discussed higher-order writing concerns. Reynolds and Russell conclude that the audio feedback was “better” than the written feedback even though students preferred the written modality. The present study reveals similar findings in that students discussed higher-order concerns in the audio/visual modality and preferred written feedback in the end due to convenience. However, when student comments in the audio/visual modality were examined more closely, results show that students predominantly gave generic feedback that lacked direction and clarity for revision. Rather, students frequently made blanket statements about wanting more details, examples,

sources, or “flow” without linking these statements to specific claims or evidence in the text. Odell and Katz (2009) discuss the problem with feedback that simply asks students to “elaborate.” They ask,

How much and what sort of information is the student supposed to provide? Where does he or she look to find that sort of information? How much elaboration is enough? How does the student decide whether a particular bit of elaboration (a detail, a quotation, a reference to an authority) is appropriate? (p. 200)

In the present study, when students repeatedly asked their peers to elaborate or give more examples, it is possible they were shadowing the type of feedback received in the past by instructors. For some students, this form of feedback proved to be unhelpful (none of the students asked for further clarification with the screencast feedback I had provided throughout the course). Further research is needed to determine if concentrated efforts to improve first-year writing students’ feedback skills would result in higher quality feedback (feed up, feedback, feed forward--Hattie & Timperley, 2007) in the audio/visual and written modalities.

Higher-order specific (HOS) comments were not common or consistent in student feedback. In Class 2, only 37% of the total comments were HOS. In Class 1, the junior and senior students provided HOS feedback 97% of the time. The freshmen and sophomores in Class 1, similar to Class 2, provided HOS feedback 37% of the time. The following student excerpts illustrate the ways in which peer reviewers attempt to contextualize the feedback and provide concrete steps for revision:

Student 4: “Find some examples of how companies are advertising for the experience not just the brand. I’ll give you an example, in my essay I found something on Google Scholar that broadcasted that companies are manipulating the consumer by photo-shopping celebrities by making them look better which furthers my argument and it just brings up a different point. The more points you have in your essay the better and more convincing it will be to your audience.”

Student 5: “First, you need to make your statement a little more clear [highlights 2 sentences] Do you think what a man’s job is changing today? I know you said that the definition of a man has been changing. Is that what you’re leaning toward? I think a man’s job is changing today.”

....

I thought you brought in this [highlights the bottom of a paragraph with an external source] about how the toys have changed from scrawny to buff. That's true. I know my Ken Barbie definitely had muscles. I think at the end of this, you need to bring in your own opinion rather than say that you only think that they're tough but they need to be smart.

In the above excerpts, both students engage with the ideas of the text and attempt to provide specific support through cursor gesturing, modeling, asking relevant questions, and responding to student claims. Unlike written modalities in which students do not have the physical space or technological affordances to elaborate on their interpretation of a text, the audio/visual modality affords students the time and space to do so.

3.2 Lower-Order Specific and Lower-Order Generic Comments

In Class 1, LOS comments were evident in 37% of the total comments by the junior and senior. In their feedback, students focused on word choice, syntax, grammar, and punctuation errors, often providing a brief rationale and modeling possible modifications. As for the freshmen and sophomores in the class, 33% of the total comments were LOS comments. In Class 2, of the total comments across the two essays, 36% of the comments focused on LOS concerns. Unlike student feedback that addressed higher-order writing issues in generic, vague terms, LOG comments were not as common, accounting for 14% of total comments in Class 2. In Class 1, LOG comments accounted for 3% of total comments among the junior and senior and 8% of total comments among the freshmen and sophomores. Although student feedback in written modalities was not the objective of the current study, there was no evidence of students articulating a rationale for any sentence-level corrections or recommendations.

Evidence of LOG feedback was not an indicator of weak reviewing abilities. For several students, LOG commentary functioned as a summative statement based on prior feedback. In the video data, it was evident that strong reviewers, who had provided ample HOS and LOS feedback throughout the video, would make general summative recommendations about proofreading for sentence-level issues. Moreover, all students were mindful of time constraints and did not want to produce videos longer than 6-7 minutes. On the other hand, weaker reviewers did not always contextualize their LOG feedback; students either did not know how to correct the problematic sentence

or felt compelled to alert their fellow classmate of the problem, because they had been instructed to focus on higher-order concerns.

3.3 Survey Results

The survey results show that students did not perceive video feedback from peers as an affordance because it was not perceived as a necessary tool to augment their peer review activities. During revision, they admitted that revising with the screencast feedback proved to be more of a challenge because they had to re-watch the video several times to locate points in the video timeline, whereas within Google Docs, they could begin to work immediately. The convenience of written feedback also correlated with some of the technical challenges that occurred in student attempts to give audio/visual feedback. Only 3 of 19 students reported no technical problems with recording, saving, converting, and uploading video files. Students did comment on the value of personalizing their feedback, as most students were quite concerned about appearing too harsh or critical; however, the technical difficulties of screen-capture software and inconveniences for revision deterred most students from considering screencast feedback in the future. Interestingly, students valued receiving screencast feedback, appreciating its conversational elements and comprehensive explanations.

A common theme that emerged from the student responses was student sensitivity about sounding too harsh or critical in the audio feedback modality. When students received peer feedback, they valued the personable and conversational quality of the commentary. However, when they themselves were the reviewers, several felt self-conscious about appearing too critical or negative. Some students compared the audio modality to the written, believing that written feedback was neutral, therefore safe:

“I feel like when I make a video, the peer I am reviewing may think I am being mean because we’re not in person for them to see that I do not mean my comments to be mean or especially negative. Whereas on Google Docs, there is no emotion whatsoever; it is just a comment.”

In this next response, the student felt that writing allowed for revision, which could control for the tone and affective intentionality of the feedback:

“I found that it was sometimes hard to explain myself well and get across a tone of constructive criticism and not arrogant correction. It was good to be able to write something

and re-write it and not worry about communicating it well the first time.”

On the other hand, one student acknowledged that she did not like to critique other’s work, yet felt that screencast feedback allowed her to communicate her affective intentions:

“I always claim to be very bad at peer reviewing and that’s because I don’t like to critique other’s work. However, with the audio I learned that it is easier to talk to someone about their essay without sounding too judgmental.”

Student sensitivity about appearing too harsh may explain the high frequency of praise comments in the screencast feedback. According to linguistic studies on politeness and peer feedback, students employ linguistic and mitigation strategies to reduce the directness of their criticism (Leijen & Leontjeva, 2012). Within a multimodal environment, having the option to employ linguistic and mitigation strategies, as well as hedge, apologize, and modulate voice can either create anxiety and discourage full engagement or assuage pre-existing anxieties about giving feedback.

Another prevalent theme evident in the survey results about screencast feedback was experiences of cognitive overload (Mayer, 2009; Sweller, 2005). While reviewing, students must mitigate any anxieties about “sounding harsh” or inarticulate, manage the functions of Camtasia, answer the peer review questions, reread relevant passages, and recall their interpretation of the text. Although Camtasia afforded students the time and space to elaborate on their reading of the draft and provide feed forward (Hattie & Timperley, 2007), the live recording did not afford students the opportunity to see and revise their feedback in real time. For example, one student commented in the survey, “I am more comfortable when I can write because I can take my time to develop an idea that I hadn’t thought about before without being interrupted. Sometimes I strongly believe in points that I have a hard time backing up with information.” For this student, the process of writing feedback was a recursive thought process that made invisible the hard work required to effectively communicate one’s understanding of a text and the assignment goals. Some students also voiced concerns about sounding unintelligent: “I really paid attention to what I was saying, because I didn’t want to sound dumb.” In both situations, the students could not edit their representational selves as articulate and intelligent reviewers within the audio/visual modality. Thus, a multimodal approach to peer feedback may be too much for novice reviewers.

3.4 Student Perceptions and Attitudes about Camtasia and Google Docs

In the survey results and in my field notes, there was a clear shift in student attitudes about receiving screencast feedback from peers and me. When students received the first wave of videos, before revised drafts were required, there was an overwhelming consensus that the peer and instructor screencast feedback allowed students to hear the intentions of the reviewer and obtain a more thorough explanation and rationale regarding problems in the text. The survey results confirm earlier findings on student satisfaction with screencast feedback (Marriott & Teoh, 2012; Silva, 2012; Vincelette & Bostic, 2013). Once students were required to incorporate the screencast feedback into their revision practices, student attitudes about Camtasia shifted. Students expressed frustration having to locate specific critiques within the video timeline and identify specific problem areas within their draft. Thompson and Lee (2012) report similar findings. Moreover, students grew increasingly impatient with the peer videos, complaining that they were too long and unfocused.

Another common thread in student preference for written feedback during revision was the importance to “fix” and “correct” localized problems in the draft:

“I felt more key issues were talked about and better explained in Google Docs, and they were easier to go back and fix and see, because they were right there.”

“This is hard to say but I think I preferred to receive the Google Docs feedback because I could get the correction and re-read it if I needed to, and again re-read it after I had made the correction to see if it fit with what the person was telling me.”

These results are consistent with the results of my earlier study (Silva, 2012) on student preference for Microsoft Word marginal comments versus instructor screencast feedback.

In the above excerpt, both students can re-read the written comment multiple times as a visual artifact fixed in time and space. In this context, written peer feedback could afford students the cognitive space to negotiate multiple perspectives (i.e., assignment guidelines and other peer responses) and develop criteria for effective writing (Nicol, 2010). In general, engaging in this mode of thinking requires additional cognitive resources. Thus, being able to “see” the response appears to link the text with formulating plans for revision, whereas having to locate feedback within a video while revising within

a Google document may create a split-attention effect (Mayer, 2009), which may leave some learners feeling overwhelmed or frustrated.

What written marginal feedback does not afford, however, is the space for students to articulate criteria for effective writing and analyze a text's progress based on those criteria. The video data show students doing this very thing—reading, synthesizing, and analyzing texts as well as verbalizing commentary utilizing multiple semiotic modes, such as highlighting with the cursor specific locations within a draft; scrolling from one paragraph to another to discuss macro-level issues; summarizing student text aloud to make inter-textual connections; modeling aloud modifications to the student text; and modulating voice to reduce the social impact of criticism and offer praise. The use of semiotic resources in screencast feedback functions as a type of socio-rhetorical performance that positions students as critical and engaged, yet empathetic and supportive. Although P2P screencast feedback videos can lack focus, or students may struggle to relocate specific comments in the video timeline, students can also experience anxiety and stress when reading and managing lengthy and numerous written comments. Whether or not students embrace screencast feedback or written feedback is a matter of students acknowledging the affordances and limitations of the two different modalities and using the semiotic resources necessary to meet their communication goals.

4. Conclusion

The objective of the current study was to discover how first-year writing students, as well as upper classmen, from two separate classes used the semiotic resources available to them across multimodal and multimedia environments and determine whether students prioritized higher-order or lower-order concerns in their feedback when delivering screencast feedback. Moreover, this study aimed to understand student attitudes and perspectives about the use of screen-capture software to provide peer feedback. According to the video data, results show that students used multiple semiotic resources to meet their communicative goals. In one class, a junior and senior student demonstrated more advanced feedback strategies, providing HOS commentary 97% of the time and modeling commentary 50% of the time. Freshmen and sophomores, on the other hand, focused more on HOG commentary, LOS commentary, and praise. Although freshmen and sophomores were not as advanced in their feedback, in the second class, freshmen and sophomores, including two juniors (who were not strong reviewers), made modest improvements in their feedback strategies. Students reduced the number of HOG, LOS, and praise

commentary and increased the number of HOS and modeling commentary. The survey results reveal that students valued receiving screencast feedback, appreciating its conversational elements and comprehensive explanations; however, as a resource for revision, screencast feedback presented various limitations.

Results indicate that first-year writing students require far more training to provide effective feedback. For students hesitant to trust the quality of peer feedback, Nicol (2010) suggests that teachers could comment on peer feedback to validate it and establish confidence and trust among peers. This is readily easy to do in Google Docs, where writing instructors can reply to comments. Writing instructors could also incorporate on-going discussions about various types of feedback and strategies for using feedback to improve student writing and reading. To improve the effectiveness of screencast feedback during revision, students could highlight and annotate their draft in a separate window while viewing their screencast feedback (Thompson & Lee, 2012). This would provide students with something more tangible to easily locate and address problem areas in their writing during revision.

Reviewing pedagogical approaches to teaching different types of peer feedback is often ignored in the literature because writing instructors assume that there is a direct correlation between advanced rhetorical/critical thinking and advanced feedback. If this were true, instructors would provide effective feedback; research on teacher feedback, however, indicates otherwise (see Thais & Zawacki, 2006). Also ignored in the literature (excluding L2 research) are discussions about the social and psychological implications of peer feedback. According to the video data and survey results, students are acutely aware of their social presence. Rather than only focusing on teaching students how to improve a draft, perhaps we should be teaching students how to build better connections with peers through their feedback in multiple modes.

In a medium such as Camtasia, students have the semiotic tools to point to different text types (e.g., words, paragraphs, images, hypertext, video) using their cursor; they can verbalize their understanding of the assignment, as well as their objectives, progress, and revision plan; they can think-aloud the skills, knowledge, and strategies that could transfer to writing situations across the curriculum; moreover, they have a medium that can record the evolution of their rhetorical and integrative thinking, which functions as a type of learning artifact that students could archive, analyze, reflect on, and/or repurpose. Written modalities can serve the same purpose and should be used to achieve similar goals; however, the constraints of print-based text open opportunities for a multimodal approach to student learning.

Further research is needed to determine if the additional modal choices in

P2P feedback, as well as training in P2P feedback, could shift students' attention toward more higher-order rhetorical concerns, allow students to engage in assessment dialogues (Carless, 2006) with peers, and feed forward (Hattie & Timperley, 2007) strategies and suggestions for revision.

Further research is needed in multimodal research to study alternative modes of assessment not situated in print literacy. Framing assessment as a dynamic multimodal activity allows instructors to re-imagine traditional forms of assessment. Furthermore, screen-capture software like Camtasia can allow researchers to better understand the interconnections between students' digital behaviors and rhetorical decisions, particularly in the ways students use semiotic resources and tools to position themselves as readers and writers across multiple rhetorical contexts. Research in this area is greatly neglected. One reason may be due to the lack of sophisticated data analysis tools for processing multiple streams of dynamic visual, audio, and hypermedia data. Although advancements in computing technologies have allowed researchers to represent multiple modes of communication in their original form (e.g., NVivo) and collect, analyze, and visualize research data (e.g., eye-tracking software, video screen-capture software, keystroke software), all of which are paired with traditional qualitative and quantitative research methods (Getto & Silva, 2012), O'Halloran (2009) argues that representations of research in the humanities have been predominantly communicated in a reductive manner employing few semiotic channels. For instance, in the present study, the coding sheets (see Appendix for a sample) could not capture the dynamic interplay between students' vocal inflections, processing of text, and use of the cursor for organizing P2P feedback. To remedy this problem, further interdisciplinary collaborations are needed between computer scientists and multimodal researchers in writing studies.

References

- Adsanatham, C. (2012). Integrating assessment and instruction: Using student-generated grading criteria to evaluate multimodal digital projects. *Computers and Composition*, 29, 152-174.
- Anson, C.M. (1997). In our own voices: Using recorded commentary to respond to writing. In P. Elbow & M. D. Sorcinelli (Eds.), *Learning to write: Strategies for assigning and responding to writing across the curriculum* (pp. 101-115). San Francisco: Jossey-Bass.
- Beach, R., & Friedrich, T. (2006). Response to writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 222-234). New York: Guilford Press.
- Borton, S.C., & Huot, B. (2007). Responding and assessing. In C. L. Selfe (Ed.),

- Multimodal composition: Resources for teachers* (pp 99-111). Cresskill, NJ: Hampton Press.
- Brick, B., & Holmes, J. (2008). Using screen capture software for student feedback: Towards a methodology. In *LADIS International Conference on Cognition and Exploratory Learning in Digital Age*. Germany: Freiburg.
- Carless, D. (2006). Differing perceptions in the feedback process. *Studies in Higher Education*, 31(2), 219-233.
- Coleman, V.B. (1972). A comparison between the relative effectiveness of marginal-interlinear-terminal commentary and of audio-taped commentary in responding to English compositions. *Dissertation Abstracts International*, 32.
- Dean, Brian C. (2007). *Dynamic homework annotation*. *First International Workshop on Pen-Based Learning Technologies*. Retrieved from <http://www.cs.clemson.edu/~bcdean/vgrade.pdf>
- Duncan, N. (2007). "Feed-forward": Improving students' use of tutors' comments. *Assessment & Evaluation in Higher Education*, 32(3), 271-283.
- Frank, Carolyn R. (2001). What new things these words can do for you: A focus on one writing-project teacher and writing instruction. *Journal of Literacy Research*, 33(3), 467-506.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. NJ: Aldine Transaction.
- Glover, C., & Brown, E. (2006). Written feedback for students: Too much, too detailed or too incomprehensible to be effective? *Bioscience Education Journal*, 7(3). Retrieved from <http://www.bioscience.heacademy.ac.uk/journal/vol7/beej-7-3.asp>
- Gould, J., & Day, P. (2013). Hearing you loud and clear: Student perspectives of audio feedback in higher education. *Assessment & Evaluation in Higher Education*, 38(5), 554-566.
- Getto, G., & Silva, M. L. (2012, October). Doing multimodal research the easy way: A workflow for making sense of technologically complex communication situations. In *Proceedings of the 30th ACM international conference on design of communication*. ACM, 89-94.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.
- Hovardas, T., Tsvitanidou, O.E., Zacharia, Z.C. (2014). Peer versus expert feedback: An investigation of the quality of peer feedback among secondary school students. *Computers & Education*, 71, 133-152.
- Ice, P., Curtis, R., Phillips, P., & Wells, J. (2007). Using asynchronous audio feedback to enhance teaching presence and student sense of community. *Journal of Asynchronous Learning Networks*, 11(2), 3-25.
- Kerr, W., & McLaughlin, P. (2008). The benefit of screen recorded summaries in feedback for work submitted electronically. Retrieved February 9, 2013, from <http://hdl.handle.net/2134/5363>
- Kress, G. (2003). *Literacy in the new media age*. London: Routledge.
- (2005). Gains and losses: New forms of texts, knowledge, and learning. *Computers and Composition*, 22, 5-22.

- Leijen, D. & Leontjeva, A. (2012). Linguistic and review features of peer feedback and their effect on the implementation of changes in academic writing: A corpus based investigation. *Journal of Writing Research*, 4(2), 177-202.
- Lerner, Neal. (2005). The teacher-student writing conference and the desire for intimacy. *College English*, 68(2), 1862-08.
- Marriott, P., & Teoh, L.K. (2012). Using screencasts to enhance assessment feedback: Students' perceptions and preferences. *Accounting Education*, 21(6), 583-598.
- Mayer, R.E. (2009). *Multi-media learning* (2nd ed.). New York: Cambridge University Press.
- Merry, S., & Orsmond, P. (2008). Students' attitudes to and usage of academic feedback provided via audio files. Retrieved March 11, 2010, from <http://www.bioscience.heacademy.ac.uk/journal/vol11/beej-11-3.aspx>
- Nicol, D. (2010). From monologue to dialogue: Improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, 35(5), 501-517.
- Odell, L., & Katz, S.M. (2009). "Yes, a T-Shirt!": Assessing visual composition in the "writing" class. *College Composition and Communication*, 61(1), 197-216.
- O'Halloran, K. L. (2009). Multimodal analysis and digital technology. In A. Baldry and E. Montagna (Eds.), *Interdisciplinary perspectives on multimodality: Theory and practice*. Campobasso: Palladino.
- Reynolds, J., & Russell, V. (2008). Can you hear us now?: A comparison of peer review quality when students give audio versus written feedback. *The WAC Journal*, 19, 29-44. Retrieved from <http://wac.colostate.edu/journal/vol19/>
- Rotheram, B. (2007). Using an MP3 recorder to give feedback on student assignments. *Educational Developments*, 8(2), 7-10.
- Shipka, J. (2009). Negotiating rhetorical, material, methodological, and technological difference: Evaluating multimodal designs. *College Composition and Communication*, 61(1), 343-366.
- Silva, M.L. (2012). Camtasia in the classroom: Student attitudes and preferences for video commentary or Microsoft Word comments during the revision process. *Computers and Composition*, 29(1), 1-22.
- Simmons, J. (2003). Responders are taught, not born. *Journal of Adolescent & Adult Literacy*, 46(8), 684-693.
- Stannard, R. (2008). Screen capture software for feedback in language education. *Proceedings of the Second International Wireless Ready Symposium*. Retrieved March 10, 2010, from <http://wirelessready.nucba.ac.jp/Stannard.pdf>
- Sweller, J. (2005). Implications of cognitive load theory for multimedia learning. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 19-30). New York: Cambridge University Press.
- Thaiss, C., & Zawacki, T. M. (2006). *Engaged writers, dynamic disciplines: Research on the academic writing life*. Portsmouth: Boynton/Cook.
- Thompson, R. & Lee, M. J. (2012). Talking with students through screencasting: Experimentations with video feedback to improve student learning. *The Journal of Interactive Technology and Pedagogy*, 1(1).

Trimingham, R., & Simmons, P. (2009). Using audio technology for student feedback. In *Proceedings of the 11th International Conference on Engineering and Product Design Education EPDE09*, 187-192.

Vincelette, E. J., & Bostic, T. (2013). Show and tell: Student and instructor perceptions of screencast assessment. *Assessing Writing*, 18(4), 257-277.

Wyatt-Smith, C., & Kimber, K. (2009). Working multimodally: Challenges for assessment. *English Teaching. Practice & Critique*, 8(3).

Appendix. Sample Coding Sheet

Total Time 5:04	Transcript Total Words=575; Average Words per Comment=63.89 9 Total Comments	Codes Praise=3 Modeling=2 HOS=5 HOG=2 LOS=2 Summarizing=1
	I think for this first sentence [highlights first sentence] [reads text] "Students in [my] Ithaca College academic writing course" You're in the class too so the reader knows you're talking that you're a part of that class.	Lower Order Specific Modeling
0:22	This is good [highlights sentence] because you said what your thesis statement was and what you want to argue.	Praise
0:31	Your summary of Sanders article was really good. But I think you should add in your opinion about how it ties into your statement. Sorry, I have notes. I'm trying to keep it going.	Higher-Order Specific without Rationale
1:01	Here [she highlight the first sentence of a paragraph] when you start "From an academic writing class" [reads from text] you already said students in an academic writing class so you already introduced them in the beginning. You shouldn't have to say it again. You just have to re-word how you say it because A) you're in the class and B) you already said it above. So, "The students' perspectives" or something along those lines. [Here, she recommends a modified version of the original.] It's really good that you tied them all together. You kept it flowing. It wasn't like "so and so said this and so and so said that." And you really tied it in.	Lower Order Specific Modeling Higher Order Specific Praise
1:50	My opinion here [Highlights a sentence in the middle of the paragraph.] this should be starting a whole new paragraph and at the end of this [highlights text] at the end of the Google posts comments, you should include your opinion here to sum up what you said and it starts up a whole new paragraph of what Paula England said. [the source that he references]. This is okay [highlights text with cursor] because it's continuing what you're talking about but it's on the contrary so you're okay. It's just a lot to have basically a page [she moves the cursor to the top of the paragraph which is about a page long] for one whole paragraph and it's a lot of information. There were times I had to go back and remember what you were talking about, whereas if you had a linking sentences so it wouldn't be as bad.	Higher Order Specific with rationale

2:56	I would say for this [highlights and zooms into the paragraph.] I think that like you should, you never said what were the popular gender roles. What do you mean? Is it the male going to work? Is the female supposed to stay home and take care of the kids. This sentence is just a little confusing. I don't know why. I can't comprehend it.	Higher Order Specific with rationale
3:33	I think you could also, you have a lot of information, here [places cursor in paper] you could definitely tie it in more to your statement.	Higher Order generic
3:46	I also think from here, it's a good conclusion. What else did I have? Tie in here [zooms into the final words of the last paragraph.] So gender roles aren't changing so I feel that you were saying that women are becoming like what men used to be, yet you say that gender roles aren't changing. I don't know. I kind of got confused. I don't know. I could have totally misread it.	Higher Order Specific Summarizing
4:31	As far as your paper goes, you have a lot of information. It's good information and you tie it all together pretty well. But I think you could just fix this paragraph [highlights the long paragraph mentioned earlier.] and make it into two. Other than that, your paper was good. Good job.	Praise Higher Order generic without rationale Higher Order specific without rationale