

iFeedback: Using Video Technology for Improving Student Writing

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The purpose of the study was to understand how to utilize video technology to create an effective way to respond to college student writing. Researchers examined college instructors' use of video feedback with college students' writing, as well as college students' uses and perceptions of instructor-provided video feedback designed to help students revise their writing. Data sources, including instructor's video feedback, student papers, and interviews of students about their use and perception of the feedback, were analyzed qualitatively, using constant comparative analysis and template analysis. The results indicate that the instructors used video feedback to provide in-depth, specific, and personalized feedback. The college students utilized the feedback to make revisions to thesis statements, ideas, and organization and ultimately improved the quality of their writing. In addition, students perceived video feedback to be more helpful than written comments, but not as helpful as one-on-one conferencing with an instructor. Implications for practice and future research are discussed.

One goal for a college student's baccalaureate study is improvement of critical thinking and writing skills in order to be well-prepared for all future endeavors, regardless of the discipline or career. Increasingly, however, students are coming to college with negative attitudes, diminished work ethics, and values that can conflict with academic rigor, inquisitiveness, and commitment (Arum & Roska, 2011). The National Survey of Student Engagement (2010) has shown that engaging students through student-centered and experiential forms of instruction has powerful outcomes for student learning, persistence, and grades. In

order to engage students in ways that will improve their critical thinking and writing skills, this study examines alternative modes of providing feedback on writing in order to actively involve students in the writing process and encourage substantive revisions through experiential instruction.

Review of Literature Response to Student Writing

Studies have shown that students do limited revision on their own (National Writing Project, 2003). However, teacher response to students' writing can help students make more substantial revisions

(Beach & Friedrich, 2006; DiPardo & Freedman, 1988) and develop the knowledge and strategies writers need to be successful (Boscolo & Ascorti, 2004). Researchers have been investigating the most effective ways to lead students to engage in substantive revisions, e.g., those associated with global issues, such as the revision of ideas and the organization of their text, but this research remains inconclusive (Beach & Friedrich, 2006). Research in this area has not focused exclusively on student revisions, but rather on types of comments instructors provide, and student perceptions of feedback. Written feedback and teacher and

peer conferences have been the focus of much of the research on response to student writing. More recently, technology has been used to enhance and develop these more traditionally used and studied types of feedback. In order to situate the current study within the body of literature on response to student writing, this literature review will summarize research on written comments given by teachers, teacher and peer conferencing as feedback, and several different technologies designed to give or enhance feedback.

Research suggests that the use of written comments is the chief way teachers comment on student writing (Beach & Friedrich, 2006). One criticism of written comments is that they privilege the teacher's voice and often students simply comply with the teacher comments so that they can earn a good grade. Another criticism is that brief notes are often difficult for students to understand.

One-on-one and small group teacher conferences and peer conferences are another way to provide feedback to writers. Often one-on-one conferences allow for a more in-depth discussion than written comments because of the teacher's ability to convey more information in a shorter amount of time and the students' abilities to drive the agenda for a writing conference (Beach & Friedrich, 2006). However, writing conferences do not provide students with a transcript of what was discussed, so ideas and goals can be lost when students return to actually do the revisions several hours or days after the meeting. Advances in technology have led teachers and researchers to explore the use of various technologies such as automated computerized feedback, audio feedback, and online conferencing, in an effort to enhance

feedback delivery to students about their writing.

Technology and Feedback

As modern society becomes increasingly plugged in to PDAs, laptops, social networking, and software, university and college administrators have called for increased incorporation of such technologies into teaching. At many colleges and universities, technology has been further resourced through additional informational technology training, staff and equipment. Writing teachers have answered the call to implement technology in innovative ways to engage students, such as through electronic/computer-based comments, audio feedback, and online conferences.

There is a growing body of research to support the validity and reliability of automated essay scoring (AES) technology in providing feedback on students' writing in the form of numerical scores and written comments (Shermis, Burstein, & Leacock, 2006). AES technology is not only being used to evaluate specific characteristics of writing quality (e.g., organization, word choice, grammar and mechanics), but also to evaluate the semantic quality of texts (e.g., depth or correctness of ideas or content) (Landauer, Laham, & Foltz, 2003). There are several benefits of this technology: It increases the amount of feedback students receive, which allows students to spend more time reflecting on how to improve their writing, makes feedback more immediate, which again encourages more revision, and frees teachers from responding to each draft, which gives teachers the opportunity to conference with students and gives students opportunities to use feedback from an outside source before sharing their writing with their teachers. Studies also underscore,

however, the limitations of this technology. For example, Moore and MacArthur (2008) found that while students reported liking the immediate feedback from an AES system, they also reported difficulty understanding it and did not use it to make substantive revisions.

With decreased costs of and greater access to computer recording devices and digital voice recorders, research on audio feedback has gained momentum in the new millennium. Recent research about audio feedback has focused on the use of embedding audio comments in PDF and Word documents and podcasting (e.g., Ice, Curtis, Phillips, & Wells, 2007; Dagen, Mader, Rinehart, & Ice, 2008; Dunne & Rodway-Dyer, 2009; Davis & McGrail, 2009).

Research suggests that students and teachers prefer audio feedback to written feedback. One study of asynchronous audio feedback versus asynchronous text-only feedback revealed that students perceived audio feedback as better at conveying nuance as well as the teacher's care for the students (Ice, Curtis, Phillips & Wells, 2007). Building on this study, Dagen, Mader, Rinehart, and Ice (2008) used Adobe[®] Acrobat[®] Professional to convert students' papers into PDFs and embed audio commentary. Using this format, students received 30% more feedback on content and 48% less feedback on clarity and organization. Dagen, et al. found that students valued content-based feedback the most and therefore perceived audio feedback to have a greater quality and quantity of the kind of comments they most desire. While student perceptions do not always align with best practices, beginning revisions with global content-based issues instead of sentence level mechanics does reflect the progression of the writing process.

While audio feedback has some benefits, Dunne and Rodway-Dyer (2009) found that some students in their study complained that the ten- to twenty-minute recordings were too lengthy. Although students perceived this aspect as a negative, their study indicated that students reported listening to their audio recordings multiple times, as opposed to written feedback that they rarely read more than once.

Another way to provide audio feedback is through podcasts. Davis and McGrail (2009) examined the use of what they term “proof-revising” (p. 522), a blend of proofreading and revision that is not considered direct feedback from the teacher. This study involved teachers creating podcasts of themselves reading students’ writing. Students then listened to their writing while following along with their written text, a technique often employed in one-on-one conferences. In this way, students learned about their writing by listening to someone who is unfamiliar with their texts read them aloud. Students heard things that they might have skipped over when revising, and learned from when the reader would stumble or sound confused when reading. The study showed that through “proof-revising” using podcasts, students moved beyond surface error editing toward thinking critically about their writing and audience.

Two forms of online conferencing have been researched: asynchronous feedback and real-time chat discussions about student writing (Beach & Friedrich, 2006). Research comparing online conferences to face-to-face conferences suggests that students feel more comfortable responding in the online environment because they are not influenced by nonverbal reactions that can be experienced during a face-to-face conference (Carabajal, LaPointe, &

Gunawardena, 2003). In addition, online conferences can be saved and referenced at a later time when students are actually revising their writing (Hewett, 2000). Real-time chats allow students to ask questions while revising, thereby giving them a stronger voice in the process, although this can be time consuming (Crank, 2002). On the other hand, asynchronous online feedback gives students more time to reflect and subsequently respond to feedback than synchronous feedback, but this communication can last several days (Blair, 2003). In summary, online feedback provides teachers and students ways to address issues created by other types of feedback such as written feedback and face-to-face conferencing; however, at the same time, online feedback creates other issues for students and instructors.

New Directions in Technology and Feedback

Each of the previously examined technologies has both benefits and limitations in terms of immediacy, length, specificity, personal nature, and reviewability. One solution to the limitations is to provide students with video feedback in which teachers either summarize their reactions after reading the paper off-line or think aloud as they read students’ writing online. In both cases students have a record of the teacher’s reactions, or feedback, while allowing the teacher to provide specific, in-the-moment feedback, directly connected to particular aspects of the writing. While simulating a conference setting, this process is less time-consuming for teachers than one-on-one conferencing. The teacher’s image and voice are included in the video, further personalizing the feedback. Finally, teachers can say more about each student’s paper and give more specific comments than

they would be able to when giving written feedback.

One study has examined student and teacher use of audio-video feedback at the college level. Warnock (2008) explored the use of Camtasia® as a way to screen-capture students’ papers and embed audio feedback from the professor. In his study, Warnock noted several advantages of audio-visual (AV) feedback including specificity, personal or conference-like feedback, quantity of feedback, legibility, and efficiency. He also found that instructors were more likely to include positive feedback because AV feedback allows them the space to give more feedback and not just focus on corrections. Additionally, Warnock observed that AV feedback circumvents a serious learning issue of students who have difficulty reading. Students often struggle with both reading and writing, which are inherently linked; “yet, the primary means of communication teachers have with students about their writing *is* writing” (Warnock, 2008, p. 209). AV feedback allows instructors to use a different mode for students to learn about writing. Warnock’s study focused on the length of time it takes for him to review papers. With a three- to four-page assignment, he was able to review about four papers per hour with written feedback. With the Camtasia® (Version 5.0) AV feedback, he could respond to six or more per hour. He concluded that “if we can decrease the response process time by over 30% while giving the same—and perhaps better—feedback, we have an opportunity to improve significantly the work of those teaching writing” (Warnock, 2008, p. 210).

Warnock’s study suggests that AV feedback is an area for deeper exploration. In our study, we have not focused exclusively on the time that it takes to respond to students,

but rather the kind of comments that instructors provide, the revisions students make when using this feedback, and the perceptions of students regarding video feedback.

Methods

The purpose of this study was to investigate college instructors' use of video technology to provide feedback to college writers and to understand the students' uses and perceptions of college instructors' video feedback. Specifically, this study addressed the following research questions:

- 1) What characterizes the comments college students receive from instructors using video feedback?
- 2) What types of revisions do college students make after viewing video feedback?
- 3) How do college writers perceive video feedback?

Participants and Settings

This study included forty-five college students and two faculty members in a Children's Literature course and an English composition course at two colleges located in the northeastern part of the United States. These two courses were selected for two reasons. First, they were chosen because the instructors were interested in participating in the study. The instructors had not been using the video technology to provide feedback prior to the study, but were interested in incorporating it in their classes. Secondly, the courses were chosen because students were required to write a research paper as the final project for the course.

All students in both of the courses were invited to participate. In each course, all students received video feedback from their instructors on their research papers as part of the course. If a student agreed to participate, the researchers collected and analyzed the instructors' video feedback and students' revisions

based on this feedback. In addition, participating students also took part in a small group interview or completed a questionnaire about their use of the video feedback. If students opted not to participate in the study, their video feedback and revisions were neither collected nor analyzed and they did not take part in the small group interview or complete the questionnaire.

All students who were invited agreed to participate in this study. Twenty-six students were enrolled in the Children's Literature course at one college. The primary goal of the course is to introduce students to teaching methods and genres of children's literature. Of the twenty-six enrolled, there were five males and twenty-one females. Fifteen students, ranging from first year to third year students, were education majors and eleven students had majors in psychology, biology, political science, and health and exercise science. Nineteen students were enrolled in the first-year writing intensive course, "Engagements with the Common Good" 100. This course is part of a three-course sequence that students take over the span of their first through junior years. These composition courses examine social justice through exploring issues related diversity, power, privilege, and difference. The course was comprised of five male and fourteen female students with various majors. All names of students used in this article are pseudonyms.

Data collection

Data were collected at both sites during a six-week period in the fall semester of 2010. The data included: instructor video feedback on two drafts of student research papers; copies of all students' paper proposals and first, second, and final drafts; student letters to the instructors explaining the revisions

they made to each draft; a small-group interview about students' experiences using the feedback; and a questionnaire focused on students' experiences using the feedback. The collection of multiple data sources allowed for triangulation of data.

Video feedback. Video feedback was utilized in two different ways at the two colleges. At one site, Instructor One used iMovie® (Version 9.0.4) to capture, edit, and produce a video recording of the professor giving feedback for revisions. Most videos were captured in one take and were only edited for interruptions. The videos were then distributed to the students using a program called Dragon Drop (2008). Dragon Drop, developed by Drexel University for this site's use, is essentially a private website that holds a repository of personal videos (videos are not web searchable). The instructor sent each student a link for an individualized video that was username/password protected.

Instructor One and a classroom coach (a senior peer tutor) provided feedback on the students' topics and thesis statements, which they posted online utilizing BBVista® (Version 8.0.6), which is an online course management and student portal. Students then completed two drafts prior to the final draft. The professor provided written feedback on the first draft, which included commentary in the margins and an endnote. The students submitted a revised second draft for which they received video feedback. The instructor had the student's paper in her hand while speaking to the screen and would glance at it while speaking. Upon submitting their third and final draft, students received their second video including both feedback and their final grade. Students then received their final papers returned with no written comments except for a

reiteration of their final grade and checkmarks on a standard rubric (see Appendix A for rubric for site one).

At the second site, Instructor Two used QuickTime Player[®] (Version 7.6.7), a multimedia technology for Mac or PC that allows users to either view video or to video their computer screen. Using QuickTime Player, Instructor Two produced a screen recording of each student's paper as well as her voice as she read through the paper and thought aloud about her experience as a reader and the guidelines for the paper established in the rubric. The instructor's physical image did not appear on the video. On her computer, she opened an electronic copy of a student's paper in Microsoft Word and she opened QuickTime Player. Once she began a screen recording with audio, she read the paper aloud and gave comments and thoughts. The video captured the cursor going underneath each word as she read and the paper being scrolled up and down as specific parts of the paper were referenced. Individual videos were burned onto individual DVD-Rs and distributed to the students in class. The videos were too large to send via email or to post on the course website.

Instructor Two gave three rounds of feedback before the final paper—written comments on the proposal and annotated bibliography, and video feedback on the first and second drafts. Because the time for reading second drafts (6-8 pages) aloud would be significantly more than the previous drafts, the instructor modified the procedure for giving video feedback. She created a screen recording in which she read aloud one or two sections of the paper and commented on these only. Upon submitting their final paper, the instructor provided students with written feedback, a final grade, and checkmarks on a final rubric that

included domains of thesis, evidence, analysis, organization, mechanics, and style (see Appendix B for rubric for site two).

Drafts and letters. Multiple drafts of the students' writing were collected and analyzed for revisions and overall quality change from draft to draft. In addition, students wrote letters to their instructors explaining the changes they made during each revision. These letters were also collected and analyzed to further evaluate students' revisions and their perceptions of video feedback.

Interview and questionnaire. The small-group semi-structured interview and the questionnaire were conducted after students submitted final drafts. Permission to conduct an in-person interview with students during the semester was granted at site one, but not at site two. As a result, an anonymous questionnaire was distributed to students at the end of the semester at site two. The questions in the interview and on the questionnaire were essentially the same. The questions focused on the students' understanding of the feedback, the use of video feedback (procedural steps), types of revisions made after viewing the feedback, perception of video feedback as compared to other types of feedback, and their overall perception of video feedback. At site one, small-group semi-structured interviews were conducted by the researcher. Small groups of five to six students participated in the interviews that lasted approximately 15-20 minutes. The questionnaire was sent electronically to students at site two after they received their final grade in the course. At site two, 14 out of 26 students completed the questionnaire (54% participation). All students at site one participated in the small-group interviews.

Data analysis

Data analysis for this study focused on the following three areas: 1) videos of teacher feedback, 2) all drafts of college students' essays and accompanying letters to their instructors, and 3) students' interview or questionnaire data. Data were analyzed qualitatively using constant comparative analysis and template analysis (additional information on each of these methods is provided under Results). The two researchers assembled and analyzed the data independently, and then checked each other's data and analysis in order to avoid possible bias and to provide triangulation.

Results

Reasons for Feedback Given

Constant comparative analysis was used to identify the types of instructor feedback given in the videos (Strauss & Corbin, 1990). Constant comparative analysis is inductive as the researcher combs through original data sources, looking at each unit of analysis (e.g., sentence, conversational turn, etc.). Researchers compare each unit of analysis to the next in order to identify categories and themes that answer their research questions (Strauss & Corbin, 1990). The analysis showed that instructors gave comments for these reasons: to make suggestions, to make corrections, to give praise, to elaborate an earlier comment, to reread a section of the paper, and to describe how a section of writing could be interpreted by the reader. See Table 1 for definitions of the categories.

The average length of time for videos given by Instructor One was five minutes (range: 3.5 and 7.09). The average length of time for video feedback given by Instructor Two on draft one was 15.54 minutes (range: 4.48 and 27.38) and on draft two was 5.06 minutes (range 2.51 and 7.3).

Table 1

Reasons for Feedback Given

Category	Definition
Suggesting	Comments that focused on what aspects of the paper students could improve.
Correcting	Comments that told students something was inaccurate.
Praising	Comments that gave students positive feedback about something they did well.
Elaborating	Comments that provided specific examples for how to address suggestions or make corrections.
Rereading	Instructor reread a part of the paper to emphasize a point or to show students how the writing sounded.
Describing	Comments that tell students how a particular piece of the paper was interpreted or experienced by the instructor.

The average length of video feedback was much higher for Instructor Two on draft one because she read the students' full four-page papers aloud and commented as she read. The largest percentage of time for both instructors was spent elaborating a particular suggestion or giving examples about how to address suggestions or make corrections. For example, Instructor Two made two suggestions about one student's, Alice's, thesis and focus in her second draft: "align the conclusion with the thesis" and "make sure all the ideas in the body of the paper are relevant to the thesis." The instructor spent 11 seconds stating these suggestions and an additional 4 minutes and 42 seconds elaborating on what she meant and giving examples for how Alice might address these suggestions.

The types of feedback that students received are similar to feedback one usually gets from an instructor giving written feedback. Several findings are compelling in

that they show how video feedback can enhance written comments. First, instructors were elaborating for much longer than they were suggesting and

correcting. Instructors commented that the video feedback enabled them to say more and to be more specific than written feedback. Secondly, instructors were rereading sections of students' papers aloud, which allowed the feedback to be very specific to sections of the text. In addition, reading aloud helped students better hear how their writing actually sounded.

Focus and Frequency of Feedback Given

To further analyze the instructors' feedback for content, all of the comments were coded as relating to one of six focus areas: thesis/focus, content, organization, style, mechanics, and citations. The six categories were predetermined and based on the instructors' rubrics for grading. The rationale for selecting these categories was the belief that instructor feedback should directly reflect the criteria for evaluation. See Table 2 for a definition of each of these categories.

Table 2

Focus of Feedback Given

Category	Definition
Thesis/Focus	Comments about thesis statement and the overall focus, unity, or coherence of paper.
Content	Comments about the main ideas, the research evidence provided, and the interpretation and analysis of the research.
Organization	Comments about the introduction, conclusion, transitions between paragraphs or between whole sections, and overall flow of the paper.
Style	Comments about the scholarly tone of the writing.
Mechanics	Comments about grammar, punctuation, spelling.
Citations	Comments about citing sources or correct citing format.

The frequency of comments in each focus area was calculated for each instructor. Instructor One gave an average of 6.61 and 5.5 suggestions per student paper in video one and two, respectively. Instructor Two gave an average of 5.3 and 3.88 comments per student paper on draft one and two, respectively. For both instructors, the majority of comments for both drafts focused on the global issues of thesis or focus, organization, and content on both the first and second drafts. In the first videos, Instructor One made 68% of total comments about global issues and 32% about local issues and Instructor Two made 92% of total comments about global issues and 8% on local issues. In the second videos, Instructor One made 63% of total comments about global issues and 37% about local issues and Instructor Two made 86% of total comments about global issues and 14% about local issues. It is important to note that the instructors did not repeat the same comments on both drafts; instead new global issues arose and thus became the focus of the instructor comments. See Table 3 frequencies of feedback given in each category.

Overall, the findings regarding the focus and frequency of feedback received by the students indicate that students were receiving clear messages from instructors to focus on global issues in their text: revising thesis statements, content, and organization.

Types of Revisions Made by the Students

Revisions were analyzed using template analysis (King, 2004). The process itself involves thematically analyzing qualitative data with a coding template, which contains a list of themes the researchers expect to identify in the data. Once evidence is found in the data to support a theme,

it is coded. The template provides a starting point for analysis; however, themes in the template can be changed and modified at any point in response to the data. The researchers used their original template that consisted of six themes: thesis/focus, content, organization, style, mechanics, and citations. They read through side-by-side first and second drafts, and then second and final drafts from the two classes using the template to code the revisions. Students' revisions fit the original template. The most prominent themes were that students revised their thesis statements, worked on aligning the main ideas in the paper with their thesis, added research evidence, and

worked on overall organization. Both Instructor One and Two had one student who did not make any significant revisions from draft one to draft two.

Overall Changes in Quality.

Students' papers were analyzed for overall quality change. After removing student names and dates from all papers, the researchers assigned a number code to each paper for draft and student. Next, the researchers grouped drafts for one student together so that the first, second, or final drafts appeared in random order. Instructors then traded papers and ranked each grouping of papers according to quality (best,

	Draft 1		Draft 2	
	Instructor One	Instructor Two	Instructor One	Instructor Two
Total student papers	18	27	18	26
Total suggestions and corrections	119	143	99	101
Mean number of suggestions by category				
Thesis/Focus	1.5	2	1.05	0.92
Content	2.1	1.74	1.6	1.35
Organization	0.83	1.11	0.72	1.08
Style	1.1	0.15	0.61	0.19
Mechanics	0.5	0.11	0.61	0.15
Citations	0.44	0.19	0.83	0.19

middle, worst). Scores were checked against actual drafts. The more accurate the matches, the better. The rate of accuracy was 100%. All students' papers, with the exception of two students, one in each class, improved from the first to the second draft and from the second to the final draft. One student in Instructor One's class made changes that were not perceived to have improved her second draft. One student in Instructor Two's class did not make revisions on the second draft and therefore the researcher rated the first and second draft as equal.

Students' Perceptions of Video Feedback

Students' perceptions of video feedback and students' perceptions of how they used video feedback were also analyzed using template analysis (King, 2004). See Tables 4 and 5 for the templates identified for each of these analyses.

All students perceived video feedback to be better than written feedback because the video feedback provided more information and was clearer than written comments they had received from instructors; however, several students reported that they would like both video and written feedback simultaneously on the same draft so that they did not have to take notes on the video feedback as they watched. A few noted that one-on-one in-person conferences are also helpful but that video feedback provides that same personal connection with the benefit of being able to be replayed multiple times when the student actually sits down to work on the paper. One of the dominant themes is that students would watch the video initially and then later view it multiple times while taking notes and actively revising papers. Some students reported taking notes on a hard copy draft of their paper or the computer

Theme	Definition
Better	Video feedback is more helpful than written feedback.
Personal	Includes the personality of the instructor; makes students feel like a person is responding to their writing.
Thoughtful	Clear that instructor puts time and thought into giving feedback.
Sounds	Writers hear mistakes or awkward sentences read aloud and they realize they should fix them.
Long	Too long to watch; tedious.
Frustrating	Difficult to watch the video and revise because there is no written list of what needs to be done. Desired video and written feedback.
Clear	Easy to understand the instructor's message.

screen while the video played. A few students also revealed that they are auditory learners so video feedback appealed to their learning style more than written comments. Students appreciated the five-minute videos but some thought the 20-minute first draft versions from Instructor Two were too lengthy.

Interestingly, some students used the video feedback in ways the instructors did not anticipate. One student reported using her video during a writing center appointment. She explained that the tutor watched the video, then "We edited it together, and then we watched the video again together. So, like, we

Theme	Definition
Repeated Viewing - Immediate	The process of watching the video multiple times in a row to understand the feedback immediately before working on the paper.
Repeated Viewing - Delayed	The process of watching the video one time through after receiving it and then watching it again while working on the paper (there was a lag between viewings).
Stop and Write Viewing	The process of watching the video, pausing it, switching windows to work on the paper or taking notes, and then repeating the steps again until the video was finished.

used that for our guide the entire way.” This student perceived that the video not only improved her revisions, but improved the quality of her writing center session.

Many students noted that the video feedback gave them greater clarity about what the instructor was trying to communicate. One student commented on the difference in how the instructor explained herself in written versus video feedback: “When you look at a teacher’s [written] comments you are like well why did she say that? And through the video feedback she told you why she said that.” Another student perceived the same ability to clearly understand the teacher’s comments: “I can really fully see what she is talking about ... rather than having a [written] comment that would be like ‘you need to fix this, Leann.’ [In video feedback] it is more ‘Leann, this is maybe what you could do to fix this sentence.’” Students also perceived written comments to be harsh, and constructive comments in video feedback to be not as stifling because they were accompanied by the faculty member’s encouraging tone that helped them to perceive that these revisions were possible.

Discussion

Video is an innovative way for writing instructors to utilize technology to provide personalized feedback to students. Students perceived that instructors gave more explanation in a video than they do in a written note and that its personal nature gives them greater confidence to revise. Students’ papers improved dramatically throughout the multiple drafts and rounds of feedback.

Video feedback allows instructors to provide in-depth comments. Instructor Two recalled dreading the first round of video feedback for fear that it would be too time-consuming. However, she believed the process

actually saved her time because she did not have to articulate her comments in a succinct way as she would have in writing; instead, she was able to talk through her comments and provide more depth about key issues. The instructor reported that it was especially helpful to be able to highlight, type, and scroll while giving comments. These features allowed her to show discrepancies in an argument, to highlight redundancies in content, or to illustrate different ways to think about organization. Instructor One recalled being pleased with how streamlined the process was and that she felt more enthusiastic to give feedback than when her hand would get fatigued from writing notes. She also noticed how her vocal inflection, facial expressions, volume, pitch, and tone afforded her more ways to express herself.

The students in this study revised at a global level, attending to their thesis statements, ideas and content, and organization, and their revisions appear to have led to better quality writing. The students’ descriptions of how they used the feedback revealed added-value to the video feedback. First, students explained that they listened to the feedback multiple times and even took notes while watching. In some ways it seems that the video feedback encourages students to spend more time with the feedback, either planning how they will address it by taking notes or trying to understand it by listening to it multiple times. In addition, in Instructor Two’s class, the video feedback prompted several students to schedule follow-up meetings for further discussion about the feedback. Some students in Instructor One’s class revised their papers beyond the final draft for their final writing portfolios. Because Instructor One gave the final grade within the video, students were more likely to

listen to the feedback, as opposed to a written grade where they might glance at the grade and toss the paper with comments into their bag. Again, students appeared to be taking an active role in revising after receiving the video feedback.

Implications

This study has important implications for both college writing instruction and writing research. First, college writing instructors can experiment with using this type of feedback in their classrooms. Students appreciated the time it took for faculty to create the videos. Seeing their teacher holding their paper and talking through it in a video showcased the amount of time and care a faculty member spent providing feedback. In addition, video feedback allowed instructors to provide detailed and specific comments to help students revise. Students reported being motivated and encouraged to actively engage in deep revisions based on the video explanations. Instructors who want to try this in their classrooms should keep in mind that the videos should be concise, as students did not like viewing lengthy videos. Students also felt that written comments in addition to videos would be most helpful. Instructors could explore ways to give both formats to students or to make note-taking based on video feedback part of students’ grades. One way to give both videos and written comments to students is to involve peers. Instructors could coach peers to provide both types of feedback and make this part of a peer revision activity.

Students also reported the benefits of conferencing versus video feedback. Instructors could explore ways to combine these two types of feedback. For example, instructors could consider videoing conferences so students have a record of feedback

during the conference. Overall, video feedback has benefits that instructors should continue to capitalize and expand upon in order to provide the most effective feedback to student writers.

This study also has important implications for research on writing instruction and technology. Prior to this study, we found only one other published study, i.e., Warnock, 2008, that examined video feedback at the college level. Technology has the ability to change and enhance what teachers do in the classroom and how students learn, particularly in the field of writing (MacArthur, 2006). This study shows how teachers and students enhanced their teaching and learning through the use of a simple technology. In order to confirm this study's findings, future research in this area should be expanded to examine the nuanced differences in revision based upon different modes of feedback. In addition, future studies should also explore video technology across the curriculum at the college level to determine if similar effects could be found in a variety of disciplines. The current study focused on two disciplines: Education and English and the results were promising. It would also be beneficial to see if video feedback can be used in the sciences, business, and other liberal arts majors.

Exploring other options for how to create and distribute the video feedback is another important focus for future studies. The iMovie and QuickTime Player programs worked well for capturing and editing the videos. The Dragon Drop (2008) video distribution system at site one worked with greater ease than distributing the videos via DVDs, thus securing private video distribution software may be helpful. The differences in technology at site two and site one resulted in two different modes of capturing and

distribution of videos. In the future, comparing the difference between the two types of video feedback utilized in this research, screen shot of paper versus instructor's face, should be studied.

Technology has the potential to advance and improve the feedback college instructors provide students. In this study, video technology enabled instructors to provide more specific, elaborated, and personal feedback to students than if they simply provided written feedback. As a result, student learning was enhanced. Students not only perceived video feedback as being helpful, they were able to use it to improve the quality of their writing. Although the use of technology in and of itself may not enhance teaching and learning, the potential does exist. In a society that revolves around technology, it is imperative that college instructors seek ways to creatively capitalize on technology to enhance student learning.

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APPENDIX A

Site One Writing Rubric

This cover sheet is designed to assess your progress as critical thinkers and college-level writers. This scale is used by our faculty to determine, with precision, areas of strength and deficiency in your written work.

	Levels of Achievement			
Areas of Achievement	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Poor</i>
<i>Analysis</i>	Advances a lucid & fully persuasive argument	Advances a clear argument	Relies on summary at the expense of argument	Lacks clear argument
<i>Organization & Structure</i>	Structure is coherent, logical, and enhances understanding	Structure is coherent and logical	Structure is evident	No structure
<i>Use of Evidence</i>	Recognizes complexity of texts & sources; command of proper citation format	Uses and cites texts & sources appropriately; adequate command of citation format	Rudimentary use of texts & sources; limited command of citation format	Misuse or no use of texts & sources
<i>Understanding of Task</i>	Engages the assignment creatively and ambitiously	Clearly meets expectations of the assignment	Minimally fulfills the assignment	Failure to address the assignment
<i>Mechanics & Style</i>	Elegant style and strong mechanics advance and enrich the project	Illustrates command of basic grammar, punctuation, & style	Some mechanical problems; little sense of style	Unacceptable and pervasive errors in mechanics; no sense of style

APPENDIX B

Site Two Writing Rubric

Below is an abridged version of the writing rubric from Site Two, which includes the seven domain areas for scoring and a description of the highest benchmark for that area (Instructor Two provided students with a more complete rubric including descriptions of the various levels of achievement within each domain).

Thesis

The thesis clearly states the point the writer will argue, and serves as an accurate forecast for the organization of the paper.

Evidence/Research

The writer has done a significant amount of research to inform his/her argument. The research consulted is from a variety of reputable and up-to-date resources. The writer selects a sufficient number of appropriate examples, citations, quotes, or passages from research to support each point being made.

Analysis

The writer clearly and insightfully explains how the selected examples, citations, quotes, etc. function to support his/her main points.

Organization

The paper is carefully organized with the most appropriate structure to support the thesis.

Topic Sentences

Each body paragraph has a topic sentence that accurately introduces the content of the paragraph, and either indicates how the paragraph relates to the thesis or uses effective relationship and transitional words to show its connections with the previous paragraph.

Sentence level clarity, conciseness and correctness

Most sentences have been edited to be smooth, clear, and concise by removing excess nouns, making verbs parallel, clarifying pronoun reference, choosing accurate words, and skillfully combining short or empty sentences. There are also few, if any, grammatical errors (such as subject-verb agreement) or typos.

Presentation/Professionalism

The format and guidelines for the project were followed completely. All drafts, revisions, letters to the professor were submitted on time and completely.