

Faculty Innovator Grant 2012
Center for Learning and Teaching

Final Report Form

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Project Title: (10 words or less)	Multi-modal Assessment for the Millennial Student

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1. Describe the specific teaching and learning issues being addressed by the proposal.

This proposal addressed student preference for auditory, visual, and written feedback, also known as multimodal feedback. Studies indicate that students prefer multimodal feedback over other sorts of communication from their instructors (Ice, Swan, Diaz, Kupczynski, & Swan-Dagen, 2010; Crews and Wilkinson, 2009; Oomen-Early, Bold, Siginston, Gallien, & Anderson, 2008; Simonsson, Kupczynski, Ice, & Pakake, 2009; Greivenkamp, Stoll, & Johnston, 2009; Wilkinson, Crews, & Kinley, 2008). Additionally, students consider electronic feedback as more valid and valuable than handwritten comments, as indicated in a case study by Denton, Madden, Roberts, and Rowe (2008). In particular, the popular grading technique of using Track Changes in Word has been found to hinder the learning process because of instructors' tendency to focus on editing instead of providing explanations (Deans, 2009).

By using screencasts as an assessment tool, an instructor can respond to student work using his or her voice while using the cursor or notes in the document to provide visual cues during the feedback video. A pilot study in progress at Old Dominion suggests students have an overwhelmingly positive response to screencast assessment (Vincelette, 2011). Because of the auditory and visual combination, a five-minute screencast allows more commentary than could possibly be written on paper, whether by hand or electronically; furthermore, in-depth explanations are augmented by the instructor's tone of voice, something impossible to provide to students with written comments along.

In addition to the use of screencasts by instructors for feedback, students can use screencasting to provide comments for one another during peer review. Therefore, this proposal aims to garner financial and technological support in order to train and implement both instructors and pre-service teachers in using screencasts for feedback. Furthermore, this year at ODU, the Quality Enhancement Plan (QEP) being implemented is entitled "Stretching the Human Mind through Learning and Writing," and the QEP addresses improving student writing, so that it "demonstrates a reasoning process supported by discipline-specific research and reflection on the problem, topic or issue under study; that is, writing that demonstrates learning" (SACS, 2011). The QEP focuses on the writing process, not just the product, and we believe that screencast feedback underscores the same principles as the QEP.

2. Describe the revised specific teaching and learning issues being addressed by the proposal (if applicable):

If anything, the specific teaching and learning issues were not revised but expanded after the study took place. The FIG grant gave us the funds needed to conduct a pilot study, and we were able to take the successes (and data) to apply for a QEP/IDW grant. The data from the follow-up grant has expanded the use of screencasting for feedback on the ODU campus to include representatives in all colleges.

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3. Describe the development activities involved addressing the learning or teaching issue.

Regarding the practical implementation of our approach, three instructors led the project, Dr. Tim Bostic and Dr. Elizabeth Vincelette (English Department), and Dr. Jennifer Kidd (Education). In the English Department, a group of five composition instructors piloted using screencasts to provide assessment of student papers. All of Dr. Kidd's Foundations of Education students (three sections totaling approximately 200 students) received training in screencasting. A pilot group of 30 were surveyed, and five instructors served as key informants who will be interviewed.

Students and instructors received separate training in how to create and deliver screencasts from Dr. Vincelette. Individual instructors integrated the assessment method into their courses, whereas Dr. Kidd's students received further instruction regarding how to use the technique for peer review. Both students and instructors gave feedback on the utility of the screencast technique.

4. Describe the learning outcomes attained by the project.

The project attained the following learning outcomes:

- improvement in student writing via providing meaningful, effective feedback
- increased revisions by students based on instructor feedback about writing
- enrichment of student peer review process
- increased engagement of students in the writing process
- support for multiple learning styles
- improved quality of teacher feedback
- reinforcement of classroom writing lessons
- integration of screencast into classroom lessons, portfolio assessment, or other assignments (intertwining assessment and teaching)

5. Describe unexpected outcomes, if any.

The unexpected outcome was that a number of faculty adapted their own techniques to screencasting. Several were uncomfortable with the software, as well.

7.1 Limitations

Although we argue here that screencast assessment is a useful pedagogic method for writing instruction in composition classes, there are limitations to this study. Including the qualitative analysis of a small, pilot study of this type always presents problems, in that the data is not generalizable, and a number of factors influence student performance and instructor assessment. It is also difficult, if

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not impossible, to state the degree to which students' writing could improve over the course of a semester based upon one survey questionnaire. Additionally, while the findings from the students were overwhelmingly positive, only 41% of the students invited to participate actually completed the survey. Thus, selection becomes an issue because it is possible that only students who really enjoyed the screencast of their paper took the time to actually complete the survey. So, while the findings are intriguing, the small sample size limits the findings generalizability. Nevertheless, this pilot study does suggest that screencasting is worth exploring as an assessment method and provides insight into students' preferences for how they receive feedback, as well as what the feedback contains. Millennial students, as we found, prefer the use of multiple modes of information in order to keep their attention.

As promising as screencast assessment sounds, in order to create screencasts a number of factors must be considered, not the least of which might be financial. Although for this study a free version of Jing® was used, along with free storage space on screencast.com (www.screencast.com), screencast software with a larger number of features costs more. In addition, we recommend high-speed internet and a computer with a hard drive large enough to support it, as well as a gamer headset with headphones for the ears and a microphone. Additionally, screencasting software can and does freeze. We also realize that using this requires a lack of fear to try technology on the part of the students and teachers, although both report the ease of use. For instructors, there is a portability problem, in that screencasting is not easy to do with an audience (roommates, other people who live in the house). In a study of written feedback on student compositions, Ferris (2003) noted that students become anxious and shut down when written comments are excessive; similarly, Dunne and Rodway-Dyer (2009) found that audio recordings of comments on compositions that lasted from ten to twenty minutes prompted complaints by overwhelmed students. By extension, with screencasting, lengthy videos could supply too much information and have a similar effect

It would be beneficial to conduct research on screencasting with larger sample sizes since having a larger sample size would allow for more generalizability. It may very well be that different demographic groups would respond differently to this form of assessment; however, without a larger sample size it is difficult to tell. There was no pre-survey given at the beginning of the semester, and a comparative analysis would have proven productive. Further, it might be important to compare screencast assessment and text-based assessment from the same instructor with the same students rather than their knowledge of grading from past writing experiences in other classes. It would help eliminate concerns arising from the fact that students may just prefer the way a certain instructor provides feedback, regardless of the mode. Finally, issues around the

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“performance” of grading on a screencast may make it a tool that is more beneficial for some instructors than others. If no matter how much training is provided, individuals do not feel comfortable having their voices recorded and are thus unable to provide effective feedback due to this concern, it may be better for those instructors to continue to use traditional written feedback until they can become comfortable with the performative aspect that this assessment method entails.

6. Describe the impact of the completed project on your colleagues, department, college, or community.

The completed project led to an increase in the use of screencasting for feedback in the English department. Beyond that, the project has led to two publications and a QEP/IDW grant, among a number of conference workshops. Not only has the project led to a use of screencasting for feedback in each college at ODU, the publications have reached a larger audience, and there are still drafts of related publications that haven't been sent yet; in other words, we are still publishing on this material. We are still presenting workshops, as well. None of this would have happened without the initial FIG grant.

7. Describe how the project can be a model, template, or prototype for use by other instructors.

The best way to answer this is to include the results from the QEP/IDW grant we received after we had the FIG grant that led to it. There's little doubt that the FIG grant led to an impactful teaching change for a number of instructors and students.

The project entitled “Screencasting to Foster Formative Assessment: Improving Undergraduate Disciplinary Writing” addressed the need to improve upper-division undergraduate students' disciplinary writing by focusing on the relationship between feedback and development. We (Elizabeth Vincelette, Jennifer Kidd, and Tim Bostic) trained faculty who teach upper-level, writing intensive (W) courses how to use screencast technology to provide formative feedback on writing. Our vision for this plan was based on research on the efficacy of screencast feedback as part of a framework designed to encourage student reflection during the writing process.

With screencast feedback, an instructor provides students with video captures that allow students to see their papers from the vantage point of the instructor's monitor and to hear spoken comments. Students can see the instructor's cursor movements, scrolling, visits to websites outside the students' texts, and pre-created or on-the-fly annotations. Screencast feedback instruction was used as part of a larger, structured plan involving formative assessment strategies. Unlike summative assessment meant to evaluate performance at the end of a process (usually when grades are assigned), formative assessments include feedback on material to build mastery.

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Specific strategies taught included (a) selection, management, and organization of screencast software; (b) work flow and best practices for screencast performance; and (c) scaffolding techniques for formative assessment, including the use of student reflective writings, especially what Yancey calls constructive reflection, which comes “between and among the drafts” (51).

The study recruited seven faculty from across the university who teach writing intensive courses in their disciplines; they were trained to use screencasts to provide formative feedback on student papers. Participants included Cindy Tomovic (STEM Education and Professional Studies), Phil Langlais (Psychology), Chung-Hao Chen (Electrical Engineering), Donna Rose (Nursing), Chris Osgood (Biology), Charlie Daniels (Engineering Management), and Tim Madden (Management).

The assessment plan included collection of quantitative and qualitative data including pre- and post-intervention student writing scores using the QEP rubric, two survey instruments, key-informant interviews, and focus groups. Surveys of students included questions regarding feedback types, feedback delivery mechanisms, and student self-evaluation of writing. Key informant interviews of the instructors and focus groups of students were conducted to ascertain the efficacy of this formative feedback method. This assessment plan incorporated all aspects of the QEP/IDW rubric, with particular emphasis on the sixth item, student reflection and evaluation.

8. Describe the technology used to help address the issues described in the proposal.

For the purpose of this study, screencasts were created using a free version of Jing® software because of its low cost and ease of use, along with free storage space on the website screencast.com (www.screencast.com) to store the screencasts for distribution to students. Other screencasting software programs like Camtasia®, CamStudio®, AdobeConnect®, and Snagit® can be purchased from anywhere from approximately fifty dollars to hundreds, and these programs offer more features than Jing®. (The authors of this study have no affiliation with Jing®, nor do we suggest that any of our data serve as recommendations or reviews of the product.) The Jing® program limits recording time to five minutes, so instructors who want to surpass the five-minute limit would need to make more than one screencast. The five minute limit prevents instructors from producing lengthy recordings that could prove unwieldy for student use. In a study of audio feedback, Dunne and Rodway-Dyer (2009) learned that some students found recordings exceeding ten minutes to be too long.

Instructors used Jing® to create the five-minute screencasts which they distributed to students using screencast.com, a file-sharing site that compresses and converts the videos into files that can be copied, pasted, and shared as links. These links are not readily searchable online because they are stored behind the instructors’ password-protected accounts, and the links themselves are combinations of numbers, capital, and lower-case letters that do not spell recognizable words. Most instructors emailed the links to their students, and one

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copied and pasted the links into online portfolios that each student had created in Google-docs®.

9. Describe products, if any, that are a result of the project.

There were two publications thus far:

“Show and Tell: Student and Instructor Perceptions of Screencast Assessment.” Co-authored with Tim Bostic. *Assessing Writing* 18.4 (October 2013): 257-277.

“Video Capture for Grading: Multimedia Feedback and the Millennial Student.” In *Enhancing Instruction with Visual Media: Utilizing Video and Lecture Capture*. Eds. Ellen Smyth and John Volker. Hershey, PA: IGI-Global, 2013: 107-127.

10. Describe the future plans for this project, if any.

As the Director of the Writing Center, I continue to train faculty at ODU in this method on an ongoing basis. I have given presentations at every QEP workshop, as well as at the CLT summer teaching conference, and I’m happy to keep doing so. In the future, I hope to earn another grant in order to continue to study this innovative feedback method.

11. Attach a financial report with updated Budget Plan Matrix.

Final Budget Matrix

Itemized Proposed Budget:				
Budget Item (equipment, personnel, software, etc.)	Qty	Total Cost	Source of Funds	
			Amount from FIG	Amount from Other Source
JingPro accounts (\$14.95 each)	8	119.60	119.60	0.00
Wireless headsets (\$85 each)	8	680.00	680.00	0.00
Wacom Bamboo tablets (\$130 each)	3	390.00	390.00	0.00
Stipends for instructors (\$110 each)	6	660.00	660.00	0.00
Stipends for PIs for data analysis (\$350 each)	2	700.00	700.00	0.00
		2549.60	2549.60	0.00