Collaboration and Dialogue: Video as an Agent in Extending and Enriching Learning and Writing

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Abstract

In this paper I explore the use of video and multimedia technology in student writing as a method to facilitate students' critical reflection about their learning process and teachers' understanding of students' learning process. Use of video in instruction has become more available and popular. From a digital camera to a webcam and a mobile phone plus the Internet, our students are using video to express and communicate their thoughts and ideas with the world outside school. K-12 educators can also use video to communicate with and better understand students. When students need to write a paper or report that presents their understanding of a specific subject or topic, video and multimedia technology can enhance that learning experience, provide an opportunity for collaborative learning between students and their peers, and enable dialogues between a student and a teacher. Using this approach, students critically reflect on and talk about each other's paper development and video creation process. At several points in the process of organizing and presenting their learning about a subject (beginning, middle and end) or at certain important turning points, students may communicate their learning via reflective videos. Through collaborative learning, they study how to critique and reflect on their thinking and gain multimedia literacy by making and editing video clips. Then, they convert their papers into PDF files and choose the proper places to embed their video clips in their papers. As they read students' papers, teachers can click on these clips to gain background into the paper creation process and a deep understanding of the student's learning process. Furthermore, the new media-enriched paper not only records the student's learning process but also helps the student deepen their thinking about the presentation of knowledge and understanding of the subject matter, and helps the teacher aid the student in organizing learning and knowledge. Other benefits include stimulating students' motivation to participate in paper writing by recording a video.

Keywords: video, learning, collaboration, writing

1 Introduction

Learning allows individuals to achieve certain goals, to transform, or to gain the basic skills for living. Meaningful learning can make a difference in a person's quality of life. Developing and assessing methods for making learning valid, efficient, and meaningful is a challenge for educators. Learner-centered learning is valued in visions of future learning [Tokoro and Steels 2003]. When learners become the center of the education process, and do not consider whether learning is meaningful or relevant to them, the learning is invalid.

Today, our students are surrounded by digital technologies and media. Use of technologies such as the Internet and cell phones is part of their daily life. They are engaging in a digital visual culture that they care about. Searching for ways to engage learners is also part of the objectives in developing digital technologies. Computer and multimedia technologies and other digital media are widely used in education. However, when using these technologies, we should consider "*how learning, both in formal and informal settings, can be engaging or meaningful through the integral accomplishment of learning and educational technologies*" [Hung and Khine 2006]. The purpose of integrating technology into education should be making learning meaningful for students.

In addition, in recent years, discussions of the importance of computer literacy, multimedia literacy, digital literacy, and media literacy, among related types of literacy [Martin 2006] reveal that in a society that embraces digital media, students should know how to manipulate these technologies and be able to critically think about these media and their impacts on human society. Furthermore, for teachers, to help students learn, it is important to understand students' learning process and be able to assess performance. Computer technology has played a role in assessment. However, those assessing computer use look at technology as an exam tool or as storage space. The value of integrating technology in education should be multifaceted. Instead of only focusing on one goal, technology could influence education in many ways. With the intention to understand how multimedia technology can help improve the learning process, this paper explores the multiple values of using video as an agent to extend and enrich learning and writing process.

Currently, viewing videos on a website such as YouTube.com, is a popular activity among students. Many students even produce their own videos and share them with other people through the Internet. Thinking through this cultural phenomenon, how might art educators use videos as a form of communication and a source of information? Using video as a medium in art has been explored for more than 40 years. In reviewing the history of video art, Elwes [2005] indicated that video artists have used video to reflect, investigate, and criticize social identity. Artists also have used "*deconstructive strategy for exposing the distortions and iniquities of media representations.*" "*In the 1990s popular cultural imagery was integrated into video art as part of a celebration of contemporary visual culture and superseded the traditional themes and preoccupations of fine art as well as the more political, deconstructive approach to the moving image*" [p. 3]. Artists' different ways of communicating via video development can be a starting point for educators as they consider possible meanings for videos and their use in education.

The project addressed in this paper was developed through art education practice. Other education disciplines could also develop similar practices as they explore the possible use of video in enriching the learning process. In this paper, the fact that videos are recorded and edited through digital technologies and computers is acknowledged to make videos a multimedia practice

and communication medium. Therefore, the project has been called the new media-enriched paper project.

2 Enriching Learning with Multimedia Technology

Several studies have explored and developed many ways and approaches to using multimedia technology in enhancing learning. Multimedia writing is one way to utilize multimedia technology in writing. Other uses of multimedia technology, such as producing videos, also have been developed in education and art education.

2.1 Multimedia Writing

Since the 1990s, the use of multimedia technology for educational purposes has been widely developed. Computer software is available that allows a multimedia environment in the writing process. A new kind of writing, which uses multimedia as a tool, has also been explored by many educators [Daiute and Morse 1994; DeVoss, Cushman, and Grabill 2005; Fan 1996; Zoetewey and Staggers 2003]. Multimedia writing involves communicating through not only texts but also other communication forms, such as sounds and images. Although the initial goal of using multimedia writing is to enhance writing, multimedia writing could be extended to other educational purposes. Learning to communicate is not only limited to using words and language, but also may be extended to visual images, audio sounds, and other types of expression. Therefore, multimedia writing has become an important tool in literacy development; the inclusion of technology enables the extension of literacy in the communication process [Daley 2003]. As technology provides enhancements to writing, teachers should also explore how to develop new curricula or projects in classes that help students enlarge their multimedia literacy.

2.2 Video in Education and Art Education

As Greenwood [2003] pointed out, "video is an extremely powerful and sophisticated form of communication that has changed our culture and continues to have a profound effect on our society" [p. ix]. One way to use video in education is as an instructor, and knowledge and information resource. In this way, video is passively used to assist teaching and learning. On the other side, video could also become an active education process. Producing video as an activity project is one way to involve students in learning. Greenwood [2003] identified several video genres that can be used in educational projects, such as: reality TV, educational video, documentary, news report, drama, foreign film, commercial/public service announcement, music video, video montage. Students can learn from the process of producing these different types of video projects. Greenwood believed that different projects engage students by allowing them to play different roles, such as reality "recorders", reporters, and artists. Szekely and Szekely [2005] also suggested the development of a video art curriculum in art education. Examples of the benefits of video in art education include facilitating sculpture or bringing paintings to life, gaining control of media, teaching camera arts, and encouraging children to perform.

The use of video can enrich learning in other ways. The new media-enriched paper project enables students to both produce video and use video as part of their writing.

3 The New Media-Enriched Paper Project

In the new media-enriched paper writing project, a multi-layered paper was created in which video clips were embedded. I describe the purpose, reason for, and process of this project in this section.

This project originated from collaborative work between two graduate students at Penn State in the Art Education Program Colloquium. The initial reason for this project was to create a way to write a paper that both synthesized the class's online discussions and reflected the author's thoughts and understanding. To accomplish this, we decided to collaborate. Since we both believed that technology is a new way to enrich the writing process, we chose technology to help us in the development of our process. We hoped that through the collaborative process, we could explore the possibilities of using new media to help the writing process become more meaningful and enhance learning. Moreover, we also wanted to experiment with the potential of using new media in assisting the collaboration process.

The outcome was a paper for the class and discussions between its authors about the process of creating the paper and reflecting on it. New media technology provided a different way to write a multi-layered paper by adding video—in other words, multimedia writing and a new way to present knowledge. In addition, this project also showed the value of collaboration through the use of new media technology. Being involved in this process, I had a chance to think, rethink, and communicate the course of our work and, more importantly, to gain an understanding of how using new media technology can enable multimedia writing and enrich the process of learning.

At the beginning of our project, we discussed how to organize our papers. In order to understand the content better and exchange our thoughts about the subject, we decided to reflect upon each other's papers. We used video to add our reflections to the paper. We set up a recording process three times, and used digital video to record our "reporting" on each other's paper. In order to simplify the reflections on the papers, video clips were made in short and reportorial form. It was also easier to edit short clips. We used Apple iMovie® to edit clips. In the video clips, we briefly introduced how we each created our papers and our thinking about the process of new media-enriched papers. The changing video tracks provided clues about how the paper came about and was shaped.

After we both finished our papers, we decided the places in the paper to put our video clips. This was the challenge of our multimedia writing. Since new technology has made the new media-embedded paper possible and easier, organizing and weaving new media in a way that helps readers gain multi-layered information without difficulty is an important part of effective communication. PDF files have made sharing articles and papers easier. We transformed our papers into PDF format and used Adobe Acrobat® to add our video clips. The papers were now both text and video, adding layers of meaning. Video and texts were now interwoven into a new media-enriched paper.

4 Educational Values

The meaning of this project and the significance of using video to enrich learning included: meaningful and engaged learning activity, collaboration through technology, communication through video making, critical reflection and thinking through the

subject matter, and the display of a learning process and understanding of the subject matter.

4.1 Meaningful and Engaged Learning Activity

New media technologies provide us with different ways for writing, recording, and communicating. New media-enriched papers enable the practicing of multimedia writing and the deepening of learning. The media-enriched paper project is a meaningful and engaged learning activity. Jonassen, Howland, Moore, and Marra [2003] argued that meaningful learning happens when learners are active, constructive, intentional, cooperative, and working on authentic tasks. This project involved meaningful learning as a cooperative project through which the learners are active, constructive, and intentional. The project originated from students; in the process of this project, students planned and decided when to reflect on each other's critical response, making this also an engaged learning activity. *"Engaged learning is grounded on recent notions of active learning where learners take responsibility for their own learning. Learners are responsible for their own learning when they are actively developing thinking/learning strategies, and constantly formulating new ideas and refining them through their conversational exchanges with others. In other words, there is active engagement in the learning process when the learners are constructing knowledge from experience through their interactions with peers and teachers to make meaning or to interpret information and patterns observed"*[Hung, Chee, and Seng 2006, p. 30]. Through the collaborative process, students engage in interaction with peers. Knowledge construction in this activity is through critical reflection. Students are engaged in the process of creating a better understanding of the subject matter and their process of organizing their knowledge. The project allows students to engage in decision making and to take responsibility for their own learning. Therefore, learning is controlled by the students themselves, and is relevant and meaningful to them.

4.2 Collaboration through Technology

Creating video is a way to reflect on and rethink the learning process in this project, and to connect students and facilitate the collaboration. When making video, we had to work together to set up the background, prepare the equipment, and control the digital camera. After recording the video, we also cooperated in cutting and editing video clips. Technology helps the process of reflecting on each other's learning process, organizing it and making it cooperative. The collaborative process provides students with experiences in using technology and learning how to support each other in a project using technology.

4.3 Communication through Video Making

Although there are many ways to communicate our thoughts, such as writing, in this project we chose to use video to communicate our reflections. We decided how to edit and present our video critical reflections. Video clips represented our thoughts and conveyed meanings about the learning process. By making the video clips, we learned how to use alternative ways to produce video and to communicate with other people. The video-making practice is a way to practice communication.

4.4 Critical Reflection and Thinking through the Subject Matter

In order to critically reflect on each other's learning process, we thought through the subject matter. In carefully considering the organization of our paper, we thought through each stage of paper writing. The process became a dialogue based on our own knowledge of the subject matter. Although we chose to make the critical reflections in the video resemble a news report style video, we did not simply "report" our progress. We critically analyzed each other's papers and gave positive suggestions. Therefore, this project allowed students to learn how to critically reflect on and analyze the process of constructing and organizing knowledge.

4.5 The Display of a Learning Process and Understanding of the Subject Matter

The process of how we organize our knowledge and the degree of our understanding of the subject matter were shown in the final media-enriched paper. The instructor's comments about the paper were as follows: *"It's exciting that both collaboration and multimedia became part of your critical reflection process. I hope you continue with such writing processes. It really does add another layer to hear/see you speaking about Michelle's paper right inside her paper in three places. Very astute points you make in giving an overview of what her paper seems to be about at the different stages, questions that it raises for you, and suggestions. You were constructively critical"* [K. Keifer-Boyd , personal communication, December 17, 2005]. Through this process, teachers can gain a better understanding of students' thinking process and help students to organize their learning and knowledge.

5 Conclusion

5.1 Benefits

The most important idea in this approach is not only to use video in writing projects, but as an agent to enrich collaboration and the critical reflection process. This approach benefits both students and teachers in learning and teaching.

For students, the benefits of using this approach include:

1. Learning to collaborate with peers and critically respond to each other's work.
2. Learning how to make video clips and edit them on the computer.
3. Deepening students' thinking about the presentation of knowledge and understanding of subject matter.
4. Practicing peer assessment.
5. Enhancing and stimulating students' motivation to participate in paper writing.

For teachers, the benefits include:

1. To better understand students' thinking process.
2. To acquire more information about students' learning to assess whether they have met teaching and learning goals.
3. To help students to organize their learning and knowledge.

5.2 Applications

Multimedia technologies can bring more potential to the development of ways to engage students in learning and writing. The face of new media-enriched papers can change through changes in new media. Video is a way but not the only way to develop similar projects. The project can also be extended, with the video opening to many different types of content. Students can even create other multimedia or animation to replace video. Teachers can use different subjects to create different projects.

The writing project is one way for educators to explore more possibilities for new technologies in education. New media-enriched papers can be applied to many classroom art projects. Such projects may be especially meaningful for art education by enhancing students' learning process and allowing critiques of each other's artwork. For example, students can embed video about their intent, goals, and the development of their ideas in their artwork; and to critique their finished work as part of a digital portfolio. I encourage teachers to develop new media-enriched writing projects in classes to help students communicate via new media and multimedia.

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