

Student Perceptions of Multimedia Technology Integrated in Classroom Learning

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Abstract

As technology has become more prevalent and accessible to students of all ages in their personal lives, educators in classrooms around the nation are being encouraged to find innovative and creative ways to incorporate this technology into classroom learning, making assignments, presentations, and learning opportunities more engaging and relevant in today's society. Multimedia technology can be a tremendous benefit to schools to increase participation in the educational environment; however, this study proposes that many educators are not taking advantage of these new and unique learning tools. The present study surveyed students entering seventh, eighth, and ninth grade regarding their current use of any technological tools in their current learning environment, and their perceptions as to the benefits of using it on a more regular basis. Results found that, although most were not utilizing technology to its capacity in their classrooms, students perceived that incorporating technology on a higher level in their classrooms would make them more engaged and excited to learn.

Introduction

Outside of the educational classroom, technology comprises a great part of a student's life. As technology advances, many educators are working at rapid pace to provide a relevant, current learning environment for students, incorporating the most advanced learning tools. Chen, Looi, and Chen (2009) state, "There is much consensus that technology is now an inevitable and integral part of our everyday life, work, and home experiences. Concomitantly, the call for schools to move to a more technologically integrated approach to teaching and learning has been resonating among ministries or departments of education in various countries" (p. 470). Using technology in classrooms can greatly enhance the efficacy of students' learning and academic achievement. Assignments that utilize technology instead of traditional forms of assessment allow educators to engage the students who, in turn, can become more motivated to complete homework as well as present the assignments in the classroom.

The accessibility of technology has been rapidly increasing throughout recent years. Many junior high and high school students have personal multimedia devices that can instantly connect to social networks, search engines, and media providers through the Internet. Smart phones and netBooks, such as the iPhone and iPad, have become more prevalent as communication and entertainment tools, and thusly access to the Internet has become more portable. Through the use of these multimedia technologies, a student is able to digitally record and upload a video to a website which will immediately enable other Internet users to access it as well.

For the purposes of this study, multimedia technology can be defined as the combination of more than one media device such as Internet, video camera, video footage, sound, computer, etc. In an effort to investigate how the use of multimedia technology enhances classroom learning this study focuses on the following questions:

1. How is technology, in general, used in schools to promote learning?

2. How is multimedia technology being used as a teaching tool in school?
3. What are the surveyed students' perceptions of the use of multimedia as a learning and teaching tool?
4. How would the surveyed students like to see multimedia technology being used as a learning tool in the future?

Literature Review

The need for technology to be incorporated into curriculum has been recognized for many years. The Benchmarks for Science and Literacy Project has acknowledged that there is an importance for students to develop knowledge and skills in technology (American Association for the Advancement of Science, 1999). According to Miranda and Russell (2011), "Since the early 1990s, schools, districts, and the federal government have invested heavily in instructional technology (IT). Teacher and student access to technology in schools has improved dramatically. Today, all public schools are connected to the Internet, with 97% connected via high-speed connection" (p. 301). However, having available technology is not the primary contributing factor to enhancing student learning; despite these numbers, many educators are still struggling to incorporate the latest technology in their learning environments for many reasons such as lack of classroom time to train students in these skills and their own lack of knowledge and training on the most current programs and software (Noveanu, 2010).

By using technology in the classroom, once proper trainings are conducted, teachers are using real world applications that students use every day to make the content relevant to the students. One principal stated, regarding his students using technology,

Students live in a world full of the latest cutting-edge technologies and applications: from iPhone's, iPod's, and PDA's to cell phones and laptops; from avatars in Second Life to real friends in MySpace and Facebook. Before entering the hall, students were socially networking around the world, conducting immediate personal research on issues they were curious about (Farr, 2009).

With multimedia technology becoming such an integral part of students' lives educators are considering incorporating it into projects to promote learning in their classrooms. As one researcher states, "The trend toward technology enhanced classrooms has escalated quickly during the past five years as students have become increasingly tech-savvy. Classrooms across the nation have become 'wired' and textbook publishers now offer a wide variety of computerized teaching supplements" (Lavin, Korte, & Davies, 2010, p. 1).

Students are using multimedia to connect with different cultures and societies that can broaden their learning experience (Warschauer, 1999). Technology provides an innovative way to reach and collaborate with students and educators all over the world. However, not only is technology useful in communicating with others, it also provides unique ways to complete assignments. One educator commented about students using multimedia technology stating, "Multimedia is a learning tool that allows learners to organize, represent and construct knowledge in multiple modalities that include text, audios, graphics, animation and videos" (Wang, 2006, p. 316). Additionally, another middle school teacher stated, "As educators, we know that students learn better and faster when they are actively engaged in their learning. Digital media can be a great vehicle for student engagement with classroom technology..." (Quinones, 2010, p. 28).

One research study that was conducted on a Midwestern college campus found that not only was technology useful in increasing the student participation but results also suggested that "adding technology to courses where it is not currently used is likely to have a positive impact on student perceptions of the instructor and the course as well as on most aspects of student behavior" (Lavin, Korte, & Davies, 2010, p. 7).

Methodology

The researchers hosted a weeklong, summer technology camp at the University of Louisiana at Monroe for students entering the seventh, eighth, and ninth grade. During the summer camp, students spent the week creating fifteen-minute, mock news broadcasts focusing on current events that they perceived as relevant and important. The students used Apple computers and iMovie, a software program made by Apple, to edit their videos. The iMovie program allows students to add video footages, sound, and captions to make the video appear more like authentic news broadcasts. After completing the project, students were given a mixed methods survey that analyzed their perceptions and experiences in utilizing the technology and also addressed the focus questions presented in the introduction of this study.

Students were asked to describe how technology impacts their learning environment at school and how students perceived their schools' use of technology to promote learning. Additionally, students were asked if program software, such as iMovie, would increase their participation, should this be provided for them to use.

Data

Research Question One: How is technology used in schools to promote learning?

The participating students responded to the survey indicating 37.5% of them spent 30 to 60 minutes on computers at school. More than half of the surveyed students, 62.5%, used computers in their English classes. Additionally, 50% of the surveyed students used computers in their Mathematics classes where they felt that technology had improved their abilities in problem solving, and approximately half of the surveyed students, 42.9%, thought that technology had improved their studying abilities. Surveyed students were asked to describe how the use of technology had made a difference in their learning experience. One of them expressed that it "makes learning easier" while another felt that it was a "good way to learn about new places." In addition, one student commented that it was "a lot of fun working with than writing."

Research Question Two: How is multimedia technology being used as a teaching tool in school?

Only 12.5% of the surveyed students had used iMovie before the summer technology camp. More than half of them, 57.1%, had used a video camera, while 37.5% said that they never used video cameras. A surprising 25% of the surveyed students did not use a computer in the previous school year. One surveyed student was unaware if a multimedia device was being used in his classroom while another felt that multimedia learning made a difference because it made school go by faster.

Research Question Three: What are the surveyed students' perceptions of the use of multimedia as a learning and teaching tool?

When asked how students viewed the use of multimedia as a learning and teaching tool, 100% of those surveyed expressed that they would participate more in class if technology was used as a form of assessment. One surveyed student thought it would be fun to have multimedia projects as a part of an assessment. Another student said that he "would participate in classroom activities more because it would be easier for me to learn."

Research Question Four: How would the surveyed students like to see multimedia technology being used as a learning tool in the future?

When surveyed about how the students would like to see technology being used as a learning tool in the future, students suggested that laptops could be used to enhance learning. Students believed that they could learn more by using technology. They also proposed that students could make movies for English classes instead of doing a report. One surveyed student commented that iMovie, or similar software programs, could be used to "make learning more interesting and fun."

Conclusion

Educators at all grade levels are encouraged to incorporate technological learning tools into their curriculum and daily activities. With technology continuing to evolve at a rampant pace, benefits can be gained when school systems are utilizing these advances to encourage student participation and learning. This study has affirmed that using technology can promote learning in the classroom, and that students have a strong desire to gain knowledge of new programs. According to the results of this survey, technology can increase participation and motivation of students in a project assignments because students can freely express their ideas in innovative ways by utilizing multimedia technology. Although students commented positively toward the use of technology, many students were unaware of certain programs and software that could greatly enhance the learning environment. Additionally, many students are only using computers at schools in a limited way. Surveyed students perceived the use of multimedia technology as a way of make learning easier and more interesting. They preferred using technology to present their ideas rather than writing papers and doing more traditional projects. Additionally, technology can also be used as a communication tool between teachers and students. Upon review of the presented material, it is clear that educators must become aware of the rise in demand for such teaching tactics and incorporate the utilization of multimedia in the classrooms. Many training tools are available to help teach educators how to utilize and implement these latest technologies.

As one instructor states that as students are learning and utilizing new devices and programs, it can be beneficial to “provide an opportunity for students to summarize what they saw” which enables the learning process to be unique to each student, exploring all facets of the programs (Quinones, 2010, p. 32). Technology provides new ways for student assessment and indirectly propels forward the learning environment for the field of education.

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