INTEGRATION OF TECHNOLOGY IN K-12 CLASSROOMS USING IMOVIE

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Abstract: This paper reports on the use of video production to facilitate technology integration into the K-12 curriculum. Participants produced digital movies and lesson plans using iMovie to enhance instructional activities. Video projects enrich K-12 classroom and engage students in collaborative learning. This paper describes how teachers integrate digital media into teaching and learning activities. The video projects are summarized and accessible from the Web.

Introduction

As the K-12 schools are better equipped with computer hardware and software, the demand for teacher training in technology integration into curriculum has also increased. Although many pre-service and in-service teachers have received skill training in using technology, the majority feels ill-prepared to integrate technology into teaching (NCES, 2001). This paper focuses on how digital video can be an effective tool for curriculum development. Specific examples of these projects are described. Reflections on the processes of integrating video production technologies in teacher education are discussed.

Literature Review

The use of video production in classroom is an excellent way to enhance student understanding of a content area, engage students in learning, and build community (Hoffenberg, October 2001). Topper (n.d.) also states that visual presentation can supplement languages and make a sophisticated concept be accurately understood and discussed. Today’s children grow up in a digital world. The use of pure text without the supplement of digital media can be difficult in attracting their attention. Furthermore, Jonassen (2003) postulates that the process of video production “requires learners to be active, constructive, intentional, and cooperative–to solve numerous decision-making problems while solving design problems associated with production” (p. 126). The learning process of producing video projects can promote collaboration among learners, enhance critical thinking skills, and make learning an enjoyable experience (Hayes, 2003).

iMovie Project Description

The iMovie videos were the final projects for the course titled “Design and Development of Digital Media” which was delivered off-campus to K-12 in-service teachers. There comprised twelve teachers taking the course. There were three high school teachers, two middle school teachers, six elementary school teachers, and one special education teacher. The main objective was to produce a two-minute video project that can be used to teach their students in a specific content area or for service learning. Teachers also developed lesson plans to accompany the videos. A survey on digital media literacy was conducted at the beginning of the courses. None of the teachers had experience in producing digital video. Most of them had little experience with digital pictures. The teachers went through the following steps before setting out to shoot videos on location: reviewing online resources on video lessons, brainstorming ideas in small groups, submitting project proposals, writing story boards, and collecting media assets (i.e. still images, text, music, sound effects). After shooting videos on site, they came back to the lab to edit the videos in small groups. Six projects were produced from six small groups, examples included:
1. Pennies from Angels: This is a service-learning video project on how kindergartners save pennies to buy food for a local food shelf. The objectives are to help students learn about the community and community service, counting skills, and the joy of giving. The video starts with a teacher explaining what a food shelf is to the kindergarteners. The video then changes scene to show how students save pennies, shop at local grocery store, and deliver food to the food shelf. The video ends with student reflection on their action. This is a perfect video to show parents what their children are learning at school.

2. Reading Strategies: This video demonstrates how Direct Instruction can improve reading skills and how parents can help their children. Two reading strategies, newscaster reading and duet reading, were introduced. An instructional manual was also developed to accompany the video for parents to learn more about Direct Instruction. The video was shot at real classrooms with real students practicing. With authentic tasks, the video has served its purpose to help children and their parents in keeping up with reading assignments.

3. The 1-2-1-1 Full Court Press: Two teachers are basketball coaches at their school. They have used iMovie to help students to learn the positions and expectations when running the press. This video that combines footages from an actual play-off and still images for explaining the positions demonstrates an excellent combination of technology with sports.

4. Surviving 7th Grade: Several seventh graders were recruited to provide surviving tips for upcoming seventh grade students. Students who have successfully survived the seventh grade talked about their experiences and the difference between the sixth and the seventh grade. This video provides an excellent community service for parents and orientation for new seventh graders in adjusting to the new environment.

5. Exploring Wolf Ridge 2003: This video project aims at providing an introduction for students to learn about Minnesota geography. Students will be able to identify the landscape of the regional geography through the video clips. This video also provides an orientation for the 6th grader before going on a field trip in the Lake Superior region. Finally, the video will be a model for students to construct their own video while learning about Minnesota geography.

6. Teacher for a Day: One of the Minnesota graduation requirements for physical education is that each student has to teach a skill of a sport. This video project is a collection of several video clips on students teaching fellow students how to do a sport. This video project provides a model for students to develop their own instructional video projects using iMovie.

The teachers in this course used iMovie with great enthusiasm. Many new projects on using iMovie as a teaching/learning tool were proposed as a result of this course. The movies and lesson plans can be viewed at: http://web1.courseweb.stthomas.edu/ccchou/movies/hinckley.html.

Conclusion

Using video to support technology integration into K-12 curriculum has been a successful experience for the participants at this course. The feedback from the teachers was overwhelmingly positive. The advantages from their perspectives can be summarized as follow: 1) engages students in learning; 2) enriches curriculum program; 3) promotes the sound use of technology; and 4) facilitates the communication among teachers, parents, and administrators. Improvements that the teachers would like to see are finding the equivalent of iMovie for the PC platform; more time for professional development, and the ‘budget to purchase equipments for their own schools. Until school districts can provide incentives to encourage more teachers to attend training on technology integration, a large number of teachers will remain unprepared for technology integration.

References


