ABSTRACT

This paper discusses how one university infused technology into physical-education (PE) methods courses required for all students seeking K-12 certification in PE or a minor in PE. The researcher began by designing and developing interactive Internet-based course material using WebCT. She converted the course syllabus and class lecture notes and identified useful web links to help students with their learning and application of course content. WebCT's bulletin board was used to develop a volunteer national network of mentor health and PE instructors. This allowed mentors and PE methods students to engage in dialogue throughout the semester. Another network was established collaboratively with another university's health and PE instructor so students at both schools could exchange ideas and concerns. The researcher constructed several multimedia interactive tutorial programs to teach students the content used in the Physical Education Teacher Assessment Instrument. Finally, she constructed a web page that shares information; highlights students' home pages; enhances communication between student teachers, cooperating teachers, and university supervisors; and promotes the teaching program. She surveyed methods course students and mentors to determine their reaction to technology integration. Results indicated that the mentors liked the experience much more than the students, though both groups considered the experience enjoyable and were glad they had participated. (Contains a list of Internet resources.) (SM)
Expanding Preservice Teachers' Tools for Effective Teaching

National Conference on Technology in PE & Sport

Expanding Preservice Teachers' Tools For Effective Teaching

Friday, July 30th @ 8:00AM - 10:00AM

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The Integration of Technology

The purpose of this article is to discuss how technology was infused into Physical Education Methods courses required for all students seeking K-12 certification in physical education or a minor in physical education at Northern State University in Aberdeen, South Dakota. The integration of technology into these courses was made possible as a result of a South Dakota Faculty Governor's grant. My motivation for infusing technology into these courses was multifaceted. First and foremost, I wanted to have a significant impact on how future physical educators' design and deliver their curriculum within the state of South Dakota and possibly the Mid-West. Secondly, I wanted to enhance my effectiveness as an instructor by expanding the experiences I provided my students beyond the traditional classroom walls.

The first step I took to integrate technology into my PE Methods courses was to design and developed interactive Internet-base course material using WebCT. WebCT is a tool that facilities the creation of sophisticated worldwide web-based educational environments developed in the Department of Computer Science at the University of British Columbia. I converted course syllabi; class lecture notes, and identified chapter goals and study questions, as well as, identified useful web links to assist students with their learning and application of course content.

In addition to using WebCT to develop Internet-base supplemental materials, I used WebCT's bulletin board option to organize and develop a volunteer national network of mentor health and physical education instructors. Utilizing the bulletin board tool, mentors and Methods students engaged in open dialogue throughout the 1998 fall semester discussing various issues and concerns facing the HPE profession. I also collaboratively established another network with a Southwestern University HPE instructor using the bulletin board tool involving our Methods students. The students from both campuses throughout the fall '98 semester exchanged ideas and concerns regarding the HPE profession and issues in becoming HPE teachers and coaches.

Next, I constructed several multimedia interactive tutorial programs using Toolbook, Microsoft PowerPoint '97, and Adobe Premier designed to teach students the content used in the Physical Education Teacher Assessment Instrument (PETAI). The PETAI is a software program used to analyze behaviors exhibited by physical education instructors and students in physical education classrooms developed in the Department of Physical Education at the University of Northern Colorado. The programs assist students in planning and implementing their classroom management and instructional skills. Furthermore, the programs demonstrate to students how PowerPoint can be used as a programming tool.
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Lastly, I designed and constructed a Northern State University Health and Physical Education Clinical Experience and Student Teaching Web page using Microsoft Word 97, Netscape Composer, and Adobe Pagemill. The web page is designed to share information, highlight NSU HPE student's homepages, to enhance the communication between the triad formed by the student teacher, cooperating teaching and university supervisor during clinical and student teaching experiences, and to promote the NSU HPE teaching program. Students' homepages are voluntarily designed and constructed for extra credit while enrolled in the PE Methods courses. The intent of this project was to provide the students with the basic principles of web page building so they will apply these skills in the future to promote their own programs. Originally the web page project was to be a course requirement, but because of time restraints and the students becoming generally overwhelmed with everything, I decided to reduce my expectations of what I could infuse and still maintain the course integrity.

Reaction to the Integration of Technology

To determine how the Methods students and mentors reacted to the integration of technology into the Methods courses, I surveyed them. I administered several different surveys using a 6 item Likert format. I administered one survey to determine the reactions of the NSU students and mentors towards their involvement in the bulletin board project and another one only to the NSU students to determine their overall reactions to the infusion of technology into the PE Methods courses. In addition, I am currently collaboratively working with the instructor from the Southwestern University in studying how our students collectively enjoyed their bulletin board experience.

The data collected regarding the students and mentors reactions to their bulletin board experience indicated that the mentors overwhelmingly enjoyed the experience more than the students, but that both parties found to experience to be enjoyable and glad the project was integrated into the courses. Several students mentioned how wonderful it was to hear what educators from other parts of the country thought, but that the bulletin board was time consuming. A marginal amount of students also felt that the bulletin board project didn't enhance their interest in the course, but the majority of students and mentors felt that the project should continue to be implemented into the courses.

Overall, the PE Methods students positively accepted the integration of technology into the Methods courses. The majority of the students indicated that they would regularly utilize technology in their teaching if they have access to the necessary hardware and software. Furthermore, the majority also indicated that their interest in the course was enhanced by the infusion of technology and that technology should continue to be used as a tool in teaching PE Methods.
Expanding Preservice Teachers' Tools for Effective Teaching

In regards to the students specific reactions to how technology was utilized in the Methods courses, let's first look at the students' feelings towards WebCT. A number of students found it to be interesting and fun, but at the same time a few found it to be time consuming and a hassle.

The students' reaction's to Internet searching was mixed, but mostly positive. Some students felt this assignment could be cut out of the course because it was basically a review, but others found the assignment to be useful and want more.

Lastly, the students overwhelmingly enjoyed learning how to use PowerPoint 97 to build PowerPoint/Internet integrated lessons, but one student did question its educational value. The majority of student's sentiment towards PowerPoint can be expressed by one student's comments, "I learned a lot from this and it is a good thing to be used in the future."

Resources

*Productivity in the Classroom:*
http://www.microsoft.com/education/k12/integrate.com

A curriculum workbook jam-packed with ideas for integrating computer application into the intermediate, middle school, or high school classrooms.

*WebCT:*
http://www.webct.com/

This site provides detail information regarding the application of WebCT. WebCT is a tool that facilitates the creation of sophisticated World Wide Web-based educational environments.

*NSU HPE Student Teacher & Clinical Experience Homepage:*
http://www.northern.edu:90/morley/index.htm

This site was developed to provide PE Methods students, student teachers, and cooperating teachers with a method for obtaining relevant information regarding PE clinical experience and student teaching.

*Personal Homepage:*
http://www.northern.edu:90/morleyl/homepage.htm

*E-Mail Address:*
morleyl@wolf.northern.edu

Nat'l Conference on Technology in PE & Sport
Hands On Material

Internet

WebCT Course Material

- Enter the following URL - http://webct.northern.edu:8900/
- Click on Course Listings
- Click on Physical Education
- Click on the Gold Key next to PE Methods (Right side of screen)
- Create a Guest Account and proceed to enter the course material

NSU's WebCT Student Guide

- Enter the following URL -
  http://lupus.northern.edu:90/morleyl/introtostudent.html

NSU HPE Department Clinical Experience & Student Teaching Web Site

- Enter the following URL - http://lupus.northern.edu:90/morleyl/index.htm

PowerPoint

PETAI Student Behaviors Tutorial

Students' Interdisciplinary Lesson Plans

- Methods '97
  - Danappt
  - Internet
- Methods '98
  - A Healthy You
  - POWERPOINT2
  - Softball
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