3.2 THE USE OF WEB-BASED PORTFOLIOS IN COLLEGE PHYSICAL EDUCATION ACTIVITY COURSES

Abstract

This paper describes the introduction of web-based portfolios as a means of authentic assessment in collegiate physical education classes. Students in three volleyball classes were required to contribute to web-based team portfolios, and at the end of the semester , were able to make comment upon this process. A six-item on-line survey used to gauge the students' responses concerning their enjoyment of the class, team affiliation, and learning of the process of developing and publishing web pages. Three key themes arose: increased team cohesion a very new way of learning and being assessed in

physical education; students' lack of technology skills. These results suggest that digital portfolios have the potential to contribute to students' learning and enjoyment of physical education classes.

Each year in the United States, approximately 16.3 million students are enrolled in colleges and universities (National Center for Education Statistics, 2003). In many, if not most of these institutions, there is a basic instruction program conducted by departments of kinesiology or physical education (i.e., Hensley, 2000, notes that 96 percent of the responding institutions in his study reported the existence of such a program, either on a required or elective basis). Although the percentage of institutions requiring physical education has decreased from approximately 90 percent in the 1960s to about 65 percent in the 1990s, we still see large enrollments in elective programs, with between 25 and 30 percent of students enrolled in a physical education class during the academic year (Hensley, 2000).

Students enrolled in these physical education courses do so for a variety of reasons. Analyzing the answers to the questionnaire obtained from 795 students enrolled in basic instruction programs, Savage (1998) reported that the main objectives for participation were obtaining regular exercise, keeping in shape, learning new skills, having fun and earning a high letter grade. The results of Leenders, Sherman, and Ward (2003) investigation supported Savage's study and found that students enroll in physical education courses primarily to learn a new activity, have fun, improve skills, improve fitness, and exercise regularly.

While learning and improvement were listed in these studies, Leenders et al. (2003) have commented that the reported reasons may not reflect students' actual reasons for enrolling. As a case in point, the in-depth qualitative study of Bennett (2000) suggests that students' participation styles fell somewhere on a continuum between "slacking" and "sweating." Further, it appeared that students' perceptions of the assessment climate in these courses was one of showing up to class, participating, and thereby getting an easy "A" (Bennett, 2000).

The overall purpose of this study, then, was to describe and evaluate a purposeful change in the assessment system of a collegiate physical education class. In this particular case, we sought to determine the implications on students' learning and motivation of the introduction of digital portfolios as part of their participation in a season of volleyball. The study aimed to answer two major questions; (i) to what extent were the students able to develop authentic web-based digital portfolios, and (ii) how well did the students enjoy the class, their team affiliation, and learning how to develop and publish web pages.

A brief note on Sport Education

The volleyball courses taught in this study followed the design of Sport Education. Sport Education is a curriculum and instruction model developed to allow students in physical education programs to have authentic, enjoyable learning experiences in sport, dance, and exercise activities (Siedentop, Hastie & van der Mars, 2004). The curricular philosophy of Sport Education has two distinct features. First, there is a greater depth of coverage of content and second, an expanded set of content goals. While the content of Sport Education has a strong focus on tactics and skills, it also includes learning about and practicing other roles that are important to how the activity is pursued outside schools; that is, coaching, refereeing, scorekeeping, compiling statistics, managing teams, publicizing results, and the like. The instructional philosophy of Sport Education centers on the development and sustaining of small, heterogeneous learning groups in which students help and learn from each other. It is within these teams that students have various roles and responsibilities, all of which contribute to the team's success.

Portfolios

Campbell, Cignetti, Melenyzer, Nettles and Wyman (1997) define a portfolio as an organized, goal-driven collection of evidence, and throughout history, artists, architects and musicians have made collections of their works as evidence of their talents. Given that these portfolios provide direct evidence of a professional's skills and competencies within a specific area of expertise, professional preparation institutions also use portfolios as a means of authentic assessment. In physical education, portfolios are seen as useful in that they allow for actual samples of student performance to serve as the measure of learning instead of the highly inferential estimates provided by traditional testing. In this way, validity is enhanced through this direct sampling of specified behaviors (Melograno, 2000).

A digital portfolio uses electronic technologies, allowing the portfolio developer to collect and organize portfolio artifacts in many media types (audio, video, graphics, text), and to transform these artifacts into computer-readable form (Barrett, 2004). A web-based portfolio is a digital portfolio accessible through the use of the World Wide Web.

Method

Participants

Seventy students from a large Southeastern university were the participants in this study. These students were enrolled in one of three sections of an elective volleyball course (20, 24, and 26 students per section). Classes met

three times a week for a period of fifteen weeks, and each class session lasted fifty minutes.

Course outline

Each section of the elective volleyball course was taught following an identical format. For the first five weeks of the course, the students learned skills and tactics of volleyball before the concept of Sport Education and the portfolio requirements were introduced. Before the introduction of the portfolio, one lesson was dedicated entirely to learning and practice of basic web design and publishing techniques. The students had 24-hour access to a well-equipped computer laboratory containing all the hardware and software necessary for them to complete the task. After the fifth week of the course, five teams in each section were formed by a draft and for the next 10 weeks the students participated in a season of volleyball organized around the key principles of Sport Education.

Web-based portfolio requirements

All students were required to contribute to a web-based team portfolio. Depending upon their role in the team, different artifacts were required from each student and each student contributed at the minimum two web pages to their team portfolio. For example, the team manager was required to produce a team roster page, and a team schedule page that showed their opponents' team names as well as the dates when the team officiated. Each team also nominated a webmaster to oversee the production of the portfolio. Specific instructions for the presentation of the portfolio are provided in Table 1, together with the individual roles and responsibilities of team members. The teams' websites were published on the World Wide Web.

Data Collection

Two data sources were used to answer the two purpose questions. The first entailed a content analysis of the students' web pages to determine if the students could produce representative portfolios of their Sport Education season. The second involved the use of an online questionnaire, used to obtain the students' responses concerning their enjoyment of the class, team affiliation, and learning of the process of developing and publishing web pages.

Content analysis. The Uniform Resource Locators (URL) of five randomly selected web sites were emailed to four professors in institutions who had taught courses that involved the Sport Education model, and who had also published papers related to the model. The evaluators were asked to rate each website on a five-point Likert scale that ranged from strongly disagree to strongly agree. The specific questions asked of the evaluators were as follows: (i) the website shows

the presence of seasons, (ii) the website shows evidence of a culminating event, (iii) the website demonstrates team affiliation, (iv) the website displays evidence of record keeping, (v) festivity is reflected in this team's website, (vi) formal competition is evident in the team's website. Students had provided informed consent at the beginning of their semester for their work to be located on the public domain.

Online questionnaire. At the end of the semester, all students were given the opportunity to complete a six-item questionnaire developed by the researchers. Accessible on the World Wide Web, the questionnaire was available to all students for a period of two weeks prior to the completion of the course. The six statements were as follows: (i) creating the team website contributed to the sense of affiliation with my team and my teammates, (ii) I am proud of my teams' website, (iii) I enjoyed learning how to develop and publish web pages, (iv) I am confident that I can develop and publish a website, (v) participation in the V-League made the class more enjoyable for me, (vi) participation in the V-League made the volleyball class more meaningful for me.

Students were instructed to access the website and first, score their level of agreement or disagreement with each statement on a five-point Likert scale that ranged from strongly disagree (1) to strongly agree (5). There was also a box following each question where the students could make a written comment about the statement. The online survey was designed so that the data were delivered to the mailbox of the first author, who forwarded these data to the second author with the students' identification stripped from the header The student names thereby remained anonymous to the class instructor (second author) and confidential to the first author.

These issues of anonymity and confidentiality of responses were explained to the students during class time. The students were encouraged to offer thoughtful and honest comments and opinions, and were informed they would receive two bonus points towards their grade for submitting the survey. Sixty-eight of the 70 students completed the survey, a response rate of 97.1%. The students selecting to continue with the survey once they read the initial instructions and comments about confidentiality achieved informed consent.

The data sources were analyzed by the two researchers using constant comparison and analytic induction methods in order to identify and extract common themes across participants (Lincoln & Guba, 1985). During several readings of the students' responses, the concern was to determine the degree to which answers between the students corroborated or conflicted. First, the data for each statement were reviewed and then common themes across questions were identified. Where there was a consistency across students, a representative statement was selected for inclusion in the results.

Results

Content analysis

The independent evaluators agreed almost unanimously that the web pages they reviewed showed the elements of an authentic sporting experience. Figure 1 shows the extent to which these experts believed that all the pages had clear evidence of six critical areas of Sport Education.

Online Questionnaire

Figure 2 shows the students' perspective about the course and the required element of web page design. Overall the students were proud of their web pages and enjoyed learning about the technology. They also considered that they enjoyed the season overall and saw increased meaning through their participation in Sport Education.

In addition to these scores, four themes were generated from the students' comments. These were (i) improved team cohesiveness as a result of group efforts in designing web pages, (ii) new ways of learning, (iii) challenging amount of work for Physical Education, and (iv) you often had to pick up for teammates' slackness

Improved team cohesiveness as a result of group efforts in designing web pages. Students commented that designing web pages really helped their team "jell together." The task of designing a team website required students to work together to establish each other's URLs as students' web pages within a team had to be hyperlinked together to form a team website. In fact, a number of students indicated that they had met several times outside of the class time to work on teams' websites. The requirement of designing web pages seemed to contribute to the team cohesiveness. As one of the web-designers noted:

New ways of learning. Students commented that they had never done anything like this before--anywhere in college. That theme of this new way of learning was attributed to both the instructional model of the class, (e.g. Sport Education), and to the extent to which the students were required to use technology in a physical education course. Although students found using technology in a physical education course to be novel, their general perception was that use of technology did enhance their learning in the class and their motivation toward the activity. One of the players commented, and we consider this to be representative of other similar comments, " ... as I had never used a digital camera and website to understand the skill. Working on the skills web page, when I had to first photograph my teammates spiking and then describe how they did it really helped me understand spiking. And I think, my spiking improved."

Challenging amount of work for physical education. Some students indicated that the demanding requirements of the class, including the additional technological requirements, were more than their previous physical education experiences. As one student noted, "There is time for each thing, so it's not that bad. It's challenging but not over demanding for a college course, but definitely lots of work for PE" (statistician). Another student followed that "this is definitely not a 'gimme' class."

You often had to pick up for teammates' slackness. There were times when some students did not completely fulfill their responsibilities in terms of the team portfolio due to various reasons including absence, illness, and laziness

In those cases, other teammates had to perform additional work. For example, if a statistician was absent during a game day, another team member had to collect and compute statistics for the day and email the absent student the results to be published on the Internet. As one statistician wrote, "I thought the websites were neat and educational however, it was stressful because not everyone on the team would do their part and then you had to do their part so it looks good for the team."

Discussion and Implications

The purpose of this study was to determine the implications on students' learning and motivation of the introduction of digital portfolios into a collegiate physical education course. From the responses of the independent evaluators, it can be seen that the students could produce web pages that demonstrated the essential elements of a Sport Education season and highlighted their accomplishments during the season. The portfolio method seemed to be a motivating way for students to demonstrate their knowledge and achievements throughout the course.

The creation of portfolios, however, was not a simple process. It involved considerable amounts of time and energy from the students outside of class--a situation for many of them that was unexpected and new. Many students stated that in their previous physical education experiences that they did not have to do anything more than show up for class and try hard. The inclusion of the portfolio requirement actually increased the standing of the course in the students' mind and raised the credibility of physical education as a subject in the collegiate setting.

One of the more interesting findings however, was that many of the students lacked the skills to complete the computer-based tasks. A common response was that these technological skills had not been learned anywhere else on campus, and consequently, the students valued learning these new skills.

Some of the difficulties with the website requirements experienced by students can be attributed to the brief instruction on website design and publishing, and to the fact that in the early stages, the development of the portfolio was left to the leadership of a student in their group who had the necessary skills. Nonetheless, on a positive note, the lack of technological skills forced teams to come together to work together to solve problems and to use each other's abilities and talents, and this group work minimized the difficulties as someone on the team was more knowledgeable and was always willing to help the teammate. As one of the managers wrote,

Even so, the development of the websites was not always smooth sailing. There was the reliance on the participants from a team to do their job, and as in many group work situations, where this did not take place, many of the team members became frustrated. The alternative for this course would have been the requirement that students create their own websites. However, to do this would be to tradeoff the advantages of team development that took place as a result of the course assignment. Perhaps in an individual class such as weight lifting or swimming for fitness an individual portfolio might be a more appropriate way of documenting student work. For this project however, the digital portfolio was seen as a positive contribution to the students' learning, and as a result of the findings in this study, gives teachers in the collegiate physical education setting another tool of authentic assessment that can serve to increase the status of collegiate physical education beyond a class seen by many as show up and get an easy A.

3.3 THE EARLY YEARS OF SPORT PSYCHOLOGY: THE WORK AND INFLUENCE OF PIERRE DE COUBERTIN

The history of sport psychology is currently an area of interest (Vealey, 2006). Although, much is known about the history of sport psychology after 1965, little detail about the development of the field before that time is available. A notable exception, however, is the work of Gould and Pick (1995) who detailed the work of Coleman Griffith from the early 1920s until the mid 1960s. Generally, historical analysis of the early years of sport psychology described research and writings of psychologists and physical educators involved in the study of sport (Cratty, 1989; Silva 2002; Wiggins, 1984). Norman Tripplet, a student of G. Stanley Hall, examined the relationship of competition to bicycle racing in the late 1800s (Tripplet, 1898). Although the work of Tripplet is oftentimes cited in the literature, work by Scripture (1894, 1895) and Fitz (1895) rarely receives attention: For example, Scripture while the supervisor of the Yale Psychology