



Are We Teaching the Use of Technology In Physical Education?

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ABSTRACT

The purpose of this study was threefold; (a) to determine how physical education teacher education (PETE) students are being evaluated on their use of technology during their teaching, (b) what types of technology are they using during their teaching, and (c) to determine the role of videotaping in the evaluation process of these PETE students. Telephone interviews were conducted with nine participants, who met the research criteria. Data gathered during the telephone interviews were combined and independently analyzed by the researchers using open, axial, and selective coding (Burnaford, Fisher, & Hobson, 2001). Categories and patterns developed by individual investigators were then compared and discussed until a consensus was reached. The results indicated that most PETE programs teach and expect students to appropriately use current technology when teaching physical education.

INTRODUCTION

Based on Prusak and Vincent (2005), physical educators are not just born but must be taught and be able to demonstrate "a discrete set of skills and abilities that are quantifiable, transferable, and masterable through diligent practice and effort one can master this set of skills" (p. 28). Both governmental agencies (e.g., department of education and the division of special education) and universities throughout the United States spend millions of dollars each year to prepare preservice teachers in general and adapted physical education. This requires preparation and not just a hope that the physical educator has the appropriate competencies to teach (Prusak & Vincent). The purpose of this study was threefold; (a) to determine how physical education teacher education (PETE) students are being evaluated on their use of technology during their teaching, (b) what types of technology are they using during their teaching, and (c) to determine the role of videotaping in the evaluation process of these PETE students.

METHODS

Identify and Contact Participants

The sampling design for this research project was purposive. Participants were professors of master's degree programs in general physical education. These selected general physical education professors' college/university departments had earned a Committee of Physical Education Teacher Education (COPETE) award during the years of 2004 or 2005. Nine out of the 12 selected participants volunteered to participate in the research ($N=9$). Two out of the nine of the participants' physical education teacher education (PETE) master's programs were NCATE accredited, while one was conditionally approved for NCATE accreditation during the research.

Information regarding the purpose of the research, research procedures, time commitment, and primary researchers' contact information, were emailed to the participants. A blind carbon copy process was used to maintain anonymity and to protect the email addresses of participants (Cho & LaRose, 1999; Hancock & Flowers, 2001). The potential participants were asked to respond to the initial email if they agree to participate in the research. Following the same protocol, a response to the participants email was sent with an informed consent document along with a request for a time and date for the telephone interview. Follow up emails were sent until the precise date and time for the telephone interview was determined.

Develop Telephone Interview Questions

The telephone interview questions were developed to determine the performance-based teaching behaviors each participant included in the training and evaluation of graduate students in general physical education. The telephone interview questions were mulled over by the researchers through several meetings and in combination of the literature review of pertinent information on performance-based teaching behaviors. Following were the questions that were developed for the telephone interview: (1) what are the five descriptive words and/or phrases that would be in your definition of an effective physical education teacher, (2) what are the five descriptive words and/or phrases that would be in your definition of an effective adapted physical education teacher, and (3) how might an effective physical education change his/her general teaching behaviors to accommodate an integrated or inclusionary class environment compared to an adapted physical education segregated class environment.

Implement Telephone Interviews

Prior to each telephone interview, copies of the interview questions were sent to the participant to allow the participant to prepare thorough responses and collect any training or evaluation materials that would assist in the identification of performance-based teaching behaviors. Each telephone interview was recorded using a digital audio recorder and then transcribed by one of the researchers.

Analyze Telephone Interview Data

Data gathered during the telephone interviews was combined and independently analyzed by the researchers using open, axial, and selective coding (Burnaford, Fisher, & Hobson, 2001). Categories and patterns developed by individual investigators were then compared and discussed until a consensus was reached. Reliability for the telephone interview responses was checked for consistency of patterns and theme development between researchers (Creswell, 2003).

RESULTS

The telephone interview participants had a return rate of approximately 75% (Braithwaite, Emery, de Lusignan, & Sutton, 2003). Following was the results of the coding of keywords from the qualitative data from the telephone interviews. Keywords were put into similar categories then the frequency of the keywords were documented.

Participants were asked, How do you evaluate your PETE students on their use of technology during their teaching?

- Seven participants did not evaluate their PETE students on their use of technology during their teaching or gave very little weight to it in their program
- One participant had their PETE students take a full course in technology in physical education
- One participant evaluated their PETE students' use of technology over a variety of courses

Participants were asked, What types of technology have they seen their PETE students use during the act of teaching?

- Computers
- Videotaping, video clips, and video conferencing
- Heart rate monitors
- PowerPoint and presentation software
- Pedometers
- E-portfolios

Participants were asked, How do the you use videotaping in the evaluation process of PETE students?

- Two participants did not use videotaping at all during their evaluation process of their PETE students' teaching
- Six participants used videotaped evaluations as feedback, reflection or self-analysis for their PETE students
- One participant used it as a demonstration to the instructor that the PETE students were using good teaching practices, a variety of teaching styles, and best practices

Participants also discussed Who was observing the videotaped evaluation process of their PETE students?

- University professors, instructors, or graduate assistants/teaching assistants
- Cooperating and/or supervising teachers
- Peers

Following were some interesting quotes from the participants:

- "Technology is merely a method to communicate material."
- "I think that the video tape allows the student to critique their own performance so I think that is important. They see themselves teach and reflect on that and what they did well and what areas they can improve on."
- "Does it (technology) enhance learning or is it something that they are throwing in to meet the requirement, or would it detract from learning."
- "Basically we want them to know about it, but they have to be appropriate for the school."

DISCUSSION

If we extrapolate from these results then most PETE programs teach and expect students to appropriately use current technology when teaching physical education. One of the quotes from a participant, "Technology is merely a method to communicate material" is becoming a hot topic in the educational technology area. Which brings up the question, "is technology a teaching style, technique, or method?" It will be interesting to see where this discussion will go in the next couple of years. Future researchers need to look into the different types of technology that is being used in PETE programs and how they are being used. Designing evaluations for the use of technology while teaching physical education should also be developed.

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