Developing Student Affect in a University Self-Defense Course

Aaron L. Banks

Abstract

The purpose of this study was to examine the effects of a 13-week media enhanced content intervention based in popular culture relative to student attitude and student enjoyment in college students enrolled in beginning level self-defense courses. Participants (n = 81) were assigned to either control or experimental groups within one of four instructional classes. Experimental group treatment included the use of video segments taken from the medium of popular film in order to demonstrate the day's lesson. Video segments were in addition to the traditional curricula of mass demonstration, student practice, and teacher feedback. From the analysis of the data, attitude and enjoyment were significantly higher in experimental group participants than control participants. These results indicate that beginning self-defense courses incorporating media enhanced content have the potential to alter university-level student attitude and enjoyment within the physical education environment.

Introduction

Affective development within university-level physical education activity classes has been identified by Pate & Hohn as one of six objectives necessary to maintain a quality general physical education curriculum (1994). In fact, most physical education activity classes at the university-level are designed with the intent of accommodating the affective development of students. A survey of Basic Instruction Program (BIP) coordinators in American colleges revealed the two primary outcomes of physical education activity classes to include: (1) the development of a commitment to lifelong physical activity participation, and (2) to enjoy participation in physical activity (Hensley, 2000). It makes sense then that enjoyable participation within university-level activity classes provides a "foundation upon which lifetime fitness can be built" (Bennett, 2000). Thus the question arises: are college-aged students enjoying BIP physical activity related courses? According to Hildebrand & Johnson, 80.3% of females and 82.6% of males elect to complete physical activity classes because they believe they will enjoy the activity (2001). This would lead one to surmise that university-level students taking activity classes do so primarily for the enjoyment derived from the experience. Affective development within physical education is crucial because enjoyable experiences tend to promote long-term participation in physical activity (Corbin, 2002).

The importance of lifelong physical activity has become a central goal and mission of modern physical education curricula (Centers for Disease Control and Prevention [CDCP], 1997). The physical activity concept provides an inclusive approach to offering various health-related pursuits in addition to sports. This goal is intended to offer a combative response to the various health problems associated with sedentary lifestyles, specifically heart disease (United States Department of Health and Human Services [USDHHS], 1996). Corbin suggests that modern physical education programs have not adopted this central goal and mission, but rather have continued to offer sport-related curricula and popular games such as dodge ball and bombardment (2002). It has been noted that the typical offering of sport-related curricula has served too narrow a segment of the physical education population (Prusak & Darst, 2002). The result has been the continued perpetuation of the concept that only

psychomotorically skilled learners will adopt active lifestyles (Napper-Owen, Kovar, Ermler, & Mehrhof, 1999).

Unfortunately, studies have indicated that regular physical activity declines most rapidly during and immediately following high school (USDHHS, 1996). Due to various biological and environmental factors, such as elimination from school sports, employment outside of school hours, and the pressure to perform academically, little time remains for physical activity (Rowland, 1998). According to Bennett, the 17-23 year old age group has shown the largest reduction in physical activity from previous years, resulting in his labeling of this group as "slackers" (2000). This drop in activity during the latter stages of adolescence has led scholars to question whether high school physical education programs are contributing more to the problem of sedentary lifestyles than to the solution of health enhancing active lifestyles (Hildebrand & Johnson, 2001). The implication is that traditional high school physical education classes are in need of restructuring. "Doing physical activity to children and youth" will not solve the problem (Corbin, 2002). Rather, there is a need for higher-order cognitive and affective development if a commitment to lifetime physical activity is a primary outcome (Prusak & Darst, 2002). The accomplishment of this outcome, however, continues to challenge researchers and practitioners alike.

Presently, little is known about the relationships between student attitude and student enjoyment and media enhanced contents within the physical education environment. Just as educators attempt to influence the minds and behaviors of young people through carefully planned curricular models, so do mass media outlets through images presented within popular culture mediums of the information society (Adler & Rodman, 1994). This investigation considered whether a pedagogically planned content including a media component would have a greater effect on student attitude and student enjoyment than a traditionally based curriculum. Therefore, the purpose of this study was to determine the effect of a media enhanced content on student attitude and student enjoyment following treatment. It was hypothesized that the group receiving the media enhanced content would display a significantly better attitude toward the field of physical education and a higher level of enjoyment within the physical education environment.

Methods

Participants and Setting

The participants of this study were 93 undergraduate students representing most academic departments at a doctoral granting university in the Western United States. Because the purpose of this study was to examine the effect of a media enhanced content on young American men and women (ages 18-24), non-traditional students and students from foreign countries were excluded from the results. Furthermore, an attendance policy was established in an attempt to avoid participant absence from treatments. Participants absent from six or more (23%) of the treatments over the course of the intervention were eliminated from the sample. Due to the parameters of this study, participant attrition occurred over the course of the study. Research mortality resulted in a usable sample of 81 (69 females, 12 males) traditional aged American undergraduate students.

All participants were enrolled in one of four introductory self-defense classes taught in the spring semester of the academic year. Participants ranged in age from 18 to 24 years (M = 20.04). The racial composition of the sample was 86% Caucasian, 5% Hispanic, 5% Asian, and 4% African-American. On average, participants were absent from treatments 2.23 times. Of the 81 total participants, 76 had no previous self-defense experience. A description of the control and experimental groups by age, absences, gender, racial composition, and previous self-defense experience are found in Tables 1 and 2. Self-defense classes were held 2 times a week for 50 minutes over the course of the semester. Seventeen media enhanced

treatments were designed for use throughout the 13-week period. The additional nine treatments allowed for one day of initial pre-testing, four days of psychomotor skill review sessions, and three days of post-testing.

Self-defense classes were conducted in a university gymnasium approximately 4,500 square feet in size. Wrestling mats lined the floor and walls of the gymnasium to ensure participant safety. A large screen television with video cassette recorder was present during experimental group treatments, but was stored in an equipment room during control group treatments. Approval for the study was granted by the university's Internal Review Board for Human Subjects Research. Informed consent was obtained from the students in each class.

Research Design and intervention

The experimental design used in this investigation was a two-group post-test only design. Participants were all enrolled in four beginning self-defense courses. Two of the classes were randomly assigned to the experimental treatment and two were randomly assigned as the control. In this design, the dependent variables, student attitude and student enjoyment, were examined at the conclusion of the treatments.

Procedures

The independent variable for this study was a 13-week treatment program implemented to assess the effects of a media enhanced content on experimental group participants. The treatment included the use of video segments taken from the medium of popular film in order to demonstrate the day's lesson. The video segments were in addition to the traditional curricula of mass demonstration, student practice, and teacher feedback. Seventeen video segments were selected, designed, developed, and edited by the researchers and a professional media specialist. The video segments presented situations within the medium of popular film that were relevant to the introduction and enhancement of the day's lesson. Video segments were designed to stimulate student thinking, comprehension, and conversation amongst experimental group participants. All experimental participants were expected to follow classroom rules regarding the use of media as an educationally active modality. Hence, participant engagement rules included no lying down, closing one's eyes, or talking to a fellow peer while viewing a video segment. Furthermore, in compliance with the educational "fair-use" escape clause of the 1976 Copyright Act (Commerce Clearing House, 1976), an attempt was made to include no more than 10% of each popular film used in this study. Because of the limited use of popular film within physical education self-defense classes, no educational tools incorporating popular media outlets, specifically popular film, were available to view or be used as a model. Therefore, all ideas and developmental design were original and designed precisely for this study.

Seventeen treatment sessions were designed by the researchers to incorporate the media enhanced intervention within the experimental group lesson plans. The 17 video segments used in this study were approximately one to seven minutes in length, depending on the amount of edited material included in each particular segment. The video segment either introduced or reinforced one of the five content-oriented objectives of the course. The five objectives of self-defense described by Leung (1991) are: prevention, avoidance, deterrence, escape, and survival. Following the video intervention, a five to seven minute discussion/question-and-answer session was built into the day's lesson plan. Questions were developed to stimulate student cognitive learning regarding the particular course objective portrayed in the video segment. Through the use of video segments, the researchers attempted to foster a constructive environment that included a popular media outlet within the physical education selling.

Control group participants also experienced the five to seven minute discussion/question-and-answer session built into each day's lesson plan. However, no video segments were used with the

control group. Rather, control group subjects were introduced to the particular course objective related to the day's lesson through a traditional teacher-led lecture format. Each teacher-led lecture was one to seven minutes in length, corresponding to the length of the particular video segment in use. Following the introduction to the course objective of the day, the questions developed by the researchers for each video segment were used to lead the five to seven minute discussion/question-and-answer session.

Data Collection

Data were collected using two instruments specifically intended for use with this study. A pilot study was conducted during the semester prior to this investigation. The pilot study allowed for the examination of new and existing instruments to be used in this study. Students participating in beginning level self-defense courses taught by the researcher were used as subjects to aid in the establishment of valid and reliable instruments. Both instruments used in this study were estimated at appropriate levels to be considered valid and reliable.

Student attitude was assessed using Martens' (1979) Physical Education Attitude Survey that was further modified by the researchers. The modified version of the Physical Education Attitude Survey consisted of 31 statements, each incorporating a 5-point Liken scale, to measure general attitudes of students toward physical education. The responses for the Liken scale were strongly agree (5), agree (4), no opinion (3), disagree (2), and strongly disagree (1). Cronbach alpha procedures were used to estimate reliability of the instrument. The Cronbach alpha coefficient of correlation was .91. Content validity was originally established by Martens. Construct validity was established by the researchers through an exploratory factor analysis. A principal axis solution factor analysis, followed by a varimax rotation of the data, presented three clearly identifiable sub-scales. The sub-scales were identified by the researchers as: Importance of Physical Education, Intrinsic Value of Physical Education, and Enjoyment of Physical Education. A fourth sub-scale was identified during evaluation of the attitude data during the pilot study, however, the two questions grouped in this sub-scale accounted for a very low percentage of variance and were thus eliminated from the survey, hence the modification of Martens' original survey.

Student enjoyment data were collected using the Physical Activity Enjoyment Scale (PACES). The PACES (Kendzierski & DeCarlo, 1991) questionnaire was designed "to assess the extent to which an individual experiences a particular physical activity as enjoyable at a given point in time" (p. 52). However, for the purposes of this study, participants were informed to respond to the questionnaire in terms of their enjoyment toward the physical activity in which they had taken part over the entire course. The PACES questionnaire is an 18-item scale that incorporates bipolar adjectives in a 7-point semantic differential format. Reliability was estimated through Cronbach alpha procedures (.93, .93, and .96) by Kendierski and DeCarlo. Content and construct validity were also estimated at appropriate levels by Kendzierski and DeCarlo

Data Analysis

Multivariate analysis of variance (MANOVA) was the statistical test used in this study. Follow-up univariate tests were used when the MANOVA yielded a group main effect. Data were analyzed using the software package of SPSS 10.0. The control and experimental groups were post-tested for the dependent variables of attitude and enjoyment following the 26-session treatment period. Data were analyzed to determine if mean differences existed between groups for the dependent variables at post-testing. All decisions concerning significance were made at = .05.

Results

A significant difference between groups was found using the Wilks' lambda multivariate test, F (1,79) = 6.44, $p < .05$. This indicated that at

least one of the two dependent variables was significant. Univariate tests revealed differences between the experimental and control groups for student attitude and student enjoyment. The post-test means and standard deviations for the two dependent variables of both groups are reported in Table 3. The student attitude mean for the control group was 115.41 with a standard deviation of 12.68. The mean for the experimental group was 128.68 with a standard deviation of 13.18. The mean difference between the two groups was 13.27. When control and experimental group differences for student attitude were examined, significant differences were found favoring the experimental group, $F(1, 79) = 21.23, p < .05$.

The student enjoyment mean for the control group was 92.34 with a standard deviation of 15.05. The mean for the experimental group was 105.78 with a standard deviation of 13.07. The mean difference between the two groups was 13.44. After examining control and experimental group differences for student enjoyment, significant differences were found favoring the experimental group, $F(1, 79) = 18.06, p < .05$.

Discussion

The findings of this study indicate that beginning self-defense courses incorporating media enhanced content have the potential to alter university-level student attitude and enjoyment within the physical education environment. Differences between the attitude and enjoyment post-test scores of control and experimental groups were found to favor experimental group participants that had experienced the media enhanced intervention. The importance of affective development within the physical education environment should not be underscored. In actuality, the pedagogy-related research base encourages further examination of the effects of differing content and teaching strategies on the affective development of physical education students (Tjeerdsma, Rink, & Graham, 1996).

Current research within physical education pedagogy has revealed several contextual factors that account for much of the variance in student attitudes toward physical education. Several factors found to influence student attitude toward physical education include the physical education teacher, curricular content, gender and age, trivialization of physical education, and student skill level (Silverman & Subramanium, 1999). Currently, one qualitatively-based study has identified the contextual variable of mass media as a potential determinant of student attitude toward physical education (Carlson, 1994). Additionally, a study conducted by Tinning and Fitzclarence (1992) discussed the role of mass media on student expectations toward physical education in a post-modern society. Further investigation regarding student attitude and mass media is warranted.

Previous research conducted on student enjoyment has focused upon factors such as participation in youth and adult sport/physical activity (Brustad, 1988) and physical education and the concept of play (Stoll et al., 2000). To date, no studies have identified the variable of mass media as a determinant of student enjoyment toward physical education. Haggerty (1997) contended that the incorporation of virtual reality technology within the classroom and sport setting could lead to an enjoyable environment that individuals could share. Nevertheless, a gap in the physical education literature base studying the effects of mass media outlets and student enjoyment exists.

The incorporation of mass media into beginning college self-defense courses has great potential. The effects of the use of mass media outlets, specifically popular film, as a physical education teaching aid were not discovered in the literature review performed for this investigation. Nevertheless, for more than a quarter of a century, electronics and film media have been used within higher education as instructional resources in nearly every discipline other than physical education (Banks, 2001). Therefore, it is the belief of the researcher that a well-structured and implemented physical education media enhanced content has the potential to impact student attitudes

toward physical education and enjoyment levels within the university-level physical education environment.

To date, television and other mass media sources represent one of the most important and unrecognized influences on youth health and behavior (Strasburger & Donnerstein, 1999). Young people of today are spending significant amounts of time engaged with new cultural conditions that were not of concern to educators of the past (Nielson Media Research, 1998). It has been estimated that by the time American youth have graduated from high school, they will have spent 15,000 hours engaged with the medium of television compared to 12,000 hours engaged in formal classroom instruction (Strasburger, 1993). The effects of mass media consumption amongst American adolescents have often been reported negatively. Media effects have been linked to violent and aggressive behavior, poor school performance, stereotyping, adolescent obesity and eating disorders, irresponsible sexual activity, and drug and alcohol consumption (Banks, 2001).

Cultural forms such as cinema, television, MTV, fashion, rock music, dance, and the internet have become important forms of expression amongst this generation (Strasburger & Donnerstein, 1999). These cultural conditions have altered youth perceptions of the world by cultivating common views, roles, and values within users (Adler & Rodman, 1994). According to Cultivation Theory (Gerbner & Gross, 1980), individuals exposed to the same images and labels over time develop a common outlook, thus sharing the same orientations, perspectives, and meanings with each other. These altered views have changed student sensibilities, needs, and expectations, forcing schools and teachers to reassess how to best reach today's youth and adolescents that are engaged with new cultural conditions (Tinning & Fitzclarence, 1992).

The present study attempted to address the concerns that Tinning and Fitzclarence (1992) raised in the early 1990s by examining a constructivist pedagogical teaching style with university-level American students. A primary tenet to the Tinning and Fitzclarence argument was the concept that physical education curriculum does not excite, stimulate, or engage youth that have been raised in a postmodern society where images dominate the social space and time of youth culture. This study was successful in attracting university-level student interest toward a physical education content area. By incorporating the physical education content within a popular culture medium, the potential to increase student affective engagement with the educational content may be increased. Continued research on student affect in physical education is warranted and can enrich the body of sport pedagogy. The knowledge gained representing students' thoughts and feelings concerning their physical education experiences may be utilized to make physical education a valuable experience for all students (Graham, 1995) and to produce physically educated individuals committed to an active lifestyle (USDHHS, 1996). Therefore, the continued measurement of student affect is of "paramount importance" (Silverman & Subramanium, 1999).

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Dr. Banks is on the faculty at Gustavus Adolphus College

Table 1

Descriptive Statistics for the Experimental Group

Variable	*n*	*M*	*SD*	Range	%
Age	37	19.92	1.67	18.24	
Absences	37	2.43	1.72	0-6	
Male	6				16.22
Female	31				83.78
Caucasian	31				83.78
Asian	3				8.11
Hispanic	2				5.41
African-American	1				2.70
Previous experience	3				8.11
No previous experience	34				91.89

Table 2

Descriptive Statistics for the Control Group

Variable	*n*	*M*	*SD*	Range	%
Age	44	20.14	1.61	18.24	
Absences	44	2.07	1.50	0-6	
Male	6				13.64
Female	38				86.36
Caucasian	39				88.64
Hispanis	2				4.55
African-American	2				4.55
Asian	1				2.27
Previous experience	2				4.55
No previous experience	42				95.45

Table 3

Multivariate Analysis of Variance of Dependent Variables by Group

	Group					
	Control		Experimental			
Variable	*M*	*SD*	*M*	*SD*	*F*	*p*
Attitude	115.41	12.68	128.68	13.18	21.23	.00
Enjoyment	92.34	15.05	105.78	13.07	18.06	.00