PEDAGOGY

Student Perceptions of University Physical Activity Instruction Courses Taught Utilizing Sport Education

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Abstract

Limited research exists on effective teaching methods in university physical activity instruction (PAI) program courses. The purpose of this study was to evaluate PAI courses taught utilizing a sport education curriculum and instructional model. The Individual Development and Educational Assessment (IDEA) teaching evaluation was administered to students (n = 306) in PAI classes during the last week of each 10 and one-half week course. The IDEA includes student self-evaluations of progress on course objectives as well as evaluations of teaching approaches used by course instructors: stimulating student interest (SSI), fostering student collaboration (FSC), establishing rapport (ER), encouraging student involvement (ESI), and structuring classroom experiences (SCE). The instrument also includes overall ratings of the course and the teacher. Results indicated that student ratings of progress on course objectives were high (M = 4.20, on a 5-point Likert scale). Evaluations of the teaching approaches used by course instructors were also high (SSI = 4.44, FSC = 4.50, ER = 4.36, ESI = 4.04, SCE = 4.54) and compare favorably to published norms in the PE discipline. Overall ratings of the courses (M = 4.34) and the instructors (M = 4.63) also compared favorably to published norms (M = 4.16, M = 4.33, respectively). This study demonstrates that PAI courses taught utilizing a sport education teaching model are

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effective in terms of both student self-evaluations of progress on course objectives and ratings of teaching effectiveness.

Physical activity instruction (PAI) programs have held a relatively important place in higher education in the United States for the last 100 years, and many health experts would argue that these programs are an essential part of the curricular landscape. However, recent trends indicate that many programs have been diminished or completely eliminated from colleges and universities alike. Probable reasons for this trend include shifts in curricular focus, limited resources, real and perceived value and quality of the program, and so forth. As of 1998, only 63% of colleges and universities in the United States required students to participate in a PAI course, with most having only a two-credit hour requirement (Hensley, 2000). In an effort to combat the erosion of and to bolster support for the inclusion of such programs in higher education, the National Association for Sport and Physical Education (NASPE) recently published a position statement declaring that "all colleges and universities uphold a physical activity instructional program for students as a strong and integral part of the academic curriculum" (NASPE, 2007).

NASPE maintains, "The need for strong college/university physical activity programs has never been so apparent" (NASPE, 2007). The data tend to support NASPE's position: Over 31% of college students are overweight or obese (American College Health Association, 2007), and greater than 33% of adults aged 18–24 report no leisure-time physical activity (National Center for Health Statistics, 2007). Physical activity patterns established in college can remain constant for up to six years postgraduation (Sparling & Snow, 2002). A university physical activity instruction course is likely the last chance for an individual to receive education on, and to have the opportunity to establish, a healthy pattern of physical activity. According to the NASPE (2007) position paper on university physical activity instruction programs, quality university physical activity instruction courses should aim to promote appropriate behavioral change methods to improve health, enhance students' intrinsic motivation to engage in physical activity, and facilitate the acquisition and development of skills and knowledge students need to practice a healthy lifestyle.

More recently, NASPE (2009) published guidelines to support the development, implementation, and assessment of higher education

PAI programs. The ultimate goal of the guidelines is to promote quality programs that are developmentally and instructionally appropriate, in which students can become physically educated. The guidelines are organized into seven general categories—Administration/Support, Assessment, Instructional Strategies, Professionalism, Learning Environment, Program Staffing, and Curriculum—and include appropriate and inappropriate practices for each. Even a cursory review of the guidelines reveals that physical activity instruction programs and students they service can benefit from greater adherence to the appropriate practices outlined in this document.

One key initiative in our efforts to enhance the quality of the physical activity instruction program at our university focuses on the *instructional strategies* category. This initiative is key because utilizing the right instructional strategy provides a mechanism for addressing appropriate practices in multiple NASPE guideline categories simultaneously. After careful consideration of the literature on instructional strategies in physical education and best practices in physical activity instruction programs, the sport education model surfaced as one alternative that could simultaneously address appropriate practices in the NASPE instructional strategies, learning environment, and assessment guideline categories.

Sport education, a highly popular and widely researched curriculum and instruction model, is designed to provide authentic, educationally rich sport experiences for all physical education students (Siedentop, 2002; Siedentop, Hastie, & van der Mars, 2004; Wallhead & O'Sullivan, 2005). A guiding principle of sport education is to educate students to become players in the fullest sense. This principle is revealed in the three goals of the model: to develop competent, literate, and enthusiastic sportspersons. In sport education, contextual authenticity is developed and sustained through infusing several key features of sport into PE. These features include seasons, affiliation, formal competition, culminating events, record keeping, and festivity. In addition, a variety of curricular, instructional, and organizational modifications are required to achieve a learning–teaching environment where the goals of sport education can be realized: extending the length of the sport unit; using a combination of teaching styles, such as direct instruction, cooperative learning, and peer teaching; providing authentic opportunities for skill and strategy practice, application,

and assessment; immersing the student in the culture of the particular sport; and increasing student responsibility for their own learning (Siedentop, 1998).

In general, the research on sport education is favorable and reveals benefits for both students and teachers alike (see Wallhead & O'Sullivan, 2005 for a thorough review). For example, students have improved levels of learning, are more engaged regardless of gender or skill level, and have increased ownership in the educational process. Teachers who use sport education report benefits including renewed interest and commitment to teaching, increased ability to focus on individual students, and freedom from using only direct instruction. An exhaustive review of sport education literature, including applied and theoretical articles, investigative studies, and texts, reveals that sport education readily lends itself to addressing the appropriate practices in the aforementioned NASPE guideline categories: instructional strategies, learning environment, and assessment. A sample of the appropriate practices and associated sport education literature can be found in Table 1. The key features of sport education in combination with the curricular, instructional,

Table 1

Sample NASPE Appropriate Practices and Associated Sport Education Literature

Sample Appropriate Practices	Associated SE Literature
3. Instructional Strategies	
3.2.1 Instructors form pairs, groups and teams in a manner that facilitates learning and preserves dignity and self-respect for all students.	• Bennett. G. & Hastie, P. (1997) • Clarke & Quill (2003) • MacPhail, Kirk, & Kinchin (2004) • Hastie (2000)
3.5.1 Instructors organize classes to maximize opportunities for all students to learn and be physically active.	
3.6.1 Instructors use a variety of direct and indirect teaching styles, depending on outcomes, lesson content and students' varied learning styles.	

Table 1 (cont.)

5. Learning Environment	
5.1.3 Fair and consistent classroom management practices (e.g., protocol and rules) encourage student responsibility for learning.	
5.5.1 All students (high- and low-skilled) have equal opportunities for participating in and during activity time (e.g., playing "skill" positions, assuming team/squad leadership roles) and interaction with the instructor. All students, regardless of developmental level and ability, are challenged at an appropriate level.	• Carlson & Hastie (1997) • Hastie & Sharpe (1999) • Hastie & Sinelnikov (2006) • Hastie & Trost (2002)
5.7.1 Instructors help students recognize that adults engage in sport and exercise activities both to socialize and to compete. A deeper understanding of competition is fostered, one that encourages students to reflect on ideas such as rivalry, competence and affiliation.	
2. Assessment	
2.1.1 The program uses assessments to inform and help students progress toward intended outcomes. Formative and summative assessments constitute an ongoing and integral part of the learning process for all students.	• Hastie (1998b) • Hastie (1998a) • Pritchard, Hawkins, Wiegand, & Metzler (2008) • Townsend, Mohr, Rairigh, & Bulger (2003) • Mohr, Townsend, Bulger, Rairigh, & Mohr (2006)
2.2.1 Instructors assess all domains (psychomotor, cognitive, affective, health-related fitness) systematically.	
2.2.2 The program conducts individual student evaluations through a variety of authentic assessment techniques (e.g., checklists, rubrics, and peer and self assessment) to obtain a broad picture of learning.	

and organizational characteristics provide the platform to address these and other similar appropriate practices.

Despite the place PAI programs hold in many college and university curricula, the potential the courses have to make a positive impact on the life of students both during and after college, and the guidelines from NASPE, limited research exists on quality of university physical activity instruction courses and the pedagogical processes that can make them most successful.

Of the limited research available on this topic, particularly relevant is work by Bennett and Hastie (1997) in which students' perceptions of a university softball class taught using the six key features of sport education was examined. The authors asked how well did students in this class adopt the principles of SE, which of the principles seemed most attractive, and how did students perceive their intensity of effort compared with previous physical activity classes. Information was collected via daily student logs of skills learned and perceptions of daily activities, via open-ended questionnaire on students' opinions of various course features, and via an instructor's reflective journal. It was found that students had high commitment to the six key features of sport education and that team affiliation and formalized competition were the most attractive principles. Students also indicated that they engaged at higher rates in this course than in previous physical activity classes, with 70% of students indicating that they learned more in this class than in other physical activity classes and 90% remarking that they would take another course taught using this method.

Jenkins, Jenkins, Collums, and Werhonig (2006) used a critical incident reporting method to evaluate a PAI course that shares many features with the program utilized in the current study. In the Jenkins et al. study, the physical activity class was taught by a physical education teacher education (PETE) undergraduate major under the supervision of a university PETE faculty member. Classes were designed to complement a lecture-based component of the course (which was taught by a different instructor). The classes met once per week for 50 min for 13 weeks. Ten classes were observed, two in each of the following topics: cardiovascular fitness, walking/stretching, circuit training, a team sport, and an individual sport. When possible, aspects of the sport education model were integrated into the courses. Critical incidents reported by the students were categorized into the same three themes identified by Coelho (2000):

teacher behaviors, curricular features, and social environment. Positive teacher variables included quality instruction, motivation, and providing optimum challenge. Positive curricular characteristics highlighted by students were meaningful assignments and content, variety and fun in class activities, and health-enhancing exercise. Meeting new people and positive group dynamics were indicated as positive social aspects of class. Detrimental aspects of physical activity classes identified by students included poor classroom management, failing to address certain types of content, lack of challenge, lack of variety, and not connecting with classmates.

Historically, PAI programs have held an important place in the higher education curriculum in the United States, and rightfully so. Although limited, the research studying student perceptions of the quality and impact of these courses is meaningful to the continued evolution of such offerings. In an effort to complement the existing literature base on curriculum and instructional practices in physical activity instruction courses, additional studies are warranted. There is a large body of research demonstrating the effectiveness of the sport education curricular model, and this instructional model seems to be well-fit to meeting the suggested guidelines for implementation of a higher education physical activity instruction program (see Table 1 above). Thus, the purpose of this study was to examine student perceptions of the quality of university PAI courses taught utilizing sport education.

Method

Participants and Course Structure

Course evaluations were collected from 306 students across 20 PAI courses (six sections of weight training, $n = 71$; four sections of jogging and conditioning, $n = 64$; four sections of basketball, $n = 75$; four sections of volleyball, $n = 71$; two sections of badminton, $n = 25$). The courses met twice a week for 10 and one-half weeks (21 lessons). The courses were taught by dyads of senior-level PETE preservice teachers (PSTs) who were trained in sport education. The PST instructors were monitored and evaluated by a university supervisor. The supervisor was responsible for a variety of tasks, including ensuring the fidelity of the prescribed instructional model and content via a daily fidelity checklist, conducting formative and summative instructional evaluations, providing feedback, and overseeing the safety of the teaching–learning environment.

Instructional Format

Each of the PAI courses was taught using the sport education model. The overall format of each course consisted of three phases: (1) a preseason; (2) an in-season; and (3) a postseason (see Table 2). During the preseason phase, the instructors provided a course orientation; assessed individuals' skills, fitness, and experience; and selected teams. The in-season phase focused on fitness, skill, tactical, and knowledge development. During the postseason, individuals engaged in increasingly formalized competitions, a culminating event, and an awards banquet, as well as post assessments. In general, the daily course structure included eight lesson components: student role and responsibility check, team warm up and coach's meeting, skill/tactics review, new skill/tactics instruction, team practice, application contest, lesson closure, and individual and team progress reports (see Mohr, Townsend, & Bulger, 2002, for a summary of teacher and student responsibilities in each lesson component).

Instructor Training

The semester prior to the implementation of the courses, the instructors were enrolled in a three-credit hour PETE course specifically designed to prepare them for teaching the assigned PAI course. In this course, instructors were introduced to sport education and initiated the planning process. In the same semester as the study implementation, the instructors were enrolled in a corequisite seminar-based course aimed at providing pedagogical support. The professor teaching the corequisite PETE course also conducted training sessions with the university supervisors in the weeks leading up to the experimental course. The primary focus of this training centered on instructional supervision, relevant administrative tasks, and verifying the implementation of the sport education model.

Instrumentation

Student evaluations of instruction in general have been shown to have an acceptable level of validity (Cashin, 1988, 1995), and the Individual Development and Educational Assessment (IDEA) system has been shown to be a valid (Hoyt & Perera, 2000) and reliable (Cashin & Lee, 2002) measure of instructional effectiveness.

The IDEA teaching evaluation form (IDEA Center, 1998, see references for the url to download the form) was completed by students in the physical activity classes during the last week of the course. The IDEA provides students the opportunity to anonymously

Table 2

Example Season Plan From a Badminton PAI Course

	Day(s)	Instructional Focus	
		Skills	**Tactics**
Preseason	1	Course Orientation	
	2	Skill & Fitness Pre-Combine	
	3	Sport Education Management Day and Benchmark Game Play	
In-Season	4	Serves: Long, Short, Drive, & Flick	Setting Up the Attack
	5	Clears: Overhand & Underhand Forehands	Creating Space Recovery to Center
	6	Clears: Backhand	Creating Space Recovery to Center
	7	Review all skills	Review all tactics
	8	Drop Shot: Overhand & Underhand Forehands, & Backhand	Deception Hitting to Open Space
	9	Smash & Returning Smash	Winning the Point Cross Court – Down Line
	10	Drive: Forehand & Backhand Returning Drive	Winning the Point Cross Court – Down Line
	11	Review all skills	Communication Doubles Play Tactics: Side-to-Side
	12	Review all skills	Communication Doubles Play Tactics: Front-to-Back
Postseason	13	Tournament Preparation Day	
	14	Ladder Tournament	
	15	Pyramid Tournament	
	16	Round Robin Tournament	
	17	Round Robin Tournament	
	18	Skill & Fitness Post Assessment	
	19	Championship Tournament	
	20	Championship Finals	
	21	Awards Banquet	

evaluate their own progress on a variety of learning objectives, to rate the frequency with which the instructor used certain teaching procedures, to compare the course to others they have taken in terms of difficulty and workload, and to describe their own attitudes and behaviors in the course. There are a total of 47 items on the instrument, each scored using a 5-point Likert scale.

In the IDEA system, 12 potential learning objectives are identified, from which it is suggested that the course instructor selects the three or four that are considered to be "essential" or "important" to the course. Validity is improved when a few highly relevant learning objectives are selected. The following were selected as essential or important learning objectives in the PAI courses:

1. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course. (Essential)

   Rationale: Acquisition of skills and knowledge is "the ultimate purpose of any physical activity program in higher education" (NASPE, 2009, p. 4), and an objective of sport education is the attainment of competency (Siedentop, 1998).

2. Acquiring skills in working with others as a member of a team. (Essential)

   Rationale: Team affiliation is an essential component of sport education, and therefore student progress on acquiring teamwork skills is an indicator of the degree to which the sport education model was successfully implemented.

3. Learning to apply course material (to improve thinking, problem solving, and decisions). (Important)

   Rationale: Formalized competition, which is the context in which skills and knowledge of the subject matter is applied, is an essential component of sport education (Siedentop et al., 2004).

4. Gaining factual knowledge (terminology, classifications, methods, trends). (Important)

   Rationale: As stated previously, acquisition of skills and knowledge is the ultimate goal of a physical activity instruction program, and attainment of competency and literacy are objectives of sport education (Siedentop, 1998).

IDEA items measuring the frequency of specific teaching procedures were grouped to form five scales representing different teaching approaches (Hoyt & Lee, 2002b): Stimulating Student Interest (e.g., introduced stimulating ideas about the subject), Fostering Student Collaboration (e.g., asked students to help each other understand ideas or concepts), Establishing Rapport (e.g., displayed a personal interest in students and their learning), Encouraging Student Involvement (e.g., involved students in "hands-on" projects), and Structuring Classroom Experiences (e.g., explained course material clearly and concisely). Global outcomes are also assessed on the IDEA, and these include the overall rating of the course, the overall rating of the instructor, and the student's positive feelings toward the field of study resulting from taking the course.

Results and Discussion

Means and standard deviations for students' self-rating of progress on selected course learning objectives are presented in Table 3. Means and standard deviations for student ratings of teaching approach, course and student characteristics, and global outcomes are presented in Table 4. Mean scores and SDs for the

Table 3

Student Self-Ratings of Progress on Selected Course Learning Objectives

	Mean	SD
Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course. (Essential)	4.28	.89
Acquiring skills in working with others as a member of a team. (Essential)	4.41	.85
Learning to apply course material (to improve thinking, problem solving, and decisions). (Important)	4.06	1.04
Gaining factual knowledge (terminology, classifications, methods, trends). (Important)	4.05	.97

Table 4

Means for Student Ratings of Teaching Approach and Global Outcomes

	Experimental Courses		PE Discipline		All Disciplines	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Teaching Approach						
(1 = *Instructor hardly ever used procedure*, 5 = *Instructor almost always used procedure*)						
Stimulate Student Interest	4.44	.60	4.10	.45	4.01	.15
Foster Student Collaboration	4.50	.59	3.86	.63	3.67	.32
Establishing Rapport	4.36	.63	4.09	.46	4.05	.11
Encouraging Student Involvement	4.04	.94	3.99	.53	3.91	.26
Structuring Classroom Experiences	4.54	.51	4.25	.45	4.19	.10
Global Outcomes						
(1 = *Definitely false*, 5 = *definitely true*)						
Increased positive attitude	4.03	1.01	4.07	.50	3.88	.23
Excellent teacher	4.63	.69	4.33	.56	4.20	.12
Excellent course	4.34	1.00	4.16	.59	3.94	.18

physical education/health/safety education discipline (826 classes, 44 institutions) and for all IDEA disciplines (28 disciplines covering most college offerings [art, biology, business, communications, etc.]) are presented here for comparison of sport education classes with established norms in both the physical education discipline and higher education in general (Hoyt & Lee, 2002a).

The purpose of this study was to examine student perceptions of the quality of university physical activity instruction courses taught utilizing sport education. Overall, results of the student evaluations indicated that students rated their progress on essential and important course objectives high, and their evaluations of the courses and the teachers were positive. According to NASPE (2007), quality university physical activity instruction courses should aim to promote appropriate behavioral change methods to improve health, enhance students' intrinsic motivation to engage in physical activity, and facilitate the acquisition and development of skills and knowledge students need to practice a healthy lifestyle. The results of this study support the notion that sport education is a viable model for meeting the latter of these aims: facilitating the acquisition of skills and knowledge.

Students rated their progress on developing specific skills, competencies, and points of view; learning to apply course material; and gaining factual knowledge a 4.28, 4.06, and 4.05, respectively (on a 5-point scale). In the context of a physical activity instruction class, this suggests that students believe they made a high level of progress developing sport- and fitness-related skills, that they were able to implement these skills successfully during game play and/or during their personal workouts, and that they learned important factual information, such as rules and tactics in the case of sport-oriented classes or training principles in the case of health-related fitness classes. These objectives are consistent with the sport education goals of creating competent and literate sports participants. They are also in line with the suggested program outcomes for higher education PAI programs (NASPE, 2009, p. 3). The sport education lesson format used in these classes calls for deliberate instruction in the salient skills and tactics (training principle and concepts) necessary to successfully participate in the selected activity. More important, students are allotted large amounts of team practice time to develop these skills and tactics (training principles and concepts) early in the season and then are

given the opportunity to apply these skills and tactics in formal competition on a daily basis throughout the season.

Students also rated highly their progress in acquiring skills in working with others as a member of a team (M = 4.41). The team affiliation employed in sport education likely contributed to this high rating, which would be consistent with Bennett and Hastie's (1997) finding that students enjoy the team affiliation component of sport education. In sport education, students are selected to a team at the beginning of the season and remain with that team for the season's duration, participating in fitness activities, practice skills, and competition as a group and taking on various roles within the team, such as coach, fitness trainer, player/participant, and official.

Student evaluations of the teaching approach used in class were also highly positive. This means that the teachers *frequently* (4 out of 5) to *almost always* (5 out of 5) demonstrated effective teaching behaviors in the five areas cited on the evaluation. The high scores for stimulating student interest (M = 4.44), establishing rapport (M = 4.36), and encouraging student involvement (M = 4.04) suggest that instructors were able to meaningfully connect with the students and were successful in engaging them in multiple facets of the course. This is similar to the findings of Jenkins et al. (2006), in which students who were enrolled in a sport education-based course cited quality instruction, motivation, meaningful content, and fun and variety as positive course aspects. Scores for fostering student collaboration (M = 4.50) and structuring classroom experiences (M = 4.54) were particularly high. The general nature of sport education, and specifically team affiliation, likely led to the high scores for student collaboration. The unit design and lesson format used in the courses (Mohr et al., 2002), along with the specific training the instructors had in utilizing this approach, likely contributed to the high scores for structuring classroom experiences. The NASPE guidelines for higher education PAI programs stress the importance of appropriate instructional strategies, and these results suggest that sport education would be a viable instructional format for university PAI courses in that regard.

Last, student ratings of global outcomes were highly positive. Increased positive attitude toward the subject scored on par with norms for the PE discipline. Ratings for being an excellent teacher were quite high (M = 4.63), as were scores for being an excellent course (M = 4.34). These scores show that student perceptions of

the courses were overwhelmingly positive and, when considered in concert with the results for progress on learning objectives and teaching approach used in class, that sport education provides a viable framework for successful implementation of a university PAI course.

Instructor training in sport education and pedagogical support throughout the semester for the instructors were likely contributors to the success of these courses. This systematic, comprehensive, and highly focused training, along with the regular pedagogical support during course implementation, enhanced the instructors' potential for success.

There are several factors that should be considered when examining these student evaluation scores. These were one-credit hour PAI courses, and the norms were established using courses of up to three credit hours and/or including courses with more rigorous academic content (i.e., nonphysical activity classes). Students also likely would have expected these classes to be fun, thus creating positive expectations for the classes. It is also possible that the unique way of teaching these courses was a pleasant surprise for students, different from the expected physical practice and competition format typically used in this type of class. It is possible that all of these factors could have contributed to the high student evaluation scores for the classes. However, it should also be noted that these courses likely differed greatly from student expectations that may not have been interpreted in a positive light. That is, instead of just showing up and merely engaging in noninstructional game-play every day, students were required to participate in a highly structured course that involved fitness activities, organized practice, systematic assessment, and even some outside-of-class work. While the workload in these courses was less than a typical three-credit hour academic course, it was likely more than students expected for a one-credit hour PAI course.

The results of this study support that sport education is a viable curriculum and instructional model for both sport- and fitness-related university PAI courses from the standpoint of facilitating student acquisition of skills and knowledge. Students responded well to the teaching approach used in these courses, and it is clear how these favorable ratings can be linked to sport education. While the conclusions of this investigation, in combination with those of the previous studies, help to identify best practices for university

physical activity programs, it is clear that more research in this area is warranted, in particular on the NASPE aims of promoting appropriate behavioral change methods to improve health and enhancing students' intrinsic motivation to engage in physical activity. There is evidence that sport education can make a positive impact on students' intrinsic motivation (Wallhead & Ntoumanis, 2004); however, this idea needs to be explored at the university level. The efficacy of sport education affecting health-related behavior change warrants future study as well. Last, in an effort to more fully understand and articulate best practices for university PAI programs, experimental and quasiexperimental designs investigating different instructional and curricular approaches and the use of varying outcome measures should be utilized, such as actual progress on course objectives (as opposed to perceived self-progress assessed in this study) including physical fitness gains, levels of physical activity engagement, motor skill acquisition, and knowledge and affective development.

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