MULTIPLE MEANINGS IN A PHYSICAL ACTIVITY CLASS: UNIVERSITY STUDENT INTERPRETATIONS

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ABSTRACT *Research in physical education has tended to ignore the ways in which students make sense of physical education and activity classes. This paper suggests reasons why the voices of students have garnered so little attention and, based on reflection papers and interviews, reveals the variety and complexity of meanings constructed by students in a university racquetball class. It demonstrates that students are expert interpreters of their own experiences and suggests ways in which classes can be structured to increase student involvement in decision-making.*

INTRODUCTION

> The fact is that as a profession we just do not know how students feel about physical education programs - what they like, do not like, value, would like to have included or excluded in their programs. (Graham, 1995b, p. 364)

Prompted by a growing awareness that "too little is known about children's experiences" in physical education (Rovegno & Kirk, 1995, p. 456), calls for investigations into student perceptions of their experiences have emerged in New Zealand, Australia and the United States (Kirk & Tinning, 1990; Graham, 1995b; Pope & Grant, 1996; Silverman & Skonie, 1997). Such calls are not limited to physical education but thread their way through the entire school curriculum as suggested by Erickson and Shultz (1992) who argue that "neither in conceptual work, nor in empirical research, nor in the conventional wisdom and discourse of practice does the subjective experiences of students as they are engaged in learning figure in any central way" (p. 466).

That students' subjective understandings of physical education have received little attention is not surprising given that "empirical analytical science" has emerged as the dominant research approach in physical education over the past three decades (Rovegno & Kirk, 1995, p. 451; Fitzclarence & Tinning, 1990). In part, researchers turned to the scientific method in search of legitimacy in higher education (Greendorfer, 1987; Henry, 1981; Kirk & Tinning, 1990; Newell, 1990). However, despite its adoption of the scientific method, physical education has remained marginalized in tertiary education and as an academic subject in primary and secondary schools in Australia, Great Britain and the United States (e.g., Bain, 1990; Katch 1990; McKay, Gore & Kirk, 1990; Rovegno & Bandhauer, 1997).[1]

Further, critics argue that the ensuing "unquestioning belief in the status of quantitative, objective information" (Kirk & Tinning, 1990, p. 10) and a dominant research focus on the motor domain has marginalized consideration of the social, political and cultural contexts in which those involved in physical education make sense of their experiences (Dewar, 1990; Silverman & Ennis, 1996). In the past

decade, as attempts have been made to broaden the research focus in physical education to include the "goals, thoughts, feelings, expectations, and attitudes" of students, constructivism has emerged as a particularly useful perspective (Lee, 1996, p. 9; Pissanos & Allison, 1993).

CONSTRUCTIVIST PERSPECTIVES ON STUDENT LEARNING

Constructivism in physical education affirms the goals of helping children to "think critically and creatively, apply knowledge, solve problems, negotiate meanings with peers, and acquire a deep, flexible understanding of subject matter" (Rovegno & Bandhauer, 1997, p. 136). Constructivism emphasizes that learners are not passive receivers waiting to be supplied with the correct information (Bransford & Vye, 1989; Prawatt, 1992; Resnick & Klopfer, 1989) but learn best when they are actively engaged (Lambert, 1996). This is in contrast to the dominant view of teaching which sees "content and students in static, non-interactive terms" and focuses on the delivery of content rather than pondering content selection and meaning making on the part of students (Prawatt, 1992, p. 357).

Constructivists argue that new knowledge must be actively constructed by students. Therefore, information provided by teachers and texts is insufficient; students must have opportunities to use the information and experience its effects on their own performances (Bransford & Vye, 1989). Research suggests that this kind of knowledge is more meaningful and better recalled than contextless information: "when a skill or a concept is used in a specific situation, it acquires meaning that it did not possess before" (Prawatt, 1992, p. 377). In addition, students learn best when new learning connects with their existing knowledge and expectations (Lambert, 1996). Attempting to elicit concepts from students allows teachers to grasp the conceptual frameworks students use, and then to pose questions, problems and movement experiences which correct misconceptions and lead students to higher levels of concepts and skills.

Learning is seen as an interaction between teachers and students, facilitated by students asking questions, thinking reflectively and intervening on behalf of their peers in order to create fair opportunities for everyone. The teacher is seen as a partner, facilitator, guide or coach in the learning process (Lambert, 1996). Creating a curriculum where students make choices by, for example, designing their own games (see Rovegno & Bandhauer, 1997), takes seriously the constructivist view that students have rights to make decisions about their own knowledge and learning (Lambert, 1996). Giving students choices about content and how they demonstrate learning may also increase intrinsic motivation (benefits, satisfactions and enjoyment of sensations inherent in the activity; Willis & Campbell, 1992) which is key to learning (Resnick & Klopfer, 1989).

It is unlikely, then, that all students are participating in physical education for the same reasons, or looking for the same experience. A constructivist perspective on student learning encourages teachers to take these differences seriously and adapt curricula to take them into account by designing "activities that are meaningful to each, individual student" (Lee, 1997, p. 264). However, without understanding what meanings students are making of their experiences,

it would be difficult, if not impossible, to discover what these meaningful activities might be.

Taking constructivism seriously, this study explored student meanings through having university students reflect upon their experiences participating in a university racquetball class designed to teach them advanced skills, tactics and strategy. The questions drew upon constructivist theorising and research on elementary and high school physical education students' experiences. In the rest of the paper, I discuss this literature and how the experiences of school children may be relevant to those of university students, explain the qualitative methodology and methods used, outline the broad context in which these students participated in organised physical activity classes, and demonstrate the diversity and complexity of student meanngs in one class.

STUDENT VOICES IN PHYSICAL EDUCATION

What we know about students' understandings emerges from a variety of perspectives and methodologies; deductive and inductive, quantitative and qualitative, and from investigations of many age groups and types of classes (e.g., discipline mastery, Sport Education, Teaching Games for Understanding). Most research has focused on school children (c.f., Bain, 1985). However, although this study focuses on university students in one of the thousands of "physical activity" classes in university settings each year , indepth studies of school children may be relevant, in part because the aims and structure of university classes share many similarities with school-based physical education. For example, in many university programmes, students choose a specific activity (e.g., aerobics, weight training) or sport (e.g., basketball, racquetball, tennis) and receive instruction in technique and fitness principles and/or rules, tactics, etiquette and strategy. Class structure includes demonstrations by the instructor, followed by ample practice time, modified game-like situations and game play, similar to the discipline mastery approach[2] (Ennis, 1992) which dominates school physical education (Gore, 1990). Further, the classes reflect the primary purpose of physical education programmes which is to guide students "in the process of becoming physically active for a lifetime" (Graham, 1995a, p. 479). Therefore, although age, the element of choice, and the length of instruction in a specific activity or sport makes a university physical activity experience quite different in some ways from school-based physical education, there are also strong similarities.

Several consistent patterns have emerged from attempts to explore students' perspectives on their physical education experiences, each of which reinforces the importance of a constructivist approach and points to the variety in how students understand physical education. In qualitative studies, children as young as five years old have shown the ability to "express their feelings, needs, and thoughts about what is taught in physical education and how it is taught" (Graham, 1995a, p. 481)

PHYSICAL EDUCATION: FROM "FUN" TO "HUMILIATING"

Jewett's (1980) theorizing that people's reasons for moving cluster around three theoretical domains, termed transcendence, fitness, and performance (see also

Jewett & Bain, 1985), has strong empirical support in studies of university students (Bain, 1985) and school children. Transcendence meanings relate to movement as a form of expression and communication and a source of joy and cultural and self-understanding. Empirical studies revealed numerous reasons related to transcendence including competition and game playing, taking risks, stress and sensation, challenging the self, self-expression and the opportunity to make choices (Chen, 1996; Dyson, 1995; Pope & Grant, 1996; Tjeerdsma, Rink & Graham, 1996; Werner, Thorpe & Bunker, 1996). In New Zealand, students in Sport Education programmes valued the chance to work at their own pace and to control how an activity was organized (Grant, 1994; Pope & Grant, 1996).

Fitness meanings relate to the desire to improve physical or mental health through developing circulorespiratory efficiency, neuromuscular efficiency, and experiencing catharsis. Empirical studies have also found that some students value fitness themes such as losing weight (Bain, 1985; Chen, 1996; Dyson, 1995). Performance involves the development of competence in basic motor skills and culturally valued movement activities, and includes mechanical efficiency, spatial orientation, object manipulation, participation and group interaction. Students have given a number of reasons relating to performance, including social aspects such as playing with friends, cooperating with others, taking part in coeducational classes and teamwork; variety through different activities, learning new skills or performing them well, and learning non-playing roles such as coach or manager (Chen, 1996; Dyson, 1995; Pope & Grant, 1996; Tjeerdsma et al., 1996; Tannehill, Romar, O'Sullivan, England & Rosenberg, 1994; Werner et al., 1996).

Although groups of students of similar age, gender or race expressed as much diversity as similarity in perceptions, the widespread ideology of male superiority in physical skills, especially sports (e.g., Messner, 1988; Willis, 1982) may influence the meanings constructed by males and females. Researchers argue that although this ideology often inhibits women from developing physical skills, it appears "natural" because men can be seen to jump higher and run faster (Willis, 1982). For example, Wright's (1993) interviews with Australian physical education teachers and students revealed that, by secondary school, beliefs that males were stronger, faster, and more physically skilled than females were firmly embedded. Wright's work reinforces the constructivist commitment to understanding the broad social context in which interpretations take place.

Empirical research supports other constructivist ideas about student learning. For example, all students desire more control and choice (Carlson, 1995; Pope & Grant, 1996); a key part of a constructivist approach. A clear discrepancy between what teachers expected their elementary school students to learn and the knowledge the students actually demonstrated shows that "just because we teach it, does not mean they learn it" (Hopple & Graham, 1995, p. 414) and reinforces the idea that new knowledge must connect in meaningful ways to students' current knowledge. Several studies indicate that students do not enjoy physical education when they find no personal meaning or relevance in it, either because they are often unsuccessful or find the activities contrived or irrelevant to real life contexts (Carlson, 1995; Griffin, 1984, 1985; Hopple & Graham, 1995). In contrast to many students who find physical education "fun" (e.g., Dyson, 1995), for some low skilled students it was "humiliating, frustrating, embarrassing and barely tolerable" (Portman, 1995, p. 452). Overall, empirical research reinforces "the

frequently stated, regularly ignored fact that youngsters have different interests, abilities, and attitudes" (Graham, 1995a, p. 479).

METHODOLOGY: QUALITATIVE RESEARCH

Qualitative research is concerned with "how people make sense of their world" (Locke, 1989).[3] Humans live by making interpretations (Christians & Carey, 1981). Therefore, the basic task of qualitative studies is to "interpret these interpretations so that we may better understand the meanings that people use to guide their activities" (Christians & Carey, 1981, p. 347). Given that the intent of this study was to gain access to students' interpretations of the experience of taking a physical activity class, qualitative techniques such as reflection papers and interviews allowed me to search inductively for patterns that emerged from the voices of the students (Denzin, 1989; Pissanos & Allison, 1993).

Written reflections have not been widely used with primary or secondary school children. However, reflective writing is increasingly used to understand how preservice physical education teachers make sense of field experiences (Rovegno, 1992; O'Sullivan & Tsangaridou, 1992; Tsangaridou & O'Sullivan, 1994). Just as in-depth interviews encourage people to express their understandings in their own terms (Denzin, 1989; Gilligan, 1982), reflection papers allow researchers access to the frameworks and beliefs used by students to make sense of their experiences and acknowledge students as "the ultimate insiders and experts" on their own experiences (Pissanos & Allison, 1993, p. 426). Although the writing is guided by general questions designed to encourage reflection (see O'Sullivan & Tsangaridou, 1992; Tsangaridou & O'Sullivan, 1994), students have considerable leeway in interpreting and responding to the questions.

In addition, active involvement in the natural environment in which people construct their meanings enhances researchers' abilities to understand how they come to these meanings (Christians & Carey, 1981; Locke, 1989). Thus researchers frequently participate: as instructors (e.g., Rovegno, 1992; O'Sullivan & Tsangaridou, 1992) or observers in the setting which is being investigated. A constructivist approach acknowledges that the physical education content which students interpret is influenced by teachers' personal experiences as well as historical and social context (Bain, 1988). Since these influence the ways in which students make their meanings, researchers should clearly identify these contexts (Christians & Carey, 1981). In the next section, I outline the context in which students created their meanings.

CONTEXT: FROM DISCIPLINE MASTERY TO CONSTRUCTIVISM

University racquetball classes followed a disciplinary mastery approach that was promoted by the university and in which the teacher controlled the structure of the class and was seen as the main or only provider of knowledge. Consequently, as the teacher, I demonstrated the "correct" way to perform a new skill, and expected all students to practice it before I allowed them to use it in modified and then standard game play. Students, particularly those who felt they had mastered the day's skill, regularly asked variations on the most common question in physical education: "Are we going to play a game today?" (Oslin, 1996, p. 27).

After being exposed to constructivist ideas, I began to question the dominant discipline mastery approach and to change the class structure to reflect a constructivist approach.[4] This included discussion with students of questions such as how to a) create a fair learning environment, b) include more student choice in activities, c) encourage students to take responsibility for their own learning, d) adjust tasks to the various abilities in the class, and e) consider how class, race and gender influence access to and beliefs about physical activity. In some ways, a constructivist approach bears strong similarities to the student-directed Sport Education model (see Siedentop, 1994) which is gaining popularity in New Zealand schools.

As I began to teach using critical questioning, problem-solving and cooperative learning (Ennis, 1992), I found that many students felt that game play was "essential" to sustain their interest (Oslin, 1996). To take this into account, I introduced elements of new approaches such as Teaching Games for Understanding which begin with tactics and strategy in modified games, and introduce skill execution only when students see the need for particular skills (see Thorpe, Bunker & Almond, 1986; Werner et al., 1996).[5] During play, as I asked questions about specific strategy choices, students identified problem areas in their games and we then worked on skills, such as serving, which would help them improve their play. This was an attempt to help students develop contextual knowledge which results from trying to use information (or skills) in specific situations (Prawatt, 1992). Influenced by my interactions with students, and anecdotal evidence from other instructors, I saw the need to systematically examine how students were interpreting and understanding the experience of taking a physical education class, particularly as the structure changed to incorporate a constructivist approach.

PROCEDURES FOR CONDUCTING THE STUDY

Gathering Information

In this study, 12 (one female, 11 male) of 14 students in a 16-week advanced racquetball class chose to complete four reflection papers dealing with various aspects of taking a physical activity class rather than taking a written final examination.[6] The reflection papers explicitly investigated constructivist issues in physical activity including the subjective meanings of a) playing racquetball, b) competition, c) learning racquetball in a structured class and d) grading and testing. (An example is included in Appendix A.) Although students were provided with general questions, they were also encouraged to write about other issues of relevance to them. The four areas and specific questions were driven by my desire to encourage students to reflect upon the way sport and university physical activity classes were organized in the United States, to explore the impact of constructivist-inspired changes in the class structure, and to investigate what sense the students were making of the class. The papers were written over one month, beginning at week 10 and ending at week 15. In addition to the reflection papers, informal interviews were conducted with these students and others in two beginning racquetball classes which met twice weekly for 45 minutes. The students represented the broad university population but did not include physical

education majors. The only requirement for entry to the advanced class was completion of the beginning class or demonstrated competence (determined by instructor) in racquetball. Throughout, I was actively involved in the setting as an instructor. The degree to which my relationship with the students and the context of writing required papers influenced their responses is unclear. However, as similar themes emerged in informal discussions with other racquetball students over a three-year period on many of the same issues, their reflections did not appear to be constrained by the context in which they were written.

Analysis

Constant comparison strategies were used (Glaser & Strauss, 1967) as I read and reread the papers in search of themes that emerged from students' writing. As each set of reflection papers was completed, the new material was analyzed and compared with emerging themes. Themes were developed and added with each set of reflections. As tentative themes emerged, they were discussed with the students in a process called source checking (Locke, 1989) which not only attempts to ensure that the researcher has correctly interpreted students' feelings but also gives students an opportunity to further discuss the themes. In addition, students' comments on reflection papers were triangulated with my observations of their behaviour in class, informal conversations held throughout the 16 weeks, and comments written on their anonymous end-of-semester course evaluations. Triangulation, where data of different kinds are systematically compared, is the most common form of validity in qualitative research (Christians & Carey, 1981; Denzin, 1989). Throughout the process, as a key element of triangulation, contradictions and examples which challenged the emerging themes were sought. These were also discussed with the students and then redefined in light of those conversations. The findings address the major themes that emerged and draw upon all the data sources. Students' comments form the bulk of evidence because their words bring the subject to life (Denzin, 1989) and best illustrate some of the contradictions, multiple views and experiences that emerged in one class.

FINDINGS AND DISCUSSION

What Does Racquetball Mean to You?

> Because movement experiences involve students immediately and totally, they provide a unique source of knowledge about self and the world. (Bain, 1988, p. 154)

In the first reflection paper, students were challenged to reflect upon what playing racquetball meant to them. As they identified their own personal meanings, a number of students also showed an awareness that their reasons for playing were not necessarily the same as others in the class, a key focus of the constructivist approach. For example, Jim wrote: "Although I can't be positive, I have a feeling that [my reasons] aren't the same reasons why Steve plays racquetball." Looking at individual reasons for playing racquetball, student meanings appeared to most

strongly fall into Jewett's (1980) transcendence theme, although some students also mentioned fitness and performance themes.

Transcendence: The most extensive and affective writing focused around transcendence-related meanings in which movement is a way of exploring and communication, and a source of joy and understanding (Jewett, 1980). Many students waxed poetic about the sounds, sights, and shots of the game. For them, the joy of racquetball seemed embedded in the kinesthetic elements of moving. As students described physical, cognitive and emotional responses to the game, it appeared that racquetball engaged the mind and body as one.

> Sweating like crazy, heart racing, eyes darting to the ball as your legs try to keep up. The almost sonic boom of a kill as it speeds by your opponent....That level where mind and body work as one, almost effortlessly, as you float around the court making every shot as if mistakes were unknown to you. That is the essence of the game for me. (Jeremy)

> I like the feeling I get after slamming into a wall in order to make a shot, or having to dive to dig a shot out. I like the sound a roll out kill makes, a certain kind of "Whap-KAPOW!" (Frank)

Fitness: Interestingly, given the focus on health and fitness benefits of physical activity (Lambert, 1996), only four students mentioned health and fitness as reasons for playing racquetball. The content, placement and limited number of comments suggested that, even for these students, health or fitness benefits were only a part of the reason for playing. For example, Louis identified multiple reasons for playing racquetball: "to improve my game, to improve my physical condition, to release stress, etc., and because I enjoy it." Only Adam went into detail about his perceptions of the fitness benefits of racquetball.

> It gives me the opportunity to tone my body in a very rigorous and alert situation, as opposed to being, say, on a Stairmaster. Racquetball also forces my body to perform with accuracy and strength. It promotes discipline and concentration. (Adam)

Performance: Four students identified reasons that fit into Jewett's (1980) performance cluster which focuses on the desire for competence in basic movement activities. These students valued being able to improve their skills, demonstrate control, and appropriately use tactics and strategies.

> In my playing, the word fun is almost synonymous with improvement and learning. I don't care if I win or lose as long as I applied established methods of playing and (successfully) incorporated new methods and/or strategies. As an individual, I strive [sic] on improvement which equates to success and usually fun. (Louis)

For these students the "fun" or "success" of a game depended upon their own performance: "making my shots and playing my game" (Steve) or "the level of satisfaction I have with my own performance" (Mike). Thus, they found pleasure in performing to their level of ability, independent of the opponent.

However, for most students the pleasure of the activity did not lie just in kinesthetic sensations -- in the feel and sounds of the court -- nor in demonstrating competence or gaining fitness or health benefits. Pleasure seemed to be integrally linked to the process of playing a closely contested game -- an activity in which the opponent/partner was a key element.

The Pleasure of a Closely Contested Game

The reflection papers revealed that the outcome of the game was less important than playing a close game with an equally-skilled opponent. For these students, playing well and hard against someone of similar ability seemed to produce the most pleasure.

> The real beauty of the game is to get into the long rallies. They pull that extra effort out of you to keep the rally going. To lunge at the ball, to roll into the corner and get right back up to recover the next hit, to dive into that low return and hit something sweet, to keep going and going - ah, it just doesn't get any better than that. When a kill (or a miss) is finally registered, both parties feel a sense of sadness that it's finally over....It doesn't really matter who got the point (that's just a detail); what matters is that for that brief period of time you were matched as closely as you could be, and you both gave all you had. (Harry)

Most students claimed they would rather lose a tightly contested match than win a lopsided one.

> There is something very desirable or "good" about...playing an incredibly long rally and ending up the victor. But, actually, this is only half of the fun. The other half (or maybe more) is playing an incredible rally, losing it, and still feeling good about it. (Janine)

> The single game I had with [Janine] was great fun. Each point featured long rallies which were often ended only as a result of fatigue. The game ended up at 15-14 I believe, and we traded serve approximately ten times over the course of the final point. (Jim)

The students' desires echoed the experiences of New Zealand intermediate school students who cooperated with each other so that "games would be closer and more exciting" (Pope & Grant, 1996, p. 113). Siedentop, Mand and Taggart (1986) also found that playing with a closely matched opponent was more pleasurable and exciting.

However, although winning was not vital to an enjoyable experience, competition was important to almost all the students, who preferred actual games to "hitting around."

> The term racquetball is synonymous with competition to me. Every point is a battle, a fight to gain the upper hand as you push your mind and body to the extreme....That intensity that comes out in competition that reminds you vividly that you're alive and you should let the entire planet know it, especially the person you're playing. (Jeremy)

The only student who regularly competed in tournaments acknowledged the potentially unpleasant side of competition: an issue which did not appear important to any other students, most of whom took the class to improve their skills for recreational play. For Steve, "competition entails many ugly social/personal conflicts. There's a lot of room for friction between players because competition heightens players' innate sense of machismo. It...promotes isolationism among teams - the game becomes a situation of 'we' versus 'them'."

Overall, whether or not students enjoyed the competition appeared to be integrally linked to the ability of the opponent. Students described feelings such as lack of motivation, fear of making the loser feel bad, frustration and self-consciousness when opponents had markedly stronger or weaker skills. For example, early in a game matched against the most skilled player in the class, John was "inspired" by every point he earned. Once the score became noticeably uneven, however, he gave up: "At this point, the game was productive for no one. I was fed up and [he] was not being challenged to do anything new. He just wanted the game to be over as much as I did." One student felt uneven matches were "a waste of time for both of us" (Louis) while another would "rather not play than be totally destroyed" (Charlie). Knowing they were the weaker player clearly detracted from the students' pleasure and, sometimes, even their ability to compete well. For example,

> When I get ready to play an individual that I know will blow my socks off, I always get nervous before the game starts. I tend to make an unusual amount of mistakes and, as the game progresses, I just seem to fall apart. I tend to think about all sorts of other things during the game (how stupid I must look, what the other person is thinking about how I play, etc.) instead of concentrating on the basics of my game. How to do a stroke or return to center seem to go by the wayside and I get very frustrated. (Harry)

Again, the most expert player, Steve, had a somewhat different interpretation. For him, ability was not as important as the attitude of the opponent: "Playing a poor sport ruins the best of games. By this I mean, someone who beats his racquet into the wall or intentionally hits you with the ball" (Steve).

In terms of choosing to take a class rather than play in competitive tournaments or recreationally, it appeared that these university students were seeking instruction and opponents of similar ability. In contrast to studies of school children (e.g., Chen, 1996; Tannehill & Zakrajsek, 1993; Tjeerdsma et al., 1996), only one student mentioned the social aspect of playing with friends as an important reason for participating. Some, like Tim who enjoyed "sharing that common bond with your partner that [you] both love to play the game," felt some

connection with other students but it was not the main reason for choosing to take a racquetball class. Indeed, in three years of teaching beginner and advanced classes, I found it rare that students signed up to take racquetball classes with friends.

Responsibilities to Other Players

A key feature of a constructivist approach is nurturing awareness of others and encouraging students to extend their sense of responsibility beyond themselves to others (Bain, 1988). From their responses to numerous questions, students were clearly aware that their needs and desires might not be the same as others in the class. More specifically, when asked a direct question, almost all students acknowledged that they had responsibilities towards opponents. Most felt that stronger players should play their best against weaker players (rather than adapt their game or introduce modifications of the game), even though their previous comments suggested this could be frustrating for both sides. For example:

> When the situation does occur that I must play a poorer player than myself, however, I do try my best and believe that this is the right thing to do as a better player. I feel that we can both benefit from this experience. (Louis)

Although none suggested modifying games, at least one student told me of a situation in which a far superior player changed to playing with his non-dominant hand: a modification designed to make the game more even. Similar behaviours were noted by Pope and Grant (1996) when, for example, intermediate school students taught a set move to an opposing team in order to create closer games.

However, students' actual behaviours sometimes contradicted their stated beliefs: although they always wanted better opponents to play their best against them, some students did not always play that way against lesser skilled opponents, believing that large margins of victory could be demoralizing or not foster skill improvement. Students responded in various ways to uneven matches. Adam worried that his opponent would perceive him as being "condescending for having to 'come down' to his/her level." Janine felt worse when a superior opponent went easy so she could win some points than if she had lost every point. Although she recognized that "the person probably feels bad about beating me so easily," she hated feeling "like they're taking pity on me" (Janine). As Jeremy tried to articulate his philosophy, he perhaps best identified the struggle that students encounter when playing noticeably weaker opponents.

> It doesn't help the opponent to work on their game when I kill every shot or ace them on 8 of 10 serves. That would be detrimental to their development as a racquetball player and might make them think twice about choosing it as a sport. On the other hand, I wouldn't baby them and give away points. (Jeremy)

Students' comments suggest that competition presented a dilemma, particularly when they played with people of different skill levels. As well as having to focus

on the physical dimensions of the game, students struggled with how to balance their desire for a close game with responsibilities towards their opponent.

Gender Differences

Although students' writings about the experience of being the stronger or weaker player did not directly engage with issues of gender, cultural beliefs that men are superior at sports (Messner, 1988; Willis, 1982; Wright, 1993) were clearly operating for many of the students in the class. A number of male students in the class explicitly recognized that their behaviours were informed by cultural ideas of women as less skilled than men. These ideas were reinforced by the personal experiences of at least three of the males who had not encountered skilled women: "few of my female opponents have been at my level" (John), "the females in this class appear to be well below the level of most of the other players" (Louis), "I have not met a woman that plays at my level" (Harry).

Several other students, although they had been beaten by women and recognized that skill was not the sole property of males, still found themselves buying into cultural beliefs of women as less skilled than men (see also Wright, 1993). For example, Steve explained that "When I play women, I tend to play easier. I honestly can't help myself. I just hit it softer. And I have been beaten in a tournament by a woman already." Jeremy had similar feelings.

> I've been beaten by women and men alike, and I have learned that sex is of no consequence in the game of racquetball [but] I have to admit that sometimes I feel stronger or more dominant when playing a female... (Jeremy)

One male student's explanation of why he preferred to play skilled than unskilled women, suggests how males may struggle with the legacy of gender ideology in sports.

> I really don't feel any different playing a person of the opposite sex. But I do find that I like playing a female who is better than me than one who is not, because I don't want her to think that I am trying to be "macho" or braggarty, especially if I beat her by a wide margin. (Frank)

Although the only female in the study did not directly address this issue, her comment that "When I signed up for this class I was afraid that...everyone was going to be a lot better than me" suggests that lack of skill may be more of a concern for female students. At this university, advanced classes attracted fewer female students than the beginner classes which were designed to introduce basic skills, tactics and rules of racquetball to those who had never played.

How Students Learned

Taking seriously the constructivist idea that teachers should structure classes to take different ways of learning into account, means "giving" students more power than in traditional classes over the organization of their own learning, as well as incorporating a diverse range of learning opportunities. For example, in this class, I a) videotaped students so they could see themselves playing, b) had students coach/evaluate each other and give feedback, c) offered a skills circuit course, d) attempted to have students peer coach each other with their weakest shot, e) co-developed a skills test based on open skills during game situations, f) asked students to critically evaluate their use of strategies and tactics in specific games, and g) to write reflection papers. Students differed widely in their beliefs about which of the diverse learning opportunities was most helpful but they all believed certain methods worked particularly well for them. These findings reinforced my belief that we cannot treat all students the same way; students learn differently and we must take that into account. Outlining how they best learned or would like to be tested, several students also showed awareness of other students by pointing out that their preference might not suit others in the class.

> Experimentation is where I thrive, and that is possible in a game situation. I guess I would rather play a game or a series of games every class period, but that would only suit my needs and would not be conducive to the success of the other students in the class. (Jeremy)

Asking students to coach and evaluate each other received mixed responses. Some students found it very useful, while others did not. One student first rejected the experience when he was coached by a peer: "It was interesting that the day that I was coached by my classmate, I tried to be receptive to his criticisms and suggestions but my cynicism about his ability to correctly critique my game remained foremost in my mind" (Mike). However, after going through the entire process of being coached and then coaching another student, he changed his mind:

> On the morning that you instructed me to observe and coach, my reaction was one of irritation, saying to myself, "another stupid activity. I wish she'd just let us play." As I began watching the game and concentrating on what my player was doing wrong and right, it really began to reinforce the techniques and strategies that you, during class, and the person who had coached me had been stressing. It was not until I was the coach and saw my player doing many of things that my coach had been critical of in my game, that I really started trying to implement those changes in my style and strategy. (Mike)

The change in Mike's perceptions suggests the importance of having students reflect, over time, upon their experiences, particularly when they involve judgments by peers. Expecting the discipline mastery, teacher-dominated approach prevalent in the university curriculum, Mike initially had difficulty accepting a peer's advice rather than a teacher's. However, as he participated in

the process of peer coaching and evaluation, he began to see its value and, later, to value feedback from other students.

Some students were clearly "visual" learners and found watching themselves on videotape a powerful learning tool. For Steve, the video was the most useful learning experience: "A player never sees himself play. The video is the closest thing and you can stop and analyze each movement." Similar to his response to peer coaching, Mike was surprised when the video revealed that he was not as skilled as he believed he was: "Seeing myself play, I did not look near as smooth nor skilled as I imagined myself to look." More advanced players appeared to benefit the most from coaching/being coached and from viewing themselves on videotape, suggesting that students may need to reach a high level of cognitive awareness of strategy and technique to effectively compare their own actions with an "ideal" movement form.

For other students, having the instructor demonstrate and discuss basic techniques and strategies of playing was a major advantage over unstructured recreational play.

> Not until this class did anyone watch what I was doing and tell me what I was doing right/wrong or ways to do them better. I learned techniques that I should have learned early on, and was now faced to unlearn techniques that I've had for years. Not until this class, did I appreciate the value of having a personal coach or guide. (Harry)

Some students preferred the discipline mastery approach where they could practice in a closed environment first to master the motor patterns and then execute the skill in an open environment (game situation). Others preferred to do most of their learning in game situations, claiming, for example, that practice "just isn't enough fun to me to force me to learn anything" (Jim).

Working Together to Critique and Change the Structure of a Class

A key element of a constructivist approach involves encouraging students to question current structures and to take responsibility for their own learning and evaluation. Again, several students demonstrated awareness that their preferences might not be the same as other students. For example, although Steve preferred a single-attempt skills test, he also noted that "none of the other class members would like this because it would force them to have to make good shots that many of them don't have yet."

As a result of complaints from previous classes, I instituted discussion of the dominant form of evaluating student performance, which involved a one-time skill test in which students performed mostly closed skills, although a small percentage of the evaluation was based on observation of strategy and positioning during game play. As suggested by Steve's comments above, most students (in both the advanced and beginner classes) were unhappy with this one-time test, charging that it created intense pressure upon them to do well on the day of the test, independent of other contexts such as illness or a family crisis which might impact their performance, and that it did not test real game skills.

My first change - from a single-attempt to a multiple-attempt skill test - seemed to increase enthusiasm, reduce stress and encourage students to continue improving skills they otherwise would have abandoned practicing. For example, one student worked on parts of the test until the last day of class to achieve an A even though the grade would be known only to him and me: it would not appear on his transcript as he was taking the class for credit only. "Retesting is a great idea. Why should only one test determine an individual's level of understanding over a long period?...Retesting allows for a margin of error on the student's part and also allows the instructor to gauge improvement" (Jeremy). Students were encouraged to take responsibility for their performance and choose the level of skill to which they would aspire. However, this form of testing depends upon an external objective standard, an issue which was of concern to students such as Charlie who felt that "testing a class for skill is a very difficult endeavour. Each person, with their own idiosyncrasies, cannot be adequately tested by a standard test."

Another form of testing which involves student decision-making is developing skill tests with students. A major complaint from the advanced students was the lack of fit between the skill test and "real" game situations. It became clear that skilled students were quite capable of doing well on the test but were unhappy that it encouraged soft shots which, in real games, would result in lost points or serving opportunities. Together we developed a game-based skill test that rewarded players for taking risks and scoring winning points.[7] This was in stark contrast to the usual test where an unsuccessful attempt at a highly skilled shot would negatively impact a student's grade. The game-based skills test also gave all students the opportunity to succeed, independent of their beginning skill level, because students demonstrated the skills against a similarly skilled partner.[8] Therefore, lesser skilled players could achieve success as long as they demonstrated tactical and conceptual knowledge, and skill performance appropriate to their current level of ability. Similarly, highly skilled players would have to demonstrate skill against an evenly-matched opponent in order to perform well. Game-based tests such as this recognize -- as students do -- that students enter classes with different skill levels which should be taken into account in evaluation.

What students desired was an opportunity to demonstrate their ability in a fair and realistic situation. Students identified one or more partners against whom they felt playing would be a "fair" test: a choice they desired and felt able to make, in part because they had spent approximately 10 weeks playing with and against each other.

It should be noted that the class did not completely follow constructivist principles: following traditional evaluation procedures and based on textbook theory, the instructor evaluated the students' grasp of appropriate tactics and strategies. To increase student involvement in this element, students could have discussed what tactics and strategies were most important and evaluated each other, similar to the peer coaching.

The Importance of Grades and Testing

All the students recognized the importance of grades to their futures after university. This is particularly true in the USA where grades for all classes taken at university are compressed into a single number: the grade point average (GPA) which is often used as a by employers as a way to screen out applicants for job interviews. The racquetball class counted towards the GPA of students who took it for a grade, but not for those who took it pass/fail. Although they all acknowledged that good grades were culturally valued, students responded in different ways. For some, grades were very important: "At a competitive school like ours, good grades are hard to achieve.... Working hard doesn't mean anything if you don't get the grades" (Steve). For others they were a necessary evil that did not truly measure learning: "If I had a choice between really learning something worthwhile and earning a C or getting an A and learning zero, I'd pick the C." (Jeremy). Some students demonstrated the ability to use a physical activity class to critique dominant forms of teaching and evaluation in other academic courses. For example: "One of my major complaints with the education system at all levels is that we as students are not often encouraged to think innovative thoughts but instead to regurgitate information" (Mike).

Most of the students -- like Jim who viewed racquetball as "my stress break from the rigors of my academic classes" -- felt that activity classes were different from other parts of the university curriculum. Their reflection papers and informal remarks showed that they approached them differently and felt they should be graded differently. Their comments reflect the ongoing struggle by physical education to be taken seriously within the academic community (e.g., Henry, 1981; Kirk & Tinning, 1990; Newell, 1990).

> The physical education department should be...fully aware of the fact that students only take...racquetball to play more often, to improve, and to learn a few things and do so of their own free will. None of the students will be financially relying on their play for their future. (Louis)

Several students downgraded or ignored the cognitive elements of physical activity, emphasizing instead the physical and affective elements. For example, they did not see the relevance or importance of written tests (e.g., testing rules or tactical knowledge) as part of a physical activity class.

> I believe that because this is a class for the physical ability of the student, written tests should not be given. There is a big difference between the ability to do something in the court and the ability to remember what the instructor told you. This class tests the physical ability not the mental ability. (Tim)

CONCLUSION

The variety and complexity of understandings constructed by university students participating in a structured racquetball class reinforce constructivist views that

students are participating in physical activity for different reasons and seeking different experiences. While clear about their personal feelings about competition, testing, grading and preferred types of instruction, these students also demonstrated a strong awareness that their needs might not be the same as others in the class. Reflection papers appeared to be a powerful tool for encouraging students to reflect upon the social and moral issues related to physical activity within their specific -- school or university -- curriculum. Particularly for teachers who do not have time to conduct in-depth interviews (see Graham, 1995a), reflection papers may enhance both student and teacher understandings of the meaning of physical education in specific contexts. In addition, the students' responses suggested ways in which physical education can be used to explore issues that extend beyond the boundaries of the classroom, such as fairness, and how to appropriately evaluate learning or decide responsibilities to others.

Overall, racquetball represented a valued opportunity to experience the joy of moving, to demonstrate and achieve competence, and to participate in exciting, close competitions with similarly skilled partners. However, when students contrasted the physical nature of racquetball class with their "academic" classes, their comments reflected the mind/body dualism that has haunted physical education's struggle to be accepted as a valued part of the academic curriculum. Despite their devaluation of racquetball as part of their academic preparation, it appeared to enhance students' lives in ways that did not occur in academic classes by engaging their minds, bodies and emotions (see also Dyson, 1995; Rovegno & Bandhauer, 1997). For example, it appeared that the process of the game, the sense that going all out could make a difference, drove the students to push themselves to discover their limits in physical and affective areas, both of which are important to physical, psychological and social development (Jewett & Bain, 1985).

This study suggested how changes in class structure which follow a constructivist approach can enhance student enjoyment, involvement and learning. For example, I attempted to create a learning environment which responded to and took seriously individual student needs. Like the Sport Education students in New Zealand (Pope & Grant, 1996), it was clear that these students valued being included in the process of structuring the class. Particularly when working on re-designing the skills test, the students demonstrated that they valued fairness and relevance to real life contexts; values that resonate with constructivism rather than the traditional discipline mastery orientation which structures many physical education classes. These students were not only able to articulate their beliefs but many also welcomed the chance to give their views.

Seeking out student voices is critical to understanding what sense students are making of their experiences in physical education or activity classes. Listening to them and making appropriate changes to class structure offers physical educators the chance to create learning environments that are responsive to students' needs and provide them with important opportunities to make decisions about their own knowledge and learning.

FOOTNOTES

1. Although many departments have recently adopted new names such as Kinesiology in attempts to satisfy the field's quest for scientific and academic respectability (Slowikowski & Newell, 1990), Katch (1990) argues that it continues to be seen as expendable.
2. This approach is also called the technological curriculum (Eisner, 1985) or discipline mastery approach (Ennis, 1992; Ennis & Chen, 1993).
3. For an in-depth discussion of qualitative research in physical education, see the March 1989 Research Quarterly for Exercise and Sport [Volume 60 (1)] in which Locke gives a broad description of the fundamental assumptions of the qualitative approach. Other scholars then respond to his paper.
4. Specifically, I drew upon ideas which are part of the social reconstruction/ responsibility, and self actualization (Ennis, 1992; Ennis and Chen, 1993; Jewett, Bain & Ennis, 1995) and personal relevance (Eisner, 1985) orientations.
5. For examples of how the Teaching Games for Understanding approach works, see Berkowitz (1996), Curtner-Smith (1996), Griffin (1996), Mitchell (1996), and
   Werner, Bunker and Thorpe (1996).
6. All student names have been changed to ensure confidentiality.
7. For example, rather than performing a (closed skill) serve alone, the student served to a partner of similar ability. In general 1 point was available for each serve. After a legal serve, if the server could play a legal shot off the partner's return, the server received one point. If s/he took a risk and aced the serve, the server received a bonus .25 points. However, if the partner beat the server on the return, each received .5 of a point. Thus, there were incentives for partners to play their best in order to score their own points, and incentives for servers to complete a skilled serve in order not to be beaten on the return. This system also allowed someone who served poorly to recoup some points when s/he was receiving his/her partner's serve. All skills were tested using some modification of this system. There was much debate over the appropriate number of points to award in each situation. Students were concerned that the points awarded to the partner should be high enough to cause that person to compete rather than cooperate with the server.
8. In order to achieve even matches, some students acted as receiving partners for more than one server. In addition, since one student was clearly much more skilled than anyone else, his receiving partner was given the opportunity to receive against someone of more equal ability when his receiving was scored.

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Appendix A

Reflection Paper #1

In this paper I would like you to think about the meaning of playing racquetball. The following questions are a guide and you do not have to answer them all (depth is more important than answering every question). You are free to write about anything you would like me to know about the class (whether or not it directly relates to this topic).
Your comments will not influence the remainder of your grade. The paper is to help you to reflect upon and think about what this class and racquetball means to you.

1. What is the meaning of "fun" to you in terms of playing racquetball. What constitutes a "good" or "enjoyable" game?
2. Who do you most enjoy playing with in this class? What is it about playing this person that makes it enjoyable?
3. How do you feel "hitting around" compared with scoring a game. Which do you prefer and when and why?
4. How does playing racquetball make you feel? Do you feel the same way every time you play? If not, describe what affects how you feel. What parts of playing the game do you like the most? What parts do you dislike the most?
5. Describe the most enjoyable game you have ever played in racquetball.
6. How do you feel when playing a person of the same sex? of the opposite sex? In what ways, if at all, is it different?
7. What do you see as your strengths and weaknesses as a racquetball player? Does this matter to you?

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