

A Sense of Connection: Toward Social Constructivist Physical Education

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Abstract:

In social constructivist educational theory, the classroom is seen as a community of learners. According to social constructivists, learning occurs through peer interactions, student ownership of the curriculum and educational experiences that are authentic for students. The purpose of this study was to investigate how teachers used social constructivist strategies to encourage student construction of knowledge and meanings, and how students constructed knowledge and meanings in two middle school physical education classrooms. A qualitative naturalistic design was used to collect data over a five-month period with two experienced middle school physical education teachers. Data included 11 weeks of observational field notes and interviews with teachers and students. Data were analyzed using cross-case and inductive analysis. Findings indicated that the teachers' strategies created a learning environment in which students actively constructed knowledge and meanings by making connections to their peers and by connecting physical education to their lives, their communities, and the real world. Students shared information, assumed leadership and responsibility, and became decision-makers. By connecting to their peers, students felt supported in their learning. This study offers additional findings in support of social constructivist pedagogy in physical education that encourages individual growth and social awareness in communities of learners.

Article:

Introduction

Over the past decade, among different approaches to learning and teaching, constructivism has been widely applied in the field of education, and has been used to explore the connections among knowledge, meaning, and learning. Constructivist pedagogical approaches can engage students in connecting their experiences in the classroom to their real lives and enhance student learning holistically, contributing to their individual and social growth. In social constructivist classrooms, students develop a sense of connection to themselves, other students, their teachers, and the world through a 'realization of community' (Stinson, 1998).

Dewey (1916/1966) was perhaps the first modern educator to recognize education as a social enterprise. In Dewey's philosophy, children's educational development cannot take place through direct teaching of beliefs, emotions, and knowledge, but instead occurs through the intermediary of community where collective experiences or activities are shared. Conjoint activities, or activities that relate to the social and the community, are essential for the growth of the young. Dewey argued that the educational setting should include conditions and situations that have the characteristics of real life. Authentic learning, therefore, results when students connect classroom activities to their lived experiences and to their lives.

Due to the nature of the interdependence between the individual and the social, social interactions and context are influential in children's development and learning (Vygotsky, 1934/1997). According to Vygotsky and other social constructivists (Hollins, 1996; Prawat, 1996a,b), the locus of knowledge does not reside in the individual, but rather is a social construct produced through the interconnectedness between the social context and the individual. Kirk and Macdonald (1998) suggested that learning occurs with any collectivity in which 'a

community of practice exists and ... its activities ... have a significant influence on what is learned and how learning takes place' (p. 380). The social context mediates and impacts students' thinking and learning.

Both Prawat (1996b) and Hollins (1996) also use the metaphor of community to explain how a social constructivist teacher creates a climate in which students become free to learn by exploring and sharing their ideas through social interaction. Prawat (1996b) defines the school as a 'community of learners' (p. 92), and Hollins (1996) defines it as a 'learning community' (p. 115). Students are centered in classroom life and actively involved in its activities by sharing experiences, exchanging information, and understanding ideas (Grossman & Weinberg, 1997; Prawat, 1996b). Like Dewey, Prawat (1996b) refers to the direct transmission of knowledge as lacking in authentic experiences necessary to the learning process, and recommends that educators create learning communities in which students experience 'real understanding' (p. 93). Building meaningful connections is especially relevant in urban schools or poor schools, where many students may face the challenges of poverty and violence in their school and community (Ennis, 2000).

Research in physical education classrooms suggests that students' social interactions and involvement in community and society are pedagogical goals that enhance learning (Cothran & Ennis, 1999; Ennis, 1999, 2000; Fernandez-Balboa, 1997a,b; Mosston, 1966). Mosston and Ashworth (1994) argue that, among a variety of teaching styles, the reciprocal teaching style promotes natural learning situations and opportunities for students to socialize among peers, and actively engage in learning through problem solving. These studies suggest a connection between the teacher's ability to create a learning environment that emphasizes students' social interaction and the enhancement of students' individual and social growth.

More recently, researchers in physical education, analyzing the broader context of schooling, have argued for social constructivist approaches that can provide authentic experiences which help students connect physical education to the sociocultural contexts of their lives (Cothran & Ennis, 1999; Ennis, 1999, 2000; Ennis et al., 1999; Fernandez Balboa, 1997a,b). Fernandez-Balboa (1997a) proposes that teachers engage students in physical education to connect 'with the broader sociocultural contexts and influences, and act politically and ethically to transform and improve schools and the profession' (p. 162). Cothran and Ennis (1999) explain that 'educational engagement is not an isolated construct' (p. 234), and that students' emotional and personal connections to peers in the classroom, school, and community are a fundamental component of student engagement in physical education.

In response to student disengagement in physical education classrooms, Ennis (1999, 2000; Ennis et al., 1999) proposed a social constructivist theme based curricula entitled 'Sport for Peace' that provided an engaging learning environment for physical education students. The purpose of the Sport for Peace curriculum was to assist students in developing self and social responsibility, an ethic of care, a connection between school and life, and just and equal negotiations among their peers. The social constructivist approach utilized by Sport for Peace enhanced students' sense of connection to physical education and focused on creating a sense of family among students. The sense of community was derived from relevant and authentic learning experiences in the physical education classroom (Ennis, 2000).

Similar to Ennis's (2000) discussion of the learning environment created in Sport for Peace, Palincsar (1998) described constructivist classrooms as communities of learners that use pedagogical approaches based on a 'postmodern constructivist perspective' (p. 349) of schooling. Similar to social constructivism, a postmodern social constructivist perspective of education considers an understanding of the 'intersubjective attitude', a connection among students and teachers, as essential to enhancing the shared construction of meanings and understanding in the classroom (Palincsar, 1998, p. 355). A postmodern social constructivist classroom differs from traditional Western notions of the classroom because it values the interdependence of social and individual processes in the construction of knowledge and meanings (Fernandez-Balboa, 1997b; Prawat, 1996a,b). Palincsar also suggests that Western classrooms are places in which 'individualistic traditions have prevailed' (p. 355) and learning is constrained by specific situations limiting students' problem solving, reasoning and transfer abilities in novel contexts.

Fernandez-Balboa (1997b) advocates for postmodern and social constructivist pedagogical approaches that encourage students to construct personal meanings by understanding their experiences in physical education in relation to their lives, backgrounds, and personal values. Fernandez-Balboa (1997b) likewise defines meaning as student activity that connects to student' lives and therefore is personally relevant. He writes, 'Meaning is discovered through an affective process by which learners experience reality and relate events to themselves' (p. 126). Student meaning making is enhanced when students take responsibility for their learning. Furthermore, Kaplan (1997) shares the conception that students learn by being active members of an educational community. Democratic educational experiences would provide students with significant individual experiences by establishing connections between student personal experience and student life in the community.

Social constructivist pedagogical approaches enhance a sense of connection among students and teachers in the classroom and in the school community. Palincsar (1998) explains that within social constructivist classrooms, 'Learning is thought to occur through processes of interaction, negotiation, and collaboration' (p. 365) by creating a 'community of learners' (p. 370). In summary, in a community of learners, constructivist teaching and learning processes occur when (a) teachers are facilitators in the classroom by providing group work that emphasizes peer interaction and peer collaboration, and students are not passive onlookers but actors in the classroom; (b) teachers recall students' prior experiences to facilitate students' construction of knowledge; (c) students have ownership of the curriculum; and (d) teachers encourage students to relate activities in the classroom to students' real lives outside of school, and to real world situations; in communities of learners, teachers aim to provide educational experiences that are authentic and meaningful for students.

Pedagogical approaches that allow students to connect to each other, their teachers, and the real world, and also to make connections between their prior knowledge and new knowledge are central to social constructivism in the creation of a community of learners. To date, few studies have explored those connections in social constructivist classrooms. The research reported in this article examined the context of two middle school physical education classes to better understand how students learned in social constructivist classes and how teachers constructed their understanding of physical activity within a physical education curriculum.

This study examined a 7th grade and an 8th grade class in two different public middle schools located in the Mid-Atlantic region of the United States. Kara's 7th grade class included 24 students (one African American, one Asian, and 22 White), 12 girls and 12 boys. In Kara's school 8.6% of students received free or reduced price meals. At Kara's school the racial/ethnic composition of the student body was: 80% White, 12.7% African American, 5.1% Asian, and 1.8% Hispanic. In Julie's school, fewer students, 2.5%, were eligible for free or reduced price meals. Eighty-three percent of students were White, 7% African American, 8.7% Asian, and 0.9% Hispanic. Julie's 8th grade class was composed of 24 students, nine boys (one Asian, eight White) and 15 girls (three African American, 12 White).

The purpose of this research was to examine (a) how teachers used social constructivist strategies to encourage students' construction of knowledge and meanings and (b) how students constructed knowledge and meanings in two middle school physical education classes. This research is significant because it provides a deeper understanding of the praxis of social constructivism, and examines social constructivist teaching strategies teachers use to enhance student learning and create communities of learners.

Method

The study was conducted using a qualitative research design. This method was chosen to analyze naturally occurring phenomena, with minimal influence from the researcher (LeCompte & Preissle, 1993; Patton, 1990; Rossman & Rallis, 1998).

Participants and Setting

Participants for this study included two experienced middle school physical education teachers, Kara and Julie, who used social constructivist teaching approaches to enhance student learning. (Pseudonyms are used for

teachers, students, and names of schools throughout this paper.) The selection criteria for the two teacher participants were based on identifying characteristics of their pedagogy that reflected a social constructivist approach to teaching. The school district's physical education supervisor recommended eight teachers for this study. After observing all eight teachers, the two teacher participants were selected whose practices appeared to most closely reflect the following criteria: (a) teacher planned interactions; (b) teacher acted as a facilitator; (c) teacher planned high social involvement among students; and (d) teacher used stimulating instructional materials to facilitate students' learning (e.g. posters, blackboard, projector, video camera, study guides) (Palincsar, 1998).

The two teachers for this study, Kara and Julie, were experienced physical educators who created learning communities in their classrooms. Kara had 14 years of physical education teaching experience and was head of the physical education department at her school. The year prior to the study, Kara won two teaching awards for her educational involvement in the school community: the Chamber of Commerce Award and the Educator Merit Award for the county school district. Kara perceived the school as a focus of the community. She described the administration of the school as 'site-based management', in which teachers and staff were decision makers and the principal welcomed and encouraged the staff and the community to support the school. She believed that students learned most successfully in physical education when they felt that their learning experiences were meaningful to their lives. Kara strongly believed that students' interaction with teachers, peers and the community was essential for their learning.

The second teacher in this study, Julie, had five years of physical education teaching experience and had taught in a variety of school settings. Although Julie now worked in a school she described as upper middle class, she often referred to her first experience as a physical education teacher in an urban low income school as very influential for her growth as an educator. Like Kara, she believed in teaching a physical education curriculum that was connected to students' lives. When Julie described her teaching philosophy and the philosophy of her department, she explained that students' interactions with teachers and peers engaged them in the learning process and were the focus of her instruction. She often said that she wanted students to feel successful in her classroom and to make physical education part of their lives. Both Julie and Kara often stated that physical education was supported by their principal and colleagues; they felt they had relative freedom to include extra curriculum activities in their physical education programs.

Data Collection

Entry into the Setting

The primary researcher entered the study settings by negotiating her role and presence in the two physical education classrooms. When the researcher entered into the setting, she provided a 'truthful but vague' explanation (Rossman & Rallis, 1998, p. 98) to the two classrooms, presenting herself as a former physical education teacher who would spend some time in the gym because she was interested in learning about the students' physical education classes. For both teachers, the overall data collection lasted five months, including collection of field notes, student and teacher interviews, the first data analysis, and the second interview with the teachers.

Eleven observations of double periods (e.g. 100 min.) of the teachers' classes were conducted and field notes were taken. The units observed in Kara's class were field hockey (six lessons) and fitness (five lessons), and in Julie's class were soccer (six lessons) and self defense (five lessons). The units, as described in the physical education handbook for both teachers, aimed to (a) develop student understanding of knowledge, acquisition of skills, and concepts of fitness for the varied physical activity units and appreciation of the lifelong value of physical activity; and (b) provide physical education experiences to promote positive self concept, positive and appropriate social and emotional behavior, self direction and appreciation for individual differences.

Written and instructional materials relevant to the classes were collected and extensive informal conversational interviews with the two teachers were conducted after each class. During the informal conversational interviews, the teachers explained the teaching strategies they had used during class, instructional materials or

organization of the class, and learning goals of the lessons or unit. Field notes on class observations and informal conversations were taken during class, then copied and saved in a file the same day. Observations and field notes focused on events and interactions among students and interactions between students and the teacher, roles taken by the teacher and the students in the delivery of the instruction and students' involvement in the physical activities, and the arrangement of the physical education classroom during the lesson.

At the conclusion of the observation period, the two teacher participants were formally interviewed with standardized open ended questions (Patton, 1990). The questions in the teachers' interviews centered on the teaching strategies used in their classrooms to encourage students to learn physical education, and on their perspectives on the effectiveness of their pedagogical approaches. A 'member check' (Rossman & Rallis, 1998, p. 45) was conducted with each teacher to discuss categories and themes emerging from the first data analysis and to confirm the accuracy of the researchers' data collection from the teacher participants' perspectives (Patton, 1990; Rossman & Rallis, 1998). Member check interviews were recorded and transcribed for analysis.

Formal interviews with 10 students (five from each class) lasted approximately 30-45 min. In consultation with the teachers, the researcher selected students to be interviewed representing the class diversity (e.g. gender, skills, and ethnicity). Interview questions focused on student perceptions of how they learned and how their teachers guided them to learn; in addition, students were asked to describe situations in their physical education class in which they worked with classmates or in groups, and to discuss the extent to which those situations were engaging or important for their learning in physical education. The interviews were conducted in a quiet room, and the tapes were transcribed for analysis.

Data Analysis

The purpose of the data analysis was to reflect the participants' perspectives and interpret findings through the creation of data categories and themes (Patton, 1990). The data collected from different sources (i.e. observations, teacher and student formal, informal, and conversational interviews) were inductively analyzed. Data from field notes, observations, and informal and formal interviews with students and teachers were reviewed thoroughly to identify categories and draw out emerging themes (LeCompte & Preissle, 1993; Patton, 1990; Rossman & Rallis, 1998). Data were reduced by grouping concepts into categories using NUD*DIST software for qualitative research. The use of the NUD*IST program facilitated the organization of the categories and the creation of a data base.

Student and teacher interviews and field notes were analyzed using inductive analysis, content analysis, and cross case analysis. An inductive analysis of data was conducted initially from field notes, then from student interviews, and lastly from teacher interviews. In this process, the researchers used questions (i.e. how did the teacher enhance students' engagement in physical education through peer/group interactions; how did those pedagogical approaches enhance students' learning; and how did students construct knowledge and meanings within the social context?) based on the social constructivist theoretical framework and specific research questions to generate categories (Strauss & Corbin, 1998). Data were organized into topics and each category was coded (LeCompte & Preissle, 1993; Patton, 1990). In the cross case analysis, categories were compared to check data source validity and to identify variations in the categories by noting their properties and dimensions (Patton, 1990, Strauss & Corbin, 1998).

After the initial data analysis and categorization of findings, a second interview, a member check (Rossman & Rallis, 1998) was conducted with each teacher to check and compare the categories to the teachers' perspective and/or to add more information to the first analysis. A member check was conducted with each teacher to compare the researcher's interpretation of findings to the participants' perspectives, and to ensure the trustworthiness of the data collection (Rossman & Rallis, 1998). More specifically, member checks were used to enhance the validity of the researcher's interpretation of the data collection by discussing and comparing the findings of the first data analysis with the participants' perspectives to clarify and add information to the data collection (Patton, 1990; Rossman & Rallis, 1998).

The accuracy of data was obtained by cross comparing all of the data collected: the field notes, interviews with teachers and students, and teachers' member checks (LeCompte & Preissle, 1993; Patton, 1990). Triangulation of data was conducted to examine data for consistency in overall patterns and explain the differences reported in data collection (LeCompte & Preissle, 1993; Patton, 1990; Rossman & Rallis, 1998).

To enhance trustworthiness and reliability of the researcher's analysis, a member check and a peer check were conducted (Rossman & Rallis, 1998). A peer review of categories and themes emerging from the first data analysis improved the accuracy of the researcher's analysis. Lastly, a member check with the two teachers allowed them to react to the researcher's first analysis of categories and themes by suggesting alternative interpretations to further enhance the trustworthiness of the researcher's analysis (Rossman & Rallis, 1998).

Results

Kara and Julie supported student learning by acting as facilitators between students and their peers, and between new classroom knowledge and students' prior knowledge. Facilitating these connections meant creating and evaluating structured relationships between students (assigned student responsibilities and leadership roles) through which students were required to use new knowledge collectively, and providing and promoting authentic opportunities for students to use this knowledge outside of the classroom.

The teachers created classroom environments similar to a 'community of learners' in which student learning occurred through peer interactions and connection to the 'real world'. Students constructed knowledge and meanings and actively participated in physical education activities by making connections with their peers. Students shared information with peers, accepted roles, assumed leadership and responsibility, and became decision makers. By connecting to their peers, students felt supported in their learning, because they belonged to a group. In these two physical education classrooms, students constructed personal meanings and social awareness by connecting classroom knowledge to their lives and communities.

Teachers' Strategies for Enhancing Peer Connection Enhancing Supportive Interactions

Kara and Julie facilitated student construction of knowledge by providing students the opportunity to discuss new knowledge and connect with peers. For example, Kara stepped back from the center of the class, encouraging peer connections by letting students' share knowledge. Kara explained:

I need to make sure that they [the students] can get the help they want. Again, if you're teaching something you understand it better. So, if you [the student] can have somebody [another student] sit down and explain it to you, and then I can go back over it, that's going to help me and maybe give you a different idea, [When peers are involved, there's] just a different way of somebody else explaining it. They [students] can learn that way.

Rebecca described how Kara acted as a facilitator for students to share information and support each other's learning. She explained:

... if we are in teams or something then she lets the team work it out because usually there would be a couple of people that know what they are doing and she kind of steps back and lets other people tell you what to do ... she didn't force me to listen to her [the teacher] and so I can listen to someone of my age that would explain it to me.

Kara provided learning contexts by promoting the creation of a 'peer culture' (Hollins, 1996, p. 120) in which the bounds and the relationships among peers are more powerful in their learning processes than those between teachers and students. As Prawat (1995) also argues, promoting interactions among age peers more likely engages students in higher thinking learning process. In addition, peers with more prior knowledge were actively involved in sharing understanding with classmates by becoming peer tutors. The role of teacher as

facilitator was quite different from direct teaching approaches, which perceive students as empty vessels to be filled with information.

As a facilitator of student learning, Kara also enriched the context of learning by providing resources that recalled students' prior learning. She frequently used the blackboard to ask questions and facilitate student exchange of information. For example, to recall information from a prior lesson, Kara drew students' attention to the board: 'What happens if this blue player stops the red here [indicating the position on the board] and sends the ball outside?' While students had been initially unsure how to respond, looking at the blackboard, Ryan now confidently answered, 'A long corner or a hit'. According to Paul, one of the other students in this class, the use of different materials was very helpful when working with classmates to support their understanding. He said:

It really helps! It is a lot different when you just go out and point to a position on the field and say, you're going to be playing this, when you want to know what positions do and stuff you can't explain. You need visuals and you need to see it to really understand it.

Colette responded:

[I thought that] the study guide [was especially helpful]. You can keep them in your binder and when you are confused you can just look at them and everything is there, like the field hockey guide. It tells you the history, the rules, the faults. It tells you everything you need to know.

Beside creating a climate in which students felt they belonged to a 'peer culture' (Prawat, 1996b, p. 94), Kara reinforced the content of the field hockey and fitness units she taught by providing students with study guides, and with posters reminding them of rules and skills. She evaluated student learning in field hockey with a unit test based on the field hockey study guide, by using the board at the beginning of each lesson to ask questions recalling students' prior knowledge and to demonstrate key information, such as proper positions on the court. Kara's scaffolding is a social constructivist strategy that encourages students' reflection and thinking, and facilitates students' construction of knowledge by linking new concepts to students' prior experiences and knowledge (Ennis, 2000; Guthrie et al., 1998; Prawat, 1996a,b). Students often had available information (i.e. posters or blackboards) during class to check their understandings. Prawat (1996a,b) defines the teacher's use of the board or posters as a social constructivist strategy in which students can share publicly the representation of the problem, enhancing peer connection and peer exchange of ideas. Similarly, Guthrie et al. (1998) and Hand et al. (1997) explain that a teacher's creation of rich learning environment facilitates students' understanding of the content.

The gym became a community of learners in which students actively participated in physical education, and students' sense of connection facilitated their learning process. To enhance student interactions, Kara carefully structured the gym environment by encouraging students to help each other and exchange knowledge about the physical education unit. To build new knowledge, teachers used different materials to recall students' prior knowledge and connect it to student experiences in the gym. Students felt a sense of connection by helping and sharing information with their peers. Tania from Kara's class explained:

We work with classmates in physical education class. If one of our classmates is having trouble, I'll go over and say you need to do like this and you go like this and I'll help them ... It helps people that are, that have problems. It helps them a real lot because they really can understand better, not just by themselves but with more people helping them, it's better.

Because of Kara's emphasis on peer collaboration and helping each other, students perceived that collaborating with peers was more useful for their understanding than working individually. In addition, promoting student interaction and creating opportunities for the continuous exchange of information between the teacher and students, and among students, reinforced the learning context. In this case, Tania said:

Yeah, I would say [when you work with your peers] you learn more, because you get to learn how the teacher would have it, and also classmates would explain it. It helps more if someone [another student] knows more about something [than you do] and they [students] can just help each other, the other kids, if they [the other kids] don't know that much about it.

According to Tania, by helping each other and sharing information, students solved problems and corrected their misunderstandings in class with each other. They became aware that they played an active important role in the class by supporting classmates' learning and by seeking help from their peers.

Similar to Kara, Julie constructed a classroom environment in which students also connected to peers and helped each other learn. During the soccer unit Julie organized groups of three to four students to play a modified soccer game. Students supported each other's learning by advising how to pass the ball strategically. The objective of this modified game was to pass the ball to classmates in the group while trying to avoid a peer in the middle. The focus of 'monkey in the middle' was for students to learn how to defend possession of the ball, where students in the group had to move quickly to create space, kicking with accuracy and using their peripheral vision. A third student in Julie's class, Sara, concluded '[With group activities] you get to share information and at some point you might learn something that you didn't know.'

Unlike Kara, Julie often organized her class in rotation stations, where each station had a different focus. Julie often began lessons by asking questions about the activity and then returned to those questions at the end of the lesson. For example, in one soccer lesson the class was organized into three groups. At one station students worked on traps, at a second station they work on a modified game called 'The King of the Grid', and on a third station they worked on kicking the ball with accuracy. Students at each of these stations stayed focused on the goals and encouraged each other loudly, while Julie floated from station to station to give students guidance. After the class had completed one full rotation, Julie gathered them together and questioned them about the different ways they had tried to trap the ball. Sara shouted, 'With our head!' Paul added, 'With your thigh'. Julie waited for another response: 'And with?' After a few seconds, Mike responded, 'With your chest', and the games started again. Kara and Julie's pedagogical approach was to organize the class into small groups. For each group they provided a, strategic and a collective goal (for example, understanding how to create or defend space) in which students were encouraged to interact and coach each other on strategies and skills to achieve the goal of the group practice.

In contrast to the traditional physical education classes that focus on developing individual skills in isolation, the emphasis on collaboration in group situations recognized the interdependent nature of student learning. In this case, the structure of each station engaged students in recognizing the collective nature of their task; furthermore, it prevented students from focusing on individual performance or attempting to dominate play. When teachers emphasized cooperation, students realized that they had learned how to connect with each other, while also practicing individual skills. The novelty of Kara's and Julie's social constructivist instruction resided in shifting the focus from individual skill development to learning as a social construct. By helping each other, students became aware of and valued each other's differences. Students' realizations of belonging to a community aided their acceptance of individual diversity (Stinson, 1998).

Student Leadership and Responsibility Promoted a Sense of Connection

To provide learning experiences for all students, both skilled and unskilled, Kara organized group or pair activities and gave students different roles and responsibilities. In Kara's field hockey unit, for example, students were responsible for selecting and covering particular positions based on their different abilities. Kara asserted:

Oh yeah, they [low-skilled students] will see a different way of approaching something. And again, they may be low-skilled students, but ... high skilled [in other aspects] ... they may be very slow runners, but the best defensive player [in understanding strategies of the game or stickwork] and they can contribute

to and guide their team. Some of them [students] that were the slowest, if you noticed, would volunteer [for positions]. They wanted to be back as the fullbacks, they wanted to be back in a defense position. They also had great stickwork. They could keep that other team from scoring.

In the example, Kara's student was a slow runner, but as a decision-maker, this student reflected on the skills required to cover different positions in the game, and decided where he felt he could successfully play the game based on his skills. As Hollins (1996) argues, social constructivist pedagogical approaches can empower students by constructing a classroom environment in which they learn 'how to direct their own leaning' (p. 112) based on their skill levels and experiences. In the field hockey unit, Kara provided opportunities for students to discuss which positions and roles they were going to play based on how they could best contribute to the team. She said:

What I do generally is ... see which students may be not the best-skilled but show the leadership where they have patience [with classmates] ... that [students] have developed a relationship with [connection to] students [that is strong enough] that I know they [that student leader] can be helping them. And I select a few students that would want to take a leadership role, have them select teams that are balanced, and that they will relate to them ... so they have the responsibility of taking [instructions] back to their team and making sure everybody understands it, and if they don't then they come back to me.

From Kara's perspective, student leadership, responsibility, and patience were as important in the classroom as skill level or performance. Students as leaders were responsible for supporting slower learners. According to Kara, a student's lack of skill did not preclude involvement in an activity and was not associated with performance as a~ measurement of success in the physical education classroom. Understanding the game, leadership, and responsibility were the focus of Kara's teaching. Similar to the structure of Kara's classroom, the Sports for Peace classroom (Ennis, 1999, 2000) created a learning environment in which students became responsible for respecting and trusting each other, and low and high skilled students connected to their teams. Providing students ownership and leadership opportunities allowed them to 'feel a bond of respect that evolved when each person contributed in a legitimate and personally meaningful way' (Ennis et al., 1999, p. 14).

Just as Kara stressed the importance of students' patience in providing extra help to fellow students, Julie also encouraged students to have patience in understanding or helping each other during group activities. Mike, a student of Julie's asserted, 'Patience [is important] I think ... um, and from each other. Like, I know that when we're working in groups some people get impatient if like one of their partners is really bad or something. And they need to just be patient'. Students learned to accept one another in Julie's classroom because they felt responsible for collaboration and interaction among their peers. Kara's and Julie's emphasis on being patient in the learning process allowed students to acknowledge and accept each other's differences. By demonstrating understanding of their peers' differences (for example, high-skilled students assisting lower skilled peers), and recognizing the value of diverse strengths and knowledge, students created a sense of affiliation to each other. This attitude of accepting and valuing peers' differences limited students' feelings of alienation, disconnection, and isolation.

Providing leadership opportunities helped students understand that they all (low- and high-skilled students, friends, or classmates who are not friends, girls and boys), belong equally to the group. Using leadership as an instructional strategy provided a sense of responsibility among students, enhancing acceptance for each other. Adrienne, Kara's student explained:

Yeah when we are leader we can't just pick our friends, we can't just leave people out, we have to pick [include peers in the group equally] ... basically what's good for our team and what's good for them. We can't just sit there and say I want this person because they're my friends or I don't want this person because nobody likes them or I don't want this person because they can't run as good or they didn't have a good skill level, or if you leave that person out, then you won't be able to play right, and that

person's self-esteem would go down and you just don't feel good. So leadership is a big part and also if you're not a good leader and you're not responsible, your team won't do as well.

According to Adrienne, being a leader in a group activity meant being responsible for classmates' inclusion in the activities and providing other students' opportunities to be decision-makers in the class. Students learned how to accept and care about peers and they became aware and respectful of others. When the Sport for Peace curriculum was implemented in physical education classrooms, Ennis found that students' sense of responsibility helped them in enhancing their own skills and in caring for their teammates (Ennis, 1999, 2000). As Stinson (1998) wrote, human movement is not the prerogative of only skilled or talented students; a teacher's pedagogy should ensure all students (skilled and less skilled) are equally involved in the physical activity. Kara and Julie used strategies that enhanced learning for students of different skill levels and promoted student responsibility toward themselves and others.

Because Kara and Julie provided a student centered structure in which students were actively responsible in the class, students negotiated and validated each other's ideas. For example, Ken explained how students connected with each other through negotiation; in this case, Ken discusses how he and his classmates negotiated positions or strategies on the field:

In field hockey we did a lot of helping each other, like really coming together as a team and telling each other positions and what our game plans would be, instead of one of us just talking over and telling everybody what to do. We worked as a team to figure out what we were going to do.

Ken explained that through negotiation and discussion students collaboratively achieved a consensus on where and how to play in different positions. From a social constructivist perspective, when the teacher structures the class so that individuals in a small group must work together, students are encouraged to develop personal solutions to the focus of the group's objective, to listen and understand others' purposes, and to attempt and finally achieve consensus in order to reach a goal (Palincsar, 1998).

Building a Sense of Connection to the Community and 'the Real World'

Community Involvement through Physical Education

Social constructivist pedagogy expands the community of learners created in the gym to include experiences in the world outside of the school. In Julie's and Kara's classrooms, student learning was supported by students' sense of connection to the community and to real world experiences. One day during an informal conversational interview, Kara said, 'I am hoping that everything we do relates to the real world, because as I said, unless it does, unless they [the students] can see the big picture they won't apply it.' As she walked out of the fitness room she added repeatedly, 'Life skills are what they need to learn.' In practice, Kara helped students relate physical education to their own lives by having them construct their own fitness action plans, which she reviewed periodically during the school year.

Kara's teaching philosophy was to connect students' experiences in physical education to 'the big picture'. To Kara, connecting students' experiences to the big picture meant providing students with opportunities to develop a holistic understanding of how physical education relates to their lives. When asked what she meant by 'life skills', Kara reiterated, 'I think that's where education should be, in that we're telling the students that this [physical education] is not an isolated subject. It's something that you are learning that you need to make part of your lifestyle and see the big picture ... we want students to see us being a real active part of the community ...' Kara strongly believes that connecting physical education to student life experiences is a fundamental part of student learning.

Kara extended and related students' learning experiences in her physical education classroom to extracurricular physical activities. Her pedagogical approach allowed students to relate physical education to physical activities at home and to community events physical activities that students pursued outside of the school gym that were meaningful to their lives and important to them outside of the classroom.

Kara viewed the school as a fundamental piece of the community, a place that has a real connection and value to families. Kara commented:

What we want to see is us [the school] being a real active part of the community. We want parents coming in and feeling they can use our computer labs, which they do. They can come and enjoy the staff basketball and volleyball games ... The school is a real focal point in the community, where even homeless people do their laundry in the school.

Kara extended physical education to the community by involving students, their families, and friends in all kinds of physical activities and community events. She actively 'organized and involved students in real life experiences and developed partnerships with community organizations. Kara actively connected her physical education class to the community and students' lives:

... We look at partnerships outside of school such as a fitness center called the Fitness Shop ... the Fitness Shop made the school partnership ... We did the [local charitable] Walk, where everybody goes and walks a couple miles, with the families, with grandparents, younger brothers and sisters, everybody in the school ... the Leslie Run we just did, a community service project it's raising money ... and families are out running a 5k or walking.

Students were aware that activities organized by Kara connected to the community. In response to a question about how physical education was connected to her family and community, a student of Kara's commented:

... It keeps us (the whole family) connected a lot ... and we can just talk about things ... it connects to your community because you interact with all the other kids ... and it helps you a lot because it does make Newville a lot tighter.

In addition, Kara organized events with the elementary and high school to encourage affiliation and sense of community among all the students in her school's cluster. For example, at the end of the field hockey unit, Kara organized a field hockey game involving middle and high school students. 'I see it as part of the Physical Education Department, making a connection [with teachers in the high school] where these kids are going when they leave middle school', Kara said. Social constructivist pedagogy engages students in meaningful learning because of 'contextual interactions' that empower and reinforce student learning. When students share values, perspectives, and experiences with parents and community through classroom activities, the schooling content becomes part of students' daily life (Hollins, 1996).

Student connection to the community was also important in Julie's classroom. According to Julie, her previous experience as a teacher in a less affluent urban middle school contributed significantly to her teaching philosophy and pedagogy. In that school, confronting gangs, weapons, and fights were a daily challenge for students, teachers and the community. Because of her history in this school context, Julie started teaching self defense as part of the curriculum at her new school, and gained support from the students' parents and the community for her efforts.

Julie added the self defense unit to the physical education program to enhance students' self confidence and knowledge about protecting themselves, and enhance feelings of safety in their community. During an interview, Julie explained that she was trying to convince the school district to include self defense in its physical education curriculum because she believes that it is helpful and meaningful to students' lives and their communities. In discussing her teaching philosophy, Julie said that students learn when they pursue activities that connect to their lives, their communities, and their futures. She described the physical education classroom as having an important role and a positive impact on the student learning. She asserted:

I want them [students] to be able to understand [physical education] for lifelong activities. I don't expect them to be professional athletes or anything of that nature, I just want them to know the skills and the rules behind [physical education activities] ... because if they want to participate in something later in life, they would have the skills and the knowledge to do that ... I am trying to do whatever I can to make the society a better world ... anything I can do for them to make it better is what I am striving to do.

Julie's perspective of student learning relies on connecting student experiences in physical education to events and experiences in the community and the society. She also believes that teaching can change society for the better; in this case, Julie strives to make students feel safe in their communities. From the beginning of the self defense unit, Julie provided a variety of real life situations to actively engage her students in learning. Students became aware of real violence among youth by looking at statistics reported in 'One day in the lives of American youth', and by reflecting on the nature of the crimes. For example, during the discussion a student explained that knowing the statistics is important because it helped them to understand what is happening in the society among youth, their peers.

Learning about self defense was meaningful for students because of its authentic connection to their community. India, when asked about the importance of physical education in her life, commented directly on the self defense unit, saying, 'We all did that [self defense] chart thing labeled like, community that was important'. As Julie reiterated, the purpose of students' learning is to construct knowledge that prepares them for their everyday lives:

... Give them the knowledge or a little more self confidence in themselves to prepare for everyday life. You never know when you are going to need it. You know they can learn it now and keep [apply] their knowledge because they keep practicing at home and in high school ...

Julie recalled students' prior knowledge about life in their communities and connected them to the focus of the self defense unit. Julie carefully explained the purpose of teaching the unit, stressing with the students that the focus was learning how to defend or to protect themselves from dangerous, real life situations in the community, not learning how to fight. In class, when Julie asked students what they thought they were going to learn, students responded that they would learn how to protect themselves and feel safe in their community.

Julie structured a group activity in which students wrote terms that recalled their connections between the purpose of learning self defense and their experiences in the community. Julie also used study guides, posters, and a projector to recall and facilitate students' learning. In one lesson, groups rotated from one poster to another, each with a brainstorming and recalling their prior knowledge about the purpose of self defense and how it has related to their lives. Students brainstormed ideas related to self defense in the community 'gangs, safer streets, bullies, K.K.K., self assurance, parks, drugs, insane people, police, safer community, cults ...' and related to self defense in school 'guidance, peer pressure, weapons, lack of confidence, strangers, threats, rumors, suspensions, shooting, exclusion, drugs, threats, bombs ...'

After students brainstormed in groups or with partners, Julie guided a group discussion in which students shared their understandings and experiences in their communities as they related to the purpose of learning self defense. At the end of the unit, Julie guided students to actively connect knowledge learned in the classroom to real life community situations. In the discussion, Julie asked why, for example, one group wrote 'parks'. In response students explained that parks are places where it is easy for people to hide, and for this reason, they argued, parks are potentially dangerous places that should be avoided when alone.

Students also identified dangerous situations in their everyday lives, even in sports. For example, Matt remembered, 'Just like I notice when I go to the [baseball] game, I notice that there are some people, like, on drugs, some people get in fights ...' Through this activity, students actively connected the purpose of this unit to their own experiences in schools and outside of school. Kara's and Julie's pedagogical approaches allowed students to construct a link between their experiences in physical education classes to real life, community

situations. Students constructed knowledge and meanings by becoming socially and individually aware, by connecting to their peers, by creating a community of learners in the gym, and by connecting to their community and the world. Based on Dewey's (1916/1966) philosophy, students construct meanings when they experience learning situations that have the characteristics of real life. More recently, Fernandez Balboa (1997b), arguing for human movement experiences that encourage and support individual growth and social awareness in democratic communities, asserted that students should be encouraged to actively participate in physical activities that are personally relevant 'learners experience reality and relate events to the self' (p. 126).

Sense of Connection Enhanced Student Construction of Meanings

A sense of connection provided students opportunities to construct meanings relating their experiences in physical education to their lives. For example, Adrienne explained how peer connection created in her physical education class would help her to be successful in the future:

Like, it [sense of connection to a group] helps [you] to work better ... maybe you'll work for a big business when you're older and a business is based mostly on teamwork. [That business] it's not focusing on one person alone that tells everybody what to do. It's basically like the secretary needs to help the person in charge, the person in charge monitors everything that's going on and everybody relies on each other to make the business grow.

Adrienne experienced teamwork as meaningful for learning how to cooperate in a real life setting. The analogy that she presented explained the similarity she sees between building a successful business and building a successful field hockey team. Both of them need good collaboration and cooperation; both the business and the field hockey team need a sense of connection to be successful. Kara and Julie often reiterated that meaningful learning in physical education occurred when students connected knowledge to real life situations. Matt, a student of Julie's, said, 'Well, you have to come up with plays and stuff, and everybody has to do their part. And that [connecting to peers in a group] is also a good thing so when you grow up you can do that [you can collaborate] like in a business'. Students' experiences in physical education were personally meaningful because of their connection to real life situations; the students recognized the need to learn how to work with others as beneficial both inside and outside of the physical education classroom.

The sense of connection between students in Julie's and Kara's physical education classes also provided students opportunities to make meanings, to reflect on themselves as individuals and to relate themselves to others. Tania, one of Kara's students, felt the connections she made with peers helped her to improve herself. She said:

It [connecting with peers] helps us learn how to get along with other people ... to get to know them more ... it actually helps [you] to become a really better person. If you don't understand others and you don't understand that sometimes you are good at something and sometimes you are not, then you can't really say that you understand people and that you need to understand others to be a good person.

Ken, Kara's student who is in special education, added, 'It [connecting with peers] helps us a lot because we can understand better, not just by ourselves, but with more people helping us. It's better'. Ken explained that connecting with peers is important because students understand the content better when learning with peers than when learning by themselves. As Stinson (1998) suggests in her search for meaning in human life, teaching should be a tool for enhancing personal and social awareness.

Physical Education and The 'Real World'

Kara extended students' experiences in the community to the real world through her physical education classes and by sharing her personal experience. When her son, who is in the military, was transferred to Bosnia, she organized faculty and students at the school to adopt a school in Bosnia and sent school supplies and sporting

equipment to the children there. The community service project Kara organized was so successful that she and several of her students were interviewed on 'Good Morning America!' about the exchange. In April 1999, a local newspaper reported, 'Students become wartime correspondents'. The article reported that students in Bosnia received school supplies and sports equipment from Newville's students. 'Newville Middle School also sent letters, sports equipment and school supplies, and sixth graders put up a web site about Bosnia ...' Enthusiastically and emotionally involved in the project, Kara explained:

... We put a big box in a hall and we collected clothes. We went to stores and got money and grants and bought school supplies. We also got PE equipment and sent soccer balls over there ... kids wrote letters, they became friends ... they would watch the news and follow [the events in Bosnia] in social studies class. They knew exactly where Bosnia was ... it was so neat!

When asked what she thought students learned from this experience, Kara said, 'They learned that they are not isolated in Newville, that there is a big world out there and we have to respect the diversity. We have to have an understanding for what people were going through'. Kara's physical education classroom was not an isolated land in a sea of the subject areas, but a well integrated part of the school community where students learned about diversity through real world experiences.

Students learned about the diversity of human experience by connecting to a different culture, and to social studies learning about Bosnia, its geography, its language, and its culture, as well as the political and economic situation in Yugoslavia. As Kaplan(1997) argues, connection to real world events provides students with 'social awareness,' which he defines as an understanding of society. Similarly, Stinson (1998) advocates for liberation of students from dehumanizing pedagogy and for 'facilitating connections teacher/student, student/student, student/self, student to the world ... [so that] the child to connect not only with the self but with the larger world' (p. 81). Kara's social enterprise was to connect physical education to real world events, like the Bosnia's conflict; by sending educational materials from the United States to students in Bosnia, Kara raised her students awareness of the world around them. In physical education, the school community became a microcommunity for students, reflecting the social constructivist perspective that 'Life is a classroom' (Hoel, 1997, p. 15).

Conclusion

This study provided an example of social constructivist pedagogy in two middle class, public school physical education classrooms on the East Coast of the United States. Unlike Kara and Julie's schools, many public schools today struggle with a lack of resources, and many students experience a disconnection between school and their lives at home and in their communities. In those contexts, the teachers' work and students' learning are often challenged by poverty, violence in school or in the school community, and fear; school may be a place where students associate learning with feelings of alienation, of loneliness or rejection.

Despite the hardship in both students' and teachers' experiences, social constructivist pedagogy can enhance a sense of connection among students, students and teachers, and students' and teachers' communities. To date, researchers in physical education have provided evidence that student engagement is often limited by traditional pedagogical approaches which lack meaningful connections between student life and the context created by traditional multiactivity, sport based curriculum (Bain, 1985; Ennis, 1996, 1999; Ennis et al., 1999; Fernandez-Balboa, 1997a,b; Kirk 1993). If traditional physical education fails to provide meaningful experiences for student learning, social constructivist pedagogy shows promise for filling this gap. Social constructivist pedagogy takes students' varied lived experiences and the schooling context into account, and envisions the participation of the student in a social community of learners as the primary vehicle for the creation of knowledge and understanding.

Certainly, social constructivist approaches to teaching physical education may require educators to change their attitudes toward student learning and skills based lessons. To implement such a curriculum, physical educators would have to shift from their conceptualizations of learning away from the isolated performance of skills to the

understanding of learning as a social construct situated in specific learning contexts. In addition, following Kara and Julie's instructional examples, a social constructivist approach to physical education would require enlisting students to play active roles in the classroom by sharing leadership and responsibility, and learning how to negotiate decisions and emerging conflicts derived from their prior experiences and understanding. These learning contexts for physical education require highly structured and organized group activities in which the teacher anticipates students' differences and provides a variety of roles to engage all students in the activities. By removing the teacher from the center of the class, social constructivist teachers strive to create an environment that values each student's contribution to the class, and therefore her/his connection to the group, and engages students in the construction of knowledge and meaning (Prawat, 1996). Teacher emphasis on student collaboration could engage students in understanding and accepting student diversity of skills and ways of being.

Although the results of this study cannot be generalized, only contextualized to these two physical education classes and schools, Kara and Julie's pedagogy still offered insights into social constructivism that might improve the quality of student learning in physical education classes. If teachers create learning environments that strongly promote the connection between students' experiences in their physical education classes and their lives, students' feelings of alienation and loneliness may be prevented. Finally, if schooling and physical education are to provide safe places for learning, social constructivist pedagogy is needed to create 'communities of learners' in which students and teachers engage in educational experiences with a sense of connection to their lives, their communities, and the world.

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