

## **The Role of Reflection in Shaping Physical Education Teachers' Educational Values and Practices**

**Niki Tsangaridou**  
University of Cyprus

**Mary O'Sullivan**  
The Ohio State University

This study was motivated by the need to understand the role and function of teachers' reflection as it "is" rather than as it "ought" to be. The focus of the study was to describe teachers' reflection within the teaching and learning environment, as well as the role of reflection in their professional development. Participants were four experienced elementary and secondary physical education teachers from urban and suburban school districts. Data were collected through observations, interviews, and journals. Case analysis and cross-case analysis were employed in analyzing the data. Findings indicated that the participants' microreflection, the type of reflection that informs teachers' day-to-day practices, addressed pedagogical, content, ethical, moral, and social issues. Their reflections were situationally driven and contextually bound. Macroreflection, the type of reflection that informs teachers' practices over time, influenced changes in the teachers' classroom practice and professional development.

The notion that teachers should be more reflective and in control of their professional development has been emphasized by educators for decades (Dewey, 1933; Calderhead, 1989; Cruickshank, 1987; Van Manen, 1977; Zeichner, 1987). Today, the concept of reflection has been accepted as a generic pedagogical principle in the teacher-education community (Feiman-Nemser, 1990; Calderhead, 1989). Many instructional strategies have been developed and used in preservice and in-service education to mediate and enhance teachers' reflection (Zeichner, 1987), and scholars from diverse theoretical orientations have shown interest in developing teachers' reflective abilities and dispositions (Cruickshank, 1987; Van Manen, 1977; Zeichner, 1987). Advocates from different theoretical orientations claim teachers should reflect primarily on the aspect of teaching and schooling valued by their specific orientation (Calderhead, 1989; Richardson, 1990; Valli, 1990; Zeichner and Tabachnick, 1991). Paradoxically, the debate over what the content and focus of teachers' reflection ought to be has not been accompanied by empirical efforts to determine the current state of teachers' reflection, either the aspects of teaching they value and think about or why they reflect on certain aspects of teaching.

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Niki Tsangaridou is with the Education Department at the University of Cyprus, Kallipoleos 59, P.O. Box 537, Nicosia, Cyprus. Mary O'Sullivan is with the School of Physical Activity and Educational Sciences at The Ohio State University, 309 Pomerene Hall, 1760 Neil Avenue, Columbus, OH 43210.

A second issue that has not been addressed empirically in the reflective literature pertains to the relationship between teachers' educational values and theories and their reflective practices. Although theoretical propositions on teachers' thinking and reflection "generally agree that teachers' personal theories and beliefs serve as the basis for classroom practice and curriculum decision making, the nature of this relationship is not well understood" (Ross, Cornett, & McCutcheon, 1992, p. 3). Some scholars have argued that teachers' values and theories may influence and shape the nature of teachers' reflection and practice (Clark, 1988; McNamara, 1990; Osterman, 1990; Pajares, 1992). McNamara (1990), for instance, suggested that teachers' values and theories may influence the nature of teachers' reflection, thus judgments about teachers' reflection should take into account their values and theories. Others have suggested that teachers' reflection may influence and shape the nature of teachers' values and practices (Sanders & McCutcheon, 1986; Smyth, 1992; Zeichner & Liston, 1987). Sanders and McCutcheon (1986) argued that through reflection it is possible teachers will come to recognize values and theories they hold implicitly. In short, it has been argued that educational values and theories may be shaped by teachers' reflection and also shape the nature of reflection. While theoretical arguments regarding this reciprocal relationship between teachers' educational values and reflective practices have been endorsed by many scholars, the reflective literature includes no empirical efforts that further our understanding on this issue.

A third issue in reflective research on teaching relates to "teachers' voices" and the contexts within which research problems and questions are examined (Calderhead, 1989; Zeichner & Tabachnick, 1991). Writing about research on teaching, Cochran-Smith and Lytle (1990) pointed out that

what is missing from the knowledge base for teaching, therefore, are the voices of the teachers themselves, the questions teachers ask, the ways teachers use writing and intentional talk in their work lives, and the interpretive frames teachers use to understand and improve their own practices. (p. 2)

Reflective research has been criticized for being shaped by the theoretical and philosophical interests of the investigators. Accordingly, it has been suggested that if researchers want to address teachers' thinking and reflection, they should do so in terms of the actual problems teachers encounter in the classroom and what they nominate as significant. Therefore, efforts to study and describe the nature and content of teachers' reflection, as well as judgments about such reflective practices, need to be carried out where these practices occur. In addition, contextual factors that may structure teacher's reflection also need to be considered.

Theoretical suggestions about aspects of teaching that physical education teachers should reflect on can be found in the literature (Dodds, 1989; Gore, 1990; Graham, 1991; Tinning, 1991). However, empirical evidence to support these theoretical propositions on reflection in physical education is almost nonexistent (Gore, 1990; Rovegno, 1992; Sebren, 1992; Tsangaridou & O'Sullivan, 1994). While the literature proclaims the usefulness of reflection, as well as a strong interest in developing preservice and in-service teachers' reflective abilities and predispositions, there is a paucity of knowledge regarding the aspects of teaching that teachers actually value and think about, or the relationships between teachers' educational values, reflection, and professional practice. The empirical work to date accepts the value of reflection *a priori* and tends to focus on strategies or programs that can

be used to promote teachers' reflective practices and abilities. This study was motivated by the need to understand the role and function of reflection as it is rather than as what it ought to be. Therefore, none of the theoretical traditions or frameworks were given priority or served as the theoretical basis for studying the concept of reflection. We believe that much can be learned by studying the aspects of teaching and schooling that teachers reflect on and their reasons for doing so. To accomplish such an undertaking, we studied reflection within the teachers' operational setting. Our intent was to provide teachers with the opportunity to describe and give meaning to their teaching within the contexts that shape their professional activities. Thus, this study has taken a more pragmatic approach towards teachers' reflection by identifying the need for description before providing more prescriptions on reflection.

This study was part of a larger project designed to provide a detailed account of how physical education teachers reflect on classroom and school realities in authentic settings. The focus was to describe teachers' reflection within their teaching and learning environments, as well as the role of reflection in their professional development. The research questions that guided the investigation were the following:

1. What do these teachers reflect on during their day-to-day teaching, and how is this reflection related to their practice and educational values (micro-reflection)?
2. To what degree have these teachers' reflection, educational values, and practices changed over time (macroreflection)?

In this study, reflection was defined as *the act of thinking about, analyzing, assessing, or altering educational meanings, intentions, beliefs, decisions, actions, or products by focusing on the process of achieving them*. This act may occur during or after the practice is completed. The primary purpose of this action is to structure, adjust, generate, refine, restructure, or alter knowledge and actions that inform practice. Microreflection gives meaning to or informs day-to-day practice, and macroreflection gives meaning to or informs practice over time.

## METHOD

### Setting and Participants

Sites for this study were elementary and secondary public schools in a large city in the U.S. Midwest. Four experienced teachers who were willing to participate in the study were chosen on the basis of a stratified, purposeful sampling approach. They provided information-rich cases for in-depth study (Patton, 1990). Stratification requires the identification of important criteria or variables related to the phenomenon under investigation (Glesne & Peshkin, 1992). Three criteria guided participant selection: (a) school level (e.g., elementary and secondary); (b) school setting (e.g., urban and suburban), which defines the teaching context and which, in turn, may influence teachers' reflection, educational values, and practice; and (c) a minimum of ten years of teaching experience. This last criterion was a prerequisite for participation, because one focus of the study was to describe the role of reflection in the professional development of teachers.

Based on the two selection criteria of school level and school setting, four teachers were selected as participants: Ari, a male teacher with 10 years of teaching experience working at a suburban elementary school; Liza, a female teacher with 23 years of teaching experience working at an urban elementary school; Stella, a female teacher with 19 years of teaching experience working at an urban secondary school; and Lara, a female teacher with 10 years of teaching experience working at a suburban high school. All four teachers were White. Ari's and Lara's students were mostly middle- to upper-middle-class White. Half of Liza's and Stella's students were White, and the other half were African American and Hispanic. All students were from lower- to middle-class families.

### **Data Collection**

Observations (field notes), interviews (formal and informal), vignettes, and journals were used for data collection. Below, each strategy is described in terms of its suitability for answering the research questions.

#### *Observations*

The general purposes of the observations were (a) to describe teachers' reflection as it related to or affected life in the classroom, and (b) to describe what educational values were manifested in the classroom through teachers' actions. The participants were observed a total of 68 times while they were teaching regular class periods: 18 lessons from Ari's kicking, catching, and dribbling units; 16 lessons from Liza's fitness, basic movements, and soccer units; 16 lessons from Stella's tennis and volleyball units; and 18 lessons from Lara's fencing and exercise physiology units.

We also observed clusters of lessons within and across units (at least two). Field notes were taken and all lessons were videotaped by one of the investigators. Field notes related to classroom activities and events pertinent to the nature and function of the participants' reflection, values, and practices. We reviewed videotapes after the lesson and recorded supplementary field notes whenever necessary.

#### *Formal Interviews*

Three formal interviews were audiotaped with each participant and later transcribed. In the first interview, participants provided a personal history regarding their educational reflection, values, and practices. They described (a) changes in their reflection, educational values, and practices over the years; (b) their current educational values and practices; and (c) the impact of day-to-day reflection on their values and practices. Open-ended questions, developed in advance and field-tested twice with teachers, provided a frame of reference for the formal interviews. We conducted the first interview with each participant before we collected observational data.

The second interview took place after all the observational data had been gathered. We formulated our questions both from the content of the first interview and our observations of the participants' lessons. The interview allowed participants to give meaning to their actions, give reasons for decisions they made during the observed lessons, and describe their thinking and reflection on day-to-day teaching.

The third "vignette" interview took place directly after the second interview; we developed open-ended questions to facilitate this discussion.

### *Vignettes*

After the participants completed their second interviews, we gave them hypothetical vignettes that we had developed to describe different educational issues in classroom situations. During the vignette interview, participants discussed their views regarding the content of the vignettes. The purpose of having the participants respond to the vignettes was to identify their views on different aspects of teaching. Each participant was asked to respond to four vignettes focused on (a) pedagogical issues, (b) pedagogical content and knowledge issues, (c) moral and political issues, and (d) social issues (gender and ability level).

### *Informal Interviews*

Informal interviews of the participants occurred before and after observation sessions. In the preobservation discussions, the participants were asked to talk about their lesson plans. In the postobservation discussions, the teachers were asked to explain if they had made any changes in their teaching and why. This information was recorded as field notes and expanded later whenever necessary.

### *Journals*

We asked the participants in the study to keep written or oral journals for the class periods in which observational data were gathered. The purpose was to explore the meanings these teachers gave to their experiences, as well as to describe the aspects of teaching they reflected upon and considered important. We asked participants to describe in their own words anything they wanted to discuss about their teaching. Before observing the next lesson, we read the written or listened to the oral journals of the teachers' previous lesson. During the observation session, we looked for any target behaviors that had been identified for maintenance, improvement, or change in the teachers' journals.

## **Data Analysis and Trustworthiness**

The data collected through observations, formal and informal interviews, a vignette interview, and journals were analyzed inductively. Through multiple and careful examinations of the data, we used key linkages, themes, and patterns drawn from various sources to develop categories to analyze and interpret the qualitative data (Erickson, 1986; Glesne & Peshkin, 1992; Patton, 1990). Because four participants were involved in the study, our analysis of the data began with individual case analysis and was completed with a cross-case analysis (Merriam, 1988; Patton, 1990; Yin, 1989). According to suggestions made by several scholars in ethnographic inquiry (Bogdan & Biklen, 1982; Erickson, 1986; Merriam, 1988; Patton, 1990; Yin, 1989), once we completed the case analysis for each participant we began the cross-case analysis. Themes and patterns drawn from the four individual cases were compared and contrasted for similarities and differences. The synthesis of the cross-case analysis represents a descriptive and interpretive framework of the four participants' educational values, practices, and reflection (Merriam, 1988; Patton, 1990; Yin, 1989). We also used three strategies for establishing trustworthiness.

### *Triangulation*

In this study, we used data triangulation, theory triangulation, and methods triangulation. During the data triangulation, a piece of evidence was compared and cross-checked with other kinds of evidence: for example, comparing field-note evidence from different observations. Theory triangulation was used in interpreting the data: different theoretical perspectives on reflection (e.g., the academic, social efficiency, developmental, and social reconstructionist) were taken into account while looking at the same data. The final type of triangulation used was method triangulation: gathering field notes and completing interviews for the same question.

### *Member Check*

Member-checking occurred twice. First, after all interview data were transcribed and before data analysis, the participants received the interview transcription packages. They were invited to clarify, elaborate, or suggest changes to the original responses. All four participants agreed that the transcriptions were accurate and none of them suggested any changes other than minor editing corrections. After we had completed all four individual case narratives, we conducted the second member check. The participants received the case narratives and were invited to correct inaccurate information and respond to the interpretations. All four participants reviewed the case narratives and suggested slight changes to improve the accuracy of factual information or to clarify their views in the quoted parts of the document. None of the subjects suggested changes in the interpretations other than minor editing.

### *Peer Debriefing*

Two individuals who were experienced in ethnographic and physical education studies served as our primary sources of peer debriefing. We scheduled peer debriefing meetings with one who had read the raw data, preliminary analysis, and interpretations, as well as the final case narratives. The discussion in those meetings focused on methodological issues, the analytic process, and narrative interpretations. The second individual was invited to read the narrative cases and comment on areas requiring more evidence or clarification.

## **RESULTS AND DISCUSSION**

Findings are structured and presented around the two major research questions. The first section describes the participants' day-to-day reflection and how this reflection related to their educational values and practices. The second section discusses the role of reflection in the professional development of the participants.

### **The Role of Microreflection**

Microreflection has been defined in this study as reflection that gives meaning to or informs the teachers' day-to-day practice. The discussion now turns to the function, origin, and focus of the participants' microreflection.

### *Function and Origins of Microreflection*

The primary function of the participants' reflection was to provide meaningful learning experiences to students. According to these teachers, the process of reflection informs them about what needs to be changed, and when and how these changes need to be made to facilitate and enhance the learning process. Liza pointed out that if something goes wrong during the lesson, she analyzes her teaching behaviors and makes appropriate changes when needed:

First of all, if something goes bad, I try to look at myself first. And then if it's something I can change, then I try to do that. I don't always do it perfectly, I'm sure, but I try to always look at myself first if something isn't going right. (Interview 2)

Liza indicated in one of her journal entries after a first grade class,

I wasn't pleased with the overall lesson. Kids didn't seem to respond as they normally do to the locomotor skills. And I changed the game for today. I changed the galloping during the tag game all the time to only galloping when the music is on, and I changed it to running when the music was off. And it worked out much better. So I think that change did make the game much better. (journal, October 5)

An analysis of instructional events, lessons, or units generated knowledge for succeeding ones. Aris pointed out, "I try to analyze . . . what it was. Then you try to come up with some conclusions as far as what should be used in the future" (Interview 1). Exemplary or unsuccessful lessons made these teachers think about how to structure new teaching and learning experiences. Stella indicated why and how she analyzed exemplary lessons:

When lessons do go really well, you wonder why did that one go real well and the other one didn't. I think I try to see why did that happen? Was it me? Was I feeling better? Was I more energetic? Did I do it? Or was it the kids? Was there some reason why the class went better? I guess I try to figure it out so I can repeat it . . . and try to maintain it. (Interview 1)

The participants' microreflection was based on ordinary experiences. In a manner similar to Schon's (1987) concepts of reflection-in-action and reflection-on-action, the participants' reflection occurred during and/or after instruction. Lara explained:

For example, if I had a class first period in fencing that didn't go well . . . I do a lot of self-drilling or self-reflection on how things went. . . . In between class periods we have a time where the students change their clothes and I am usually organizing my thoughts right then. There is a new class coming in. I want to spend more time on that drill and that rotation went well, and I want to use that again, so that time I reflect right after my class goes to leave. A lot of times it happens right in class, though. I'll be caught in the moment and I'll go Oh, let's try this. . . . A lot of times you are reflecting right there and thinking that does seem to be getting a little clearer, or not getting there, or whatever the situation might be. (Interview 1)

Students' responses and problems during instruction were analyzed, interpreted, and addressed by these four teachers as they were teaching. Often, after instruction, they reconstructed situations in order to analyze their actions and the events that occurred, either to change or modify their practices across lessons or across classes. Stella wrote in her journal, "Students on the whole were not prepared to take the test for unit one. I can see where I will have to be very strict on them all the time to follow the objectives and work. I am wondering if this method of teaching is the right way for this new group of students" (journal, October 6). Lara provided an example of how the nature of the class influenced her to make some changes in her lessons:

I had a very big class, a big number of students in the class. For fencing, this was quite a few. I had 18 in there and I usually have no more than 14-16 students. I arranged the tournament differently in that class. I modified their tournament for that actual reason, so that more students could get a chance to participate without a lot of transition time or waiting time. (Interview 2)

The following informal interview and field-note segments were recorded from the fencing class that Lara described above.

#### Informal interview before class:

Lara pointed out that she planned to do some modification in this class since the class is large (18 students). She decided to use the "team cards" strategy in eliminating some managerial and transitional problems. (informal interview, October 13)

#### Observation:

10:15. Lara asked students to come close to her before taking the fencing equipment. She explained to them that she had prepared some cards for them. She introduced "team cards" to students. On each card were the names of the students who would work in the same group. She was very explicit about how the team-card system would work. Lara and the students discussed the new strategy. Then, students were asked to go and get ready for their matches. Students took their equipment and started their matches. (field notes, October 13)

#### Informal interview after class:

Lara felt that the lesson went much better than yesterday. The "team cards" strategy helped students to get into activity more quickly and provided them with more opportunities for practice since they did not have to move from one group to another. She hoped that tomorrow students would work more, since they would get used to the team-card strategy. (informal interview, October 13)

Students' responses to instruction (e.g., task modification and motivation), their unsuccessful experiences during the learning process, and the nature of each class (e.g., students' characteristics, their needs and capabilities, and class size) were the major factors that stimulated the participants to make changes where necessary. Unclear, unchallenging, or inappropriate tasks that interfered with students' success stimulated the participants to change elements of their teaching, as Liza explained in the following interview and field-note extracts:



If I see that somebody isn't understanding it [the task], I watch for that first. I may have students repeat my directions sometimes, depending if I think it's a more complex level of some sort. I may have a student repeat in their words. Sometimes it's better communication coming from a student when they say it in their own words. And then if students seem unchallenged, like the one day with the passive defense, I should have picked up on that to change to active defense. I was really upset that day with myself, but that type of thing happens. (Interview 2)

Although Liza did not change the passive defense to an active defense during her first teaching lesson, she did change it during the second teaching period:

10:05. Students came in the gym. Liza told them that they would go out in the field to practice their soccer skills. They would work in three stations. She pointed out that today they would do active rather than passive defense. In the active defense, the defender can intercept the ball. Two students were asked to demonstrate the active defense while Liza pointed out the critical elements of the skill. Then she told the students they should do short not long kicks. She asked them to stay within the boundaries of their stations. The defenders could take the ball only if the ball was out of control of the offensive player. (field notes from second class, October 27)

Informal interview after the second class:

Liza felt that students in the second lesson were more actively involved and had more fun than the students in the first lesson. At times, during her second lesson, she felt that students were out of control. It is hard for her to teach the concepts of offense and defense together. However, she likes to change things in her teaching and try new ideas. Comparing the two teaching sessions that she had today, she felt that students in the second class were more active and had more fun after changing the passive defense to an active defense. She told me that next week she would take the first class outside, although she told them that they would stay inside. She would tell them that it was her fault that she did not change the passive defense to an active defense. (informal interview, October 27)

Constructing successful learning experiences motivated, in Schon's (1987) terms, these teachers' reflection-in-action. As Aris explained,

If they [the students] are not experiencing success, it's my fault. So I have to quickly make a change because I can't wait seven days. I have to make the change on the spot. . . . because I want them . . . feeling like they've achieved a great deal. (Interview 1)

Lara explained:

I get an emotional, kind of a psychological reaction. . . . If you start to see inappropriate behavior because . . . they're bored . . . or they're not achieving the skill. They're frustrated with it. So that's how I know right away how something has to change. I have to do something different." (Interview 1)

### *Dimensions of Microreflection*

In the literature, several prescriptions exist about what aspects of teaching teachers ought to reflect on. These prescriptions range from pedagogical to ethical and moral issues (Adler, 1991; Gore, 1990; McNamara, 1990; Zeichner & Tabachnick, 1991). There has also been a tendency in the literature to prioritize the content of teachers' reflection (e.g., Van Manen, 1977). This study has taken a "descriptive" rather than a "prescriptive" approach to investigating teachers' reflection. Our intent was not to apply a predetermined conceptual framework against which aspects of teachers' reflection could be evaluated, but rather to identify these aspects inductively and study factors that may have influenced the teachers' focus of reflection. Here follows a presentation of the commonalities and differences in the pedagogical, content, social, and ethical and moral dimensions of the participants' reflection.

*Pedagogical Issues.* All four participants emphasized pedagogical issues. They reflected on students' progress and improvement and analyzed how their instructional practices affected student learning. The influence of their teaching behaviors was constantly analyzed in relation to the lesson's instructional objectives. Stella explained:

I'm most concerned that they're learning the skills. That's my number one priority. I want them to be proficient in the skill that I'm teaching. My second concern is understanding the game. And I suppose the next priority would be their association with each other. In other words, being cooperative and being able to help each other, and learning to teach each other and that type of thing. I suppose then my next priority is them behaving in class. (Interview 2)

Two examples from Stella's journal follow:

Well, another unexcited lesson. I'm not sure if it's me or them. I was hoping this class lesson would help them think while they were playing. I was wanting them to concentrate on what they were doing and begin to develop a sense of teamwork. (journal, November 6)

Class went fairly well. Most students seem to grasp the spike approach but are having some problems still with facing the net instead of coming in at an angle. (journal, November 10)

Liza also wanted her students to develop their physical skills, and her journal writing frequently reflected her concern with student learning:

I hadn't seen these classes for about three weeks and I thought it was quite obvious. I felt a little panicked when I was teaching because they are further behind. They really had difficulty with the galloping, which should not be at this grade level. I'm going to review it again next week and just move on with things. (journal, October 7)

*Content.* All four participants agreed on the importance of content knowledge, but only Aris and Lara reflected on content-related issues. For Aris, content-related issues emerged in teaching dribbling to primary grades; for Lara, content issues arose in teaching exercise physiology to high school students. Aris stated:

Another thing that's making me think is dribbling is much harder to do as an individual task. . . . I'm going to have to rethink how I'm doing it. I'm really not satisfied with this whole unit. (journal, November 23)

*Social Issues.* All four teachers in this study reflected on social issues, although there were differences in the social issues they discussed. Liza was concerned about female attitudes toward involvement in sports and the negative attitudes of some male African American students toward soccer. She was frequently critical of herself on these issues:

Very rarely do girls see other girls playing sports. If it's not Olympic time or NCAA tournaments, they never see women or girls involved in sports in our country compared to males seeing male role models of sport figures. . . . I think that's a big problem. Just the gender issue and our expectations: approval, reinforcement. And why would a girl learn a sport if it's not appreciated? Only a few will just like it automatically. Rarely do they change, so to speak, and become a basketball player if they don't have the interest at the beginning. I want to do something about it. I'm not sure what to do. When I ask a question, ten boys raise their hands. I'm not getting a lot of that from the girls. I don't want to put them on the spot, necessarily, when their hand isn't up, but I feel it may be something I'm doing. Maybe I'm reinforcing the males. That's really bothering me. I think about whether something isn't quite right in class. I don't get the same intensity from many of the female students. (Interview 2)

The following journal segment was recorded by Liza after two fifth-grade classes.

Soccer is just starting to be accepted by, particularly, the Black male athletes. I've been told in previous years that this is a White sport and they didn't even want to do it. But it is improving, and you know of course I pointed out Pele in previous years. . . . I'm sure a lot of the students haven't seen soccer games, and it's just starting to grow in this country. I didn't do maybe that good a job either. (journal, October 26)

Lara's reflection on gender issues focused on the male students in her class. Although it was their choice to participate, Lara believed it was harder for the male students in the exercise physiology class to accept some of the aerobic routines that were perceived as a female activity. Thus, the composition of the class was a concern to Lara because

just as I have a concern toward the female end of things . . . I also, on the other hand, have a lot of sensitivity for the male. . . . In a class where they're feeling vulnerable because of the activity, where it's a stereotypical female activity, you have to be sensitive." (Interview 2, pp. 51-52)

Stella reflected that social influences affected students' view of the purpose of schooling as another form of entertainment: "Talking to other teachers, it's not just physical education. It's occurring everywhere. . . . You almost feel like you have to entertain them. And I think a lot of this is due to TV, videos, video games" (Interview 2).

Aris emphasized that problems students experience in their personal lives are visible in learning situations. He felt one of his responsibilities as a teacher was to help students overcome personal problems:

K—, the young girl in the K-1 split, last class. She's not a very happy child and I've been concerned about it for a while. That's when I sent C— to get the guidance counselor to see, find out if she's been counseling this child and see if there's something wrong at home, something like that. . . . I'm always concerned when a child doesn't smile about something. If they're not smiling in here, I want to know why, and it bothers me because sometimes I think it's me. Maybe it's me. Maybe it's something I'm doing or not doing. But with her, I've observed that when she walks through the door instead of screeching with a big grin on her face ready to go, it looks like she's on the verge of tears, and I'm concerned about that, because I hate seeing children sad. They should be the happiest people in this world. I need to help find out if maybe there is something really wrong. . . . Occasionally, you'll get a child like that who has been abused, either by a parent or a relative or something. And the added fear is that I am a male teacher. . . . I may be the only male they come in contact with other than their dad. So I am concerned in that regard too. (journal, November 16)

Aris believed that young children are socialized and educated to protect themselves from perpetrators, who are always portrayed as males. He felt that because of a lack of male teachers at the elementary level, he needed to make extra efforts to gain the trust of students, especially female students. Aris explained why he always has to consider his interaction patterns with female students:

For instance, every piece of education as far as teaching children to protect themselves, teaching anti-drug, anti-abuse, anti-sexual abuse, all that, the perpetrators are always males, and they start learning that in kindergarten. So then they come in contact with a male teacher and that's a big concern of mine. (journal, November 16)

*Ethical and Moral Issues.* Reflection for Aris, Lara, and Liza included issues about students with developmental handicaps (DH) in their classes. Aris, who is a coach for special Olympics, felt that students with disabilities should be included in regular classes, but he believed that they need to be mainstreamed according to skill-level rather than chronology in order to provide more benefit from instruction. He pointed out that

it's not fair to them [DH]. It's not fair to the other kids, because you can't expect them to drop down [skill] levels just to accommodate a lower level. Because . . . that's when the kid is not learning and their parents can only argue, Hey, my child has a right to learn. (Interview 2)

### **The Role of Macroreflection**

Reflection has also been linked to teachers' professional development and growth (Calderhead, 1989; Zeichner, 1987). Reflection that gives meaning or informs practice over the years has been defined in this study as *macroreflection*. The second research question pertained to the role of macroreflection in the professional development of teachers. To accomplish this objective, we took an historical approach: specifically, we discussed the professional issues these four teachers viewed as problematic, how these issues changed for them over the years, and the factors that influenced such changes.

### *Problematic Issues of Teaching and Schooling*

Even though the participants in this study worked at different schools, they expressed common problems, concerns, and frustrations about teaching and schooling. Subject matter concerns, societal concerns, and contextual concerns were discussed.

*Subject Matter Issues.* Systemic problems such as the marginalization of subject matter can imprison teachers, irrespective of the energy and professionalism of individual physical educators (Locke, 1992). The literature has shown that physical education is perceived as a marginal subject matter in schools (Siedentop & O'Sullivan, 1992; Sparkes, Templin, & Schempp, 1992). All of the participants except Stella indicated that physical education has been a marginalized subject area in schools. As a result, the allocated time for physical education in the school curriculum is limited. All of them emphasized that teachers from other subject areas as well as administrators need to realize that physical education is an important aspect of students' education. They felt that physical education needed more allocated time and should be a curriculum requirement. As Lara emphasized,

I know you can't change people's perceptions that easily. I want [physical education] to be seen as a very viable and very important subject area and for students to be required to take it. . . . It should be a reflection of where the society is going in the sense that so much of our leisure and time after our work should be constructively used in either watching, observing, attending sporting events or participating in them. That's probably the major frustration I have with it right now. (Interview 1)

A second concern related to the marginalization and devaluation of physical education is a result of low or nonexistent performance expectations for physical education in many school systems. The participants believed that physical education teachers must raise performance expectations and expect more students to perform up to their potential. Aris emphasized that "expectations in physical education have always been low, [and] expectations for achievement in physical education, especially for the female population [have been low]." (Interview 1)

*Societal Issues.* Schools and classrooms can be viewed as small social systems that reflect the social organization of the society in general (Kirk, 1992; Lawson, 1989; Sparkes, 1989). All four participants expressed concerns about broader societal issues that affect teaching and schooling. Although these teachers recognized that it was difficult to eliminate them, they were aware of them and tried to address social problems embedded not just in the school culture but in society.

The participants believed gender equity is a societal problem that is difficult to resolve. Even though these teachers worked hard to make things more equitable in their teaching and at their school, such changes have not been established to their satisfaction. As Aris pointed out,

The influences are so powerful outside of the school, in school. In society in general. . . . They [parents] have a tendency to still raise them according to the typical social norm status of pink and blue. Pretty shoes for girls. Tennis shoes for boys. In other words, appearance is important. Competence is important. And I can work all year and still have a second grade female say

boys play hard, girls play soft. . . . Well, our society teaches those kids to make those generalizations. . . . I guess I have a real defeatist attitude towards that issue now. I'll keep fighting because I know I can't give up. I'm not a quitter. I'll keep working on that and working on it and living in a responsible manner as a teacher, because I believe teachers have a responsibility to teach in an equitable manner. (Interview 1)

Liza was the only participant who addressed race-equity concerns. She emphasized that many things have not been equitable for non-White students in schools and believed teachers need to learn more about the background of their students, their history, and their culture to provide them with a more meaningful education. She suggested that

it [knowledge about cultures] will help all teachers in at least understanding and not thinking there is just one type of student that's okay. The one that comes in sits down, A/B student. That there are other children and they're okay too. . . . We have set up schools in very middle-class European ways of doing things. . . . If we have knowledge about cultures, maybe we can understand our students. (Interview 1)

Liza and Stella, the urban teachers, indicated that students in inner city schools face many problems in their personal lives. Liza believed teachers need to be socially active and work collaboratively in order to assist students in solving their problems. As Stella noted,

It's more difficult, because they have so many other things that have kept them from learning that it's real hard, and I don't think we're always properly trained to handle those extra things, and they need to get those taken care of before they can really learn. (Interview 1)

She went on to suggest that

teachers need to be a little more flexible. Especially in that realm of understanding and caring. Because especially the students that we see, a lot of them, come from backgrounds where no one cares, so at least if they think somebody at school cares, maybe that one person could do better in school or see the value of education or whatever. (Interview 2)

Aris identified the "overweight syndrome" and "teaching in a predominantly female job" as problematic issues. He explained he has to work hard to teach students ways to a healthy lifestyle, but he had not seen any major change in students' lifestyles:

I'll give you the number one thing: overweight children. The reason for that is that it's a no-win situation for the physical education teacher. And I don't want to sound so pessimistic, but at the same time I haven't found the solution. . . . For instance, an overweight child usually has an overweight parent. Their eating habits at home are not affected because you're teaching the child. . . . I've been successful at teaching the child proper things to eat, proper ways to manage their activity, to increase it. But when they go home, they're in conflict with their number one role model, which is Mom and

Dad. . . . I understand that no matter how delicately you handle that situation, you're opening up a can of worms, and it's hard to work through those kinds of problems that are really more of an issue with the parents than it is with the child. And I haven't seen any success unless the parent is willing to change their [*sic*] lifestyle. (Interview 1)

Aris believed that male teachers are discriminated against in several ways. Society and even preventive programs at schools have taught students that the "bad" people in society are always male. Aris believed strongly in the need for more male teachers in elementary schools, because the increase in single-parent families (headed by women) and the lack of male teachers at the elementary level have limited students' interactions with males and have created few male role models. As Aris emphasized,

We need more males in the school, but you're never going to get them . . . because that's the way the society . . . has deemed it appropriate to deal with children. . . . First of all, you can't deny the fact that young children are taught to be afraid of males. They are taught that men in general are bad. . . . If you watch any film, you show me one film that is shown in the school where the abuser is a female. You won't find one. So now, very young children are taught that males are bad. They're still being nurtured by female classroom teachers. They have no positive male role models in school. You could have made the argument that when I got this job, I got hired because I was a male, and you wouldn't be that far off. I think they wanted a male because they had none. (Interview 2)

*Contextual Issues.* The participants in the current investigation identified contextual factors that have impacted their teaching, although the urban teachers raised different concerns about their working environment than the suburban teachers. Both Liza and Stella, urban teachers, suggested that poor facilities and large classes made teaching a much more difficult and complex task. As Stella noted,

Facilities—it's probably the worst aspect of this job. For tennis courts I have to use the city courts. We have to walk over there for that. I don't have a track to do my running. We do it on an uneven round. The gym is not very big, so when we do volleyball, we do them on shortened courts. It's not regulation courts. That type of stuff. The equipment that we use is not the greatest. The tennis or badminton rackets are real cheap, so they break easily or a student can't really get a good stroke because the strings are very poor. (Interview 1)

Large class sizes and the variety of personal problems that inner-city students bring to school presented additional challenges for these inner-city teachers. They indicated they needed to have fewer students in their classes and suggested that all urban teachers needed more appropriate training to help students deal more effectively with personal problems. Liza emphasized, "It's not just content. We need fewer students. There's no counseling going on here. If you could just see a student move right through. Maybe they could be helped. We don't have the time to do it" (Interview 2).

The two suburban teachers, Aris and Lara, worked in schools where facilities, equipment, or class size were not a problem. Aris taught in another elementary school setting one day per week and indicated that working with another

physical education teacher and another administrator who have a different philosophy about physical education, made the process of establishing a quality program in his second school very difficult. For Lara, working with four male physical education teachers who had different philosophies about physical education did not affect her pedagogy but did affect curricular decisions and what she believed was the quality of the program:

It limits what I teach more than how I teach. I would love to teach gymnastics. None of them want to teach it because they don't want to set it up. It's a pain. . . . They also don't feel comfortable with the knowledge of the activity, so they don't want to teach it. That's the only thing I think is what I feel negative about teaching with four males. In the sense of what I teach. How I teach, they don't affect me at all. (Interview 2)

To address how context influenced the teachers' work, we asked the participants to discuss the possibility of teaching in a different setting, especially from a socioeconomic and racial standpoint. There were commonalities and differences in their views. Although Liza and Stella described several problems and constraints in urban schools, they had no desire to teach in a context where students would come from a higher socioeconomic or more homogeneous racial background. They liked teaching students from diverse cultural backgrounds. Liza stated that she probably would not be an effective teacher in a different setting, and Stella indicated that she would not be any more effective:

I like being with different types of students. I don't know if I would appreciate or if I would enjoy as much being with one class of student. . . . I think I kind of like this kind of student better. Real diversity. . . . I don't think that I would be any better. Only that I may have more facilities, more options available to me. (Interview 1)

The idea of teaching in a different setting appealed to the suburban teachers, although Aris indicated that personal commitments did not allow him to do so at this point in his career. Lara pointed out that she made a positive impact on students in her present school and was not sure if she wanted to risk losing that.

It is clear that the context was perceived by the four participants as a critical factor in their experiences and professional practices. All four participants indicated that they would be neither more nor less effective as teachers if they had to teach in another setting. This finding is consistent with a previous study of effective elementary specialists by Siedentop and Eldar (1989), who noted that "it became clear that contextual differences were an important factor in effectiveness/expertise. None of the teachers felt they would perform effectively if the context of teaching changed dramatically" (p. 256).

### *Teachers' Changes and Factors for Change*

Teachers change their beliefs with time and the teaching circumstances in which they find themselves (Schiro, 1992). The history of the four participants in this study indicated all have changed considerably in their educational values, practices, and reflection over the years. All described themselves as having an authoritarian, rigid, or "traditional" approach to teaching earlier in their careers. They



were overly concerned about management and control, covered content without questioning or analyzing its appropriateness or value for their students, and paid limited attention to students' needs and individualities. As Lara explained,

When I first started 10 years ago, it was just important for me to get out the skill and it didn't matter what I taught. I had a knowledge base and I had the skill base, and I didn't care if the students enjoyed it or not. I would hope that they would enjoy it, but that wasn't my main objective. Over the years and since I've been here, that one [objective] has changed tremendously, because with all the opportunities given it should become more enjoyable. . . . You keep striving and thinking and reflecting about What would be better? (Interview 1)

Over the years, the four teachers learned that students' needs and personal characteristics vary greatly, and their teaching practices grew more flexible to meet individual student needs. They became more positive in their interaction patterns; more sensitive to students' needs, backgrounds, and personal problems; and more concerned about their impact on students' learning and the development of positive student experiences. As Stella indicated,

I think I've become more human as the years go by. When I first started teaching, I was very strict. It has to be this way and total silence and complete If-I-say-jump you ask me how high. I think I'm more humanistic, where every child is different. When I first started teaching, all children were the same. (Interview 1)

Changes also occurred in the nature of the participants' reflection. These four teachers indicated that when they started teaching, they did not spend much time thinking about or analyzing their practices, and even when that happened, their focus was on the technical aspects of teaching, such as management, organization, or control. As Liza explained,

I've looked at teaching and analyzed it and really tried to work with it and improve, but before that I didn't. I didn't even really think about it. It was keep the lid on. Keep the kids from getting out of control. That was all that was ever expected. Nothing on content or instructional-wise was ever used. (Interview 1)

According to these four teachers, the quality and focus of their day-to-day reflection has extended far beyond the technical. As Lara stated,

You need to have structure and management and control . . . but after you get past that stage, it has to go further. It [reflection] has to go deeper, and that's where I think I am after 10 years of doing this. And for me to remain in that control and management stage, I would feel my job was not fulfilling if the students did not get something out of it. (Interview 1)

Also, reflecting and problematizing their work helped these teachers become aware of issues beyond their immediate classroom environment that, nevertheless, impacted their work. Over their years of teaching, they were able to pinpoint concerns and constraints such as equity and racial prejudice, subject matter marginalization, and students' personal problems that made teaching even more complex for them.

There were similarities and differences in the factors that influenced the teachers' educational values, practices, and reflection to change over the years. For the urban teachers, students and educational opportunities were major agents for change. For the suburban teachers, school context was a stimulus for change. All four teachers referred to changes in the needs and characteristics of their students as a major factor that stimulated them to change. Stella, for instance, pointed out that her knowledge of students' background and history influenced her to alter her practices over the years:

Children aren't the same and they have to be treated differently. They come from different backgrounds. They have whole different agendas, and each child has to be treated, I think, independently. Many of them have traumatic experiences at home and they come in—they're all emotional, and they're having a hard time, and instead of being—before, I guess in my first years of teaching, I would say hey, you've got to go on with it. You've got to do this anyhow. I think I'm a little more humanistic. What can we do to work this out, and let's see what we could try. And I think probably that is a big difference from when I started teaching. (Interview 1)

Aris also emphasized that his instructional approach changed upon realizing that only highly skilled students initially benefited during physical education. As he explained,

I went from being a very, very structured teacher, to a teacher who wasn't satisfied with the fact that yes, I was making 50% of the group feel really good about themselves, while the low end was feeling kind of threatened, and the high end was feeling kind of well, we need to move on here, and they were getting bored. (Interview 2)

A second major agent for change was continuous education. All four participants emphasized that their professional development work had an impact on their practice and on the way they think about educational issues. As Liza noted,

The professional development work made me more accountable in that sense, particularly working with preservice teachers. They're observing you. You're just more accountable, and you have to practice what you preach. It has helped me become more positive, because I wasn't a positive teacher. I've changed completely. (Interview 2)

Similarly, Stella pointed out,

Well, I think it [professional development work] has obviously made it [teaching] better. It's given me a variety of ways in which to teach, rather than just the same old way all the time. So I think it keeps you from burning out. It keeps you up, keeps you going. I don't know how people continue to teach and not refresh themselves. (Interview 2)

Aris and Lara, the two suburban teachers, pointed out that the school context has influenced their values, reflection, and practices. Aris noted that the school environment, especially his colleagues, encouraged him to strengthen his program. Lara indicated that the school setting

has given me the opportunity, especially with equipment needs, facilities, schedule needs, graded courses of study—all those things that enable me to

do a better job, also enable me to help kids have a better experience in physical education. (Interview 1)

## CONCLUSIONS

For the participants in this study, day-to-day reflection originated in ordinary experiences and served as a means of checking and fine-tuning their teaching practices. It helped them stay on target while pursuing their educational objectives and provided them with a supply of ideas for similar teaching situations later. In ways similar to what Schon (1987) has described as reflection-in-action and reflection-on-action, the participants in this study indicated that their reflection occurred during and/or after instruction. Educational dilemmas that evolved during instruction were analyzed, interpreted, and addressed by these participants as they were teaching. After instruction, situations were often recalled, reconstructed, and analyzed to provide additional information and inform future practices.

The primary function of these teachers' reflection was to provide meaningful learning experiences to students. Reflecting on the instructional process generated knowledge that informed their practices. Students' responses to instruction, unsuccessful experiences during the learning process, and the nature and/or composition of each class influenced participants' abilities to analyze, interpret, and provide solutions to complex as well as ordinary classroom events.

The participants' day-to-day reflection was precipitated by enacted events and followed by concrete action. Disruptive events appeared to stimulate reflection, while positive instructional experiences were used as opportunities for analysis, learning, and application of successful pedagogical strategies for other classes. Such events fostered situational learning for these teachers and provided opportunities for reflection-in-action.

Various theoretical traditions in reflection (Zeichner & Tabachnick, 1991) and theoretical frameworks for reflection (Van Manen, 1977) prioritize different aspects of teaching and schooling as appropriate foci for teachers' reflection. This study attempted to describe reflection as it emerged in authentic settings. These teachers reflected on pedagogical, content, social, ethical, and moral issues. Pedagogical issues relating to students' progress, improvement, and learning were constant themes for all four teachers' reflection. All four teachers' continuous emphasis on pedagogy would suggest that student learning was a priority. McNamara's (1990) statement appeared to capture their teaching orientation: teaching "has a purpose and it is intentional activity which entails fostering children's learning. . . . Consequently thinking about teaching . . . requires teachers to examine how they may better their teaching methods in order to achieve specific ends" (p. 155).

The four dimensions that the participants reflected upon were aligned with their educational values and practices. The differences in reflection on the specific issues within each dimension should not be thought of as inconsistencies among values or educational theories, practices, and reflection. One could argue that their reflection was influenced by enacted events specific to their context. For example, reflecting on issues of how to better treat students with developmental handicaps was not an issue for Stella because, in contrast to the other three teachers, there were no students with developmental handicaps in her classes. Similarly, issues of

fairness regarding team organization during a class tournament did not emerge for Aris and Liza who, for the duration of this study, taught fundamental motor skills. The point is that these teachers' reflection did not neglect the dimensions of teaching beyond pedagogy (e.g., social, ethical, and moral), but it was situationally driven and contextually bound.

The teachers' reflection on the social, ethical, and moral domains was stimulated by enacted events. These teachers were aware of equity issues in education and used pedagogical strategies to promote and establish equity. When enacted events interfered with their pedagogical values or practices (i.e., equity), they reflected and acted to frame or reframe such dilemmas. Evidence from this study suggests that these teachers reflected not only upon pedagogical aspects of their teaching but also valued, reflected upon, and challenged assumptions about how to best structure their practices to provide positive and equitable education for all students. For these teachers to reflect upon an issue, that issue needed to be part of the teachers' belief system and theories of professional practice and become a factor in his or her teaching environment. These four teachers used positive experiences and events as sources of knowledge. Microreflection, however, for the most part occurred when unexpected outcomes or disruptive events emerged in their classrooms.

The four teachers' values, reflection, and practices changed over their teaching careers. These teachers went through substantive changes over their careers to become, in our opinion, good teachers. The second question pertinent to this study was what was the role of macroreflection in the professional development of these teachers. Some might argue that they changed as a result of the amount of experience they carried with them. Indeed, in the learning-to-teach literature, experience has emerged as an important variable in the development of teachers' knowledge (Richardson, 1990), and in some expertise literature, experience is sometimes used as the only characteristic to define expert teachers (Berliner, 1986). However, experience is educative only when it is accompanied by problematic thinking and reflection (Schon, 1983; Shulman, 1986). Teachers reflect on concrete experiences, but experience without reflection, at best, will help teachers become more efficient at what they already do and, at worst, it may lead to inertia or routinized action. The four teachers substantively altered their professional practice. Such changes are not possible without a fair amount of problematizing, criticizing, reconstructing, and experimenting with one's teaching.

Findings from this study indicated that macroreflection, the type of reflection that informs teachers' practices over time, was influential in changing classroom practice and the teachers' professional development. Professional development through reflection is based on constructing and reconstructing knowledge over time. Ideas, beliefs, professional theories, and values about teaching are modified, changed, rejected, or reframed as new information becomes available and circumstances change. Improvement in teaching demands that teachers acknowledge, reflect, and build upon their experiences.

This investigation represents only a first step towards developing an understanding of the concept of reflection and its function in authentic settings. Although no evidence suggests that reflective teachers are also effective teachers, the widespread use and acceptance of the notion of reflection suggests that reflective practice is at least desirable. Based on the findings of this study, together with previous research on teacher education, we provide four implications for fostering and developing reflective practitioners:

1. Reform proposals have identified the need for changes in our schools. Reflective practitioners are characterized not only by their ability to think critically but also by their association of thought with action. It is important for in-service and preservice teacher education programs to provide opportunities for teachers to develop and refine their reflective abilities.

2. Criticisms of in-service teacher training programs often pertain to their short duration (Ackland, 1991) and their abstract nature (Howey & Zimpher, 1989). Evidence from this study suggests that these teachers reflect on concrete and context-specific events. Preservice programs aiming to develop reflective practitioners need to recognize the value and importance of particular and concrete experiences within teachers' work. Teachers need to be provided with opportunities to reflect on actual issues, dilemmas, or problems that they ordinarily deal with in their own contexts.

3. Research evidence suggests that teaching experiences socialize prospective teachers into accepted institutional roles and do not provide them with opportunities to investigate how schools operate or to understand social and political issues of teaching and schooling (Zeichner & Gore, 1990). All too often, field experiences stimulate preservice teachers to adopt more rigid attitudes toward teaching and become more custodial, authoritarian, and utilitarian (Graham, 1991). One suggestion that teacher educators may consider in overcoming some of the problems associated with field placement and helping preservice teachers to develop their pedagogical and reflective abilities is to arrange the conditions for preservice teachers to work with cooperating teachers who exhibit reflective capabilities in addition to desirable teaching behaviors.

4. For the teachers who participated in this study, reflection was not a characteristic they developed overnight. Developing reflective practitioners requires time, commitment, and programmatic efforts. Efforts to support and enable prospective teachers to reflect about teaching and schooling should start during early field experiences and continue throughout professional preparation. Teacher educators should teach their students how to reflect and provide assignments that stimulate multiple dimensions of teaching for reflection. Armaline and Hoover (1989) noted,

Field experiences are sites where the potential for miseducation is as great as it is for education that transforms, depending on the way in which the phenomena of the site are constructed by our students. They are sites where the activities of ideology are manifested. Whether or not our students critically examine the language, conventions, attitudes, and actions of the workplace is largely dependent upon us as teacher educators. (p. 47)

Our findings suggest that the teaching context and concrete experiences were most often responsible for stimulating reflection. Teachers' educational values also seem to provide a basis for their reflection. Encouraging reflective thinking among in-service and preservice teachers should incorporate real-life settings and concrete experiences rather than abstract situations that challenge explicit or implicit beliefs about teaching and schooling, and provide opportunities for description, justification, and critique of their actions (Tsangaridou & O'Sullivan, 1994). Further, if educational values are an important basis of professional education, strategies designed to sensitize both the preservice and in-service teacher to the social, ethical, moral, and political aspects of schooling as well as the technical aspects of teaching should be used.

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