

Teaching Preservice Physical Education Teachers to Reflect

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Discussions of reflective thinking and teaching have become common in recent educational literature (Gore, 1987; Grant, 1984; Posner, 1985). Teacher educators also have written a great deal about the necessity of teaching preservice teachers to reflect (Bullough, 1989; Calderhead & Gates, 1993; Liston & Zeichner, 1987; Smyth, 1989; Valli, 1992). The term reflective thinking is often traced back to John Dewey. While Dewey's general definition of reflection, "turning a subject over in the mind and giving it serious and consecutive consideration" (1933, p. 3), provides a broad framework for thinking about this topic, his distinction between routine and reflective action has helped educators think more specifically about reflection. While routine action is guided by impulse, tradition, and authority, reflective action is "behavior which involves active, persistent and careful consideration of any belief or practice in light of the grounds that support it and the further consequences to which it leads" (p. 9). This reflective action is the type of reflection teacher educators hope to encourage through teacher education programs.

Two assumptions underlie the renewed interest in reflective teaching in teacher education programs. First, educators assume it is possible to teach preservice teachers to be more reflective and, second they assume that reflective teachers will provide better educational experiences for their students (Goodman, 1989).

Much of the research and writing about teaching physical education is technologically oriented, telling preservice teachers the right way

to teach (Rink, 1993; Siedentop, 1991). Some recent interest, however, has been shown in reflective approaches. Kirk (1986) has called for an alternative approach to the technical perspective based on reflective practice. Several articles (Cutforth & Hellison, 1992; Graham, 1991), Hellison and Templin's book, *A Reflective Approach to Teaching Physical Education* (1991), and an AIESEP conference (1993) devoted to the topic of reflection have added to the sparse physical education literature on the topic. The only data-based study in physical education, however, is Rovegno's case study of a preservice teacher (1992).

Recent research evaluating the effects of teacher education courses or program components that encourage reflection has shown the difficulty of teaching preservice teachers to become more reflective (Ferguson, 1989; Morine-Dershimer, 1989; Ross, 1989; Rovegno, 1992; Zeichner & Liston, 1987). While we recognize the necessity of preservice teachers learning to execute the technical skills of teaching, we are interested in encouraging students to think about and move to the second of Van Manen's (1977) three levels of reflectivity, reflection on the relationship between principles and practices with particular attention to social context. Moving students to Van Manen's third level (reflection on moral and ethical issues of domination and authority) was considered too difficult to accomplish in this one semester study.

Asking students to reflect at higher levels is congruent with the assertions of O'Sullivan & Doutis (1994) who describe expert physical education teachers as, "virtuosos," not only having "sophisticated content knowledge and pedagogical content knowledge, but also demonstrating a commitment to the social, political, and moral agendas of teaching physical education" (p.176).

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They, like other physical education teacher educators, question how we might provide novice teachers with experiences which would lay the foundation for the development of such concepts and eventually apply them as they become more experienced teachers. In addition, they recommend that research in this area of preservice teacher education would be of value.

Believing technical, social, and political reflection to be important, we have tried for a number of years a variety of strategies (e.g., journal writing, discussions of class observations) to help preservice physical education teachers learn to reflect. While we were discouraged by our lack of success, the recent literature renewed our interest in this topic and we attacked the problem again. Specifically, Valli's (1992) report on case studies provided us with a number of models for preparing reflective practitioners.

In accordance with Goodman's (1989) call for more reports on how teacher educators promote reflection, this paper describes a project whose purpose was to design, implement, and evaluate learning activities planned to facilitate and increase the reflectivity of undergraduate physical education majors at two institutions. We limited the scope of the project by asking students to focus their attention on teachers and teaching on a day-to-day basis in their classes rather than all possible events relating to teaching.

Method

Nineteen undergraduate students majoring in teacher preparation in physical education participated in this study. Twelve students attended a large state university and seven attended a state liberal arts college. While participating in this study all students were enrolled in a one-semester secondary prepracticum course in physical education in their institution. The students were either juniors or seniors scheduled to student teach the following semester. Although the students were enrolled in two different physical education teacher education programs, and thus their prior course work and prepracticum differed, we wanted to obtain a

greater number of students than were available from one institution and to compare student scores from two different teacher education programs.

Study Design and Data Collection

The primary source of data for this study was a series of four essays which the students wrote during the course of the semester. The essays were the culminating assignments; prior to each essay the students were assigned readings and wrote about their experiences in the public schools in their own journals. They had further opportunities to reflect through weekly (University) or bi-weekly (State College) discussions. The four writing assignments were analyzed to determine the students' levels of reflectivity throughout the semester.

Prior to writing each essay, the students at both institutions were assigned the same reading material which was designed to stimulate their thinking about a particular aspect of teaching physical education. The students at each institution then discussed the readings with each other and their professor in classes accompanying the prepracticum. We realize that these discussions, while designed to be similar in format, may have differed considerably since they were led by faculty from each respective institution. Also, given the open-ended nature of discussions in general, the resultant conversations within each course almost certainly varied between the two groups. Immediately following the reading and discussions students were asked to write a two to three page essay related to teaching physical education.

Specifically, during the beginning of the semester, students read and discussed Chapter 1, "Reflective Teaching—Who Needs it?" from Hellison & Templin's book (1991). This reading assignment and ensuing discussion focused on the purpose of reflecting about one's own teaching, as well as one's philosophy related to teaching physical education. In addition to their reading and writing assignments, the students were observing the public school physical education teachers with whom they would be teaching

during the semester. The first writing assignment was designed to encourage students to think about and describe their vision of the "ideal" physical education teacher.

Their second reading assignment, "The Road Less Traveled—A Fable" (Zidon, 1991) provided students with a "story" which described two different physical education curriculum ideologies. The following discussion focused on physical education teachers' varying philosophies about teaching and curriculum. At this point in the semester many of the students were assisting their cooperating teacher with parts of a lesson. The second writing assignment required the students to describe how their cooperating teachers compared to the "ideal" teacher, particularly paying attention to their teaching style.

As the semester progressed, students from each institution assumed more teaching responsibility; thus the next reading assignment and subsequent discussion were concerned primarily with effective teaching strategies in physical education (Mustain, 1990). Their third writing assignment required the students to reflect upon one of their own teaching episodes, describe it, and compare themselves to their "ideal" physical education teacher.

At the end of the semester the students were asked to reflect upon their observations, readings, discussions, and teaching experiences throughout the course. For their last writing assignment, the students re-wrote their description of the "ideal" physical education teacher in light of any changes they may have made as a result of their experiences during the semester.

Data Analysis

The written assignments were analyzed to determine the students' levels of reflectivity. Each student's assignment was divided into segments. A segment was defined as writing which focused on one central idea. Thus, each assignment had varying numbers of segments. Each segment was coded, the segment scores added, and the mean score for each assignment was calculated.

We used the categories suggested in Sparkes-Langer, Simmons, Pasch, Colton, & Starko (1990), "Framework for Reflective Thinking" to code the individual segments within each essay. This framework was adapted from Gagne's (1968) hierarchy of thinking and Van Manen's (1977) idea of critical reflection. The framework is based on the belief that students' language can convey their ability to use concepts and principles to explain events and experiences (Sparkes-Langer, et al., 1990).

The levels in the framework describe seven categories of language and thinking progressing from simple description to explanations with consideration of moral, ethical, and political issues (see Figure 1). In Levels 1 through 3, events are described with no explanation offered. For example, Level 2 descriptions label events with appropriate pedagogical terms. In Levels 4 through 6, explanations of an event are offered. Level 4 explanations use tradition or personal preference as a rationale. Level 5 explanations offer principles or theories as rationales, while Level 6 adds a consideration of contextual factors.

As cited in Sparkes-Langer, et al. (1990) a one-level difference in codes was considered acceptable (e.g., one coder scored 4, the other 5) in establishing reliability. Inter-coder reliability was established at .85 for each of the four writing assignments. Each researcher coded the essays of students from the other program to eliminate the bias of knowing that particular student.

Results

Analysis of the essays written by the secondary prepracticum students suggests that (a) the students' levels of reflectivity was moderately low, (b) the students' levels of reflectivity increased very little over the course of the semester, and (c) there was little variation in the range of scores on the Framework within, as well as across subjects (see Table 1).

The scores for writing assignment 1 (the ideal physical education teacher) ranged from 2.0 to 3.8, indicating that these students labeled events

Level	Description	Examples from Study
1	No descriptive language	No examples given
2	Simple description	"A good PE teacher should also have some degree of knowledge of most sports and techniques that are common at the moment."
3	Events labeled with appropriate terms (pedagogical concepts)	"Joe used the command style of teaching in the soccer class I observed."
4	Explanation with tradition or personal preference given as rationale	"A healthy lifestyle means that the teacher cares about him/herself and is involved with a variety of health-related activities."
5	Explanation with theory or principle given as rationale	"Once the teacher has planned for the class s/he then needs to know where everything will be set up, and do it before class. The more time a teacher takes running around getting equipment during a class, the higher the students' wait time."
6	Explanation with principle or theory and consideration of contextual factors	"Being a realistic and open-minded person would also help the teacher to better understand the students' social background which works as a great tool when trying to understand and plan for the students."
7	Explanation with consideration of ethical, moral, and political issues	"With the state of PE today, the burdens of maintaining a strong and viable program are slowly becoming the responsibility of the individual PE teacher. Justifying a program to students, parents, faculty, and school boards is just as important as the actual teaching."

Figure 1. Framework for reflective teaching (from Sparkes-Langer et al., 1990)

with appropriate pedagogical terms such as "positive feedback" and "time-on-task." In addition, they were beginning to provide explanations of their descriptions with tradition or personal preference given as rationale. For example, one student wrote,

A good physical education teacher's curriculum should involve fitness, skill development, individual games and sports, team games and sports, as well as cooperative activities. The better teacher involves all these aspects of

curriculum into a complete K-12 package. (Level 4)

In this excerpt from writing assignment 1, the student provided an overview of content areas for a typical physical education curriculum. The rationale for this statement was not based on principle or theory, but rather on tradition or personal preference.

Overall, students showed no change in their reflectivity scores from assignment 1 to assign-

Table 1. Range and Mean Reflectivity Scores for Written Assignments

	Range	Mean		Overall
		Univ	College	
Assignment 1	2.0 - 3.8	3.0	3.1	3.0
Assignment 2	2.3 - 4.2	3.0	3.0	3.0
Assignment 3	2.5 - 4.1	3.4	3.4	3.4
Assignment 4	2.9 - 4.8	3.9	3.4	3.7

ment 2 (comparison of cooperating teacher to "ideal" teacher) as the mean scores were identical. The overall mean scores for writing assignments 3 and 4 suggest a slight improvement in the students' levels of reflectivity. Thus although the students were providing explanations using tradition or personal preference, they were not using principles or taking contextual factors into account.

While there was little change in the subjects' levels of reflectivity throughout the semester, we found that the University students scored somewhat higher than their State College counterparts on the last writing assignment. In addition, six University student essays were coded above 4.0 (4.1 - 4.8). State College scores, on the other hand, ranged between 2.9 - 3.8. This gain in scores is a result of 50% of the University students moving from using personal preference (level 4) towards levels 6 and 7. One student, for example, wrote the following,

I also feel that if a teacher doesn't plan right, or decides to skip a certain progression, there is a chance of injury and time wasted if the teacher has to backtrack to the areas s/he skipped. These faults fall under the category of poor time management. With good management time the students are more active and therefore have more opportunities to learn. (Level 5)

A few University students considered ethical, moral, and political issues (level 7). One particularly thoughtful student wrote,

Being a teacher in any capacity today requires a special type of person. Society is changing

and is full of trouble that no longer are hidden from children [sic]. Students come to class with everything heaped on them from financial woes to single-parent families to drugs. P.E. teachers seem to have the responsibility of being a friend and someone to talk to, for most of these students. It is not easy, but it needs to be done by someone.

We find the trend toward higher levels of reflectivity to be particularly interesting because of one particular difference in teacher education programs offered at the two institutions. At the University, the students were required to take two courses related to social issues and equity (one earlier and one concurrent with this prepracticum course) in addition to the traditional courses in general education, sport pedagogy, and related areas of physical education. State College students, however, had no formal course work related to social issues or equity.

Discussion

The results of this project are similar to those reported in previous studies (Rovegno, 1992; Welfel, 1982a, 1982b). Teaching students to become reflective is difficult to accomplish. The students in these two schools not only showed low beginning scores, but did not demonstrate a significant increase in levels of reflectivity over the course of the one semester project. Except for the University students' slightly higher scores on writing assignment number 4, the students' reflective ability was not influenced by the differences in programs, nor much at all by the assignments in the prepracticum experiences.

What reasons may account for this failure to increase our students' reflectivity? While we cannot answer this question with certainty, three possible reasons seem plausible. First, our readings, class discussions, and writing assignments may have been ineffective in promoting the type of thinking we hoped to engender. The students also may have been receiving mixed messages. Although we tried to facilitate reflection at

higher levels, overall their teacher education programs emphasized the technical skills of teaching.

Second, it is possible that students were not developmentally ready or able to move beyond the stage of description and simple explanation. Berliner (1988) and McIntyre (1993) suggest that perhaps reflection has limited utility for beginning teachers and should be fostered only after teachers have gained substantial experience.

Third, Dodds (1993) suggests that several factors applicable to physical education may help explain our lack of success. She suggests that the conservative viewpoint brought by students into the programs and their strong sport ethic which favors direct action and following coaches' orders may override attempts to change students' styles of thinking.

While not encouraged by our results, we are not totally discouraged either. As O'Sullivan & Doutis (1994) suggest, it is important to introduce concepts to preservice teachers which can be applied as they gain teaching experience. For future efforts, we suggest that any attempt to increase students' reflectivity should not be limited to one class for one semester. If reflection is considered important, it has to be done throughout a teacher education program and coordinated among classes to be effective. Teacher educators must also be invested in reflection and model reflective teaching behaviors (Valli, 1992). Perhaps in designing learning experiences it would be helpful for teacher educators to be more specific about the types of reflection they wish students to achieve. It is important to inform students of the various types and then reinforce their attempts to reflect on different aspects of teaching and schools.

References

- AIESEP Conference (1993, July). *The training of teachers in reflective practice in physical education*. Universite du Quebec a Trois Rivieres. Trois Rivieres, Quebec, Canada.
- Berliner, D. (1988, February). *The development of expertise in pedagogy*. Hunt Memorial Lecture, Annual Meeting of the AACTE, New Orleans.
- Bullough, R. (1989). Teacher education and teacher reflectivity. *Journal of Teacher Education*, 40(2), 15-21.
- Calderhead, J., & Gates, P. (Eds.). (1993). *Conceptualizing reflection in teacher development*. London: Falmer.
- Cutforth, N. & Hellison, D. (1992). Reflections on reflective teaching in a physical education teacher education methods course. *The Physical Educator*, 49(3), 127-135.
- Dewey, J. (1933). *How we think. A restatement of the relation of reflective thinking to the educative process*. Boston: D.C. Heath.
- Dodds, P. (1993, July). *Reflective teacher education (RTE): Paradigm for professional growth or only smoke and mirrors?* Paper presented at the AIESEP conference, Trois-Rivieres, Quebec, Canada.
- Ferguson, P. (1989). A reflective approach to the methods practicum. *Journal of Teacher Education*, 40(2), 36-41.
- Gagne, R.M. (1968). Learning hierarchies. In M.D. Merrill (Ed.), *Instructional design: Readings* (pp. 118-131). Englewood Cliffs, NJ: Prentice-Hall.
- Goodman, J. (1989). Teaching preservice teachers to be reflective. *Journal of Teacher Education*, 40(3), 60-63.
- Gore, J. (1987). Reflecting on reflective teaching. *Journal of Teacher Education*, 38(2), 33-39.
- Graham, K. (1991). The influence of teacher education on preservice development: Beyond a custodial orientation. *Quest*, 43, 1-19.
- Grant, C.A. (Ed.). (1984). *Preparing for reflective teaching*. Boston: Allyn and Bacon.
- Hellison, D., & Templin, T. (1991). *A reflective approach to teaching physical education*. Champaign, IL: Human Kinetics.

- Kirk, D. (1986). A critical pedagogy for teacher education: Toward an inquiry-oriented approach. *Journal of Teaching in Physical Education*, 5(4), 230-246.
- Liston, D., & Zeichner, K. (1987). Reflective teacher education and moral deliberation. *Journal of Teacher Education*, 38(6), 2-8.
- McIntyre, D. (1993). Theory, theorizing and reflection in initial teacher education. In J. Calderhead & P. Gates (Eds.), *Conceptualizing reflection in teacher development* (pp. 39-52). London: Falmer Press.
- Morine-Dershimer, G. (1989). Preservice teachers' conceptions of content and pedagogy: Measuring growth in reflective, pedagogical decision-making. *Journal of Teacher Education*, 40(5), 46-52.
- Mustain, W.C. (1990). Are you the best teacher you can be? *Journal of Physical Education, Recreation and Dance*, 61(2), 69-73.
- O'Sullivan, M., & Doutis, P. (1994). Research on expertise: Guideposts for expertise and teacher education in physical education. *Quest*, 46, 176-185.
- Posner, G.J. (1985). *Field experience. A guide to reflective teaching*. New York: Longman.
- Rink, J. (1993). *Teaching physical education for learning*. St. Louis, MO: Mosby.
- Ross, D. (1989). First steps in developing a reflective approach. *Journal of Teacher Education*, 40(2), 22-30.
- Rovegno, I. (1992). Learning to reflect on teaching: A case study of one preservice physical education teacher. *The Elementary School Journal*, 92(4), 491-510.
- Siedentop, D. (1991). *Developing teaching skills in physical education*. Palo Alto, CA: Mayfield.
- Smyth, J. (1989). Developing and sustaining critical reflection in teacher education. *Journal of Teacher Education*, 40(2), 2-9.
- Sparkes-Langer, G., Simmons, J., Pasch, M., Colton, A., & Starko, A. (1990). Reflective pedagogical thinking: How can we promote it and measure it? *Journal of Teacher Education*, 41(5), 23-32.
- Valli, L. (Ed). (1992). *Reflective teacher education: Cases and critiques*. Albany, NY: SUNY Press.
- Van Manen, M. (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry*, 6, 205-228.
- Welfel, E. (1982a). The development of reflective judgments: Implications for career counseling of college students. *The Personnel and Guidance Journal*, 61(1), 17-21.
- Welfel, E. (1982b). How students make judgments. Do educational level and academic major make a difference? *Journal of College Student Personnel*, 23(5), 490-496.
- Zeichner, K., & Liston, D. (1987). Teaching student teachers to reflect. *Harvard Educational Review*, 57(1), 23-48.
- Zidon, M. (1991). The road less traveled—a fable. *Journal of Physical Education, Recreation and Dance*, 62(2), 29-32.