Chapter 3: The Effects of a Long-Term Professional Development Program on the Beliefs and Practices of Experienced Teachers

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Just as preexisting beliefs mediate the ways in which messages received in preservice programs are interpreted and assimilated (Matanin & Collier, 2003), Bechtel and O’Sullivan (in press) suggest that beliefs have the potential to impact the effectiveness of professional development (PD) programs. This is of particular interest when considering the PD opportunities that underlie educational reform efforts for teachers of varying experience levels where the implicit goal of the PD initiative is one of teacher change (Fullan, 1992). If preexisting beliefs filter information, then these beliefs might in fact serve to mediate change in response to PD.

Teachers are not passive recipients of PD—they are active participants. Teachers arrive at workshops with prior knowledge and varying levels of expertise in addition to differing values, identities, interests, and motivations (Levinson & Sutton, 2001). The knowledge provided at workshops is not merely transmitted to teachers, but is mediated by sociohistorical features of the mode of delivery. These include but are not exclusive to the language used to convey the content, subjective positions of participants as they negotiate their experience and relationships, and artifacts both brought to and created within PD interventions (Holland, Skinner, Lachicotte, & Cain, 1998; Wenger, 1998).

Theorizing that begins with the assumption that learning takes place within social practice necessarily requires attention to the relationships between individuals, their own self-making in terms of their ability to actively engage with their environment, and their participation in what Holland and Lave (2001) refer to as a contentious local (or situated) practice. Local practice is contentious since participation in a group requires participants to negotiate the tension between their own autobiographies and the struggles that result from group membership. As
such, this perspective also accepts the epistemological assumption that humans experience the world indirectly through mediational means or cultural tools that include local practice (Holland & Lave, 2001; Wertsch, del Río, & Alvarez, 1995). These mediational means provide “the line or bridge between the concrete actions carried out by individuals and groups, on the one hand, and cultural, institutional, and historical settings, on the other hand” (Wertsch et al., 1995, p. 21). It has also been suggested that understanding teachers’ responses to reform initiatives requires an appreciation for the diversity of processes of cognition and learning in complex social environments such as schools (Greeno, Collins & Resnick, 1998).

**Theoretical Frame**

This study of teachers’ PD is positioned within a sociocultural theoretical frame that draws on theories of identity development and theories of practice (Holland et al., 1998). In so doing, it is assumed that a community of practice created around a PD program is necessarily located within the cultural and historical assumptions and contexts that underlie the ability of teachers to mediate change, transform individual and group identity, and develop individual agency within the community. The community of practice is, therefore, itself a mediating influence on multiple levels when considering teacher change. Agency as defined by Inden (1990) is

> the realized capacity of people to act upon their world and not only to know about or give personal or intersubjective significance to it. That capacity is the power of people to act purposively and reflectively, in more or less complex interrelationships with one another, to reiterate and remake the world in which they live, in circumstances where they may consider different courses of action possible and desirable, though not necessarily from the same point of view. (p. 23)

In order to understand how the level of theory and practice are conceptually connected, a brief conceptualization of the connection follows.

The sociocultural perspective accepts that teachers bring different values, beliefs, identities, interests, motivations, and practices to communities of practice. This perspective also presupposes that learning is both situated within and mediated by action that includes involvement with cultural tools or artifacts and historical, institutional, and structural constraints. These constraints afford or constrain learning, individual participation, and images of self within a community (Holland et al., 1998; Lave & Wenger, 1991; Levinson & Sutton, 2001).

Accepting that individuals have only indirect access to the world allows us to understand culture as something that has the potential to be both transmitted and acquired through the commingling of agency and structure (Levinson, Foley, & Holland, 1996; Wertsch et al., 1995). Using a holistic approach that moves away from a cultural reproduction perspective and toward a perspective that embraces individual agency is to move toward the acceptance that culture is produced. From this perspective, culture is the product of individuals attempting to make sense of their world and, although enabled and constrained by social structures, individuals do have the ability to organize culture for themselves (Levinson, 2000). As Levinson
and Holland (1996) suggest, “it is through the production of cultural forms created within structural constraints of sites such as schools, that subjectivities form and agency develops” (p. 14).

Extending this notion to theories of identity development, and drawing on the work of Bakhtin (1981, 1986), Holland et al. (1998) suggest that by accepting that culture is a continual process of creating meaning in social contexts and by using past experiences and available cultural resources to respond to subjective positions in the present, subjectivity can be formed and identity altered. Within this framework, shifting identities can be seen as the link to developing new knowledge and skill. Through shifting participation and transformation of roles within a particular community, individuals craft new identities, and these identities in turn influence the acquisition of knowledge and skills (Rogoff, 1995). Your behavior in the group, then, is mediated by your sense of identity and your agency, and learning is a cyclical process.

The theoretical frame can be applied at the level of practice. Wenger (1998) suggests that identity is produced as a “lived experience or participation in specific communities” (p. 151) and as a consequence of the various and negotiated ways of being a person in that context. Learning happens as individuals engage and contribute to communities and in so doing construct individual identities in relation to those communities. As teachers learn and change, they have a capacity to participate in and contribute to the group in different ways, and by extension, the ways in which they choose to engage or not engage in the group leads to transformations in knowledge, and individual and group identity.

For learning to occur, the community must create ways for members to negotiate and create meaning within the community, thereby creating identification with the community and empowering ownership. In so doing, teachers not only learn, but they also create shifts in their own cultural understanding and what it means to be a member of that group and create shifts in their identities. Wenger (1998) suggests this process involves both participation and reification, is ongoing and pervasive, combines multiple forms of membership, is positioned within community that has its own social character, and is a trajectory in time that “incorporates both past and future into the meaning of the present” (p. 163).

One of the ways of looking at teachers’ engagement in the community that impacts these transformations is to examine how teachers develop a sense of belonging to that community. In order to determine the degree to which group members have experienced shifts in learning and identity, Wenger (1998) suggests we examine the various ways group members choose to belong to the group. By examining how actively participants engage in the process of negotiating meaning (engagement), their ability to expand their sense of self by imagining a new image of themselves and their work (imagination), and by the action they have taken to become part of a group that is larger than themselves (alignment), we can begin to consider the extent to which teachers have formed identities of participation, nonparticipation, or a combination of both. These identities would depend on how individuals choose to locate themselves in the social landscape of the group (Wenger, 1998). Their identities would also depend on what they choose to ignore versus know and understand, with whom they seek connections and who they avoid, how they engage and direct their energy, and how they steer their professional/career trajectories (Wenger, 1998).
If we are to understand teachers’ responses to PD opportunities at the level of practice and how such practice is situated within communities of learners, we must consider changes that occur as a result of participation and the mediational influences of the community of practice itself on such changes.

The primary purpose of this study was to examine how a 15-month PD program influenced urban teachers’ beliefs about teaching and their teaching practices. A second purpose was to understand how the teachers’ experiences within a community of practice influenced their sense of themselves as professionals and their physical education program.

The following three questions guided the research study: How did teachers’ experiences with the first PEP grant influence their thinking and beliefs about teaching? In what ways did the community of practice influence teachers’ thinking and beliefs about themselves as teachers and their identities as physical educators? How did teachers’ experience with the program influence their thinking and beliefs about their students?

**Methodology**

**The PEP Professional Development Program**

The Physical Education for Progress program was a PD program available to experienced physical education teachers in the Columbus Public Schools (CPS) district. The program was funded through federal grant money provided for teachers’ PD. The goals of the PEP program were to provide a cohort of teachers with opportunities to build their capacities as professionals, including their knowledge, skills and dispositions; to increase students’ physical activity levels through designing and implementing curricular programs that encouraged active teaching and learning; and to establish a cohort of future teacher leaders for the district.

The PEP program was implemented in stages over a 15-month period during which teachers attended eight workshops in addition to an initial orientation workshop, a mid-term debriefing/training session, and a final debriefing to conclude the project. The length of the workshops ranged from 1 to 5 days and included a variety of content areas designed to align with the goals of PEP (see Table 1). Attendance in the PEP program was mandatory for all workshops and training sessions. The design and delivery of two units of instruction that reflected two curricular approaches to physical education introduced during the program were also required.

All physical education teachers in the district (n = 137) received a letter inviting them to enroll in the program. Twenty-five teachers volunteered to participate and all were accepted. Only one teacher dropped out because she and her partner moved to another state. Teachers were paid an hourly stipend ($21) to attend all workshops and debriefing sessions that took place outside of school time. For workshops held during school hours, funding for a substitute teacher was supported by the grant. Teachers also received paid membership to the Ohio Association for Health, Physical Education, Recreation, and Dance. In addition, teachers received money for both equipment and professional purchases that included resource books, journal subscriptions, and technology. Funds were available for additional equipment purchases contingent upon submission and implementation of two instructional
units based upon the curricular innovations introduced during the intervention.

Workshops were interspersed throughout the 15 months as teachers learned new content and pedagogies, and acquired materials and equipment to support the initiatives (see Table 1). Workshops were provided by university faculty recruited from around the country. The program was also supported by two graduate student teaching assistants who worked as grant facilitators. In addition to attending all workshops, the facilitators helped teachers implement changes in their gymnasia by visiting schools on a weekly basis and supporting them by teaching model lessons, coteaching lessons, or providing feedback when requested by teachers.

Participants

For the purposes of this study, six teachers were purposefully selected from the cohort of 24 PEP teachers who varied in their degree of engagement within the community of practice as conceptualized by Wenger (1998). This was intended to maximize the variation in responses and reactions of teachers to the PD initiative. Prior to the selection of participants, researchers reached a consensus opinion regarding the behaviors that would constitute engagement. Teachers who were considered engaged were those who actively participated with their colleagues during workshop activities that required group work, willingly shared their ideas, and completed both joint and individual activities over time.

Based upon a peer-debriefing-session that occurred following the completion of the PD initiative in which participants were classified according to their level of engagement (Wenger, 1998), the researchers selected two teachers who they considered highly engaged (HE), two moderately engaged (MOE), and two marginally engaged (MRE) during the 15-month PD initiative. One female high school teacher and one male elementary teacher were selected as highly engaged; two female middle school teachers were selected as moderately engaged; and one

### Table 1  PEP Professional Development Workshops

<table>
<thead>
<tr>
<th>Order</th>
<th>Date (m/yr)</th>
<th>PD workshops (in order of delivery)</th>
<th>Contact hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>03/02</td>
<td>Initial orientation</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>12/02</td>
<td>AMTP Pedagogy 1: Instruction</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>05/03</td>
<td>AMTP Pedagogy 2: Management</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>06/03</td>
<td>Tactical Games Teaching</td>
<td>35</td>
</tr>
<tr>
<td>5</td>
<td>06/03</td>
<td>Teaching Social Responsibility</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>06/03</td>
<td>Inclusion</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>08/03</td>
<td>Promotion of Physical Activity</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>08/03</td>
<td>AMTP Content 1: Content</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>08/03</td>
<td>Midterm debriefing</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>12/03</td>
<td>Sport Education 1</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>01/04</td>
<td>Sport Education 2</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>02/04</td>
<td>AMTP Content 2: Content</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>05/04</td>
<td>Final debriefing</td>
<td>7</td>
</tr>
</tbody>
</table>

Note. AMTP = American Masters Teacher Program.
female elementary and one male middle school teacher were considered marginally engaged with the group.

**Data Collection**

A variety of data were collected throughout the program. Data were collected from interviews, questionnaires, field notes made during the midterm and final debriefing sessions, workshop evaluation forms, and during observations of the PEP teachers as they implemented their new units of instruction.

During the course of the PEP program there were two individual audiotaped semistructured interviews conducted with participants. The first was conducted following implementation of at least one unit of instruction using the Tactical Approach (Griffin, Mitchell & Oslin, 1997). Teachers were asked to reflect on their experiences with the implementation in terms of their perceptions of the model’s usefulness and impact on their practice and the experience of their students. All teachers who participated in PEP were interviewed at that time by one of the grant facilitators or the principal investigator. The second interview was conducted with the six participants in this study during the first full school year following completion of the PEP program. Questions posed during this interview were designed to have teachers talk about their current practices, reflect back on their experience with the PEP program, and consider whether or not the PEP experience contributed to changes in their beliefs and thinking about themselves, their students, and their practices.

In addition to completing evaluations of each PEP workshop, teachers also completed four questionnaires during the initial orientation and final debriefing sessions. These included the School Health Index (Centers for Disease Control and Prevention [CDC], 2005), the Value Orientation Index (Ennis & Chen, 1993), and two program-specific questionnaires created for PEP: the Teacher Goal Statements Questionnaire designed to assess programmatic goals (e.g., “What were your goals for your physical education program this year?” and “To what extent have you been able to achieve your goals this year?”), and the Student Assessment Questionnaire designed to understand teachers’ use of assessment. The first two questionnaires helped to develop a holistic understanding of the teachers and their school contexts and the latter two to understand the goals teachers had for their programs and their use of assessments.

Data were also collected from field notes taken during the midterm and final debriefing sessions as teachers shared their experiences with the larger group. Field notes were also taken during observations of the PEP teachers as they implemented their new instructional units. Collecting data over time allowed insight into teachers’ perceptions of the curricular innovations both prior to and following implementation of the innovations in the classroom.

**Data Analysis**

Using an observational case-study methodology grounded in an inductive analysis, the data analysis began with the construction of individual cases that highlighted themes that emerged from participants’ responses to their experience in the PEP community as reflected in their data. Inductive analysis builds theoretical categories by first looking for topics, regularities, and themes that emerge from an
initial reading of the data and then coding the data into categories (Tesch, 1990). Following the construction of individual cases, a cross-case analysis was conducted to identify common themes and create interpretive understandings that emerged across teachers when considering the three research questions. Trustworthiness was achieved through triangulation of multiple data sources (Patton, 1990), constant comparison to confirm or disconfirm themes that emerged from the data (Strauss & Corbin, 1990), and peer debriefing (Strauss & Corbin, 1990) that occurred throughout the study.

Findings

Findings are discussed relative to the themes that emerged based upon the inductive analysis of the data in answer to the research questions, each of which considers shifts in teachers’ thinking and beliefs about their teaching, themselves as teachers, and their students.

Research Question 1: How did teachers’ experience with the PEP program influence their thinking and beliefs about teaching?

Three themes emerged in response to research Question 1. Teachers began to believe the alternative models of instruction benefited their students, to embed technology into their lessons, and also value assessment of student learning. Each of these will be discussed below.

Theme 1: Belief That Alternative Models of Instruction Benefit Students

Prior to the PEP program, most of the teachers in this study followed a skills-based approach to teaching that characterizes much of physical education programming at the P−12 level (Ward & Doutis, 1999). In this approach, units and lessons are characterized by a focus on isolated skill development prior to scrimmaging. Given the focus of the No Child Left Behind policy on PD to enhance numeracy and literacy rather than physical education outcomes, the district had not recently provided funds to help physical educators stay abreast of curricular options for contemporary schooling. Consequently, these teachers had limited or no familiarity with contemporary curricular models or teaching methods.

During the PEP program, teachers were introduced to three curricular innovations that included a model of personal and social responsibility (Hellison, 2003), a tactical approach to games teaching (Griffin et al., 1997), and the sport education model (Siedentop, 1994). Teachers were supported in their efforts to create units of instruction based on one or more of these approaches and implemented these units with at least one class of students. For two of these curricular models in particular, the tactical approach to games teaching and the sport education model, teachers were required to create a unit of instruction and provided specific days when grant facilitators could observe and assist with the implementation of the lessons. For the personal and social responsibility model (Hellison, 2003), teachers were provided assistance in embedding the model into both curricula as requested.
Data on the influence of the tactical approach to games workshop on teachers’ practice were gathered from questionnaires, interviews, observations and the mid-season debriefing. The data indicate a shift in teachers’ practice from a skills-based to a tactical approach to teaching games. The goal of the tactical approach is not the suppression of skill development, but the promotion of a “greater interest to learn games, more understanding of game play, and improved ability to play games” (Griffin et al., 1997). Teachers recognized an immediate difference between the tactical and skills-based approaches following the 4-day intervention and began to articulate how their thinking changed as a result of implementing the model. The teachers’ comments revealed substantive changes in how they thought about teaching tactically. This teacher’s comment reflects the influence of the workshop on teachers’ thinking: “The workshop helped me to think through how to break down games into manageable parts. Also, how to adapt games for a higher success rate for the students.” (MRE)

Following implementation of the tactical unit, teachers articulated the difference based upon their personal experience with the model:

[With the] pre-tactical approach, I just did the skills and then I would get to the strategies while they were playing at the end. But now, strategies [are] part of the game throughout; instead of the last two days, it’s the whole ten days. (HE)

Another articulated the change in their approach to teaching games this way:

I liked that concept because the kids love at this level to play games, so the sooner you can get them into games, the more you’ve got their attention. Less discipline problems, that kind of things, and then pull them out, do a follow-up and then refine some things and go back; it has been really helpful. (MOE)

Not all teachers believed the shift from a skills-based to a tactical-based approach was the best choice. After reflecting on her tactical unit of soccer, one teacher suggested,

As far as the skills go, I don’t give them as much playing time as you did in the soccer unit. They played a lot, but I don’t think their skill development was as high. Their awareness was higher but their skillfulness was not increased . . . so I’m devoting more time to skill development than we did in the fall. (HE)

Teachers continued to articulate differences in their thinking and practice about the efficacy of the tactical approach to games after they had implemented the tactical unit and were experiencing success with the model. One teacher noted.

They like it; some of the kids who didn’t like soccer liked the fact we didn’t have to sit and learn some skills . . . they just wanted to play, and what I’ve leaned from a lot of different things we’ve done is let them play and teach them as they play, which I didn’t really believe in when I first started hearing it. I was kind of against it ’cause I wasn’t brought up that way. But it’s changed, I’m letting them just go and then teach, and it works, and for sure I’m going to do it that way (HE).
Data from the second series of interviews for this study revealed teachers continued to use the tactical approach:

I think this year, in some of the tactical games, they’ve really caught on. They’ve really been able to see the connection between soccer, hockey, all the invasion games . . . they’re starting to see relationships, where before it was just skills and you try to put the skills together, you know. (MRE)

When asked specifically what had changed in the second year, comments included.

I am teaching tactically. . . . I’ve tried to incorporate different tactical aspects like starting out with proper ways to pass and move to an open space. . . . They now know how to work in small groups. When I first came here I didn’t think I would ever be in a situation where I could see them working in small groups because they fought too much. (MOE)

Just as teachers were observed using the tactical approach, teachers were also observed enacting the personal and social responsibility model (Hellison, 2003). Data examining the influence of the model revealed a similar shift in thinking and practice as teachers adapted the model to fit their varying contexts. In addition to the daylong workshop in which teachers were provided specific strategies for its implementation, teachers received a classroom poster listing the levels of responsibility and were encouraged to actively refer to it when discussing personal and social responsibility with their students. In this instance, the teacher tried to make social responsibility a schoolwide initiative:

I made a presentation at one of our staff meetings with Hellison’s model and a chart. I had talked to the principal about having one of these charts put in every classroom so that we could all be on the same page and the kids knew they had the same behavioral expectations in each class. And I presented it to the staff and they were very receptive, and really liked it. . . . (HE)

Another teacher noted,

The grant enabled me to change my curriculum and start to give choices to the students by giving them responsibility. Before I was unwilling to loosen control, but giving the students responsibility within classes has been such a positive experience for me. (MOE)

During an observation, this teacher was observed having a conversation with one of the grade 5 students at “the wall” (the area where the levels of responsibility poster was hanging). She was asking the student why he had been asked to go to the wall, what level of responsibility he was working at as a result, and what level he should have been working at in order to learn the material and reduce the distractions for his classmates. Having observed and cotaught with this teacher many times throughout the year, it was clear “the responsibility wall” was frequented less as students took greater responsibility for their behavior. An elementary PEP teacher articulated how, during the year following the program, he was continuing
to implement the model and “do a better job this year with Hellison in all grades 2–5.” He explained his strategy of “identifying kids that are helping other children in the class, and telling them that’s a Level Four and then doing a group debriefing at the end” (HE).

The substantive changes in practice that resulted from the introduction of both the tactical approach and social responsibility model were not seen with the sport education model. Although teachers were required to submit a unit of instruction, and demonstrate its implementation, two teachers failed to submit the unit, few were observed implementing the model in its full form, and references to the model in teacher discourse were infrequent. This may have been a function of the timing of the sport education workshop. This workshop was presented over two Saturdays during the academic year rather than an intensive weeklong summer workshop that characterized the tactical workshop. This may also have been a function of the complexity of the model and the work inherent when using this model. Among other activities the model requires teachers to articulate roles for the students, set up accountability systems, teach students to assume various roles, develop daily coaching plans, and keep daily records. The teachers who used the model were able to articulate how things had changed. One teacher explained, “I learned different ways of presenting lessons and getting kids more involved; more enthusiastically involved with the sport ed . . . reaching out to the students that aren’t as athletically inclined, but yet enjoy [being a] spectator” (HE).

Theme 2: Embedding Technology into Teaching

One of the three foci infused across all curricular workshops was the appropriate integration of technology into the physical education curriculum. The grant provided PEP teachers with funds to purchase equipment including pedometers, personal digital assistants, and digital cameras. Each of the workshops offered ways to embed the technology into either managerial, instructional, or assessment tasks in order to achieve lesson objectives and improve instruction. One teacher noted, “I’m implementing the cameras, the digital cameras, using that as a demonstration of how to run or how to do the dance . . . or when I was doing track and field; different steps on how to do track and field” (HE).

Teachers spoke about the development of walking clubs and the use of pedometers and computers in recording mileage as some of their classes simulated a walk across America. Other teachers described reward programs they had designed to motivate students toward achieving specific mileage milestones, and how pedometers motivated even the lowest skilled and least active students to be more active. When asked to reflect on the extent to which their goals for physical education had been achieved for the year, questionnaire data following completion of the program included comments like “my students have proven they can be responsible for the pedometers and they have great enthusiasm about sharing steps” (MOE).

Although teachers talked about the use of digital cameras and personal digital assistants, data from the midpoint evaluation meeting revealed that pedometers were the primary influence on teachers’ programming as they shared ideas about how they were using the technology. This might have been a result of the fact that pedometers are a relatively simple intervention as compared to the other technologies introduced.
Theme 3: Assessment for Learning

A key focus infused into the PEP workshops was the importance and use of assessment. The initial survey of the teachers who entered the program revealed that many of the teachers who entered the PEP program had either never used formal and informal assessments, or lacked the knowledge to create and implement assessments. As a result of participation in the program, the primary shift in their beliefs was about the role of assessment for learning. Teachers began to see value in demonstrating student outcomes to parents and teachers in their buildings:

So that is why it’s important to me to build on these portfolios and things because just like, right now it looks like my class is based on participation and dress, and that’s wrong. I don’t want it to look that way. I want it to look like this is what your child’s doing in there, this is how your child is interacting . . . these things are important things to me and I want them to be displayed. (MOE)

Some teacher changes occurred as a consequence of acquiring new knowledge and skills during the workshops; others occurred as teachers acquired technology to assist with assessment. For some teachers changes were reflected in an increased use of informal assessment. One elementary school teacher explained, “I had the kids rate themselves . . . thumbs up if they thought they did the task (everything they were supposed to) . . . if they did almost everything, thumbs side” (HE). For other teachers, assessment became more formal:

Student assessments have gotten really big with us. . . . Before I never really had a nice little rubric for assessing skills and now I have developed a nice rubric to assess skills. It’s just made it a whole lot easier on me as far as teaching. . . . It was so difficult for me to assess student performance, student responsibility, things like that. (MOE)

Another wrote about a change in her program: “So in my journal this year I do have assessment on skills using the tactical approach and very simple basic, basic, basic, and I would like to build on them each year and change my assessment; but the kids are assessing each other more” (MOE).

The intersection of assessment and technology was peppered throughout the teachers’ discourse during the midterm evaluation, teacher interviews, and questionnaires. During the final evaluation workshop, teachers were asked to reflect on the extent to which they had achieved their goals and the differences they currently make in the lives of their students. Comments included, “My students have proven they can be responsible for pedometers and they have gained an enthusiasm for achieving more steps” (MOE). One middle school teacher articulated the enthusiasm shared by many of the teachers in terms of the changes they had made to their programs:

We weren’t doing it before PEP. PEP is what gave us the money to do it and we just started incorporating it in really slowly; and now it is just a routine part of the class. It’s just awesome; it is phenomenal. (MOE)
The enthusiastic reference to “it” included a program that required students to record their daily number of pedometer steps in their personal portfolio as a way to self-assess their class participation. Reflecting on the beneficial use of portfolios during the final interview, the teacher suggested “. . . we had people saying you’ll never, ever get those kids wearing these pedometers. You’ll lose them; they’ll steal them, blah, blah, blah. Our kids wore them, our kids logged their stuff, our kids built graphs. It was amazing.” This teacher had used neither pedometers nor portfolios before the PEP program.

The data relative to Question 1 shows that, as a consequence of the PEP program, teachers not only began to believe in the benefit of using alternative models of instruction, but they also began to embed technology within their lessons and to value student assessment.

**Research Question 2:** In what ways did the community of practice influence teachers’ thinking and beliefs about themselves as teachers and their identities as physical educators?

Two themes emerged in response to the second research question. Teachers developed a sense of responsibility toward their community of learners, and teachers experienced a shift in their capacity to think differently about their identity as physical educators and their responsibility to contribute to the profession.

**Theme 1. Shared Commitment and Community**

Findings revealed that teachers experienced a substantive and important shift in the responsibility they felt toward their PD community. As a consequence, their commitment to and involvement with the community changed over time. These shifts in feelings of professional responsibility began during attendance at the mandatory PEP workshops that were a substantive component of the grant. Several teachers revealed that, although they had initially enrolled in the PD program for the money (they received both an hourly stipend and equipment funds), things changed along the way:

“I’ll go anywhere, talk anywhere, and do anything that’s needed. Where I wouldn’t do that before. I was like, look, I’m getting my check, I’ll see you later, you know . . . I like didn’t think I could make a difference in it. But now, after the grant thing, you know what? You really can make a difference. (HE)"

Another teacher revealed how his participation in PEP shifted from “not minding going there” [the workshops] to embracing the new content that was being offered: “What changed for me was the day we did tactical . . . I love it, and the day we did tactical I sat there and I listened to that and I started thinking from that day on” (MRE). This PEP teacher went on to say that following his participation in the tactical workshop, “it completely changed the way I thought about teaching.”

In developing an increasing commitment to the PEP community and the profession in the district as a consequence of participation, teachers valued the fact that they were provided opportunities to meet and share ideas with colleagues across the district, and often spoke about the value of engaging with other teachers. “I think the best thing PEP did for us was put us together and get us talking. You
never get a chance to sit with your peers and talk about what you’re doing, what works for you, what they’ve done” (HE). As a result, teachers began to see they were not alone. In the final questionnaire, one teacher explained that in addition to improving her teaching and engaging students, PEP funding enabled her to “affirm my belief that there are people out in my profession that value their students and want to provide a program to help students both enjoy physical education and be active.” In reflecting back on what she had learned during the past year another teacher responded, “Gosh, really what I learned is that there’s more phys-ed teachers in our district that care than what I thought; about serving the children and giving them the best they can” (HE).

 Teachers articulated how the PD program changed their participation in ways they had not anticipated. “But really in PEP . . . I was pleasantly surprised that it all kind of tied in together; that it did motivate me to get out and actually implement what was going on, what we were learning” (MRE).

**Theme 2: Pay It Forward**

Beyond implementing the new material in their own classrooms, teachers began to envision themselves as leaders and mentors with the ability to enact these roles at the school, district, state, and national levels. One teacher expressed a shift in her role at the school level: “I’ve gone from being a scared, ‘am I doing things right’ teacher to a very yes, I am doing things right teacher. This is what I want to try . . . and I’m more of an advocate [for physical education in her school]” (MOE).

At the district level, several of the PEP teachers became leaders willing to present their expertise and newly acquired knowledge at the school district’s K–12 in-service days. “After we did it [PEP], I volunteered to go ahead and do the thing on Hellison [during an in-service day]. I did a PowerPoint presentation, which I’ve never done in my life. I put it together . . . things I never thought about doing before” (MRE). During the academic year after completion of the PEP program, 12 teachers participated in district-level initiatives that included presenting materials at in-service days and workshops related to a diversity of content varying from technology and its application to model lessons.

During the course of the PD program, six teachers presented model lessons they had created during the PEP PD program for the state convention (OAHPERD). Four teachers presented at the national physical education convention (AAHPERD) that took place the year following completion of the program, three of whom had been selected for this study. Teachers provided the attendees with a glimpse of the types of things they were now doing in their physical education classes and explained how their participation in the PEP program had influenced their teaching and thinking about physical education.

Underlying this increased capacity and motivation to work as leaders and mentors was a strong sense of responsibility to represent the community of practice and to serve as advocates for their profession. One of the teachers who traveled to the AAHPERD convention explained his sense of responsibility as follows:

This isn’t a “what you can get outa it,” it’s a “you gotta build from here,” for years to come, and that’s a pretty big responsibility. . . . I mean, you got paid, you got equipment, you’re getting to do a lot of things (at least I know I am,
I’m getting to go to New Orleans) . . . I’m thinking Jiminy Christmas, you’ve got to give back or pay forward. . . . You have to, and you should. (HE)

The new ideas discussed in PEP helped some teachers to approach their work differently. For some, these newly acquired or refined capacities and skills enabled teachers to think differently. One teacher explained:

Before I knew that I enjoyed teaching PE, I knew I felt it was important but I couldn’t step out and say why, I had no tools to say why. But now, I could say look what we’re doing. Don’t you think it’s important? I have those tools and I love it. It’s cool. (MRE)

Another teacher who had presented at the OAHPERD convention explained,

I honestly feel that was an opportunity for me to change people’s attitude and view of what physical education was in the schools. By learning and being retrained myself, I can prove to others and show others how important phys- ed is to these kids. (MOE)

Findings from research Question 2 showed that teachers developed a sense of responsibility toward their colleagues within the community of practice and experienced a shift in their identities as physical educators.

**Research Question 3:** How did teachers’ experience with the PEP program influence their thinking and beliefs about their students?

The emergent themes in response to research Question 3 indicated the teachers experienced a shift in their beliefs about both the role of students in their class and their motivation to participate.

**Theme 1: Students Can Be Trusted**

Findings revealed a shift in beliefs about student choice, a central feature of the social responsibility model and a key component of the PEP workshops. Teachers began to believe in students’ ability to make good choices and students were given a greater degree of autonomy in their classes. One teacher’s comment reflected the views of many:

Well choices, that was one of the biggest aspects I liked… it makes the kids feel good; that they are the ones that initiate what they are going to use, and they are the ones that have a say in what they are going to do that day. (MRE)

When asked what the students might say had changed in their class, another teacher articulated this shift:

Well, the delivery is definitely different. . . . They’re more involved in the process. I mean I use a lot of peer teaching, tell them they’re my assistant coaches and all, and they enjoy that. So, I think a lot more interaction is going on between students you know, and I’ve stepped back and become more in the facilitator’s role than the teacher directed role. (HE)
For some teachers, greater choice resulted from students showing a greater level of responsibility during class. One teacher reflected on what she had learned “. . . and then I realized that if I gave back some of the responsibility to the kids, it enabled me to teach again instead of worrying about their behaviors and keeping class, quote, ‘in control’” (MOE). The teacher went on to explain how student responsibility translated into greater choices during a culminating field day:

We decided not to do a regular field day that we had done in the past. I put them with a buddy and they went around and had to go to every activity that was there and get their card scored . . . it was their responsibility to go to every station, and they didn’t have to go in order and be sent, directed. I mean it was all their responsibility. (MOE)

Although many teachers, including those within this study, experienced a shift in their beliefs about the value of choice and their students’ ability to make good choices, others remained unwilling or unable to relinquish responsibility to the students. In the latter case, teachers believed their students were not ready to take responsibility and attempting a shift in that direction would result in a breakdown in class control.

**Theme 2: Increased Student Engagement**

Teachers attributed increased student participation and motivation to new curricular innovations that excited students, to new equipment that allowed for innovative programming, and importantly, to changes in their instructional approaches and attitudes toward teaching. During the midterm debriefing, one teacher explained that participation had improved as a result of using the tactical approach and consequently he believed the innovation is “the greatest thing since sliced bread” (MRE). In the final questionnaire, the same teacher suggested that the PEP funding provided “equipment to teach other things we were not able to do before.” The PEP curriculum was seen to be effective because it made my class fun, and the kids do it now. I mean it used to be half a class wanted to sit out . . . but overall [since the introduction of the tactical approach] the kids are participating, or at least a lot more than there used to . . . and besides, it made it fresh for us. (MRE)

In the final questionnaire, teachers consistently mentioned that the new equipment allowed students to experience “new activities” that were seen as having a positive influence on student enjoyment.

**Discussion and Conclusions**

The findings in this study are discussed relative to the ways in which teachers’ experiences with the PEP program influenced their beliefs about teaching and their teaching practice, and the ways in which their experiences within the community of practice influenced their sense of themselves as professionals and their programs over time. Although tempting to discuss these as separate and distinct purposes,
one at the level of content (the PD program) and the other at the level of experience (engagement within the community of practice), the theoretical frame of this study accepts that content and experience should be discussed together.

Perhaps the greatest integration of content and experience, and the most robust in terms of findings, can be seen when one considers the degree to which participants’ beliefs and practices changed as result of their engagement within the community of practice. The innovative curricular programs introduced to the community required teacher participation, input, products, and implementation. It was through these activities that most of the teachers began to align their practice and discourse with the goals of the PEP program. This in turn worked to influence teachers’ thinking and beliefs about themselves, their role as teachers, their identities, and indeed their students.

Findings from research Question 1 indicated that not only did teachers feel a sense of efficacy toward a tactical approach to teaching following the workshop, but also the highly and moderately engaged teachers continued to implement both the tactical approach (Griffin et al., 1997) and the personal and social responsibility model (Hellison, 2003) more than a year beyond the one instructional unit required by the grant. Further, findings from research Questions 2 and 3 indicated that engaging in the planned workshops and seeing positive student response to their planning and instructional efforts also contributed to shifting beliefs.

Requiring teachers to both write and implement one unit of instruction with support from program facilitators might well have contributed to their engagement with the model and therefore served as a positive mediational influence or a feature that transformed the actions of the teachers. The required implementation provided the teachers an opportunity to experience the model within their own contexts, develop confidence with its delivery, and assess student response to the new programming. This is a key variable in persistence to change as outlined in Guskey’s model for PD (Guskey, 2002). Similarly, findings showed the use of technology and the introduction of assessment instruments mediated or transformed teachers’ responses, not only in terms of the programming teachers offered, but also their comfort with assessment and technology. The influence of the various features used in the delivery of PD on the changes in thinking and beliefs should be interpreted with caution given that this study did not specifically examine the influences of these particular features. Research specific to understanding the mediational influence of particular features is necessary in order to more fully understand their specific influences.

Although this study specifically examined the research questions with participants drawn according to their level of engagement in order to maximize variation in responses and reactions of the teachers to PD efforts, another preliminary finding emerged from the data that warrants a brief discussion. The data also showed that highly and moderately engaged teachers developed a sense of belonging to the group that extended beyond engagement and included imagination and alignment as discussed earlier in the chapter (Wenger, 1998). Engagement, imagination, and alignment are not mutually exclusive and discrete forms of belonging, but work in concert to create communities with different characters depending on which forms of belonging are foregrounded (Wenger, 1998).

The decision to continue using both these models required an investment of personal energy, and this is also indicative of a teacher’s shift in practice toward an
alignment with the goals of the PEP program (Wenger, 1998). Teachers who chose to continue using the innovations did so by choice, as did teachers who voluntarily began to use technology, institute student assessments, or attend conferences. Wenger (1998) suggests that alignment “requires the ability to coordinate perspectives and actions in order to direct energies to a common purpose” (p. 186). Many of these teachers demonstrated that ability at varying levels.

Additionally, the highly engaged teachers in this study produced and shared artifacts in the form of unit plans, assessment instruments, and lesson plans that both contributed to and demonstrated alignment of their work with the major goals of the PEP PD initiative and went beyond what was required. The artifacts served to create a focus around the work of the teachers and how it aligned with the goals of the PEP program. It also represented evidence of how teachers negotiated the PEP PD content to fit their particular teaching context. Although some of these artifacts were produced to adhere to the conditions of their involvement in the grant (e.g., two units of instruction), many of them were produced above and beyond these expectations. They were presented publicly when teachers began to share their ideas and innovations with each other, or in preparation for conference presentations. Alignment of teachers’ work with the goals of a program often results from compliance with a set of expectations freely entered into by the teacher as well as allegiance to the goals of the program; these levels of participation influence teachers’ identities as members of the community of practice (Wenger, 1998).

The ability of these teachers to create new assessments for their students, design lessons that embedded technology in support of student learning, deliver new units of instruction, and plan presentations for state and national conferences suggested they developed an ability to imagine themselves in different professional roles. They grounded these professional images of themselves and their programs via artifacts they created for their students, for PEP teachers, and the larger physical education profession (Wenger, 1998). In so doing, they moved beyond a level of imagination as they took action and made specific contributions to both their community and the broader profession. Wenger (1998) describes the interaction of alignment and imagination in this way:

> The combination of imagination and alignment produces the ability to act with respect to a broad and rich picture of the world. We align our activities and we understand why. We have a vision and it helps situate what we are doing and make it effective. We have a big picture and we do something about it in concert with others. We can therefore embrace part of that big picture as part of our identity because it reflects the scope of our imagination as well as the scope of effects of our action. (p. 218)

The long-term nature of this program, and its commitment to providing opportunities for teachers to engage with each other within a community of practice, resulted in many of the teachers forming strong identities as teaching professionals willing to participate within the professional community in their school district. These included capacities as instructional leaders, presenters, and teachers (evidenced by changes in practice and students), as well as changes in their identities as teachers as evidenced by the ability to assume new roles.

Although many of the teachers in this study developed a full sense of belonging to the group, not all of the teachers in this community developed a similar sense of
belonging or worked actively to change their practices. Few teachers developed an identity of nonparticipation that resulted in compliance with the PEP expectations for the most part yet did not influence aspects of their teaching or their vision of themselves as teachers beyond these minimum expectations. Although we selected two of these teachers as part of the purposeful selection process for this study, their discourse did not focus on their nonparticipation and it was difficult to identify specific instances of nonparticipation. More research examining the factors that influence teachers’ identities is necessary to more fully understand teachers’ response to PD opportunities.