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Curricular Change in Physical Education: Success Stories from the Front Line

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ABSTRACT *The need for reform is a standard refrain in much of the physical education literature. Unfortunately, physical educators know more about the factors that impede change than the factors that promote change. It was the purpose of this investigation to identify characteristics of successful, internally initiated curricular change in physical education. Six teachers in the United States who voluntarily adopted a new curricular model were identified and interviewed. The new curricula that were attempted included wilderness sport and adventure education, fitness education, sport education, and Hellison's Social Responsibility. Data were analyzed via constant comparison procedures. Although the curricular models and teachers varied widely, there were general themes that reached across the divergent settings. Change began with dissatisfaction and progressed to an implementation phase centered on knowledge and financial resources. The change process was marked by adaptations and a continued commitment to change primarily related to student response.*

The need for reform is a standard refrain in much of the physical education literature (e.g. Rink, 1993; Lawson, 1998). A large body of research lends support to proponents' calls for change as many programs suffer from a lack of accountability (Matanin & Tannehill, 1994), effectiveness (Griffey, 1987), equity (Chepyator-Thomson & Ennis, 1997), and meaning (Cothran & Ennis, 1999). Although critics most frequently focus on secondary programs, many of the same problematic issues also confront elementary physical education. Due to these problems, the continued presence of physical education in schools may even be in jeopardy (Stroot, 1994). The negative situation is not limited to the United States as international scholars (Evans, 1993; Tinning & Fitzclarence, 1992) have addressed similar shortcomings in other countries.

Although the need for change is clear, how to promote it is not. Tinning and Fitzclarence (1992) suggest that changing the current state of physical education will take more than improved teaching skills and must include a re-examination of what physical education is. Similarly, Locke (1992) calls for replacement, rather than repair, of the current model of physical education. If we are to change what physical education is, then a likely mechanism for that change would seem to be the curriculum for it is the curriculum that defines, describes, and communicates the essence of what the subject matter is.

From a curricular perspective, what physical education has been is the multi-activity model. This framework of numerous sport or movement activities offered in relatively short and frequently changing units holds a near monopoly on secondary programs with slightly more diversity at the elementary levels. The multi-activity model's purpose is to

provide students with an exposure to a wide variety of sport and movement while maintaining student interest with its fast changing focus (Siedentop *et al.*, 1986). This dominant model has been criticized on a number of grounds, although a majority of the critiques revolve around its lack of relevance (Cothran & Ennis, 1999; Solmon, 1997) and equity (Ennis, 1999; Evans, 1993). Alternative curricular models that offer potential promise are available and occasionally implemented, but physical educators know very little about their impact or the specific processes involved in curricular change.

A small number of studies within physical education have addressed specific change mechanisms and contexts. Perhaps the largest and most detailed of the change investigations involves the multiple studies of Project Sports, Play, and Active Recreation for Kids (SPARK) (e.g. McKenzie *et al.*, 1993; Sallis *et al.*, 1997). SPARK is an elementary curriculum that promotes increased school and out-of-school physical activity. In this large-scale research, teachers (both physical education specialists and classroom teachers) were trained to use the curriculum. A number of teacher and student outcome measures were then compared between physical education specialists and non-specialists, and between the treatment and control schools. On a smaller scale, Faucette (1987) examined several elementary teachers involved with an in-service program and followed their implementation of the new curriculum. These two studies are representative of a majority of the education change literature wherein curricular change is initiated from outside the teacher's individual program and researchers then examine the teacher's reactions and ability to implement a new curriculum. With external change initiatives, the degree of implementation varies widely and is frequently unsuccessful (Kirk, 1990).

In contrast to an external change force, change can be internally initiated by a teacher. This perspective on change is not as well represented in the general education, or physical education literature. One example of such an approach in physical education is offered by Rovegno and Bandhauer (1997a,b). They chronicle the curricular evolution of a single teacher and the individual and school characteristics related to the teacher's implementation of a new curriculum. Pope and O'Sullivan (1998) provide an example of internal change at the secondary level in their investigation of a teacher adopting the sport education model. Action research exemplifies another form of internal change, a form which is largely missing from the physical education literature base, but is well represented in general education (e.g. Butler, 1999; Senese, 1998).

Whether externally or internally initiated, it is the teacher who plays a central role in determining the success or failure of any change (Fullan, 1991; Sparkes, 1991). The central role of teachers may be even more influential in physical education where teachers have near complete curricular freedom. Granted, teachers do nothing in isolation, including change, yet it is their personal beliefs and efforts that must be understood in context if we are to understand change. What physical education teachers believe about and their actions related to curricular change are largely unknown.

It was the purpose of this investigation to identify characteristics of teachers engaged in successful, internally initiated curricular change in physical education. Specifically, I explored: (1) what stimulates a teacher to engage voluntarily in a curricular change; and (2) what steps and support did these teachers use to bring about change in their programs? The results should aid educators in better understanding the positive factors that promote the change process in physical education. By understanding the factors that lead teachers to change voluntarily, educators may gain insights into how to promote and enable change to occur in other settings.

Methods

Participants

Six physical education teachers in the United States who attempted a self-initiated curriculum change were recruited to participate in the study. The teachers ranged in experience from seven to 28 years and were in years 1–10 of their curricular change. Two of the participants were identified from the PE central physical education listserve. One teacher was recommended by a state department of education coordinator and one participant was recommended by another study participant. Two teachers were acquaintances of the author. It was beyond the scope of this paper to identify curricular failure attempts also; therefore, this paper is limited to the factors involved in successful change for these six teachers.

Karen Mulhoney (all personal and school names are pseudonyms) taught at a middle class, suburban elementary school on the west coast of the United States. She had been at her school for two years and was in her first year of a curricular change to add the Hellison Social Responsibility Model (Hellison, 1985) to her curriculum. Overall, Ms. Mulhoney had seven years of teaching experience, but had spent a number of years in the fitness industry prior to her return to teaching. Her school, Kinsey Elementary, enrolled 450 students in grades K–5. The school enrollment was approximately 70% Caucasian with a large minority population of Asian–American and Hispanic students. Kinsey had adequate facilities and equipment (descriptions of and judgments about school facilities and equipment were provided by the teacher).

Robin Brooks was also an elementary teacher integrating the Hellison model into her curriculum. She had 19 years of teaching experience and was in year two of her change to the Hellison model. Ms. Brooks taught at Southside Elementary, a suburban, upper middle class elementary school outside a large Midwestern city. The school served 450 students in grades K–4. Southside's physical education was well-equipped with good facilities. The student body was primarily Caucasian. Southside also employed a second full-time physical education teacher.

Conner Elementary's physical education teacher, Linda Baker, had 25 years' teaching experience. She was in the fourth year of a curricular change to a fitness focus (Jewett *et al.*, 1995; Ennis, 1995). The school was located in a Midwestern rural area and enrolled approximately 600 students in grades K–5. The students were primarily lower to middle class and Caucasian. There was one other part-time teacher at the school which had adequate equipment and facilities.

Vicki Hooper had 28 years of teaching experience. She currently taught 450 students in a K–8 private school in a large city in the Southeast. The students were primarily from lower to middle class socioeconomic families and Caucasian. The school had few facilities and little equipment, other than what Vicki bought at her own expense. She was in the second year of a change to sport education (Siedentop, 1994) for her upper grades (6, 7 and 8).

Lance Phillips' middle school adopted a health-related fitness model (Jewett *et al.*, 1995) 10 years ago. He was a veteran teacher of 25 years and served as the department chair of a five-member staff at Triton Middle School. Triton was located in an upper middle class community in the suburbs of a large Midwestern city. The student body of 1000 students was primarily Caucasian. The school had above-average facilities and equipment.

A 24-year veteran of teaching, Bill Rivers was in the seventh year of his curricular change to a wilderness sports and adventure education program (Siedentop *et al.*, 1986).

He taught at an upper middle class suburban high school (grades 9–12) outside a large Midwestern city. The student body at Western High was 1800 students, 70% Caucasian with the remaining 30% of the student body being primarily Asian–American. He taught in a well-equipped school with 18 other teachers in the physical education and health department.

Data Collection and Analysis

The teachers were contacted by e-mail or phone and asked to participate in the study. Informed consent was received and a telephone interview was conducted. An interview guide (Patton, 1990) structured the conversations which lasted 40–75 minutes. The interview guide had four major categories of questions. The first section was largely demographic in nature with questions about the teacher's career and school setting. The second set of questions dealt with the teacher's goals for their program and their curricular history as a teacher. The change process was the focus of the third section as teachers were asked about why and how they changed to their new curriculum. The final section focused on consequences, lessons learned, and goals for the future. The conversations were recorded and later transcribed.

The transcribed interviews were returned to the teachers for a member check on the data. Teachers were encouraged to elaborate on and make changes to the transcripts. No substantive changes were made to the interview responses, although four of the teachers chose to elaborate on selected answers. These additional comments were explored via follow-up conversations with the teachers. As the data analysis process developed, teachers also were contacted to clarify answers and verify emerging themes. After completion of the paper, a copy was mailed to the teachers for an accuracy check and to request their comments and recommendations.

In addition to interviews and follow-up conversations, on-site observations of Robin Brooks', Linda Baker's and Lance Phillips' programs occurred. Observations of all six schools were not possible due to the wide geographic distribution of the schools. During the school visits, classes were observed and informal conversations with administrators, colleagues, and students occurred. Discussions with the three teachers also occurred between classes and during planning periods. After each visit, field notes were written that summarized the content of the discussions and described what occurred during specific classes. The observations did not serve as a primary data source but did provide a limited check of the curricular innovation. More importantly the observations served as a stimulus for follow-up questions with all teachers about adaptations they made to their individual curricular model.

The interview and observation data were analyzed using constant comparison and analytic induction methods to identify and extract common themes across participants (LeCompte & Preissle, 1993). First, individual themes were developed for each teacher. Then the six individual cases were compared to identify common themes and unique perspectives. A variety of measures were taken to insure the trustworthiness of the data collected. Regular member checks were utilized to insure the emerging themes were grounded in the data. Triangulation of data sources was provided by interviewing different teachers at different locations, grade levels, and curricular models and comparing those interviews with observations. Particular care was taken to search the data for negative cases that could serve to disprove an emerging theme or to provide an alternative perspective.

The Change Process

These teachers represented a spectrum of curricular change. At one end were the teachers who integrated the Hellison model into their existing curricula with minimal disruption to their current program. At the opposite end was the complete abandonment of the current curricular system and a switch to a wilderness and adventure education model. The following section provides a brief overview of the curricular models implemented, and then the remainder of the section details the similarities and differences the teachers experienced in the three general phases of curricular change: initiation, implementation, and continuation (Fullan, 1991).

Curricular Models

The six teachers were selected in part for their use of different curricular models used to achieve different learning goals. Two of the teachers chose to incorporate the Hellison Social Responsibility Model (Hellison, 1985) whose primary goal is student social development. The structure of the model is based on levels of social responsibility ranging from irresponsibility to caring and acting as a change agent. Activities are selected that provide students with the opportunity to better understand themselves and others, and with that increased understanding comes more opportunities for student choice and responsibility in the design of their own activity program. The Hellison curricular model can act as a 'stand alone' model or can be incorporated into an existing curriculum, which is how Karen Mulhoney and Robin Brooks chose to implement their social responsibility curriculum. Teachers used the levels to prompt student self-reflection and goal-setting in behaviors during activities.

Linda Baker and Lance Phillips adopted fitness models (Jewett *et al.*, 1995) in their schools. Although not as clearly defined as the Hellison curricular approach, fitness models do share many similarities. They commonly are united by a commitment to cardiovascular activity via participation in activities at an appropriate heart rate level. A fitness curricula may also contain activities devoted to increasing the other fitness components of muscular strength and endurance, flexibility and body composition. A common goal is to provide the knowledge and experience to enable students to be active and healthy for a lifetime. In both Linda's and Lance's schools, heart rate monitors played a primary role in student assessment, accountability, and motivation to be engaged in cardiovascular activities. Both programs also had adopted new activities or modified old ones to increase the physical activity component of the sport or movement form. For example, the students played ultimate frisbee rather than flag football or engaged in small-sided games and stations to encourage maximum activity.

Vicki Hooper adopted sport education (Siedentop, 1994), a curricular model designed to produce skilled sport participants and good sportspersons. A key component of the model is creating an authentic, quality sport experience which is accomplished by having longer sport seasons, team affiliation, formal competition, keeping of records, and a culminating event. Students work together on teams for extended periods of time to accomplish skill and other sport role (coach, manager, statistician) responsibilities. Vicki adopted all aspects of the model, but did use shorter seasons than recommended.

The wilderness sports and adventure education curriculum (Siedentop *et al.*, 1986) adopted by Bill Rivers involved several different types of activities. Within the wilderness sports component are activities focused on the skills needed to participate in wilderness activities like camping, canoeing and hiking. The adventure education component

involves the ‘personal or group challenge of overcoming anxiety and functioning under stress to solve a problem’ (Siedentop *et al.*, 1986, p. 205). At Western High, the curriculum involved a mix of on- and off-campus learning experiences.

Initiation

The initiation phase involves the factors and decisions leading up to the change. It is a period of exploration when teachers examine the current setting, alternatives, and the potential rewards and costs of change. Fullan (1991) suggests that change initiation is related to the relevance of the change, the readiness of the individual and organization to make change, and the resources needed and available. Although the specifics varied, those three factors influenced all the teachers.

Relevance. The relevance of a proposed change involves two components. First, a teacher must believe there is a need to change, and second, the teacher needs a clear vision of alternatives to the current model. The teachers shared similar stories of reaching a point of significant dissatisfaction with their programs before they searched for alternatives. They had a clear vision of what they wanted students to achieve and were disappointed at what students were achieving in the current program. Perhaps most importantly, the teachers also assumed responsibility for the problem and the solution.

Karen Mulhoney described her reason for seeking a new approach:

It was kind of like the saying, ‘If it ain’t broke, don’t fix it.’ Well, it was broke. We were having kids who were not taking responsibility for their own discipline. I was really open to finding something that would really affect them in their heart, not just in their head. I was having trouble reaching what I considered a connected level with the kids on the issue of their social responsibilities in class. I was ready to try something and the something that I was fortunate to find was the Hellison model.

Although the focus of her concerns about students differed from Karen Mulhoney, Vicki Hooper also mentioned a lost connection with students. Vicki was bothered by the lack of involvement by her upper grade students: ‘I wasn’t reaching. I felt like that I had lost touch with the sixth, seventh, and eighth graders. I just felt like I was losing them. They were bored and they weren’t excited about it.’ Lance Phillips and Bill Rivers also were troubled by student behavior, but were unique in that they also were motivated by outsiders’ view of their programs. Lance focused more on the parents and noted that the old program ‘... did not seem to meet the needs of what the public wanted,’ while Bill mentioned students and other educators in his school:

I wanted to change kids’ attitudes because we were seeing a lot of negative attitudes from kids. They were very disrespectful students and I thought it needed to be addressed. If nobody else was going to do it, I was at least going to try. I also wanted to make a program that was so valuable that they couldn’t get rid of it. I decided to make a program valuable enough that they couldn’t just decide to cut it.

In addition to being dissatisfied, the teachers took personal responsibility for the situation. A review of the above quotes reveals significant use of the personal pronoun ‘I’. These teachers did not ask what was wrong with their unmotivated or unskilled students. Rather they asked, ‘What’s wrong with my program?’ By framing the problem as a

personal challenge rather than student shortcomings the teachers took ownership of the problem and the solution.

Readiness. To initiate a change, the individual and the organization must be ready. One aspect of individual readiness was the previously discussed dissatisfaction with the current program. Maturity and reflection also seem to be related to the teacher's individual readiness to change. Karen Mulhoney, Linda Baker, and Bill Rivers specifically mentioned life stage as part of their willingness to try something new. Bill claimed that he no longer worried about what others thought:

It comes with being an older teacher. I've tried a number of things and I know what works best for me. When you're a new teacher you're afraid to try something because you're afraid of what somebody else might say or they could turn on you.

Karen also mentioned maturing as a person and teacher and suggested that maturity changed her perspective on potential failure:

I think part of it is where I am in my life. As you live more life, and experience successes and failures you don't take them so personally. It's not so drastic a move to try something new, to change, if you're willing to fail. Its like I tried this and it did work, but if it hadn't worked I wouldn't have lost faith.

At an organizational readiness level, the teachers' experiences differed. Vicki Hooper, Karen Mulhoney, and Robin Brooks had few organizational challenges. Their changes required few resources and they worked alone or in limited ways with one other person. At the opposite end of the organizational readiness spectrum was Bill Rivers, who had multiple layers of administration and many peers to involve in his proposed change. As a result, he had the most difficulty in promoting organizational readiness for his curricular change:

It took me six years to convince people to actually change. Through writing, lots of selling, school board changes, new principals and all, it took me six years before I got an established class. Obviously if somebody told me it would be six years before this happened I may have backed off, but I just kept this optimistic point of view that maybe it will go next year.

Linda Baker and Bill Rivers mentioned the importance of principal support in their change. Both also had to wait for a principal to leave to incorporate their new program. Linda claimed:

I cannot tell you how much you need a good principal to back you. With my other principal, you know it was the usual setback when I would get an idea for a game or something I had seen. I was used to the rejection. I just took it as usual and then he retired that year and we got a new principal. I told him about my contacts and plan and he said we can do it out of our capital fund.

The other teachers did not mention a central role for their principal in their curricular change. Robin Brooks's description of her principal reflected the relatively neutral position the other teachers reported: 'I just say I'm going to be trying this and she says, that's great, let me know how it's going.'

Resources. All six teachers needed new resources to begin their programs. The one resource need they all shared was for new knowledge. None of the six learned about their new curricular approach from their undergraduate teacher education program or school

system sponsored teacher in-service programs, two traditional avenues of change promotion in physical education. Karen Mulhoney was first exposed to the Hellison model in a graduate class while working on her master's degree. Robin Brooks's introduction to Hellison occurred via an Internet listserve for physical education teachers. Karen and Robin moved beyond their initial introduction to purchase books and communicate with other teachers familiar with the model.

Linda Baker and Vicki Hooper relied on university contacts in their initial search for alternatives. Linda contacted a nearby university for help: 'It's been wonderful for me to have the input of Midwest State. To see they're still strong in their beliefs, it's been rewarding. They're specialists and have good things to say.' She worked closely with her local university, including on-site visits, to incorporate new fitness ideas and tasks. Vicki used personal, social relationships with two faculty members to discuss her program challenges. Via these informal teaching discussions, the sport education model was discussed. Vicki's university contacts provided her with an initial list of resources and schools using the model. She then purchased those resources and pursued personal contact with those schools.

Bill Rivers gained his new knowledge via years of attendance at conferences and workshops in adventure education: 'A lot of it [training] was at personal expense. It meant traveling and if I could drive it within five hours or less I would try to do it.' Lance Phillips took an eclectic approach of professional reading and contacting medical and business people: 'I did a lot of reading, a lot of talking, and a lot of listening. I've been fortunate to network with some people that are maybe the best in the business.'

Although they shared similar needs for new information, the teachers differed greatly in their need for financial resources. Robin Brooks', Vicki Hooper's and Karen Mulhoney's new curricula required few financial resources; therefore, they did not have to convince their administration for additional support. Bill Rivers and Linda Baker, however, needed substantial funds. They initially started outside their school or program to attract those resources. Bill stayed within his school, but partnered with the special education program to access their financial resources to make the initial purchases in his adventure education program. Linda approached an influential community member:

I was so determined to have the heart rate monitors that I went to a community person that I knew would back me, plus I had already used some of my own money to buy one. So I went to the community person because he was a runner and I showed him the watch and showed him how to use it.

After their initial external contacts, Linda and Bill received internal funding.

Implementation

After the decision to initiate a change is made, the new plan must be implemented. The implementation phase is typically the first few years of a new program, although a complex change might take several years to implement fully. These six implementations were characterized by difficulties and adaptations of the original model.

Difficulties. After the teachers gained the theoretical knowledge about their new curricula, they were still faced with the practical challenge of what that curriculum looked like in the 'real world'. They struggled with how to implement a curricular approach they had never seen or experienced. Vicki Hooper described her dilemma: 'I wish I could have experienced it first. It was hard for me to get it. I think if I had experienced the

organization and forms that are used then I could help get more out of it.' Robin Brooks also described a struggle with clarifying her vision of how the model should work: 'It's been hard really trying to clarify in my own mind the different levels. I've really had to work out in detail from a physical education aspect what each level should be, and then how do you tell little children about it?'

The new curriculum also meant that teachers needed to think differently about their programs and take time to teach new behaviors to students. Karen Mulhoney described the tension she felt during the early implementation phase:

The challenge is that there was a trade off for that first three weeks of not being as active as I wanted to be. I tried to use stretching time and introductory time to do the teaching of this [Harrison levels] but there was obviously some down time in addition to that. It's like I had to choose am I going to really work on the motor skills, or am I going to be working on and emphasizing a little bit more this responsibility skill?

At times during the difficult implementation phase, the teachers were tempted to return to the more familiar former program. Karen Mulhoney described the temptation:

It was a learning curve for me because I wanted to jump back into the old turn a yellow card [the current discipline system in her school] at you every now and then. When a student would lose control I wanted to make an exception and throw in the towel and that was hard.

The new program was also a learning curve for the students and, at times, the students made the change more difficult. All six teachers discussed students not just as problem behaviors that needed to be changed, but as important people involved in the class change. Robin Brooks shared her concerns:

It's just difficult coming in with something new when those kids have already been used to a certain thing. Change is always difficult. When you introduce something new to the third and fourth graders that have been there for two years already and it's like 'Well, what's this?'

Karen Mulhoney, in particular, was worried because she had tried other systems prior to the Harrison model:

You can imagine explaining it to first graders on up to fifth graders after I've already tried two or three systems from day one that I've had some of them. I was afraid eyes would roll like this is her plan-of-the-month club.

What seemed to be critical in allowing the teachers the confidence to move forward with the change was the relationship each teacher had with their classes. Vicki Hooper explained her students' reactions to their initial introduction to sport education:

You could see it. They were thinking 'Oh no, what is she doing now?' and they never know about me. They know I'm crazy and they just say 'We'll give it a shot and if it doesn't work then she will back off.' I'm lucky that they're not afraid to try things with me.

They were not afraid to try things with her because she worked hard to build a safe and connected learning environment for her students. Similarly, Karen Mulhoney discussed how important the teacher-student relationship was in terms of trying new things:

I already had a relationship with these kids for a year and a half and they knew that I could make mistakes because I proved that to them before. And they knew that I could apologize to them or I could right my mistakes and it's like

we had this relationship and trust. It's about communication and getting someone's trust.

Adaptation. The teachers reported an evolving, adaptational approach to their change. Lance Phillips described this evolution: 'We started the change 10 years ago and we're still changing.' None of the programs looked exactly like the curricular proponents' specific model and all reported continued modifications. Robin Brooks described her perspective on change:

You're always looking for that instant fix or something that is so wonderful that everybody will just say, 'Yes, this is it!' But it just doesn't work that way. You know you have to adapt so many things to your situation or your personal strength. It's an evolving process to see how this works. It's a work in progress as to how it will end up. Next year maybe I'll try something different and look for the next natural step to take.

Vicki Hooper also commented on the rough, but evolving process of change: 'At first you'll make a lot of mistakes and it won't be easy. It will be very rough and crude the first unit you try it on. Then you refine it and go ahead and then put it in another unit.' Bill Rivers changed something every semester, often due to systematic feedback he collected from his students.

Continuation

The final phase of the change process is continuation. In contrast to these six teachers' curricular change stories, a majority of change efforts do not make it to the continuation phase. Perhaps failed change attempts never got past the initiation phase due to resource or relevance issues. The change might have been initiated, but failed or faded away after an initial attempt during implementation.

Within the sample in this study, Lance Phillips, Bill Rivers and Linda Baker seemed to have reached a stable continuances of their programs as they had maintained and continually improved their curricular change for more than three years. They appeared to have the resources, planning, and commitment to continue with their current program focus. All three had also moved into the role of providing resources for other teachers attempting similar curricular changes. They frequently hosted visitors to their schools and shared materials and experiences with other teachers considering a similar change.

Vicki Hooper, Karen Mulhoney, and Robin Brooks were still in year one or two of their curricular innovation so it is unclear if the change would continue. The possibility of continuation seemed likely, because of the positive results they saw in their students. Bill described the change in students in terms of connectedness: 'You see that sparkle in their eye. You see the wheels turn and that's when you know you've connected.' Robin Brooks was pleased with the new behaviors she saw in her students, particularly during game play: 'The name-calling has gone down. There has been a little more team aspect play. I think they stop and think about not demeaning other kids.' Vicki Hooper reflected on her rough start and multiple mistakes, but added, 'I saw enough improvement in the kids and I saw kids that never did get involved in the sport side of physical education get involved and that was a godsend to me.'

Promoting Change

Fullan (1991) suggested, 'Educational change depends on what teachers do and think—it's as simple and as complex as that' (p. 117). What did these six teachers do and think that allowed them to act as change agents for their programs?

First, it seems that teachers who are able to promote change reflect on their programs and its impact on their students. A key component of these teachers' change efforts was related to their dissatisfaction with their current program and search for solutions. As Locke (1992) noted, 'There must be people who are sufficiently dissatisfied with what *is* to take the risks of exploring what might be' (p. 369). Yet, the incessant demands of the work day leave too few hours and too many responsibilities for many teachers to have the time to reflect in a systematic manner on what is and what might be.

Reflection also seemed to involve an aspect of value clarification. Although the six teachers' goals differed, they shared the ability to clearly articulate what they wanted in terms of student outcomes and behaviors. Their need for different curricular models to match different goals suggests reconsideration of the current one-curriculum-fits-all system currently in place in many schools and teacher education programs. For when the curriculum does not match participants' values, conflict and confusion in the class are inevitable (Cothran & Ennis, 1998).

A second guideline these cases offer is the power of students. McLaughlin and Talbert (1993) report that students are the greatest influence on a class and that finding certainly held true for these six teachers as student behavior was the initial impetus for change and the most important reason teachers mentioned for continuing. For these teachers, the cost of change was worth the payoff in student reward. Doyle and Ponder (1977) describe this component of change as the 'practicality ethic' when teachers weigh the benefits of change in relation to the costs. It is a critical calculation and one that frequently ends up with the teacher deciding not to change, for all change involves costs which are clear and rewards which most commonly are not.

Had the students' response to innovation been more negative than positive, it is far more likely that the teachers would have abandoned the curricular change during the implementation phase rather than continuing. Students are actually quite conservative forces (Fullan, 1991) and may not respond positively to change even when the change seems to be appropriate and meaningful to educators (Cothran & Ennis, *in press*). It was beyond the scope of this investigation to identify the students' perspectives on these curricular models, but further research focusing on students and their perspectives on curricula and change is needed if we are to truly understand educational change and how to promote it.

Finally, these teachers reached out beyond the isolation that characterizes most physical educators' lives. Their outside resources varied, but all were external to their school system and the traditional supervisor support or one-day in-services provided to them. Also unique to these teachers was that their external contacts were lengthy relationships with other professionals. These teachers' changes certainly reflected the maxim 'Change is a process, not an event,' and they were engaged successfully in the process with continuous and ongoing support from others.

How can physical educators promote the types of reflective and collaborative efforts that characterized these successful change attempts? Housner (1996) proposed a four-pronged approach to innovation and change in physical education: reverse the trend of de-professionalization, minimize isolation, overcome marginality, and re-think teacher education. Although it was not the purpose of this study to confirm Housner's proposal,

the findings of this small sample certainly serve to confirm portions of Housner's plan. In particular it seems that a current knowledge base serves to reverse de-professionalization. All six teachers needed new knowledge for successful change, knowledge that in several cases (i.e. Hellison and sport education) was not available yet, or was not covered (i.e. wilderness sport and adventure education), or has changed dramatically (i.e. fitness) as part of the professional knowledge base when these teachers were in teacher education programs. How to gain that new knowledge base was handled differently, but all actively pursued new knowledge to solve new problems. As part of that search for new knowledge, the teachers all reached out beyond their gym, beyond their schools, and even the physical education field, which in turn served to reduce isolation.

The experiences of these six teachers also suggests support for Housner's (1996) call to re-examine teacher education programs. If these six teachers are more than random oddities, then there are lessons to be learned for teacher education programs. Pre-service teachers need to develop reflective skills that will allow them to analyze their and their students' values and needs. Reflection is a necessary first step and set of skills; however, pre-service teachers also need a commitment to lifelong learning as well as the skills and commitment to act as a change agent.

Reform at the teacher education level will begin the change process, but our field must also address better professional development programs as teacher education is merely four out of 34 years that career teachers spend in our field. We must provide opportunities for practicing teachers to meet regularly with others, gain new knowledge, and reflect on their program and the physical education field.

All of these suggestions are worthy of future exploration and none will be easy. If, however, we believe that physical education has the ability to change students' lives, then we will undertake the task of changing physical education to fulfill that promise.

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