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Chapter 3: A Comparison of High and Low Performing Secondary Physical Education Programs

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The development of national academic standards, assessment programs for those standards and accountability for achievement of those standards are a current focus of educational reform. To date, thirty-seven states have created and published standards for K-12 content areas and most are adoptions or modifications of the national standards (Dingerson, 2001). Student achievement of the standards is considered an indirect measure of school and teacher effectiveness: the higher the percent of students who meet the standards, the more effective the schools. The reform effort in South Carolina is heavily based on the establishment of standards, the assessment of student achievement of those standards and public reporting of student and school achievement of those standards.

Standards based reform emphasizes establishing a minimum standard of learning for every student. States have used an adaptation or adoption of national standards to classify what basic competencies should be expected of students. The process of developing standards that establish minimum expectations for every student results in a shared meaning among schools, teachers, students, and parents regarding expectations for learning (Fullan, 1991). The notion of shared meaning is a change in thinking that encourages alignment of the entire system, not merely achievement in a single classroom.

Accountability programs for student achievement of the standards seek to apply external pressure to produce student learning. Haertel (1999) described accountability programs as tests or measurement that have the potential to alter instruction and change the curriculum. The underlying assumption of accountability according to Haertel is that teacher and school effectiveness results from schools and teachers being held accountable for student performance.

Despite its popularity some remain opposed to the standards based accountability movement, fearing this initiative discourages content application and life-long learning (Sheldon & Biddle, 1998). "The more that accountability systems become focused only on cognitive achievement, the greater the gap will become between those students who are doing well and those who are not" (Fullan, 2001, p. 152). These gaps result from a narrowing of the curriculum or "teaching to the test," as teachers focus on the immediacy of the test and not the application of content.

Despite small steps of progress, issues of legitimacy and worth are still barriers inhibiting systemic change in physical education. Even with the call for reform in physical education (Rink, 1993), few comprehensive school reform efforts

have included physical education, for at least two reasons. First, physical education is not considered a core subject area, and second, physical education, as a profession, has not made a case to be part of these reform efforts (Ward & Doutis, 1999).

South Carolina professionals made a case to be part of the current standards, assessment, and accountability movement. The South Carolina Physical Education Assessment Program (SCPEAP) is one of the first efforts by a state to hold schools and teachers accountable for meeting state standards in physical education. It is a unique approach to program assessment in that teachers assess students in a sampling of classes, across four student performance indicators. Details of the program are described in chapter 1.

The assessment program in South Carolina has created the opportunity to study the viability of school and teacher accountability as an instrument for change in physical education. One of the ways to study change in physical education programs as a result of accountability is to look at differences between high performing schools (HPS) and low performing schools (LPS). Knowing the characteristics of HPS and LPS can help us understand what effective physical education programs look like, how to best facilitate change in physical education, and how to get students to meet standards.

The efforts of the reform movement in South Carolina and the present study have been informed by a growing body of literature on how schools change and how they become more effective. The relationship between reform, accountability, and change is ambiguous, for change is not dependent upon accountability or reform alone. Change can happen with or without the presence of reform or accountability. However, in South Carolina a state mandate was used to encourage schools, programs, and teachers to change present practice by establishing accountability through the public reporting of program effectiveness.

The School Change Literature

Determining the efficacy of a reform is dependent on being able to identify the characteristics of effective schools. Creating a list of specific characteristics of effective schools has proven problematic because of the uniqueness of each school, changes over time, and political agendas. Previous work on effective schools (Edmonds, 1981) may not hold true for all schools today, as educational reform may have changed what effective and ineffective schools look like. For example, a school using site-based management may be identified as effective for slightly different reasons than a more traditionally structured school.

One current method of establishing public accountability for school effectiveness is the school report card available to and often distributed to the public. School report cards are intended to report school effectiveness on multiple indicators. When designing school report cards, indicators that are highly correlated with school effectiveness are selected for inclusion, as well as those that might be of interest for different reasons. Despite the diversity of indicators of effectiveness, some overlap in indicators related to school performance has been identified. These indicators of effective schools have been broadly characterized into characteristics of the learning environment, instruction, and collaboration (Lee, Bryk, & Smith, 1993; Rosenholtz, 1985, 1989).

In effective schools a positive learning environment often stems from the presence of a strong administration (Purkey & Smith, 1983). Schools of today might call this leadership characteristic a shared vision (Fullan, 2001; Lee, Bryk, & Smith, 1993). Principals are considered valuable contributors to a positive learning environment and school effectiveness, but are not solely responsible for the effectiveness of a school. Teachers and parents are also considered to contribute to a positive learning environment.

The teacher's primary contribution to school effectiveness comes through instruction. Effective schools enhance instruction through high expectations for student learning and monitoring of student progress. In effective schools, teacher development plays an important role in helping teachers identify appropriate expectations for their students. Expectations for learning are documented in standards and benchmarks. Monitoring student progress toward standards contributes to school effectiveness.

Collaboration, though time and labor intensive, does facilitate dialogue and thus school effectiveness. Bernauer and Cress (1997) discussed the role of accountability, time, and resources, as well as a people-centered process approach to aid in the facilitation of change. Schools that form collaborative teams (interdisciplinary and cross grade level) have the longest lasting innovations that address the school environment, instruction, and teacher development. When people are embracing change together and the learning environment supports change, then perhaps teachers have a better chance of getting to the point where there is actually an impact on their students.

Reform Efficacy

Reform efficacy, the effective implementation of a reform initiative, can be an influential part of change. Reform efficacy is influenced by teacher values and perceptions, an awareness of "best practice," and school leadership discussed below. Various levels of the educational organization ranging from the policy makers to the teachers are involved with each of these factors.

One of the strongest lines of research on school change is work related to teacher perceptions of the reform effort. Research suggests that teacher values and perceptions will influence how a reform is interpreted and implemented (Hall & Hord, 2001; Jewett, Bain, & Ennis, 1995). Odden and Anderson (1986) identified four key factors related to the initial stages of how teachers perceive school reform: (a) the amount of external pressure for accountability, (b) availability of effective awareness training, (c) school and teacher perceptions of fit, and (d) the presence of a district advocate. A balance between external pressure for accountability and internal support is suggested to be the ideal scenario for successful school reform (Fullan, 2001; Odden & Anderson, 1986).

Reform necessitates an awareness of "best practice" by both teachers and administrators. When best practice was linked to district goals, teachers believed the reform to be a good match. State initiated programs are often unsuccessful because of local resistance, an unwillingness to change, and a lack of comprehension of the intention of a reform (Odden, 1991).

Leadership and advocacy for a reform is also important for reform success. Odden and Anderson (1986) suggested that a single advocate for a state project within the district could act as a liaison to the state department for interpretation

and implementation. This person could help minimize uncertainties or mismatched intentions. Having a single person as an advocate is valuable and arguably essential. Because the advocate and district leader for a reform requires that the advocate have specialized skills, many reforms go without district advocates.

Physical education is a marginalized program within the schools most often left out of large school reform efforts. The elements of teacher values and perceptions, an awareness of “best practice,” and school leadership in the reform effort influence the degree of reform efficacy in academic areas, but it is unclear how these characteristics affect reform efficacy in physical education.

In 1995 the physical education performance indicators were legislated for the high school program in South Carolina. Following a year of teacher development work to help teachers align their programs with the standards and the performance indicators, two studies were done. Fleming (1998) investigated change efforts to implement mandated criteria after the first year-long teacher development program in physical education. He found that many teachers were most supportive of the new criteria and saw the effort to change physical education as advocacy. Teachers identified collaboration, student choice, and longer units of instruction as facilitators of reform. They also identified the diversity of student abilities, a variety of student levels of fitness, and little accountability as inhibiting change in physical education.

In a second study, Wirszyla (2002) investigated three schools that had made the most progress in implementing the new reform after a year of teacher development work. Using a case study approach, he found that female, lead teachers served as the driving force for change in the school. Wirszyla found that the willingness of teachers to create student accountability, the degree of implementation, the amount and nature of curriculum change, and facilitators and inhibitors common in the literature were influential factors related to change in physical education. In the model schools selected for study, the teacher-coach role conflict was a strong inhibitor for change, particularly for the male teachers.

The SCPEAP program was initiated following both the study done by Fleming and the study done by Wirszyla. The program was designed in part as an attempt to address some of the inhibitors, such as low stakes accountability and lack of male participation in change efforts in physical education, found in these studies (Fleming, 1998; Wirszyla, 2002).

The purpose of this study was to compare HPS and LPS in a secondary physical education state level assessment and accountability program. The implementation of the assessment program provided an opportunity to determine school performance and study both HPS and LPS. Using both quantitative and qualitative methods, this investigation examined reform efficacy, teacher perceptions, program characteristics, department and school characteristics, and facilitators and inhibitors, in four HPS and four LPS.

Methodology

Participants

Several levels of participation were identified for this study. Data from all schools ($n = 62$) and all teachers ($n = 160$) were used to analyze school performance. The participating schools represented a stratified (enrollment), random

sample of 1/3 of the high schools in South Carolina. Based upon the final overall score given to each school, four HPS and four LPS were selected for in-depth study. All teachers ($n = 22$) at the selected HPS and LPS who participated in the assessment were surveyed. From the survey, fourteen teachers, eight from HPS and six from LPS, were selected to be interviewed.

Selection of Schools

HPS and LPS were determined using two criteria: the overall school score representing the weighted score on all of the indicators for all of the teachers and the level of compliance of the school. The level of compliance reflected the amount of data a school submitted that was accepted as accurate and reliable by the monitoring committee (chapter 1). The researcher elected not to visit schools that submitted a large quantity of noncompliant data. In such cases, testing protocol violations, missing data, or substantial errors in data submission made it impossible to determine the extent to which students met the performance indicators for these schools. Twenty schools had less than 50% of their data accepted by the monitoring committee, therefore these schools were not considered for visitation.

Overall school scores were used to select 8 out of the 62 schools. The state overall mean score for all schools was 42% for all of the indicators. The four HPS originally ranked among the top seven schools in overall physical education score and represented four of the top five schools in level of compliance (88% of the assessments were accepted by the monitoring committee). The four HPS overall score was at least 76% or higher ($M = 78.00$, $SD = 1.63$).

The four LPS scored between 7% and 38% ($M = 28.75$; $SD = 14.52$). All of the schools in this study had compliance scores of 50–100% (at least half of the assessments were accepted by the monitoring committee), except for one LPS. The LPS that did not have at least 50% compliance had a unique situation: One teacher had a compliance level of 67% (of the assessments were accepted by the monitoring committee), while the second teacher at that school elected not to submit data to SCPEAP. The input from the 67% compliant teacher was felt to be important because these data represented the only classes in which the data were accepted, but no students attained competence. The researchers attempted to balance region, school size, and SES in the selection of schools.

Selection of Teachers

All teachers in the selected HPS and LPS, who had participated in the state-wide assessment, were recruited for participation. A teacher survey was administered to teachers at the eight selected schools. In the schools selected for further study, 22 teachers remained from the 2000-2001 school year that had participated in the data collection and taught state mandate physical education classes. Twenty-one of the 22 teachers returned the survey for a response rate of 95%. The survey was used to identify teacher perceptions at the HPS and LPS and also to identify teachers to be interviewed.

Fourteen teachers from the HPS ($n = 8$) and LPS ($n = 6$) were identified for extensive interviews, based upon the survey data. Teachers were selected for interview by their level of support of the assessment program (determined through the survey), an analysis of student competency in their class, participation in data collection training and Physical Education Institute teacher development, and gender.

One teacher selected for interview was considered supportive, while the second teacher was less supportive of SCPEAP. Of the fourteen teachers selected for interview, 8 were females, 6 were males, 9 were Caucasian, and 5 were African American. There were fewer teachers selected for interview from LPS because two schools had experienced staff turnover. Two schools had only one teacher (out of a staff of two teachers) remaining from the data collection school year.

Procedures

Qualitative data sources included teacher surveys, teacher interviews, and an analysis of both SCPEAP and school documents. Data sources were analyzed independently and then synthesized to create school profiles and profiles of HPS and LPS.

Teacher Survey

A teacher survey was designed to collect data regarding teacher support of SCPEAP, department use of performance indicators, program change resulting from accountability, and department characteristics of curriculum and instruction. Also, the survey sought to identify teacher perceptions of the facilitators and inhibitors to program effectiveness. The survey was based on the work of Carter and Stanhope (2001) and Castelli et al. (2001) and was piloted with teachers from six high schools. The survey consisted of 75 Likert scale questions and 27 open-ended questions. The Likert scale questions had four foils of *strongly disagree*, *disagree*, *agree*, and *strongly agree*. The opened-ended questions required short answers ranging from listing facilitators and inhibitors to explaining, “what did your department do to prepare students for PI-1 (movement competence)?” Teacher surveys were completed prior to schools receiving information on their physical education scores from SCPEAP. Each teacher at the selected school, who had participated in the data collection, was mailed a survey. In many schools, staff turnover had occurred since the data collection process, therefore only teachers still at the school, with the same teaching responsibilities were mailed surveys.

The researchers analyzed the teacher surveys in two ways. First, teacher surveys were analyzed to determine overall support for the SCPEAP program for the purpose of selecting teachers for interview. Nineteen of the 75 Likert questions related to support of SCPEAP. For example, “do you feel that physical education teachers should be held accountable on the state level?” Surveys were placed into one of three categories of support: *very supportive*, *supportive*, and *weakly supportive*. No surveys were identified as *very weak* support of SCPEAP. Second, HPS and LPS were separated for analysis. Survey responses were examined to obtain descriptive data concerning demographics, reform efficacy, school and department characteristics, program characteristics, and facilitators and inhibitors of reform efforts. Frequency counts were used to identify commonalities among HPS and LPS within a matrix.

Teacher Interviews

Formal interviews with two teachers from each HPS and LPS were used to identify reform efficacy, school and department characteristics, program

characteristics, and facilitators and inhibitors. Information obtained from the analysis of the school assessment plan, an initial technical report project (Castelli et al., 2001), and the survey results were used to create the interview questions. A protocol created by Fleming (1998) and Wirszyla (2002) for conducting teacher interviews served as a guide for the development of an interview protocol in this study. A panel of experts (four teacher educators) reviewed the interview questions and protocol for clarity and validity. Each teacher was asked a group of specific, common open-ended questions with follow up questioning and clarification as part of the interview. A single interviewer was responsible for conducting one practice and all fourteen teacher interviews. Teacher interviews were conducted prior to schools receiving information on their physical education performance from SCPEAP. Interviews with each of the selected teachers from the HPS and LPS were conducted during the school day, in a private, quiet space. The interviews were between forty-five and seventy-five minutes in length. The interviews were audio taped and the interviewer took written notes. Materials evidencing their responses to questions were requested and collected at this time.

Once the interviews were transcribed these data were analyzed by the interviewer using a constant comparative method (Glaser & Strauss, 1967; Glesne, 1999). Spradley (1980) uses cultural domains (patterns of behavior, artifacts or knowledge) to create categories giving meaning to the coded data. Spradley's (1980) analysis by cultural domains was employed in this study. First, all discrete ideas were assigned a code and defined by rules of inclusion. Second, codes were assigned to domains using terms representing the semantic relationship, describing how these codes related to one another. Third, the patterns were grouped into themes.

Documents

A document analysis of current materials for the recruited schools was conducted in order to identify similarities and differences between HPS and LPS. There were three different sources for documents in this study: those supplied to SCPEAP by a school, those made available during school visitation, and the Internet. Documents reviewed for this study included school assessment plans, monitoring committee decision logs, teacher score sheets, correspondence between SCPEAP and the school, any other additional documents in their SCPEAP school profile, and the South Carolina school report cards, accessed via the Internet.

The South Carolina school report cards were the first-ever comprehensive, school effectiveness ratings that were made public for all publicly funded schools in South Carolina. The school report cards were released on December 4, 2001, representing the same school year (2000–2001) that the SCPEAP data collection began. Additional documents were obtained during the school visitation. The teachers supplied items such as department policies, worksheets, or homework assignments during the visitation. All documents were coded as facilitators and were applied a second code representing a discrete idea. The documents confirmed and supported codes established during analysis of the teacher survey and interview data.

Synthesis of Qualitative Data Sources

All qualitative data sources (teacher surveys, teacher interviews, and documents) were analyzed individually and collectively. Individual analysis included

frequency counts, percentages of responses in agreement or disagreement, and by code. Similarities and differences between HPS and LPS were identified by frequency counts of each code. Collective analysis was conducted using matrices to combine the data sources. To identify facilitators and inhibitors the teacher responses on the survey and interview data were recoded as facilitators or inhibitors. A summary list of facilitators and inhibitors was placed in a matrix, by frequency, to identify commonalities between HPS and LPS.

In summary, multiple quantitative and qualitative data sources were used for triangulation and to ensure trustworthiness of the data. Confirmability and dependability were addressed through an audit trail of coded data. For example, teacher responses on the survey were compared to teacher responses to similar interview questions to confirm the reliability of the data. Furthermore, the submission of documents served as confirmation that program characteristics described in the teacher’s survey and interview were truly representative of the program.

Results

Profile of High and Low Performing Schools

The results of this study are presented in profiles in which all data sources and results for the HPS ($n = 4$) and LPS ($n = 4$) schools in this database were synthesized, using matrices. The profiles of HPS and LPS are organized by the themes of (a) teacher perceptions and roles, (b) relationships, and (c) reform efficacy. Table 1 contains a summary of characteristics of high and low performers.

Table 1 Characteristics of High and Low Performing Schools

High performing schools	Low performing schools
Cohesive, long-standing, positive departments	Department members acted as individuals
Effective, regular communication	Informal and procedural communication
Made change before accountability	Made change with accountability
High teacher expectations and enthusiasm	Had misconceptions about student performance
Clear teacher roles to meet standards	Variety of duties in conflict with teaching
Little evidence of marginalization	Evidence of marginalization
Effectively used student choice	Inhibitors prevented use of student choice
Department leader who served as a liaison	Ineffective department leader
More facilitators than inhibitors	Ineffective department leader
More facilitators than inhibitors	Context specific inhibitors
Linked performance indicators	Talked about linking performance indicators
Active administration, supportive of policy	Passive administration

Teacher Perceptions and Roles

Information on teacher perceptions and roles was collected in both the teacher survey and interview data sources and confirmed using documents as a data source. Teacher perceptions are organized by teacher support for SCPEAP, changing expectations, enthusiasm for teaching, teacher perceptions of students, and teacher roles.

Support for SCPEAP. The survey data revealed overwhelming support for SCPEAP with 97% of the teachers stating that they supported SCPEAP. No teacher expressed having “very weak” support of SCPEAP, as survey responses were mostly supportive. Eighty-six percent of the survey participants believed that teachers and students should be held accountable. Across performance levels, 95% of the teachers who completed the survey perceived that the presence of statewide performance indicators promoted a higher level of student learning. One teacher expressed his support this way,

if you are not evaluated, we have so many in our state [that are] slackers, because everybody knows they exist. And this will help you focus on what is truly important. You still have choices. Like I can choose for my team sport, what I want. And you’ve got the freedom to do that. But it [SCPEAP] helps you to put the pieces together without just throwing out the ball and letting them go at it. . . . I do appreciate it [SCPEAP] and I see the need for it, it makes us better (School #7).

According to the teacher survey, both high and low performing teachers had similar perceptions of the performance indicators that described expectations for students. Little difference was found regarding strategies to address PI-1 (movement competence), as most teachers agreed that basic skill instruction, longer units of instruction, and student compliance (e.g., attendance, motivation, etc.) were important for student success. Ninety-two percent of all teachers surveyed believed teaching basic skills were important for student success.

Eighty-eight percent of low performing teachers surveyed suggested that they had increased their emphasis on health-related fitness in their program since the state mandate had been created. Fifty percent of the teachers at HPS reported increased focus on the amount of fitness taught in their programs since SCPEAP. Teachers identified 18 different instructional strategies to help students prepare for the cognitive health-related fitness test. The writing of individual goals, monitoring student progress, personalized instruction, class discussions, and the use of fitness labs and lectures were commonly identified as teaching strategies. There were no differences in the instructional practices selected between the HPS and LPS except for the use of homework. Eighty-eight percent of teachers at LPS used formal homework; where as only 31% of teachers at HPS used homework.

Perceptions regarding PI-3 (outside activity) were also similar between HPS and LPS. According to the survey 75% of all the teachers believed that SCPEAP had helped students to better understand the importance of physical activity. Yet, 56% of the teachers believed that students did not welcome the physical activity opportunities presented through PI-3 (outside activity). Teachers rated PI-3 (outside activity) as the least important among the four state mandated criteria. This lack of support for PI-3 (outside activity) may have influenced teacher perceptions about student enjoyment in PI-3 (outside activity).

The data revealed students were the least competent (see Chapter 2) in PI-4 (fitness), yet 89% of all teachers believed that PI-4 was attainable for their students. Teachers at LPS were most pleased with their students' performance and suggested that the students had exceeded their expectations. Despite the low student competence in PI-4 (fitness), most teachers would not change how they prepared the students. HPS were more likely to address fitness every day and used testing for more than assessment, such as creating personal goals to be part of PI-3 (outside activity).

Changing expectations. According to the survey teachers at HPS had higher expectations of their students and were slightly more supportive of the performance indicators. This was confirmed by the interview comments of a teacher in a HPS, "It [performance indicators] changed my expectations of them [his students]. With the Fitnessgram, we gave them a challenge. . . . We sat down, we wrote down goals. If you can do two push ups today that is two more than you did yesterday" (School #40).

Documents also supported the difference in expectations HPS had for their students. Policy and procedure materials were found in all four HPS. At HPS these materials had been created prior to the initiation of accountability of SCPEAP. Only one teacher from a LPS could present a formal document detailing teacher expectations for students.

Enthusiasm for teaching. Teachers in HPS were more enthusiastic about their teaching than low performers. Five different teachers offered such statements as, "We enjoy teaching. I mean, we really enjoy it. We like the students. We like the interaction" (School #61). Another teacher at a HPS stated, "I think we have a good program here. I love it here" (School #32). Only one teacher at LPS made a statement of enjoyment and pride.

Teacher perceptions of students. Teacher perceptions of student performance and student compliance differed between HPS and LPS. Despite knowing student scores from the data collection of assessments, some teachers at LPS had misconceptions regarding the level of their students' performance. When this department chairperson at a LPS, who assembled the materials for SCPEAP, was asked how the students at her school performed, she responded,

You know what? It's really hard because they [the other teachers] do what they want to do . . . up to a point. You know? It's not that I rule with an iron fist. It's like this is what we are doing . . . but my students, I'm sure, did fine, because I teach like the protocols (School #34).

When the student performance scores were compared to this low performing teacher's comments there was a disparity. She believed there was an adequate performance from her students when just fewer than 50% of her students had attained competence. These misconceptions of student performance may be related to lower teacher expectations or a misunderstanding of SCPEAP.

Both high and low performing teachers believed that student compliance (e.g., attendance, participation, effort during testing) influenced student scores. Fifty percent of the teachers at LPS reported having more problems with student compliance than HPS (15%). This may have been because HPS had policies and procedures outlined in documents clearly describing teacher expectations of student conduct, attendance, participation, and grading.

Teacher roles. All participants were full time physical education teachers and either coaches or athletic administrators. Differences were found in two areas: (a) teaching responsibilities and (b) the teaching-coaching role conflict. Information on teaching roles was initially identified in the school assessment plan documents and confirmed in the teacher survey and interview data.

An analysis of SCPEAP documents supports the idea that HPS adhered to recommendations made by SCPEAP to teach two different movement forms, health-related fitness, physical activity outside of physical education, and fitness. At HPS teachers were assigned to classes and given the responsibility to teach the recommended content. LPS had a wide range of teaching responsibilities (e.g., drivers education, social studies), creating competing demands between teaching different subjects and coaching. Teachers at LPS had difficulty balancing the demands between teaching and coaching and were in conflict with their roles. The survey revealed that high performers balanced their teaching and coaching responsibilities and used coaching experiences to their advantage by electing to teach and assess activities that they had taught and coached for a long time. High performing teachers identified themselves as teachers and coaches, not just coaches, expressing pride in teaching as well as coaching. When a teacher/coach at a HPS was asked about the climate in the department he responded,

I wouldn't rather be any place else. Even, if I had opportunities (which I have had) to be at other schools, to design a wrestling program. . . . I am supposed to be right here. We all work together. We all take pride in our physical education and athletic programs (School #24).

Teacher characteristics (such as balanced teacher-coach roles, teacher enthusiasm, and high expectations) were beneficial for the students. These characteristics may be related to teacher follow through on the belief that skill instruction was important. HPS had teachers that acted on this belief and did not merely identify its importance.

Relationships Between Physical Education Department Members

Having a shared vision means demonstrating positive relationships, communicating effectively, and taking a team approach to planning and data collection. This shared vision was evidenced by the relationships between physical education department members, relationships outside of the department, and reform efficacy (the implementation and adherence to recommendations made by SCPEAP).

The teacher survey found that both HPS and LPS increased collaboration between department members since the assessment program began. Collaboration was conducted similarly in both HPS and LPS through increased communication. Departments and schools acted on that discourse in different ways. There was agreement among teachers from both HPS and LPS that the most important factors in implementing the performance criteria were (a) communication between the physical education staff (100%), (b) communication with administration (93%), and (c) the use of the performance indicators to hold students accountable (93%).

Communication between physical education staff members was often informal and impromptu; teachers were talking to each other about physical education

programming, assessment, and standards. One LPS had two teachers who both stressed the importance of communication within their program. "You know, we had complete support all the way around. Like I said, we have great communication; between each other and with administration. We were kept abreast of what was going on [with SCPEAP]. We checked in everyday" (School #61).

How HPS applied information from the dialogue was different than LPS. HPS established a daily routine of "checking-in" with each other and were more likely to have long-standing departments in which positive interaction was an expectation of the department. Tension existed between teachers at some LPS, particularly during the data collection process. When asked about the relationships between staff members at one LPS, the teacher quickly responded with what bothered him the most, "... unmotivated teachers or teachers that is just not going to do anything" (School #22).

Departments in which everyone was moving toward a common goal were able to relieve tensions, such as the one described. High performing departments were more likely to make positive statements about the department relationships between teachers, such as, "Another positive was that we worked together as a group. Big time! I had to be open to teach different things and Coach Dickerson would help tape the curl ups. . . . It made us a lot closer as a department" (School #24).

Relationships outside of the physical education department. Teacher relationships with the administration and parents were important to student performance. Overall, the school administration was identified as supportive in both HPS and LPS, but the type of administrative support differed between HPS and LPS. In HPS the administration was active (e.g., communicated information from SCPEAP). In LPS the administration was more passive (e.g., teachers left on their own to solve problems). Teachers in LPS believed that communication with the administration was an essential part of the assessment process, yet in the survey data only 17% of the teachers recalled an administrator ever observing a class or talking with physical education faculty about the performance indicators (13%). When asked about administrative support, one teacher at a HPS stated, "It's excellent. It keeps me working here. We have excellent administrative [principal] support. It is very strict with high expectations" (School #60).

Often high performing departments had a single leader, usually the department chairperson, who served as liaison to the administration and directed programming. The leader was usually an experienced female teacher who facilitated communication with the administration. LPS may have had a female in that position, but the leadership or communication was not as effective as with HPS. Collaboration with the administration came mostly in the form of financial support, with 95% of the teachers, across performance levels, stating that they were provided with the necessary equipment (video cameras, videotapes, Fitnessgram kits, or equipment) required for the assessment program. Only one school failed to report an increase (it remained the same) in their department budget during the assessment year.

Both HPS and LPS reported that collaboration even extended beyond the physical education staff as teachers collaborated with parents to motivate students and track their progress with fitness and physical activity (83%). Positive relationships extended beyond the school walls, as teachers at all performance levels were willing to contact parents and felt this contact was important for motivation and

verification of PI-3 (outside activity). One teacher at a LPS identified contact with parents as a means for advocacy for physical education,

A lot of parents were part of the problem. "Hey look, my child doesn't have to do this." Or, "when I was in school all we did was play basketball." So now with the state backing this thing [SCPEAP], well we can't just let them get dressed and throw a ball out and let it rip. And I think this assessment has kind of brought credibility to physical education programs (School #61).

Reform Efficacy

Reform efficacy, the implementation and adherence to recommendations made by SCPEAP, is broken down into four categories, (a) teacher compliance, (b) curriculum, (c) instruction, and (d) facilitators and inhibitors to reform efficacy. Issues of implementation and adherence to the state mandated criteria were related to teacher compliance with required data collection procedures, use of materials, and strategies related to the assessment of student performance. HPS were more compliant (data was accepted by the monitoring committee), because the department collected data as a team, whereas LPS were less compliant because the teachers collected data independently and acted as individuals. Both HPS and LPS corresponded with SCPEAP and expressed a willingness to contact SCPEAP with questions via phone, at data collection training sessions, PEIs, or at policy board meetings. Both HPS and LPS referenced SCPEAP materials (notebook and CD-ROM). The survey revealed that there was a difference in the frequency of use of SCPEAP material between the HPS and LPS. LPS referenced SCPEAP materials (notebook and CD-ROM) more frequently than HPS and LPS accessed the state curriculum guide more frequently than HPS.

LPS reported practicing the tests more often. Some LPS practiced the test three times as much (10–11 times) for PI-1 (motor competencies) and PI-2 (cognitive fitness), than HPS (2–3 times). For PI-3 (outside activity), both HPS and LPS brainstormed community activities with the students. However, LPS were more likely to offer activities specifically for PI-3 (outside activity) (e.g., walking programs, intramurals, open gyms) than HPS. To facilitate student success the low performing teachers felt as if they needed to provide physical activity opportunities for their students within the school rather than rely on encouraging students to seek opportunities outside of the school.

Curriculum. All schools reported making change to their programs because of SCPEAP. Teachers discussed the performance indicators and SCPEAP materials before making decisions regarding curriculum and teaching. HPS aligned the curriculum to specifically meet the state standards. For instance, HPS used longer units of instruction. Longer units of instruction ($M = 8$ weeks) meant teaching fewer units during a semester. Additionally, student choice, an emphasis on health-related fitness, and more frequent fitness testing were implemented. All of these were recommendations made to teachers at teacher development sessions over previous years.

Schools were different with regard to curriculum alignment and how health-related fitness was addressed. HPS made changes before the onset of the testing program and after the legislation of the state mandated criteria (a seven year period). LPS initiated change concurrently with the accountability and data collection. Change in HPS resulted from teacher discussions of the performance indicators

and SCPEAP and was characterized by a greater emphasis on student learning. In the HPS discussions of the performance indicators led to alignment and integration of all performance indicators into the curriculum. LPS had more discussion than before but it did not necessarily lead to the same decisions. Specific changes such as the addition of a student choice program, more specific instructional goals, using state criteria and materials for grading, recording and monitoring student progress, were all easier to identify and clearly more established in HPS.

An example of an increased emphasis on health-related fitness and alignment of the curriculum with the standards was found in all data sources. For PI-3 (outside activity) teachers used individual goal setting and monitoring progress toward that goal to facilitate competency. Teachers from HPS were more likely to incorporate the fitness (from PI-4 (fitness) into the requirements for PI-3 (outside activity). The highest student competency was found among those teachers who addressed both PI-3 (outside activity) and PI-4 (fitness) simultaneously. Among the LPS there was little evidence of a cross over between the performance indicators. Monitoring student progress for PI-3 (outside activity) and PI-4 (Fitnessgram) and including performance indicator criterion, as part of physical education grading was evident at all schools, to varying degrees.

Schools that had a tendency to be progressive in academic subject areas were typically high performing in physical education (see Chapter 2). One teacher at a HPS (academic and physical education) described how change began to take place within their school.

The assessment has been a really good challenge for us, because this is tough. I won't say it wasn't difficult . . . We thought we had a good base of a program but when that state standards came out we began to question some things [within their our program] (School #24)

Instruction. Instructional strategies were primarily reported on the teacher survey. Both HPS and LPS used PI-1 (movement competence) rubrics for assessment (beyond data collection), used performance indicators for grading, and used classrooms and textbooks for instruction. Teachers across performance levels were open to new and different teaching strategies and attempted to use a wide variety of strategies to help students attain competency. Strategies such as test/retest, sharing the results of assessments with students, and linking physical activity to grading as a motivational tool were employed. Elimination of PI-1 (movement competence) activities because they were too difficult for students was not evident for either performance level.

HPS used textbooks (67%) and classrooms (63%) more frequently than LPS (38%, 42%, respectively) and elected to use seatwork over homework. LPS used homework (86%) more often than HPS (31%) with mixed results. HPS monitored student progress (89%), linked the progress to personal goals (63%), and recorded that progress (75%) more frequently than LPS.

Facilitators and inhibitors of the reform efficacy. The most common facilitators identified by both HPS and LPS were collaboration between members of the department, administrative support, supportive physical education staff members, PEIs, the performance indicators, and student accountability. The following facilitators were considered to be of different importance between HPS and LPS: (a) student choice, (b) the importance of data collection training, (c) communication with SCPEAP committee, (d) higher expectations of students because of

SCPEAP, and (e) student characteristics. All HPS had a student choice curriculum and attributed student success to its presence. LPS did not have a choice curriculum and perceived the guidance department of the school as an inhibitor of this change or did not consider it an important factor.

Data collection training and communication with the SCPEAP was considered to be more valuable by LPS. LPS relied on this communication with the SCPEAP to collect data and make change to their physical education programs. HPS relied more on the entire physical education staff at that school.

Teachers at HPS had higher expectations of student performance and more effectively expressed them to the students. Student compliance issues were proactively dealt with through written policy and administrative support of such policy. Teachers at LPS were pleased when a few students did well on the performance indicators and did not expect all students to perform as well.

The most common inhibitors for both HPS and LPS were SCPEAP materials that changed during the course of the data collection, interruptions in the conduct of their classes and units, class size and assessment protocols. Inhibitors were more context specific than the global facilitators, therefore there was little agreement. The following inhibitors were considered to be of different importance between HPS and LPS: (a) too much paperwork connected to the assessment program, (b) lack of textbooks, (c) poor facilities, (d) lack of resources (such as, equipment for teaching) (e) other physical education staff, (f) lack of knowledge, (g) difficulty in managing students during testing, and (h) difficult students. All of the inhibitors listed were issues for LPS. No HPS stated the factors of resources, facilities, other staff members, knowledge, or management of students as inhibitors.

The difference between HPS and LPS regarding inhibitors is related to the difference in the way HPS and LPS perceived their status and reacted to potential inhibitors within the school. HPS did not see themselves as a marginalized subject area. One teacher at a HPS comments,

The discipline is treated like any other discipline. I mean, the professional respect that you see and the climate . . . I'm talking across the board. I'm talking in between departments and there is a lot of respect that comes and goes [mutual respect]. It [physical education] is not like a stepchild. We are not here because they have to have us. At least I have never felt that (School #60).

Another teacher at a HPS said,

We feel appreciated and very respected part of the school and the curriculum. I mean obviously if you treat people right there will be benefits in return. We have great administrative support and that something [else], I feel that our administration have hired good instructors. That is important. We have had some challenges as well, but with that support we have developed a mind set that we want to be the best. It kind of ties in the whole school, really (School #24).

Not only did HPS not perceive physical education as marginalized, they had a better awareness of potential inhibitors and were more proactive in addressing these potential inhibitors. HPS addressing potential inhibitors relates to their willingness to make change prior to the presence of accountability. It took the presence of accountability to change low performing physical education programs and

for those schools to become aware that inhibitors existed and that something could be done about them.

Discussion

The purpose of this study was to identify and describe the characteristics of high and low performing secondary physical education programs. The state level testing program in South Carolina has provided the opportunity to describe not only the impact of a major reform effort but to shed some light on what an effective physical education program looks like. This section is organized by a discussion of the issues related to the effectiveness of SCPEAP as a reform effort and the characteristics of effective physical education programs.

Effectiveness of Reform

Haertel (1999) suggests that state level accountability, as measurement, has the potential to alter instruction and change the curriculum. State level assessment has played a substantial role in education but public demand for accountability in schools has largely excluded physical education programs. The SCPEAP program in this sense is the first opportunity to study the viability of a major reform effort and the effects of state level accountability on physical education programs.

The results of this study clearly demonstrate that accountability can produce change. In this study every school made substantial change to their physical education programs, whether high or low performing. The timing and initiation of change distinctly separated the performance levels. HPS began change with the legislation describing the performance indicators for the one-year state mandated physical education program (seven years prior to the assessment). HPS had quality programs before the accountability piece of the reform effort was in place. For LPS, change was not initiated until the accountability system was a reality for them. This would seem to confirm the importance of the accountability piece of a reform effort to initiate change.

Change for each school was unique to its context and setting, as some schools had a lot further to go than others. For one teacher, SCPEAP accountability represented advocacy and helped clear the way of many inhibitors, such as student compliance, "Now we finally have the teeth and the backing so we can do what we have always wanted to do in this program." (School #61). All of these programs made curriculum and instructional changes to accommodate the reality of accountability. They had to find ways to function as a department and to negotiate their way through the administration. Teacher accountability from the state resulted in a focus on student learning and teachers holding students accountable in the classroom.

Unlike much of the literature describing a lack of support for reform efforts, the results of this study confirm earlier studies of this project (Fleming, 1998). Teacher support for the indicators used to judge their programs and teacher perceptions of accountability as advocacy for a marginalized subject in the school was confirmed by this study.

The assessment program was effective in discriminating HPS and LPS. It is unlikely that the LPS in this study would have been identified as HPS on any indicators accepted by the profession. The use of student performance data across

four performance indicators (collected and scored by the teachers) is an innovative way to assess program effectiveness in physical education that seems to work.

The long-term effects of this assessment program have yet to be identified. What will happen to LPS? Will they continue to change and grow toward the characteristics of HPS? Action toward LPS, whether providing help or levying sanctions is the responsibility of the SDE or of local school boards and administrators who received the reports. Scores were not reported publicly for this data collection but were reported to the SDE and the administrators of the participating schools. At this time, it is unknown how local administrators have reacted to low school performance scores or to teacher scores of zero, resulting from either non-compliance or non-competence, on the physical education assessment.

The long-term effect of SCPEAP is clearer for HPS than it is for LPS. Rosenholtz (1989) suggested that successful student learning and administrative support in effective schools will help to keep teachers motivated and encourage continued experimentation with new techniques. We also can conclude that SCPEAP is committed to not just be an assessment program but a teacher development program as well. Therefore the outlook for HPS is bright.

The lengthy time frame to reform initiatives often makes it problematic to identify specific influential factors. In this study, many physical education programs did not change until the statewide accountability system was in place, thus making it easier to identify school, teacher, student characteristics, teacher behaviors, and other factors that facilitated and inhibited reform in physical education. Linking performance to these characteristics in physical education is a major contribution of this study.

Lawson (1998) concluded that "multiple benefits" would result if changes, through reform efforts could be made to physical education programs. Lawson was referring to benefits for students. SCPEAP increased program and teacher emphases on student learning by focusing on all four-performance indicators as contributors to the development of a physically active lifestyle. The ability of high performing physical education departments to purposefully link the performance indicators together to provide meaningful experiences for their students is an impressive by-product of SCPEAP. Perhaps benefits such as increased emphasis on health-related fitness and the requirement of participation in outside of physical education physical activity will impact students' lives beyond their physical education experiences. The long-term effects of these program innovations will not be evident for several years.

Characteristics of High and Low Performing Physical Education Programs

Some teachers and physical education departments were better able than others to help students meet the performance indicators. High performing physical education programs look different than low performing physical education programs, similar to how effective schools often look unique (Rosenholtz, 1989). Most of the factors differentiating HPS and LPS in this study have been identified before in the literature (Fleming, 1998; Rink, 1993; Wirszyla, 2002). Confirmation of the relationship of these factors to performance is a contribution of this study. Teachers, departments and schools had different characteristics in high and low performing physical education programs.

Teachers Matter

The individual efforts of teachers matter in physical education performance. Teachers at HPS can express why students performed well on the performance indicators because their actions are purposeful attempts to attain student competence. Instruction was conducted with the intent of student learning. Teachers at HPS were more reflective and had self-assessed their own teaching and programs before state level accountability. These teachers behaved differently than teachers at LPS, making change prior to accountability.

The findings about high performing teachers seem to be common sense. These teachers emphasized student learning, had high expectations, balanced teaching and coaching responsibilities, used a variety of strategies to meet the students' needs, and assessed and monitored student work. The multidimensionality of teaching makes these characteristics more complex.

Teacher expectations. Teachers may not have an understanding of appropriate expectations for secondary physical education students. Standards help teachers identify and, in many cases, raise expectations of students. The literature has identified high teacher expectations as a characteristic of both HPS (Levine & Lezotte, 1990) and LPS (Teddlie & Reynolds, 2000). Teachers at HPS in this study were more likely to have high expectations for students. High teacher expectations resulted in an increased level of student accountability and ultimately an increased level of student learning.

The public awareness associated with state level assessment places pressure on schools and teachers to get students to perform. One of the negative aspects of state level assessment is the reality that many teachers will abandon a more appropriate curriculum and teaching to the test, which results in a narrowing of curriculum. As described in chapter 1 the intent of SCPEAP policy makers was to expand physical activity and activity choices for students not to encourage elimination. The curriculums of the schools in this study were not narrowed but expanded. For this first data collection, schools did not choose to be assessed on activities they perceived to be easier to get students to a competent level. The long-term effects of the "test" have yet to be identified.

Teaching and coaching responsibilities. Certainly the teaching-coaching role conflict in high school physical education is well documented (Fleming, 1998; Rink, 1992; Wirszyła, 2002) as some teacher-coaches overemphasize the importance of coaching. One of the most unexpected findings of this study was related to the performance of teacher-coaches at HPS. At HPS, teacher-coaches in this study taught and assessed activities that they coached and used their coaching knowledge to their advantage. They balanced the responsibilities of teaching and coaching, by taking equal pride in both the physical education program and their coaching.

The initial study of the South Carolina physical education reform effort identified the teacher coach role conflict as a major inhibitor to change in schools (Wirszyła, 2002). The change from 1998 when Wirszyła did his work to 2001 may be related to the implementation of accountability. Coaches were no longer being held accountable for only what they did in their coaching roles but what they did in their teaching roles as well. Perhaps HPS already believed that they had a good program and wanted to prove it to everyone else. These findings need further investigation to perhaps discover the reasons why these teacher-coaches at HPS are better able to balance their responsibilities to both teaching and coaching.

Cohesive Relationships

This research details the importance of positive relationships both within and outside of the physical education departments (Lawson, 1998); the question is how do we create more physical education programs that look like the high performers in this study? Human relationships are part of workplace conditions. No job, even one we love, is without some negative interactions. Locke (1992) suggested that the removal of barriers was important to providing quality secondary physical education programs. Teachers at LPS in this study did not necessarily lack resources, planning time, or teacher development. With few exceptions (see chapter 2) class sizes were reasonable for all schools and there were few indications that resources were an issue for the schools. LPS did however lack in department cohesion, as unmotivated teachers inhibited collaboration. Unlike, LPS, HPS had established positive relationships through frequent communication, common goals, and helpful teamwork. It remains to be seen whether continued accountability for school and teacher performance will create enough incentive for teachers in LPS to find ways to work productively with each other.

The great conversation. Shulman (1986) described the dialogue regarding research on teaching as the *great conversation* suggesting that communication among researchers was important to gain an understanding of teaching. SCPEAP has opened the lines of communication between teachers, administrators, parents, and students regarding what should be expected of students in physical education. In this case, the expectations are expressed as standards and the responsibility is placed on the schools for their attainment.

As identified by these data and by Fullan (1991), long-standing, strong communicating departments that had a shared meaning (common understanding or vision) were most successful. Development of a shared meaning (Fullan, 1991) of the intent of the change among department members has been considered a facilitator in the change process. Those departments that behave collaboratively create dialogue that often leads to higher levels of implementation and longer lasting change (Foster, 1991). When people work together, believe in change, and are supported by the school climate, change may evolve to impact the students. This research suggests that lack of expectation and accountability for teachers may be a significant factor related to the dysfunction of high school departments of physical education.

Conversation between physical education teachers has always existed. SCPEAP changed the content of that dialogue, from sports scores and coaching to such topics as how to help students become competent in the standards, curriculum, instruction, and assessment. For many schools it took the presence of accountability for that dialogue to take place. As a profession, physical education has never had a shared meaning, yet high performers in this study clearly established a shared meaning that was facilitated by the establishment of state standards and performance indicators. Teachers expressed having a better sense of what a student should be able to do when they exit physical education programs. Departments that identified and collaborated on a common vision had greater percentages of competent students.

Administrative attitudes toward physical education are influential with regard to the marginalization of subject areas within the school program. What principals expect of teachers and students and the communication of and support of those expectations, are vital to school climate. All teachers in this study believed

that they had the support of their administration, but was that really support? Did teachers at LPS just believe that they had the support of the principal because the principal left them alone, taking a “hands off” approach to management? At HPS teachers used words like “mutual respect,” “equal with other subjects areas,” or “an important part of the curriculum,” to describe what physical education meant at their school. Administrative support was not merely supporting department policy, providing sufficient funds, planning time, and equipment. Administrative support at HPS was accompanied by expectation. These high performing teachers willingly accepted their responsibilities in exchange for dispelling marginalization issues. Teachers hinted that respect was earned through their program success, not simply available through unequivocal administrative support.

Teachers at HPS had a better awareness of potential issues, which could become inhibitors. This awareness went hand-in-hand with a positive relationship with administration, as some issues could be resolved through proactive planning. Unfortunately, for some LPS it is a harsh reality that many barriers exist for the schools, teachers, and students. In these cases, sanctions levied for poor performance are not the answer. Several schools of the sixty-two schools overcame poor school climates to succeed. Future research needs to look to them for answers.

Purposeful Programming to Meet the Performance Indicators

Curriculum implications. This study did not examine the curriculums of LPS and HPS. That study needs to be done to identify more specifically how effective schools packaged the one year high school required course to meet the needs of their students and to score well in the assessment program. It is possible that programs will narrow their offerings, particularly for PI-1 (movement competence) to offer only those activities perceived to be easier for students. Presently, the teachers did not eliminate activities because they were too difficult for the students. The curriculum changes identified by the schools in this study could be considered positive ones. Schools offered students more and different kinds of activities (e.g., many included dance for the first time), longer units and a choice of the activity they wanted to study. Teachers ordered textbooks and used them to teach the cognitive content. They worked with students to develop personal fitness programs and the more competent programs were able to integrate all of the performance indicators.

HPS allowed students to select a package of activities representing two different movement forms. The use of student choice helped with motivation, student compliance, and accountability. Student choice contributed to a higher level of student performance and minimized student compliance issues. Student choice also led to ability and gender grouping. Students tended to choose the activities in which they had both interest and ability. It is unclear whether this form of selected homogenous grouping is good or bad for physical education (Arobogast & Lavay, 1987; Chambers, 1988; Kneer, 1982; Napper-Owen, Kovar, Ermler, & Mehrhof, 1999).

Linking performance indicators. Departments with this vision were able to align curriculum with the performance indicators and link the indicators together, resulting in meaningful activities for students. Unlike PI-1 (movement competence) and PI-2 (cognitive fitness), PI-3 (outside activity) took place beyond the

walls of the classroom. Teachers sensed that lack of control and were uncomfortable being responsible for student behavior outside of the classroom. Teachers across the performance indicators in this study had the least support for this indicator, and yet if physical educators are serious about developing a physically active lifestyle it is perhaps the most important. Teachers used grades to motivate students to participate, monitored progress with exercise logs, brainstormed community activities, and contacted parents and coaches to help the students. Teachers at LPS provided additional activities for students in open gyms, intramurals, or walking programs. Teachers at LPS believed they would need to provide opportunities to be physically active in order for the students to be successful.

Implications

The initial results of the South Carolina Physical Education Assessment Program have produced positive effects on secondary physical education programs and students enrolled in those courses. For many schools it took teacher development and the presence of accountability to make that change. Student performance scores have provided new insight into how secondary physical education programs effectively function, raising many questions for further investigation. For example, how can cohesive, effective communicating departments be created and maintained?

Marginalization within schools remains a pivotal factor in how students perform within physical education programs. How and why did some administrators reduce marginalization, minimize inhibitors, and establish clear teacher roles, while others did not? How do administrators perceive a state level physical education assessment program? Upon receiving the overall performance scores for their school how did administrators respond, with regard to accountability? The role of administration in physical education effectiveness is important, but further study must be done to describe why some administrators are successful, while others were not.

The role of the teacher was influential in student performance. Those teachers who had high expectations, were enthusiastic, purposefully linked performance indicators, monitored progress, and balanced their teaching and coaching roles had more successful students than those that did not. Questions arise as to how best prepare preservice teachers to exhibit these characteristics and practices. Teacher education programs need to graduate effective communicators who understand best practice and standards based education, possess the ability to identify potential inhibitors, and advocate for their programs.