OHIO PHYSICAL EDUCATORS’ PERCEIVED PROFESSIONAL DEVELOPMENT NEEDS

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This dissertation describes research designed to investigate the influence of select teacher and school characteristics on the perceived professional development needs of in-service physical educators in the state of Ohio. Data were collected using a self-report survey instrument comprised of the Professional Development Needs Questionnaire-Physical Education (Conkle, 1994), and the Teacher Concerns Questionnaire-Physical Education (McBride, 1993). Additional demographic data were collected and categorized according to grade level taught (elementary, middle school, high school, or some combination), and school setting/location (urban/inner city, suburban/small city, and rural). Descriptive statistics and Pearson correlation coefficients were analyzed to determine the strength of the relationship between the independent and dependent variables. Multiple regression using stepwise method was further conducted to determine the degree to which a teachers’ stage of concern, grade level taught and school setting influenced their perceived professional development needs. Results indicated that participants’ perceived professional development needs were driven primarily by issues of concern rather than teaching situation (e.g. grade level taught; school setting/location).
This dissertation is dedicated to my family who sacrificed much that I might have the opportunity to pursue my professional goals; especially my husband Rick and our son Kalad for their unselfish support and encouragement throughout my pursuits. I also dedicate this dissertation to my dear friend and mentor, Carol for believing in me.
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CHAPTER I

Introduction

This dissertation describes research designed to investigate the perceived professional development needs of Ohio’s physical educators. Specifically, this study explored the relationship of select teacher and school characteristics to the perceived professional development needs of physical education teachers in the state of Ohio. Chapter One describes the background of the study, identifies the problem, justifies its significance, and provides a brief overview of the methodology implemented. In addition, this chapter describes possible limitations of the study and outlines specific terms used in the study.

Background of the Study

The demands of systemic reform, which include high standards, aligned curriculum, and new approaches to assessment, generate new expectations for today’s teachers (Corcoran, 1995). According to Corcoran, teaching has become a complex task; teachers are expected to “master new skills, take on new responsibilities, and change their practice” (p.1). Such reform-driven expectations will require teachers not only learn new ways of teaching, but also be given “…opportunities to acquire and practice the new knowledge and skills needed to implement these reforms” (p. 7). As a result, there has never been a “greater recognition of the need for ongoing professional development” of America’s teachers (Guskey & Huberman, 1995, p. 1).

Traditionally, teachers in public schools have been expected to improve their practice and learn new ways of doing their jobs through formal training experiences and workshops
commonly known as In-service Education and Training (INSET) (Corcoran, 1995). According to Corcoran, such workshops characterize the traditional in-service program approach to professional development, and represent the prevailing pattern of professional development (PD) in public schools across the nation (Sandholtz, 2002).

Although the term professional development generally defines the “full range of activities that affect how a teacher learns how to teach and how they mature intellectually and professionally” (Corcoran, 1995, p.1), traditional in-service programs are defined as “formal opportunities for learning provided by the school district and other agencies” (p.1). Although the terms are frequently used interchangeably in professional development literature, and often include other terms such as staff development and teacher development, for the purposes of this study, the term professional development will be used in the broad sense, whereas in-service will be used to describe the traditional approach to the professional development experience.

The central purposes of traditional inservice education and training workshops (INSET) tend to focus on developing or improving teachers’ technical competence by “helping teachers learn or adopt a particular method or program” (Sandholtz, 2002, p. 816). According to Sandholtz, this method implies a deficit exists in teachers’ knowledge and abilities, and suggests that outside experts are needed if teachers are to improve their teaching. In some cases, teacher input is solicited; in others the district may solicit assistance from outside experts (e.g. consulting firms, university partnerships, state agencies) to design and implement a program or series of programs. Regardless of either approach, the district retains control of the design and delivery of the program, teachers are required to attend, and effectiveness is measured according to teacher satisfaction, or what Sparks (1995) refers to as the ‘happiness quotient’ (p. 2).
Although INSET approach represents the prevailing pattern of PD in public schools, and is deeply institutionalized within the practices of most school organizations, research consistently points out few PD programs in the form of INSET can achieve the systematic changes in teacher behaviors needed to reach and sustain practices required for successful systemic reform (American Federation of Teachers, 1995; Guskey & Sparks, 2002; Hawley & Valli, 1999; Sandholtz, 2002).

Although PD literature suggests a variety of factors that likely contribute to the ineffectiveness of the traditional approach, a major problem lies in the fact that most teachers view it as a waste of time (Corcoran, 1995). Miller (as cited in Sandholtz, 2002), indicated that most teachers describe INSET experiences as “boring and irrelevant” (p. 815). Corcoran (1995) agrees, citing that most teachers fail to find value in traditional in-service programs because the programs tend to ignore teacher expertise and experience, and view teachers as passive learners. As a result, many teachers do not perceive a lot of the PD they receive as beneficial to their professional growth as teachers; especially when the content is not linked to their specific teaching contexts (Bechtel & O’Sullivan, 2006).

According to Dilworth and Imig (1995), much of the criticism leveled at traditional INSET experiences is due to narrow design and purpose, and a disregard for what teachers consider necessary and important to their daily work. Furthermore, Sparks and Hirsch (2000, para. 13) report that the “typical school spends as little as half a percent of its budget on raising the abilities of its staff, while the private-sector company spends nearly three times as much”. Sparks and Hirsch further suggest that when states fail to support professional development activities and rely on teachers to assume most of the cost, they relinquish their role in controlling
the content and quality of the program. Consequently, most INSET experiences are too short to be effective in promoting the development of the teacher knowledge and skills necessary to ensure all students reach the highest levels of achievement.

Although support for traditional approaches such as INSET experiences appears to be suspect, a new vision of professional development has evolved over the past decade. Driven by federal and state policy initiatives, as well as teaching and subject matter organizations (Bechtel & O’Sullivan, 2006), this new vision of professional development recognizes the importance of professional learning opportunities designed to meet the interests and needs of teachers, and acknowledges the central role effective professional development can play in student learning and school improvement initiatives (Bredeson, 2002). In order to understand the role of professional development in today’s educational system it is useful to examine the current educational climate and its impact on policies and practices that have led to changes in how we view the importance of the continuing professional development of America’s teachers.

No Child Left Behind

Historically, the federal government’s role in the progress and growth of education in America has been indirect (Yell & Drasgow, 2005). However, in recent years the federal government’s role in education has changed significantly. On January 8, 2002 President Bush signed into law the No Child Left Behind Act (NCLB) of 2001 into law. According to Yell and Drasgow, the passage of NCLB represents “the most significant expansion of the federal government into education in our nation’s history” (p. 1).

As indicated by Yell and Drasgow (2005), NCLB is significant for two reasons. First, the law, which reauthorized the Elementary and Secondary Education Act of 1965, increased federal
mandates and requirements on states, school districts and schools. Second, the law significantly increased the amount of federal spending on education as well as provided greater flexibility to states, school districts and schools in determining how federal funds would be used to benefit the greatest number of students.

Under NCLB states are required to set rigorous academic content standards, measure student progress annually, and report the results of the tests to the public (Yell & Drasgow, 2005). As explained by Yell and Drasgow, NCLB holds states accountable for the academic success of all its students by requiring schools and school districts to measure and report student achievement toward stated proficiency standards in the following academic content areas: reading, language arts, math and science.

According to Yell and Drasgow (2005), achievement of proficiency standards are measured according to state defined adequate yearly progress (AYP) goals. AYP goals are used to determine annually the percentage of students in a district meeting proficiency standards, and to verify if schools and school districts are progressing at an acceptable rate toward stated proficiency standards. Yell and Drasgow go on to explain that when schools and school districts fail to meet AYP goals as mandated under NCLB, the law requires sanctions and corrective actions, ranging from state assistance to complete school restructuring, be applied.

Specifically, the primary goals of NCLB, as explained by Yell and Drasgow (2005, p. 10) are as follows:

1. All students will achieve high academic standards, by attaining proficiency or better, in reading and mathematics by the 2013-2014 school year.

2. Highly qualified teachers will teach all students by the 2005-2006 school year.
3. All students will be educated in schools and classrooms that are safe, drug free, and conducive to learning.

4. All limited English proficient students will become proficient in English.

5. All students will graduate from high school.

Although these goals pose great challenges for states, school districts and schools, NCLB also increases significantly the amount of federal spending on education in order to assist states in meeting the central goals of NCLB (Yell & Drasgow, 2005). However, Yell and Drasgow explain that to receive funds, states are required to submit accountability plans to the U.S. Department of Education. Accountability plans must delineate state procedures for measuring and reporting AYP goals and school performance as well as define their system for holding schools and school districts accountable for student progress.

As a direct result of NCLB (2001), priorities for states, school districts and schools currently focus on improvements in the areas of student academic performance, particularly in math and reading, English instruction for all students, and improving the quality of teachers in the nation’s classrooms (Tunnicliffe, Chatterton, & Arcari, 2006). Thus, states set about making numerous changes in state education laws in order to meet the central goals of NCLB.

Ohio’s Senate Bill 2

In Ohio, Am. Sub. S.B. 1 of the 125th General Assembly directed the Governor to create a Governor’s Commission on Teaching Success (Legislative Service Commission, 2004). The Commission, appointed by Governor Taft, was directed to develop recommendations for improving teacher quality to ensure all Ohio’s students would be able to achieve newly formed academic standards in the specified content areas. The Commission’s Report, Achieving More:
Quality Teaching, School Leadership, Student Success, identified four major elements critical to the development of a better system of education for Ohio’s students (Governor’s Commission on Teaching Success, 2003). According to the commission, the critical elements include the following: (a) standards clarifying what teachers and principals should know and be able to do to ensure academic achievement and student success, (b) development of recruitment and retention strategies, (c) attention to the preparation and induction of new teachers into the profession, and (d) development of a system of professional training that includes new standards for professional development.

From the Commission’s perspective “the best way Ohio can increase and sustain the achievement of all students is to provide them with high quality teachers who have the preparation, supports, and incentives they need to help students succeed” (Governor’s Commission on Teaching Success, 2003, p. 5). The Commission’s report became the foundation for major changes in Ohio’s education laws. Am. Sub. S.B. 2 (2004) represents the Commissions work as well as the state of Ohio’s response to education requirements as outlined by NCLB (2001).

Accordingly, the subsequent sections will examine the following five components of Am. Sub. S.B. 2 (2004) deemed most pertinent to the growth and development of Ohio’s teachers: (a) highly qualified teachers in every classroom, (b) development of the Educator Standards Board, (c) identification of educator standards for teachers and principals, (d) identification of standards for professional development, and (e) development of a career ladder program. Furthermore, legislative efforts driven by Ohio’s Association for Health, Physical Education, Recreation and Dance (OAHPERD), will be discussed.
**Highly Qualified Teachers**

One of the primary purposes of NCLB is to improve teacher quality (Yell & Drasgow, 2005). Specifically, NCLB (2001) requires states that receive Title I funds to develop a plan to ensure all teachers who teach core academic subject areas (English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography) are highly qualified. According to Yell and Drasgow, to be considered highly qualified under NCLB, teachers in the core academic content areas must meet three basic requirements: (a) hold a minimum of a bachelor’s degree from a college or university; (b) obtain full state certification or licensure in each of the core academic content areas in which they teach; and (c) demonstrate subject matter competence by passing a state administered test in each of the core academic content areas in which they teach. However, teachers in non-academic content areas are not subjected to highly qualified requirements as defined under NCLB. As a result, there are no specifications for highly qualified teachers in non-academic content areas such as physical education.

In Ohio, Am. Sub. S.B. 2 (2004) incorporates most of the requirements of NCLB into law (Legislative Service Commission). Specifically, S.B. 2

… defines a ‘highly qualified’ teacher as a classroom teacher who (1) holds a bachelor’s degree; and (2) is fully licensed or is participating in an alternative licensing route in which the teacher receives professional development and mentoring, not teaching for longer than three years, and demonstrates satisfactory progress toward becoming fully licensed. (Act section, para. 11)
In addition, S.B. 2 requires teachers to fulfill one of the following additional requirements: (a) pass a test of subject matter knowledge required for licensure, (b) receive a graduate degree or advanced certification in the assigned teaching area if teaching grades K-6 or successfully complete an undergraduate major, coursework equivalent to a major, a graduate degree, or advance certification in the assigned teaching area if teaching grade 7-12; (c) achieve 100 points on the Ohio Highly Qualified Teacher Rubric, or (d) complete an individualized professional development program approved by the local professional development committee (Legislative Service Commission, 2004).

To maintain compliance with NCLB’s Highly Qualified Teacher requirements, states must also submit plans to the U.S. Department of Education explaining their procedures for ensuring that all teachers in core academic content areas will achieve highly qualified status by the end of 2005-2006 school year (Yell & Drasgow, 2005). Furthermore, Yell and Drasgow explain that states must also include plans for assisting public schools and school districts, as well as methods for monitoring their progress as they work toward the NCLB requirements.

**Educator Standards Board**

While NCLB (2001) requires states to establish rigorous academic content standards that define what a student should know and be able to do, the Governor’s Commission on Teaching Success (2003) believed it was equally important to identify similar standards that define what is expected of educators. In addition, the Governor’s Commission recommended that classroom teachers, administrators, and other stakeholders have a strong voice in the development of and implementation of such standards. To provide that voice the Commission called for the
establishment of an Educator Standards Board (ESB) whose primary purpose would be to develop and implement new standards for teachers and principals.

In accordance with S.B. 2, Ohio’s Office of Educator Standards established the Educator’s Standards Board (ESB) in September, 2004 (Legislative Service Commission, 2004). The ESB’s primary goal is to address and meet mandates as specified in S.B. 2, and to collaboratively promote “… educator quality, professionalism, and public accountability on behalf of the students and citizens of Ohio” (Ohio Department of Education, n.d.a, Mission Statement section, para. 3). Thus, under S.B. 2, the Ohio Department of Education was required to establish an ESB whose primary function would be to develop and recommend standards for teachers and principals.

As specified under S.B. 2, the ESB would be comprised of 21 members consisting of teachers, public school administrators, district Board of Education members, faculty from approved institutions of higher education teacher education programs, and other state level school administrators and legislators (Legislative Service Commission, 2004). According to the Legislative Service Commission, S.B. 2 also requires the ESB, in consultation with the Ohio Board of Regents, to develop statewide educator standards in the following three areas: (a) teacher and principal standards, (b) standards for the renewal of educator licenses, and (c) standards for educator professional development.

Standards for Teachers and Principals

According to the Governor’s Commission (2003) teacher and principal standards are a critical and necessary component of a better education system. The Commission suggests that standards are necessary because they define, as well as clarify, what teachers and principals are
expected to know and be able to do in order to improve academic achievement and promote student success. Under S.B. 2, teacher and principal standards are based on the Commission’s recommendations and are intended to specify what teachers and principals should know and be able to do at all stages of their careers (Legislative Service Commission, 2004). According to the Legislative Service Commission, S.B. 2 requires teacher standards be aligned to student academic content standards; be performance based as opposed to years of experience or course work completed; rely on a variety of evidence-based factors; and must be aligned with the Interstate New Teacher Assessment and Support Consortium (INTASC).

The adoption of the Ohio Teacher Standards as defined under S.B. 2 (Legislative Service Commission, 2004) acknowledges Ohio’s belief in the importance of teacher quality. According to the Ohio Standards for the Teaching Profession (Ohio Department of Education, 2006b) “…what matters most is the quality of the teacher who we put before every student. It is the interaction between teacher and student that is critical to producing high-level student learning and achievement” (para. 1).

Standards for Professional Development

Under NCLB states are required to provide high-quality professional development (HQPD) activities, grounded in scientifically-based research, to all public school teachers (Yell & Drasgow, 2005). In turn, the NCLB Act provides federal funds to states and school districts, as well as greater flexibility in determining how to use those funds, for the development of HQPD experiences. According to Yell & Drasgow, to meet NCLB’s high-quality requirement, school district personnel, administrators and teachers must work with the state departments of education
to develop research-based professional development activities designed to improve student achievement.

The Governor’s Commission’s report (2003) acknowledged that teachers and principals in Ohio were not receiving enough HQPD throughout their careers. According to the Commission, PD efforts were highly fragmented and uncoordinated, lacked resources and funding, and even more alarming lacked statewide standards and a systematic method for evaluating the effectiveness of existing programs. As a direct result of the Commission’s concerns, S.B. 2 not only addresses NCLB’s (2001) high-quality professional development requirement, it also acknowledges the Commission’s recommendations for making high-quality professional development a priority for Ohio’s teachers (Legislative Service Commission, 2004).

S.B. 2 addresses the requirements of NCLB and the Commission’s recommendations through the development of the Educator Standards Board. According to the Legislative Service Commissions (2004), S.B. 2 directs the State Board of Education to establish an ESB for the purpose of developing statewide standards in three areas: a) standards for teachers and principals, b) standards for educator license renewal, and c) standards for educator professional development. In addition, to ensure “practitioners have a strong voice in the development and implementation of statewide standards” (Governor’s Commission on Teaching Success, 2003, p. 12), S.B. 2 requires the ESB be comprised of a variety of education stakeholders including, teachers, local and district level school administrators, and teacher educators.

Developed in conjunction with the Ohio Board of regents, and adopted by the State Board of Education, the educator standards for professional development serve as a guide in the development and provision of school-based professional development across Ohio’s schools
(Legislative Service Commission, 2004). Specifically, under S.B. 2, schools are required to use the educator standards for professional development to provide school-based professional development that is linked to student learning. In addition, the educator standards for professional development serve to “determine what types of professional development the district and schools within the district should provide to teachers”, as well as the establishment of local professional development committees (para. 29). For example, under S.B. 2 school districts must establish local professional development committees (LPDC). As explained by the Legislative Service Commission, the primary function of the LPDC is to review and approve individual professional development plans (IPDP) and determine if the requirements for license and certification renewal have been sufficiently met.

According to the Ohio’s Standards for Professional Development (Ohio Department of Education, 2006c) quality professional development is defined as professional development that “…meets the needs of educators by responding to the needs of students. It also must align with personal, building, district, state and national goals” (para. 1). Ohio’s Standards for Professional Development, which represent “the overarching goals and themes that provide a framework for HQPD” (para. 6), include the following six standards:

1. High Quality Professional Development is a purposeful, structured, and continuous process that occurs over time.

2. High Quality Professional Development is informed by multiple sources of data.

3. High Quality Professional Development is collaborative.
4. High Quality Professional Development includes varied learning experiences that accommodate individual teacher educators’ knowledge and skills.

5. High Quality Professional Development is evaluated by its short- and long term impact on professional practice and achievement of all students.

6. High Quality Professional Development results in the acquisition, enhancement or refinement of skills and knowledge.

Ohio’s Career Ladder Program

To advance in the teaching profession, teachers are generally required to leave their classroom and the students they teach (Ohio Department of Education, 2006d). Opportunities for advancement within the typical hierarchical structure found in most schools means that teachers move vertically from their classroom role to an administrative role. Rarely are there opportunities for lateral or diagonal movement in which teachers expand their leadership roles while maintaining their role as a classroom teacher (Governor’s Commission on Teaching Success, 2003). In addition, differences in performance and achievement among teachers are not recognized with teachers generally paid on a single-salary schedule that assumes education level attained and number of years experience are sufficient criteria for evaluating and rewarding teachers. The result is a flat career structure in which teachers have little motivation to improve their teaching or to pursue expanded leadership roles outside their classroom (Ohio Department of Education, 2006d).
To address the impact of the traditionally flat career structure, The Governor’s Commission (2003) recommended the development and implementation of a career ladder program based on their belief that a well-executed, state-level career ladder program can support the growth and development of both teachers and students. As a result, S.B. 2 (Legislative Service Commission, 2004) requires the ESB, in conjunction with ODE, to develop a proposal for a career ladder program. Defined as ‘… a performance-based multilevel system of teaching positions or compensation levels within a school district or district building’ (Ohio Department of Education, 2006d, p. 7), career ladder programs are designed to provide teachers with the opportunity to advance in their careers while maintaining their role as teachers. Such opportunities should, according to the ESB and the ODE, create differentiated roles and responsibilities as well as describe differentiated competency levels that are observable and measurable.

Therefore, Ohio’s proposal, the Ohio Teacher Career Lattice Framework, was designed to create a “teacher leadership conceptual framework that enhances roles and responsibilities; encourages increased knowledge, skills and performance; spreads a culture of career opportunities; and increases teacher productivity and fulfillment” (Ohio Department of Education, 2006d, p. 7). Furthermore, EBS and ODE state that the career lattice approach recognizes multiple entry points and pathways promoting vertical as well as horizontal and diagonal movement within the structure.

The Impact of NCLB and Ohio’s Reform Initiatives

Although NCLB and state initiatives such as Ohio’s Am. S.B. 2 appear to be worthy attempts at improving educational experiences for all students, there is a growing concern that
the focus on student achievement in core academic content areas has led to a narrowing of the curriculum (Center on Education Policy, 2005). According to the Center on Educational Policy, narrowing the curriculum is one strategy that schools and school districts have opted to use to meet accountability measures. In effort to create more instructional time in core academic content areas, schools and school districts reduce instructional time to minimum standards or in some cases completely remove non-academic content areas from the school curricula. Thus, the impact of NCLB on non-academic content areas, such as physical education, has been primarily negative (Tunnicliffe, Chatterton, & Arcari, 2006). According to Rink (2007), … for many physical education programs the emphasis on academic test scores in ‘core’ content areas has meant a further reduction in program time, and administrative policy and support. In most cases, it is not that administrators do not ‘value’ physical education as an integral part of a well-rounded program for children. In the present educational environment they are forced to accept the idea that what isn’t tested does not ‘count’. (para. 1)

Unfortunately, legislative policies such as NCLB and the ensuing state policies designed to address NCLB requirements, appear to lack an understanding of the vital role quality physical education programs can potentially play in the growth and development of healthy children (Tunnicliffe, Chatterton, & Arcari, 2006). According to the Center for Disease Control and Prevention (as cited in Tunnicliffe, et al.), approximately 15% of all children in the U.S. are overweight. In a recent article highlighting the concern over declining opportunities for students to participate in physical education classes during the normal school day, Candisky (2001) noted
that in Ohio, one in seven children and one in four adults are obese. Despite such statistics, school boards and local administrators are frequently forced to funnel resources away from, or even cut physical education programs in effort to comply with federal mandates associated with NCLB, without fully understanding the impact of such choices.

According to the Ohio Revised Code (ORC) (Boards of Education, 2001), physical education must be included as part of the prescribed curriculum for Ohio’s public school students. In addition, effective September 29, 2007, the ORC further specifies one-half Carnegie unit (120 hours of instruction) at the high school level. According to a survey conducted in 2007 by the Ohio Association of Health, Physical Education, Recreation, and Dance (OAHPERD), the average time Ohio students spend in a physical education class equals as little as 30 minutes or one time per week (as cited in Candisky, 2007). Such limitations occur at a time when physical education programs should not only be considered a priority, but be supported at both the state and federal levels. For example, Tunnicliffe, Chatterton, and Arcari, (2006) noted that the CDC has attributed sedentary lifestyle habits and poor diets as the two primary contributing factors for overweight and obesity.

Although physical education cannot solve the obesity epidemic single handedly, physical education should certainly be a major part of a comprehensive approach to improving the health and wellness of the citizens of Ohio. To do so, physical educators in Ohio must be able to design and implement programs that provide children with “… proper instruction, feedback, and opportunities to become a physically educated person” (p. 19).
Currently, Ohio requirements for physical education are limited at best. However, recent efforts by Ohio’s professional organization and learned society, the Ohio Association for Health, Physical Education, Recreation and Dance (OAHPERD), and key legislators such as Senator Randy Gardner, as well as the passage of Governor Strickland’s state budget bill (HB 119, 2007), suggest that physical education may play a new role in the education of Ohio’s school children (Martin, 2007). According to Martin, the combined efforts of interested parties such as Senator Gardner and the OAHPERD resulted in the inclusion of specific physical education provisions in the Governor’s budget proposal. Specifically, Martin explained that HB 119 (June, 2007), as passed and signed into law by Governor Strickland, required the Ohio Department of Education to:

2. Develop and fill a staff position within the department of education dedicated specifically to the area of physical education by October 31, 2007.
3. Remove concurrent approval of physical education standards from the General Assembly.
4. Require all schools to report, by October 31, 2007, the number of minutes of instruction per week, as well as, the number of days per week instruction is provided.

Prior to the passage of HB 119, Senator Gardner introduced SB 118 to the General Assembly in March, 2007 (Martin, 2007). Also referred to as “The PE Bill”, and designed to make changes in the Ohio Revised Code relative to physical education, SB 118 included the following requirements: (a) schools must provide daily, high quality, physical education
instruction in grade K-six; (b) students must complete one-full Carnegie unit of physical education instruction between grades seven through twelve; (c) licensed physical educators must be in all physical education classrooms; and (d) school districts must not be allowed to excuse students from physical education for participation in extracurricular activities such as band, cheerleading or interscholastic sports (as cited in Martin, 2007). Although still in process at the time of this research, proposals such as SB 118 indicate recognition of the critical role physical education can play in the school curricula, such changes also suggest that physical educators will need access to HQPD experiences if they are to develop the knowledge and skills necessary to implement high quality, standard-based physical education programs daily.

Statement of the Problem

The documented ineffectiveness of most INSET experiences becomes problematic for several reasons. First, PD increasingly is cited as a critical element necessary for school improvement (Corcoran, 1995; Dilworth and Imig, 1995; Garet, Porter, Desimone, Birman, & Yoon, 2001; Lieberman & Wilkins, 2006; National Commission on Teaching and America’s Future, 1996). According to Corcoran (1995), the success of any reform initiative requires a “teaching force prepared to help students reach high standards of achievement; and a system of professional development that helps teachers learn, develop, use, and maintain knowledge and skills required to meet this goal” (p. 2). Thus, the success of systemic reform initiatives hinge not only on the quality and effectiveness of teachers (Garet, et al.), but a system of PD that supports the “design, development, and implementation of more rigorous standards, new curriculum
frameworks, authentic assessment, and changes in school organization and governance‖ (Corcoran, 1995, p. 2).

Secondly, PD has gone from choice to mandate (Lieberman & Wilkins, 2006). As explained in earlier discussion, Federal (No Child Left Behind Act, 2001), and State (Ohio’s Am. Sub. SB 2, 2004; HB 119; SB 118) level school improvement initiatives have created a shift in how local districts provide PD. Lieberman and Wilkins pointed out that because PD is “… required for all teachers and is often linked to certification, workshops and in-services must be better designed and relevant” (p. 125). However, professional developers “often struggle with meeting the needs of every teacher because school contexts are so different” (p. 125).

Finally, legislative initiatives aimed at amending NCLB to include physical education as part of the law’s core curriculum (Tunnicliffe, Chatterton, & Acari, 2006), as well as the passage of Ohio’s 2007 Budget Bill, and the introduction of SB 118 suggests a new vision of physical education is evolving. The importance of healthy children and the potential role high-quality physical education programs can play in ensuring a generation of healthier, physically educated children is undeniable (Magnotta, 2006). However, if physical education is included as a part of the core curriculum in the 2007 reauthorization of NCLB, it will become subject to all the mandates as specified under NCLB. In addition, Ohio’s adoption of physical education content standards as required by HB 119, and the potential mandates of SB 118 will require physical educators with knowledge, skills and abilities necessary to provide a new kind of physical education; one in which lifetime approaches to fitness and physically active lifestyles are emphasized, and schools and school districts are held accountable for student achievement of specific learning goals. Consequently, professional development programs will be crucial
elements in helping physical educators cope with the demands of educational change as mandated by NCLB and the ensuing state initiatives as outlined in HB 119 and SB 118. Therefore, the general purpose of this study was to investigate INSET experiences as a viable professional development strategy. Specifically, this study explored Ohio physical educators’ perceived professional development needs, and examined the influence of selected teacher and school characteristics on physical educators’ perceived professional development needs.

Significance of the Study

This dissertation study is significant for two reasons. First, although research on professional development (PD) and general education teachers has increased significantly over the past twenty years, research on PD with physical education teachers has been slower to develop (Bechtel & O’Sullivan, 2006; Ward & Doutis, 1999). As Ward and Doutis noted, efforts to systematically document the processes and effectiveness of inservice training in physical education have been limited in number. As a result, “we know little about which processes, forms, or components of inservice professional development projects in physical education are effective” (p. 395).

Second, this study is grounded in the idea that professional developers must recognize that the “design, delivery, and intended outcomes of learning activities are to serve the interests of the client….After all, they are the participants in the learning activities” (Bredeson, 2002). Furthermore, Bredeson suggests that when PD is designed and delivered without clear purpose or consideration of teachers’ interests and needs, it most often results in teachers who become “resistant, cynical, and frustrated by professional development designs created and imposed
without their input‖ (p. 667). Consequently, understanding how to design INSET activities that serve the interests and needs of teachers in any discipline area is critical to providing INSET experiences that conform to the criteria of high quality professional development, and that strengthens the individual and collective practices of teachers.

Finally, it has been said that physical education is at a crossroads in America (Tozer & Horsley, 2006); however, as Bechtel and O’Sullivan noted, “most recognize that quality physical education depends on well-qualified professionals and curriculum time” (p. 364), even when all others resources fall short. Thus, it is hoped that this study will provide a better understanding of the relationship between physical educators’ unique needs and the contexts in which they work. Ultimately, it is expected that this line of study will benefit professional developers as they design and deliver INSET experiences specific to the needs of today’s physical education teachers.

Overview of the Methodology

This study was designed to explore Ohio physical educators’ perceived professional development needs. Three variables, teacher stage of development, grade level taught and school location, were examined using the Scientific Package of the Social Sciences (SPSS 15.0) software for their influential value in relation to perceived professional development needs.

Perceived professional development needs were assessed using the Professional Development Needs Questionnaire-Physical Education (PDNQ-PE) developed by Conkle (1994). Teachers’ stages of concern were determined using the Teacher Concerns Questionnaire-Physical Education (TCQ-PE) developed by McBride (1993). Additional demographic data were
collected and categorized according to grade level taught (elementary, middle school, high school, or some combination), and school setting/location (urban/inner city, suburban/small city, and rural).

Delimitations and Limitations of the Study

Delimitations are defined as boundaries put in place by the researcher in effort to narrow the scope of the study (Creswell, 2003). For the purposes of this study, the delimitations included a self-selected population from the OAHPERD’s membership data base. For the purposes of this study, the organization’s membership was intentionally targeted due to the likelihood that membership in a professional organization might indicate a desire for continued professional development experiences. In addition, it was assumed that teachers who participate in professional organizations would provide an informed perspective regarding physical educator’s unique professional development needs. Initially the researcher limited survey responses to OAHPERD’s membership. However, teachers involved with the university’s physical education teacher education program (PETE) as mentor teachers were also invited to complete the surveys.

A further delimitation included select teacher and school variables. Teacher variables were limited to stage of concern (SoC) as defined by Fuller (1969, 1974), and the grade level taught by the teacher (elementary, middle school, high school, or some combination of the three). School variables were limited to the setting/location of the school in which the teacher was employed. The setting was limited to urban or inner city, suburban, small city, and/or rural schools.
According to Creswell (2003), all studies, regardless of their type, have limitations that indicate potential weaknesses of the study’s results. This study is limited by the following factors:

1. This study was conducted using a self-selected population of physical educators from one state, which limits the generalizability of the results.

2. Because the sample was limited to OAHPERD’s membership data base and to teachers involved in the university’s PETE program the sample size is relatively small.

3. Initially, the participants were invited to complete the survey on-line. As a result there is a potential risk that participants could have responded more than one time, thus duplicating some responses.

4. The use of a survey questionnaire by nature is limited because the results consist of self-reporting data based solely on what people say they believe or like or dislike (Thomas, Nelson, & Silverman, 2005).

Key Terms

The following terms and definitions will apply to this study:

Career ladder program: as defined by the Ohio Department of Education and the Educators Standards Board (2006), a career ladder is a performance-based, multilevel system of teaching positions or compensation levels within a school district or district building.

Carnegie unit: as defined by the Ohio Revised Code one Carnegie unit equals 240 hours, four semesters or two full years to be earned between grade 7-12.
Core academic content areas: as defined by NCLB (2001) core academic areas include English, reading, language arts, math, science, foreign languages, civics, government, economics, art (each state may decide the subject areas that constitute the arts), history, and geography.

Fuller’s Model of Teacher Concerns – three-stage, developmental theory that posits teachers’ progress through three developmental stages of concerns (self-task-impact) as they grow & mature in their environment.

High quality professional development: HQPD as defined Ohio’s Standards for Professional Development (2006) is professional development that meets the needs of educators by responding to the needs of students, as well as aligning with personal, building, district, state and national goals.

Highly qualified teacher: all teachers of subject areas identified within the academic core who have fulfilled HQ requirements as specified under NCLB (2001).

Impact concerns: characterized by feelings of concern about pupils and their level of achievement, teachers this stage of concern are interested in how well their instruction impacts student learning (Fuller, 1969).

Narrowing of the curriculum: a strategy designed to increase student achievement in core academic content areas; increase in instructional time in core academic areas that directly results in a decrease in instructional time from non-core content areas.


Non-academic content areas: all other content areas not identified as part of the “academic core” by the NCLB (2001) (e.g. physical education, art and music).
Professional development: “broader, more inclusive term referring to the full range of activities that affect how teachers learn how to teach and how they naturally mature intellectually and professionally” (Corcoran, 1995, p. 1).

Self concerns: teacher concerns fixated on concerns related to one’s self-protection and self-adequacy; concerns primarily center on issues such as class control, their own content adequacy and the situations in which they teach, and about evaluations from supervisors, colleagues and their pupils (Fuller, 1969).

Systemic Reform: also referred to as standards-driven reform, systemic reform calls for the development and implementation of standards and coherent education policies for curriculum, assessment, professional development, and school management (Corcoran, 1995).

Task concerns: teacher concerns related to the actual act of teaching (Fuller, 1974); concerns at this stage are centered on issues related to the teaching environment and the teacher’s professional responsibilities.

Teacher concerns: as defined by Fuller (1969), teacher concerns are the perceived problems or worries of teachers.

Traditional in-service education and training (INSET): “formal opportunities for learning provided by the school district and other agencies” (Corcoran, 1995, p. 1).

Summary

As PD takes on increased significance in school improvement initiatives at both federal and state levels, it becomes increasingly important to understand how to design and deliver experiences that are meaningful and relevant to teachers work, regardless of their discipline.
However, school administrators and professional developers must be prepared to support physical educators as new standards and curriculum are envisioned by the state. Much of what is being required in standards-based education and reform will require teachers to think differently about how and why they teach physical education as they do. However, as Sullivan (2001) pointed out, state and local foci on core academic content areas funnels support away from non-academic content areas like physical education. As a result, the professional growth and development of physical education professionals may not be supported through high-quality professional development programs. Therefore, the following research questions were developed to guide this study:

1. What are the perceived professional development needs of Ohio’s physical educators as measured by the PDNQ-PE (Conkle, 1994)?

2. Do the perceived professional development needs of Ohio’s physical educators vary according to school setting/location?

3. Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

4. Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?
CHAPTER II

Introduction

In order to explore the impact of select teacher and school characteristics on the perceived professional development needs of physical education teachers in the state of Ohio the literature reviewed for this study was divided into the following bodies of knowledge: adult learning and adult and teacher development theory, effective professional development research, and general education and physical education teacher professional development.

Adult Learning and Teacher Development Theory

A consistent theme in educational reform calls for teacher professional development practices to be linked with the body of knowledge on adult learning because it is understood that the most powerful and effective professional development results will come from connecting the two fields (Galbo, 1998). Glickman, Gordon, and Ross-Gordon (2007) note that “the use of such readily available and potentially rich knowledge about human growth can be extremely valuable to those who work with adults” (p. 51).

In a climate of educational change, knowledge of how teachers learn and grow as competent and productive adults is critical for professional developers charged with the task of planning teacher professional development experiences (Terehoff, 2002). According to Terehoff, successful professional development experiences are dependent upon the professional developers’ ability to create learning environments based on the principles of adult learning. Terehoff suggests that when teacher learning experiences are based on the principles of adult
learning, teachers are more likely to be interested and engaged in the learning process. Furthermore, Terehoff argues that the extent to which teachers are able to assimilate and accommodate new materials and teaching strategies into their daily work depends upon the decisions professional developers make in planning and implementing a teacher professional development program.

Although the research on adult learning and teacher development has been prolific (Glickman, Gordon, & Ross-Gordon, 2007), no single theory has emerged from the literature to explain all that we know about the growth and development of adult learners, the learning process or the context in which learning takes place (Merriam, 2001a). Thus, for the purposes of this study, the research related to adult learning was limited to adult learning and teacher development theories that have had significant impact on our conceptions of teacher learning and effective professional development practices. Specifically, self-directed learning, andragogy, and transformative learning provide the theoretical basis for understanding teachers as adult as learners.

Theories of Adult Learning

Andragogy

Since its inception, the field of adult education has centered on two basic questions: do adults possess unique learning needs that dictate how the educational process should be designed, and if so, are there preferred methods, based on those needs, for providing adult educational experiences (Clardy, 2005)?
Beginning in the late 1960’s andragogy, as posited by Malcolm Knowles, attempted to provide answers to such questions. Defined by Knowles (as cited in Clardy, 2005) as the art and science of teaching adults or helping adults learn, andragogy is grounded in the assumption that adult learners possess different learning characteristics and requirements than children.

According to Clardy (2005), understanding such differences begins with an awareness of what Knowles believed constituted an adult learner. As explained by Clardy, Knowles believed adult learners possessed two distinct characteristics: (a) the person performs a role traditionally associated with that of an adult (e.g. a parent or worker), and (b) the person’s self-concept is that of an adult (e.g. possess a fundamental need to be independent and self-directing). Due primarily to age and maturation, Knowles suggested a person’s self-concept changed from one of dependency and direction by others, to one of independence and autonomy for one’s self. Consequently, Knowles believed the unique and distinctive characteristics of adults required different educational procedures than those used to educate children.

Andragogy suggests a number of assumptions that describe the unique characteristics of the adult learner. Specifically, the adult learner is someone who (a) has an autonomous self-concept and a desire for self-direction, (b) has previous life experiences that serve as a rich resource for learning, (c) has personal learning needs and interests closely associated with a particular developmental stage, (d) is pragmatically oriented and interested not only in the reason for learning something, but also in the immediate application of what was learned, and (e) is internally motivated to learn and participates in learning experiences as a function of personal needs and issues as opposed to externally driven factors (Baumgartner, 2003a; Clardy, 2005; Kerka, 2002; Merriam, 2001).
The central assumptions underlying andragogy suggests professional developers consider not only a different view of the adult learner, but also practices and procedures that best facilitate the learning process. Specifically, Knowles (as cited in Clardy, 2005; & Terehoff, 2002) proposed the following principles intended to guide the organization and provision of adult learning experiences:

1) Creation of a learning climate conducive to adult learners.
2) Involvement of adult learners in mutual planning of the content.
3) Diagnosing and attending to the adult learners’ needs and interests.
4) Involvement of adult learners in the selection of learning goals and objectives.
5) Involvement of adult learners in the programs design.
6) Involvement of adult learners in the operation and implementation of the program.
7) Involvement of adult learners in the evaluation of the program.

When professional developers consider the elements of the andragogical perspective, the learning environment becomes conducive to the awareness, growth and development of adult learners (Terehoff, 2002). According to Terehoff, the focus of the learning experience is no longer the program’s content, but rather the program’s process and the characteristics and needs of those involved in the learning experience. In this approach, adults are considered self-directed beings, and andragogy is seen as the “activating or enabling environment that best supports self-directed learning experiences” (Clardy, 2005, p.5).

Self-directed Learning

Emerging alongside andragogy as its own distinct body of theory (Glickman, Gordon, & Ross-Gordon, 2007), self-directed learning (SDL) also played a significant role in early efforts to
professionalize the field of adult education, and further distinguish adult learning from learning in childhood (Merriam, 2001). Knowles (1980) identified self-directed learning as a key assumption of the andragogical model and described it as “a natural part of the process of maturation for an individual to want [need, even] to move from dependency toward increasing self-responsibility and self-directedness” (p. 48).

Although self-directedness was a significant andragogical assumption, it was Tough, (1971), based on the work of Houle who first uncovered and documented the widespread presence of self-directed learning among adults (as cited in Merriam, 2001). According to Merriam, Tough’s study of numerous adult self-planned learning projects revealed that adults regularly engaged in a type of learning that occurred as part of everyday life, and that was systematic yet did not depend on an instructor or a classroom. Such realization marked the beginning of self-directed learning as a focus of inquiry in adult education (Baumgartner, 2003a).

Since its beginning SDL has been a significant factor in adult education literature, and as a result has generated extensive research and inquiry (Roberson, n.d.). As a result, SDL has been alternatively defined as (a) a set of goals for adult learning, (b) a model of the adult learning process, and (c) as a personal attribute or characteristic of the adult learner (Baumgartner, 2003a; Glickman, Gordon, & Ross, 2007; Merriam, 2001a).

First, SDL has been defined as a set of goals in which the focus depends upon the philosophical orientation from which it is considered (Baumgartner, 2003a; Merriam, 2001a). For example, Merriam points out that the humanistic philosophy posits the goal of SDL should be the development of the learner’s capacity to be self-directed. Baumgartner further argues that
from this perspective the goal is for the individual to reach his or her full potential through increased independence, personal choice and free will. A second goal of SDL is transformational learning. According to Merriam, critical reflection and autonomy are central to the learning process. Finally, Merriam points out that critical theorist would argue that the third goal of SDL should be that of emancipatory learning and social action. From this perspective social and political action are more important than individual learning.

Second, SDL has been defined as a process of learning (Baumgartner, 2003a; Glickman, Gordon, & Ross, 2007; Merriam, 2001a). According to Merriam numerous models of SDL have been designed to address how individuals actually work through the self-directed learning experience. Early models, as explained by Merriam, were sequential in nature and emphasized the steps in the self-directed learning process. For example, Baumgartner describes Tough’s Sequential Model of SDL (1971) as an early attempt to identify how individuals plan and execute self-directed learning projects. Tough (as cited in Baumgartner, 2003a) identified specific steps designed to facilitate the leaning process and essentially “tease out the ‘what, where, and how’ of self-directed learning” (p.26).

Interwoven models emerged in the 1980’s and 1990’s and served to not only characterize the learner, but the context and nature of learning itself (Baumgartner, 2003a; Merriam, 2001a). For example, Brocket and Hiemstra’s (1991, as cited in Baumgartner) Personal Responsibility Orientation model not only identifies personal responsibility for learning and learner self-direction as necessary learner characteristics, but also considers the fact that “learning activities and the learner exist in a social context that affects the learning process and the learner” (p. 27).
Models that emphasized what instructors can do in formal settings to facilitate development of self-direction and student centered learning were termed instructional models (Merriam, 2001a). Instructional models, as defined by Merriam and Caffarella (1999, as cited in Baumgartner, 2003a), represent frameworks employed by educators in formal settings in effort to integrate self directed methods of learning into the learning experience. The best known instructional model, according to Merriam, is Grow’s Staged Self-Directed Learning (SSDL) model. In the SSDL model the instructor attempts to match the learner’s estimated stage of self-directedness with appropriate self-directed instructional strategies.

In addition to goals and processes, scholars of adult learning and education have also defined SDL as a personal attribute that can be measured utilizing several scales of self-directedness (Baumgartner, 2003a; Merriam, 2001a). According to Merriam, two scales of self-directedness were created in an attempt to measure the existence of personality characteristics necessary for SDL, as well as the degree of readiness to undertake self-directed learning experiences.

Lowry (1989), summarizing the work of Hiemstra and Brocket and Hiemstra, suggested that educational institutions and employers interested in providing SDL experiences considering the following guidelines:

1. Have the faculty meet regularly with panels of experts who can suggest curricula and evaluation criteria.
2. Conduct research on trends and learners’ interests.
3. Obtain the necessary tools to assess learners’ current performance and to evaluate their expected performance.
4. Provide opportunities for self-directed learners to reflect on what they are learning.

5. Recognize and reward learners when they have met their learning objectives.

6. Promote learning networks, study circles, and learning exchanges.

7. Provide staff training on self-directed learning and broaden the opportunities for its implementation. (para. 12)

The implications of SDL are numerous for professional developers seeking to foster teacher growth and professional development through SDL experiences. For example, Roberson (n.d.) suggested that the power of SDL is its “applicability to any subject and any learner” (p. 14). In addition, Roberson argued a primary advantage of SDL is its ability to empower those who participate and to enable them not only to continue to learn throughout life, but to learn to control what they learn. Such learning, according to Roberson empowers adults, and prepares them to meet the challenges of their lives as well as to design learning projects that meet personal needs rather than waiting for traditional learning experiences to be provided.

*Transformational Learning*

Although andragogy and SDL served as the focus of adult learning theory and adult education research during the 1970’s and 1980’s, transformational learning moved to the forefront of the field in the early 1990’s and has since surpassed both andragogy and SDL as a major theory of adult learning (Merriam, 2001b). To begin to understand transformational learning, it is necessary to distinguish between the types of learning that typically occur in adulthood (Baumgartner, 2003b). For example, Baumgartner pointed to Kegan’s differentiation between informational and transformational learning. According to Kegan (as cited in Baumgartner, 2003b), much of the learning that occurs in adulthood is informational in nature.
Kegan defined informational learning, as the kind of learning that adds to or extends current knowledge about a topic into new terrain and results in changes in what we know. For example, a teacher knows the importance of matching instructional style to student learning styles, but through additional research he or she is able to identify instructional strategies designed to meet specific learning styles.

In contrast, Kegan described transformational learning as a type of learning that ‘changes …how we know’ (p. 49, as cited in Baumgartner, 2003b). Such changes, according to Baumgartner, allow people to see themselves and their world from a different perspective. Under the right circumstances changes in how we know can lead to a more “…inclusive, discriminating, self-reflective, and integrative” (Mezirow, 1997, p. 5) perspective of the world.

Although there are several philosophical approaches to transformative learning, it has been Mezirow’s cognitive-rational approach that has received the most attention over the past twenty-five years (Baumgartner, 2001). Therefore, Mezirow’s conceptualization of transformational learning will provide the primary means for understanding the adult learner. The cognitive-rational approach proposed by Mezirow is based on two underlying assumptions concerning adult learning. First, adult education “must empower the individual to think as an autonomous agent in a collaborative context rather than to uncritically act on the received ideas and judgments of others” (Mezirow, 1997, p. 8). Second, knowledge is not discovered, but rather created or constructed from interpretations and reinterpretations of new experiences. According to Mezirow, such knowledge then serves to provide “… frames of reference” (p. 5) that define an individual’s “… life world” (p. 5).
Transformational learning, as proposed by Mezirow (2000), is defined as a process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. (p. 7)

Mezirow’s theory of transformational learning is grounded in Habermas’s understanding of learning and problem solving (Mezirow, 1997). According to Habermas (as cited in Mezirow), communicative theory suggests that problem solving and learning essentially entails two or more people “learning to understand the meaning of what is being communicated” (p. 6) relative to a person’s specific purposes, values, beliefs and feelings. Therefore, Mezirow argued it is necessary for learners to become “critically reflective of the assumptions underlying intentions, values, beliefs and feelings (p. 6) … rather than to uncritically act on those of others” (p. 11). Mezirow further explained that it is the very process of resolving differing assumptions that allows perspective transformation to occur. According to Mezirow, the process of transformative learning requires a set of ideal conditions that include critical reflection, awareness of frames of reference, and reflective discourse.

The process to perspective transformation as described by Mezirow typically begins with a life experience or disorienting dilemma that requires critical reflection (as cited in Baumgartner, 2001). Critical reflection allows the learner to not only examine previously held assumptions, but to reevaluate their legitimacy in relation to what is thought to be true. Becoming critically reflective is “fundamental to effective collaborative problem posing and solving,” (Mezirow, 1997, p. 9). Reflective discourse allows the learner to “determine the truth
of their perspectives” (Baumgartner, 2001, p. 20), and to “validate what is being communicated” (Mezirow, 1997, p. 6) by challenging old assumptions in effort to “arrive at a common understanding that holds until new evidence or arguments present themselves” (p. 7). Finally, as the new perspective is validated and old assumptions are revised, “action on the new perspective” (Baumgartner, 2001, p. 17) is necessary in order to fully integrate the new perspective into one’s life. As Baumgartner explains, to fully realize the transformative process, “not only seeing, but living the new perspective is necessary” (p. 17).

Mezirow (1997) further suggests that to facilitate the process of transformative learning professional developers would need to provide adult learners opportunities to “practice recognizing frames of reference and using their imaginations to redefine problems from a different perspective” (p. 10). In addition, professional developers would need to provide adult learners opportunities to participate effectively in discourse, as it is through discourse that the learner validates understanding and ultimately arrives at a new or transformed frame of reference.

According to Baumgartner (2001), the process of fostering transformative learning has generated increased interest in the topic, and resulted in literature concerning how to create Mezirow’s ideal conditions as well as specific practices that promote transformative learning. Cranton’s work (as cited in Baumgartner, 2001) identified two key elements necessary for creating Mezirow’s ideal conditions. First, educators need to be able to relinquish their authority or position of power in the classroom. And, second, they need to recognize the learner’s learning styles in order to facilitate the critical reflection process. Taylor’s work (as cited in Baumgartner, 2001) identified specific practices designed to foster the transformative process. First,
transformational learning requires an atmosphere that is safe, open, and trusting, and that emphasizes participation, collaboration and critical reflection. Second, adult educators should focus on creating an environment that fosters group ownership as well as individual action. Finally, Taylor (as cited in Baumgartner, 2001) noted the importance of “value-laden course content” (p. 21) as it appears more likely to rouse discussions about controversial topics and lead to the act of critical reflection more so than other content.

Mezirow’s transformational learning theory provides a unique perspective of adult learning by “explicating the meaning-making process” (Baumgartner, 2001, p. 22) and helping us to understand that it is not just “what we know, but how we know that is important” (p. 22). As Mezirow (1997) pointed out, understanding the meaning of our experience is “a defining condition of being human” (p. 5). Transformative learning theory has yielded insights into the process of adult learning and has helped us to understand ideal conditions and practices that promote transformational learning (Baumgartner, 2003b).

Andragogy, self-directed learning and transformational learning represent early efforts to not only distinguish adult learning from the learning of children, but also professionalize the field of adult education (Merriam, 2001b). Although no single theory can capture the complex nature of adult learning, Merriam points out that these three ‘foundational’ (p. 93) theories combine to contribute to our understanding of the adult learner and the learning process. Furthermore, Sullivan (2001) suggests such theories provide professional developers insight into the various aspects of adult learning that are “relative to creating an optimal learning environment for adults” (p.16).
Adult and Teacher Development Theory

According to Clark and Caffarella (1999b), the purpose of any theory is to “help us understand something better” (p. 3). In the case of adult development, Clark and Caffarella posit that ‘something’ is the adult’s life course; specifically, “how it unfolds and the meaning that can be given to various aspects of that unfolding” (p. 3). Essentially serving as a lens through which we view the adult’s life course, Clark and Caffarella suggest adult development theory provides a view of adult growth and development that not only considers the process of being an adult, but also the various sociocultural factors (race, gender, sexual orientation, social class) that shape the trajectory of the adults life course. Clark and Caffarella (1999a) further contend that because many aspects of our current thinking regarding adult learners and the learning process are shaped by our knowledge of how adults grow and change across the lifespan, it is critical for adult educators to understand the various aspects and dimensions of adult development theory.

Current adult development literature represents a broad domain that is both diverse and multidimensional (Clark & Caffarella, 1999a), and includes several distinct but related approaches (Glickman, Gordon, & Ross-Gordon, 2007). In an effort to better understand the numerous approaches, Glickman et al., suggest a conceptual model that organizes adult developmental theories according to two broad categories: those that include universal, orderly, and sequential models (e.g. hierarchical stages, lifecycle phases), as compared to those that are more interactive, and socially contexted (e.g. transition events, role development, and sociocultural variables).

Traditionally, adult development has been conceptualized as an orderly progression, focused primarily on the change processes occurring within the individual across time.
Sequential adult development models typically emphasized growth in terms of hierarchical stages and age-linked life cycle phases (Glickman, Gordon, & Ross-Gordon, 2007). From this perspective, adult development is viewed as a series of distinct stages with subsequent stages “considered to be successively better frameworks for managing one’s life in a complex society” (Oja, 1990, p. 2). Life-cycle theorists also define adult development according to sequential and normative patterns of development (Glickman et al.); however, their interest is in particular events or markers in a person’s life that are seen as driving development (Clark & Caffarella, 1999b). According to Clark and Caffarella, such events or markers can be individually focused (e.g. birth, marriage, and death) or group focused (e.g. survivors of a tornado, a war, or a flood).

Interactive or socially contexted theories of adult development focus on understanding the various ways in which social and cultural aspects influence growth and change throughout the adults’ lifespan (Clark & Caffarella, 1999b). According to Glickman, Gordon, and Ross-Gordon, (2007) socially contexted models not only examine adult social roles (e.g. work or career, family life, and personal development), but also how those roles interact to characterize adult lives. More recently, socially constructed notions such as race, ethnicity, gender, social class, and sexual orientation as they relate to adult development have been examined in an attempt to “develop more robust and inclusive theories” (p. 74) that describe a broader range of people and acknowledge the diverse nature of today’s society.

Clark and Caffarella (1999b) acknowledge the fact that adult development is a complex process, and no single approach has the capability to explain the complex nature of adult development; however, “each provides a particular way of looking at adult development and illuminating certain aspects of it” (p. 4). As such, the subsequent section discusses teacher
development from what Oja (1990) terms a “developmental stage perspective” (p. 1). A developmental stage perspective assumes a sequential or hierarchical approach to understanding how teachers grow and learn professional knowledge across their careers. Applied to the profession of teaching, developmental stage perspective provides a framework for understanding how teachers grow personally and professionally across their careers.

Teacher development: A developmental stage perspective

Research relating developmental stage theories to the professional development of teachers provides a compelling framework for understanding how teachers grow personally and professionally across their careers (Oja, 1990). According to Oja, implications from such work suggest that “teachers at higher stages of human development appear as more effective in classrooms than their peers at lower stages” (p. 4). In particular, Oja, cited the works of Harvey, Hunt, and Joyce, as well as her own work, and connected developmental theory to classroom teaching based on the following key findings:

1. teachers at higher stages of development functioned in the classroom at a more complex level than their counterparts at lower levels
2. teachers at higher stages of development tended to be more flexible and adaptive than their counterparts at lower levels.
3. teachers at higher stages of development not only employ a wide variety of coping behaviors, but also tend to be more stress tolerant than teachers at lower levels.
4. teachers at higher stages of development employ a wide range of teaching models as well as vary those models according to a variety of student learning styles.
5. teachers at higher stages of development are more effective in interpersonal relationships and group problem-solving.

According to Oja (1990), such findings support a developmental approach to teacher education. Specifically, Oja argues, professional development should have as its goal development of teachers’ cognitive structures, “specifically to increase their conceptual complexity, ego maturity, and moral reasoning as a means to improved teacher effectiveness and professional development” (p. 2).

Cognitive-developmental stage theories, which assume human development occurs as a result of invariant changes in cognitive structures, provide the basis for understanding how teachers come to learn professional knowledge (Oja, 1990). For example, Oja, cited Piaget’s (1972) theory of cognitive development, Hunt’s (1975) theory of conceptual development, Kohlberg’s (1981) theory of moral reasoning, Loevinger’s (1976) theory of ego development, and Fuller’s (1969) stages of concerns theory as developmental stage theories most pertinent to teacher education. Although each represents a separate and distinct strand of developmental stage theory, all posit a sequence of hierarchical stages in which “subsequent stages are considered to be successively better frameworks for managing one’s life in a complex society” (p. 2). The following section provides an explanation of each theory as well as a brief description of specific stage characteristics as they pertain to teacher development.

**Cognitive-developmental stage theories**

The best known stage theory of adult development is Piaget’s theory of cognitive development. According to Glickman, Gordon, and Ross-Gordon (2007), Piaget identified four distinct stages of cognitive development: sensorimotor, preoperational, concrete operations and
formal operations. As a person matures and progresses through each stage his or her cognitive abilities become more advanced. For example, Glickman et al. explained that a person at the formal operations stage is capable of using hypothetical reasoning, understanding complex symbols and formulating abstract concepts. However, Glickman, et al. point out that some questions remain regarding whether formal thought operations are demonstrated by all adults, as well as the existence of adult forms of thinking that go beyond Piaget’s fourth stage of development.

Closely related to cognitive development theory is Hunt’s theory of conceptual development (Glickman, Gordon, & Ross-Gordon, 2007). Conceptual development as viewed by Hunt included not only increasing conceptual complexity (e.g. the ability to discriminate, differentiate, and integrate concepts), but also increasing interpersonal maturity (e.g. ability to define one’s self and create positive self-other relations) (as cited in Glickman et al.). Based on this description, Hunt positioned individuals on a conceptual continuum with the lowest level indicating the most concrete type of thought processes to the highest level indicating the most abstract type of thought processes. Low conceptual level thinkers tend to evaluate situations using simple, concrete processes; whereas high conceptual level thinkers tend to evaluate situations using more abstract processes. High conceptual level thinkers are also more independent, needing little assistance in defining problems and indentifying solutions, than low conceptual level thinkers (Glickman et al.).

Conceptual development theory has been studied significantly in teachers resulting in several key findings (Glickman, Gordon, & Ross-Gordon, 2007). According to Glickman et al., high and low concept teachers differ in a variety of ways. First, high concept teachers tend to rate
higher on educationally positive characteristics (i.e. warmth, perceptiveness, empathy, flexibility), while low concept teachers tend to rate higher on educationally negative characteristics (innovativeness, rule orientation, anxiety). Second, high concept teachers appear to use a greater variety of teaching methods as well as employ those methods at a rate of four times greater than teachers operating at lower stages of conceptual thinking. Third, high concept teachers provide more constructive feedback, give more praise, and are overall less negative than low concept teachers. Finally, high concept teachers elicit more higher-order conceptual responses from their students than teachers operating at lower stages of conceptual development.

A second strand of cognitive-developmental stage theory is that of moral development. According to Leithwood (1992), “moral development occurs as the basis on which one’s views of rightness and goodness shift from a basis of personal preference toward a basis of universal ethical principles” (p. 91). Kohlberg and Armon’s (as cited in Glickman, Gordon, & Ross-Gordon 2007) theory of moral reasoning contends that human development occurs across a series of stages of morality (preconventional, conventional, and postconventional levels) in which a person’s moral reasoning shifts from a self-centered perspective to a perspective that not only considers the rights of others, but also places moral principles at the forefront of the decision making process. Glickman et al. further explained that interest in teachers’ moral development has generated research in which the relationship between teachers’ moral development and their understanding of teaching and learning has been examined. Findings from this line of research suggest that high concept teachers possess a more complex understanding of the teaching and learning process as well as a greater concern for student instructional needs.
A third strand of cognitive-developmental stage theory pertinent to teacher development is that of ego development. According to Leithwood (1992), “ego development occurs as a person strives to master, to integrate and otherwise make sense of experience. Greater ego maturity is associated with a more complex and better differentiated understanding of one’s self in relation to others” (p. 91). Loevinger’s work in ego development identified as series of four hierarchical stages (e.g., self-protective, conformist, conscientious, and autonomous) that individuals pass through as they progress toward ego maturity (Oja, 1990).

Based on Loevinger’s work, numerous descriptions of teachers at each stage of ego development have emerged. For example, the Self-protective stage of ego development is considered the lowest level of ego maturity and is characterized by behaviors that are fearful, dependent, and distrustful. Teachers at this stage tend to have an overly simplistic view of their classroom and their students, and are more likely to function in a highly teacher-directed manner. Furthermore, because they possess an overly simplistic view, these teachers depend heavily on the assistance of others for solutions to problems (Glickman, Gordon, & Ross-Gordon, 2007; Leithwood, 1992; Oja, 1990; Sullivan, 2001).

The Conformist stage represents Loevinger’s second stage of ego development, and is characterized by conventional behaviors that include concern for social acceptance, belonging, and a desire to be viewed positively by students as well as peers (Oja, 1990). According to Oja, teachers at this stage are especially susceptible to the expectations of others; their desire to be viewed positively by both students and colleagues creates a constant struggle for teachers at this stage. The classrooms of conformist teachers tend to be conventional with explicit rules and expectations that have little regard for individual student differences or needs (Leithwood, 1992).
The Conscientious stage represents the third stage of ego development and is characterized by efficiency, responsibility, and internal self-motivated goals (Glickman, Gordon, & Ross-Gordon, 2007; Leithwood, 1992; Oja, 1990; Sullivan, 2001). For example, Oja, described teachers at this stage as idealistic, and goal oriented with a strong sense of responsibility. In addition, teachers at this stage are also adept at implementing a variety of alternatives in problem-solving situations; however, as Oja explained, these teachers can easily become frustrated when goals are not achieved and problems are not easily solved.

The Autonomous stage represents Loevinger’s final stage of ego development (Glickman, Gordon, & Ross-Gordon, 2007; Leithwood, 1992; Oja, 1990; Sullivan, 2001). A teacher in the Autonomous stage demonstrates behaviors that suggest an “awareness of the broader social context in which the school operates, and a realistic appraisal of his or her own limitations and responsibilities” (Oja, 1990, p. 4). Oja further explained that teachers at this stage are inner-directed but value the interdependent nature of relationships with colleagues and students. In the classroom, autonomous stage teachers’ function from a student-centered perspective in which control is shared with students and an emphasis is placed on meaningful learning, creativity and flexibility.

Teacher development and concerns-based theory

An additional developmental stage theory particularly pertinent to teacher development is Fuller’s Stages of Concern (1969, 1974) theory. In examining small groups of prospective teachers as well as analyzing the work of other researchers, Fuller hoped to discover not only what student teachers were concerned about, but also whether those concerns could be conceptualized in a useful way.
Fuller (1969) defined teacher concerns as they related to “teachers’ perceived apprehension, distress, or interest regarding the interrelationship of themselves and the elements of their work environment” (Conkle, 1996, para. 2). According to Fuller (1974), teachers’ concerns could be conceptualized as three distinct stages: Self, Task and Impact. Furthermore, Fuller believed that prospective teachers not only had common concerns within each stage, but that movement from one stage to the next appeared to occur in a fairly regular sequence.

The first stage of Fuller’s concerns theory is the self stage. Teachers at this stage fixate on concerns related to one’s self-protection and self-adequacy. As a result, these teachers tend to focus more on their own survival and less on the task of teaching and student learning (Conkle, 1996). Conkle further explained that this need for self-protection and self-adequacy manifests itself as teacher concerns for class control, their own content adequacy and the situations in which they teach, and about evaluations from supervisors, colleagues and their pupils. As teachers gain confidence and begin to feel safe and secure in their position, their focus shifts from that of self to that of task.

Fuller (1974) described task concerns as those concerns related to the actual act of teaching. Viewed as the mastery stage of teaching (McBride, 1993), teachers at this stage are concerned with their own performance (e.g. how they sound and look; their subject matter knowledge), and strive to avoid appearing inadequate or inexperienced. In addition, teachers at this stage begin to focus on issues directly related to the teaching environment and their professional responsibilities (Glickman, Gordon, & Ross-Gordon, 2007). During this stage, teachers question whether or not the myriad of teaching duties that must be performed regularly can actually be accomplished within the work day (Conkle, 1996).
The impact stage is the final stage in Fuller’s model. According to Conkle, (1996), the impact stage is characterized by feelings of empathy and concerns for students. Teachers at this stage are considered to be at the highest stage of concern, and are particularly interested in how their instruction impacts student learning, as well as the well-being and total development of the whole child (Glickman, Gordon, and Ross-Gordon, 2007). Watzke (2007) further described the impact stage as a “teachers’ emergence from the process of survival into an advanced developmental stage” (p. 107).

Fuller’s three-stage conceptualization predicts a developmental progression with resolution of concerns at one stage necessary before movement to the next stage could occur (Watzke, 2007). Although Fuller believed teachers could have concerns in multiple stages at once, she also believed the teaching experience of a given individual would cause concerns at one stage to manifest more dominantly than concerns at another stage (Rutherford & Hall, 1990; as cited in Conkle, 1994). According to Conkle, Fuller further contended that while concerns appear to change as experience is gained, migration through the stages was not automatic, and in fact required appropriate interventions specific to resolution of the given individuals concerns.

Classroom teachers and concerns-based research

Fuller’s concerns-based theory (1969, 1974) of teacher development has generated numerous follow-up studies with much of the research (Bray, 1995; Conkle, 1994; Conway & Clark, 2003; Watzke, 2007) focused on testing the existence of the three stage hierarchy and the developmental progression of classroom teachers through each stage (Bray, 1995). Generally, research related to classroom teachers’ concerns supports Fuller’s three-stage theory (Conkle, 1994); however, the findings have not always been in strict accordance with the developmental
sequence as posited by Fuller. For example, George (as cited in Conkle) compared the concerns of pre-service teachers and inservice teachers and found that inservice teachers demonstrated lower self concerns and higher task concerns than pre-service teachers. However, impact scores for both groups were the highest suggesting a concerns pattern much different than the one proposed by Fuller. Similar studies with pre-service and inservice teachers (Marso & Pigge, 1994; 1997; Pigge & Marso, 1997; Reeves & Kazelskis, 1985) reported findings comparable to those of George; however, as Conkle noted, a summary of these findings suggest only partial support for Fuller’s concerns theory. Overall, while pre-service teachers tended to report higher self concerns over task concerns, as well as higher self concerns than inservice teachers as predicted by Fuller, the fact that impact concerns were the highest in each group contradicts the notion of a strict developmental sequence (Reeves & Kazelskis, 1985).

In a recent study, Conway and Clark (2003) suggested that while shifts in concerns stages do occur, such shifts may be more cyclical and less linear than originally proposed by Fuller. Furthermore, Conway and Clark claimed that teacher interns in their sample reported shifts in concerns from “a focus on self to task to impact – a journey outward” (p. 470) as well as a “progression toward greater self-awareness/self-knowledge and subsequently made efforts at greater self-organization and self-development – a journey inward” (p. 470). Watzke (2007) examined Fuller’s self-task-impact chronology in beginning teachers across a two-year period, and also reported a more complex understanding of Fuller’s theory. Watzke argued that concerns are on-going and appear to be less chronological and more holistic, encompassing recurring areas of concern. While Watzke strongly suggested that concerns-based inventories have debunked the Self-Task-Impact chronology, the important lesson remains in understanding the on-going nature
of concerns and the fact that there is a natural ebb and flow to the development of teachers. Although the findings from such studies are moderately contradictory, Conkle (1994) suggests their importance becomes apparent when synthesized together. According to Conkle, the three SoC are evident as an element of teacher development. This literature indicates that pre-and inservice teachers have distinct levels of concerns as they progress through their teaching careers . . . the point still remains that teachers are affected by the concerns they feel. Such concerns influence how and what teaching skills are used to educate children (p. 90).

Physical educators and concerns-based research

Research related to physical educators teaching concerns (Boggess, McBride, & Griffey, 1985; Fung, 1993; Hynes-Dusel, 1999; McBride, Boggess, & Griffey, 1986; Wendt, Bain, & Jackson, 1981; Wendt & Bain, 1989) emerged from concerns-based research related to classroom teachers. Following a similar line of study, interest in physical educators teaching concerns (both at the pre-service and inservice levels) focused on substantiating Fuller’s three-stage theory and the developmental progression of physical educators through the stages (Conkle, 1994).

According to Conkle (1994), conflicting results are prevalent in research related to physical educators teaching concerns. For example, Wendt, Bain, and Jackson (1981) observed notable shifts in concerns among PE pre-service teachers; however, those shifts were not always in the hierarchical fashion that Fuller proposed. In a subsequent study comparing pre-service and novice inservice physical educators concerns, Wendt and Bain (1989) found that impact concern was lower in the novice inservice group than the pre-service group. According to Fuller’s theory, novice inservice teachers should possess higher impact concerns for students’ needs than pre-
service teachers with limited teaching experience. The decline in impact concerns as experience was gained suggests physical educators in their sample did not follow Fuller’s model.

In a study designed to assess changes in the levels of physical education student teachers’ concerns across a semester of student teaching, Boggess, McBride, and Griffey (1985) found that the three-stage developmental construct as postulated by Fuller did not exist among PE student teachers in their sample. More recently, Fung (1993) reported no difference in pre-service and inservice teaching concerns between the two groups in terms of teaching experience further debunking concerns as a developmental sequence.

On the other hand, Conkle (1994) noted two qualitative studies, one by Janssens, and another by Rust, related to teacher concerns that not only confirmed Fuller’s theory, but generally suggested that teachers moved through the stages developmentally. In addition, McBride, Boggess, and Griffey (1986) reported data suggesting experienced inservice physical educators did follow Fuller’s three stages of development; however, some concern regarding the validity of the instrumentation used to collect concerns data emerged.

According to McBride (1993), numerous studies (Boggess et al., 1985; McBride, 1993; McBride et al., 1986) confirmed low internal consistency of the task scale in the physical education setting. Although self and impact scales consistently produced strong factor loadings with both pre-service and inservice physical educators, the task scale consistently produced weaker loadings. Therefore, McBride argued that Fuller’s task scale as measured by the Teacher Concerns Questionnaire (TCQ) (George, as cited in McBride) may be inadequate due to the unique nature of the physical education setting (e.g. large class sizes, a movement-oriented environment, inadequate facilities and space). To address the inappropriateness of the TCQ in
physical education settings, McBride re-designed the TCQ in a multi-phase pilot test that yielded a new task scale deemed more suitable for a population of physical educators.

The resulting Teacher Concerns Questionnaire-Physical Education (TCQ-PE) was found to be both valid and reliable (the adaptation of the TCQ-PE is discussed in greater detail in chapter three), and has since been utilized in several studies (Conkle, 1994; Hynes-Dusel, 1999; Sullivan, 2001) related to physical educators concerns. In particular, Conkle conducted a study of Alabama’s inservice physical educators in an attempt to validate the TCQ-PE instrument as well as identify their collective concerns. Conkle reported findings in support of McBride’s adaption of the TCQ. In addition, Conkle found that while physical educators did indeed have distinctly different levels of concerns, there was no evidence to suggest that those concerns were progressive or developmental in nature.

Sullivan (2001) analyzed the TCQ-PE responses of four experienced physical educators and found that they had concerns in all categories. In addition, Sullivan noted that despite averaging over eleven years teaching experience all four participants identified their highest concerns in different stages with one participant demonstrating extreme self concerns. Although two participants identified their highest concerns in the impact stage, the differences in concerns suggest that physical educators’ progression through the stages are not directly aligned to years of experience and therefore do not support Fuller’s developmental theory of concerns. Furthermore, Sullivan found that in some cases, the participants’ concerns were linked to the professional development opportunities pursued.

In a study designed to identify the concerns of physical education student teachers as well as determine the extent to which physical education students reflected Fuller’s theory, Hynes-
Dusel (1999) found that physical education student teachers demonstrated high levels of self concerns at both the beginning and ending of the student teaching experience. In addition, the task scale remained low across the student teaching experience suggesting that one stage does not need to be resolved before concerns emerge at another stage. Overall, Hynes-Dusel’s findings do not support Fuller’s developmental theory of concerns when applied to pre-service teachers, but rather suggest that physical education student teachers may hold multiple concerns at once.

Although the findings do not fully substantiate Fuller’s theory, some concern regarding the applicability of the TCQ-PE in a pre-service setting was noted. For example, Hynes-Dusel (1999) pointed out that because the TCQ-PE was designed for inservice teachers the task scale items may not be applicable to student teachers who are assigned to their school for a relatively short time period (e.g. eight to ten weeks). As a result, Hynes-Dusel suggested that task scale questions regarding long term issues such as continuity in the yearly curriculum, inadequate scheduling, or lack of administrative support simply may not be meaningful to student teachers. Furthermore, Hynes-Dusel suggested that the subsequent student teaching assignment may have influenced levels of self concerns at the end of the student teaching experience.

Despite applicability concerns of the TCQ-PE in the pre-service physical education setting, McBride (1993) suggests that the TCQ-PE can provide professional developers with useful information when planning education and training experiences for both pre-service and in-service physical educators. Specifically, McBride proposes the TCQ-PE be used to identify appropriate professional development topics based on the concerns, needs and interests of teachers. Utilization of the TCQ-PE would allow professional developers the opportunity to
provide inservice education and training experiences that are responsive to physical educators’ needs. In addition, McBride suggests TCQ-PE data could be used to support the mentor-neophyte relationship. According to McBride, mentor teachers who are knowledgeable about physical educators’ concerns are in a better position to provide appropriate information, advice, and moral support.

Understanding the nature of adults as learners, their unique backgrounds and experiences, as well as teacher developmental stages, can provide professional developers with the knowledge base necessary to better provide school-based professional development experiences that support high levels of learning for teachers (Terehoff, 2002). According to Oja (1990) developmental theory has powerful implications for teacher professional development as it provides a greater understanding of how teachers acquire professional knowledge and how they assimilate that knowledge into their daily work. Oja argues that it is important to understand what stages of development teachers are operating from in terms of what they are able to learn and implement in the classroom. “Whatever the new content is in a staff development program, there is also a developmental stage perspective which provides the process knowledge for how a teacher assimilates the new information and implements newer teaching strategies” (p. 1)

Despite the various ways in which adult development has been conceptualized throughout the literature, a consistent theme emerges: the supposition that adult lives are characterized by adaptation and change (Glickman, Gordon, & Ross-Gordon, 2007). In terms of teaching, Glickman et al. reminded us that teacher or adult development is not monolithic, linear, or eternal. The research on developmental stages provides lenses for viewing teachers individually and
collectively as to their current levels of thinking and commitment. Through such lenses, we can explore possible interventions to assist teachers individually and collectively to move into higher stages of development (p.78).

In recent years educational reform initiatives intended to improve how children in the U.S. are educated have forced significant changes in the daily work of teachers. Teachers are not only being asked to master new skills, but to do so at an increasingly accelerating pace (Corcoran, 1995). If teachers are to be successful in meeting such demands they will need learning experiences that reflect an understanding of adult learning and teacher development literature. Glickman, Gordon, and Ross-Gordon (2007) suggest that for “those who seek to provide assistance to teachers, familiarity with this literature serves as a reminder of the tremendous degree of difference that exists among the adult learners who constitute the teaching force” (p. 76). Oja (1990) proposed developmental theory as a framework from which professional developers can plan learning experiences that support and challenge teachers at all stages of development.

Needs-based Professional Development

Calls for professional development that are responsive to the needs of teachers (Lee, 2004 & 2005) have been noted in the literature. Specifically, Lee stated professional growth is possible only when professional development programs respond to teachers’ personal needs. Ohio’s Standards for Professional Development (Ohio Department of Education, 2006c) state that effective professional development must be “approached systematically and involve all educators in the planning, implementing, reflecting and maintaining phases. To be effective, the system must involve and be supported by all educators” (para. 4). Oliver (1987) noted a significant
amount of research related to school change and innovation suggested the most important step in planning any type of staff development program begins with being responsive to the clients’ needs.

Despite the general consensus that teachers’ needs, interests, and preferences should drive the design and development of inservice experiences, research has consistently pointed to the fact that traditional inservice experiences rarely consider teachers’ needs, interests, or preferences (Conkle, 1994). Designed to cater to the masses, traditional inservice tends to focus more on the latest hot topics and less on individual teachers’ personal needs (Lee, 2004 & 2005). Moreover, inservice experiences generally focus on the needs of classroom teachers responsible for teaching core academic areas (e.g., math, reading, science). As a result, physical educators rarely find inservice experiences relevant or meaningful (Bechtel & O’Sullivan, 2006). Because classroom inservice is irrelevant in the physical education setting, Conkle (1994) suggests it is important to determine what needs physical educators perceive as vital. That information can then be utilized by professional developers to guide the design and implementation phases of an effective inservice program responsive to the needs of physical educators.

Research related to physical educators’ perceived professional development needs

Although classroom teacher inservice has been an established topic of interest in the literature, relatively little research has investigated the perceived professional development needs of inservice physical educators (Conkle, 1994; Oliver, 1987; Sullivan, 2001). In general, the findings suggest that physical educators have definite preferences for inservice activities. However, Conkle notes that needs-assessment alone may be insufficient in providing the basis for effective inservice planning. According to Conkle, research suggests numerous teacher and
school variables (e.g. age, gender, school size) exist relative to those needs. More specifically, Oliver (1987) examined the perceived inservice needs of 85 secondary physical educators, and explored the relationship of those needs to select teacher and school characteristics. Oliver defined teacher characteristics according to age, gender, degree obtained, and years of experience, while school characteristics were represented by the size of the school, ethnic make-up of the student body, and varied teaching and/or coaching responsibilities. Using a 120-item questionnaire, Oliver found that physical educators had definite preferences for inservice activities related to four specific areas: student-centered needs, instructional improvement, motivating strategies, and behavior/discipline strategies.

In addition, Oliver (1987) conducted a regression analysis to determine the degree to which teacher and school characteristics influenced those needs. For student centered needs, Oliver found that teachers’ age and years experience surfaced as significant factors while school size and percent of white and Hispanic students were significant factors for perceived needs related to behavior/discipline strategies. However, for motivation strategies and instructional improvement needs, none of the teacher or school characteristics were significant. Overall, Oliver reported that while significant correlations were found for a number of teacher and school characteristics and preferences for certain activities, “the number and magnitude of the relationships were so small that the strength of the relationship was inhibited” (p. 43). Nonetheless, the results indicate that the physical educators in Oliver’s sample not only had definite preferences for inservice activities, select teacher and school characteristics may also influence those preferences.
Conkle (1994) investigated the perceived professional development needs of Alabama’s inservice physical educators for the purpose of developing a relevant and modern needs-assessment tool, as well as determining what variables best predicts physical educators’ inservice needs. Conkle revised an instrument originally created by Oliver (1987) in an effort to develop a needs-assessment instrument appropriate for physical educators at conventional school levels (i.e. elementary, junior/middle school, and high school).

The resulting Professional Development Needs Questionnaire-Physical Education (PDNQ-PE) contained 17 demographic questions as well as 30 needs-assessment items. Demographic questions represented teacher characteristics (TEAC) and community, school, and student characteristics (CSSC) and were defined as follows. TEAC included teaching experience, age, gender, degree earned, coaching duties, percent of time as a physical educator, and number of inservice hours during the past two years. CSSC included percent of inservice input, school system, school type/location, school size, school level, percent of minority students, family income, mean number of students per class, and student skill level. The 30 needs-assessment items contained five sub-scales consisting of six corresponding items. Although not indicated on the survey instrument, the five subscales represented the following perceived needs: 1) teacher knowledge and skills (TKS); 2) psycho-social aspects of physical education (PSA); 3) curriculum/evaluation/supervision (CES); 4) instructional strategies (STR); and 5) current issues and trends (CIT).

A total of 265 questionnaires were returned and analyzed using descriptive statistics and multiple regression analyses. Conkle’s (1994) findings indicate that the PDNQ-PE provides professional developers a “reliable and valid instrument for frequent needs-assessment and
designing INSET” (p. 49) (a thorough explanation of the PDNQ-PE instrument is provided in chapter three). Conkle further reported over 50% of the respondents indicated a perceived need for inservice related to all 30 PDNQ-PE items. Another 70% indicated ‘moderate’ to ‘extreme’ needs on all but three of the items.

Although a high percentage of the physical educators in Conkle’s sample expressed a need for numerous inservice activities, more than 80% indicated CIT items as at least ‘moderate’ needs. Response patterns on the PSA sub-scale suggest physical educators in Conkle’s sample are concerned for their student’s health and psychological well-being. More than 80% indicated a need for inservice related to three specific areas: motivating students, dealing with the social forces that affect students, and developing student self-concept through physical education. Overall, the TKS domain received lower ranked responses with the exception of one item which focused on learning innovative activities that are fun and positive for students. According to Conkle, this item received the second highest mean ranking overall, suggesting that physical educators are interested in “new concepts which might be of interest to students” (p. 42).

To determine which TEAC and CSSC best predict perceived professional development needs, Conkle conducted a multiple regression analysis. Conkle’s analysis revealed many relationships; however, in the presence of select community-school-student characteristics, Conkle noted that teacher variables appeared less influential. Only two TEAC variables; number of inservice hours during the past two years and percent of daily time as a physical educator, were identified as significant predictors of inservice needs. On the other hand, several CSSC were found to be statistically significant predictors of perceived professional development needs. Specifically, Conkle found that school size or where a teacher worked contributed significantly
in all five perceived needs sub-scales. School level, percent of minority students in the school, and student’s typical skill level contributed significantly in four of the five sub-scales, whereas school type/location contributed significantly only in the STR sub-scale.

Conkle’s (1994) study provided further evidence that physical educators not only demonstrate specific preferences for inservice topics, numerous variables can be identified as predictors of perceived professional development needs. Based on such findings, professional developers should be able to plan relevant and meaningful inservice experiences that are responsive to the needs of physical educators. Conkle further proposes that the PDNQ-PE provides a convenient method by which professional developers can efficiently, effectively, and consistently conduct needs-assessments for the purpose of planning relevant inservice experiences.

Sullivan (2001) conducted a study in which she explored the perceived professional development needs of four experienced physical educators. Using the PDNQ-PE (Conkle, 1994), Sullivan analyzed the perceived needs of four experienced physical educators and the degree to which those needs influenced professional development opportunities pursued. Sullivan reported results consistent with those reported by Oliver (1987) and Conkle (1994). Specifically, the teachers in her sample identified perceived needs in all five of the sub-scale domains. Furthermore, Sullivan found that the highest sub-scale for all four participants was in the CIT domain. All four participants indicated ‘moderate’ to ‘extreme’ needs related to fitness testing, motivating students to develop lifetime wellness habits, acquiring and utilizing media in physical education classes, and teaching skills for implementing wellness oriented physical education programs. The second highest sub-scale for all four participants fell within the CES domain.
response pattern in this domain indicated a range of ‘moderate’ to ‘extreme’ needs in this
domain. Specifically, all four participants indicated needs in the areas of developing and using
student evaluation instruments to improve teaching, curriculum design, improvement,
implementation and evaluation. In addition, three of the four participants pursued professional
development opportunities that closely aligned with their perceived professional development
needs.

Collectively, the results of these studies indicate that physical educators do indeed have
specific professional development needs. Furthermore, those needs are influenced by a variety of
teacher and school characteristics. Conkle (1994) notes that professional developers cognizant of
the importance of physical educators’ unique needs and the variables that influence those needs
are more likely to design and implement meaningful inservice programs.

Summary

The overarching goal of this study was to aid in the design and implementation of
inservice education and training experiences that are responsive to the needs of Ohio’s physical
educators. Because research findings suggest physical educators have unique job related
concerns as well specific inservice program needs (Conkle, 1994), understanding those needs
and the variables that influence them is critical in providing teachers with the kinds of learning
experiences that ultimately lead to greater student learning. Therefore, based on the literature
reviewed, four research questions served to guide the exploration of Ohio’s physical educators’
perceived professional development needs and the variables that predict them:

1. What are the perceived professional development needs of Ohio’s physical educators
   as measured by the PDNQ-PE (Conkle, 1994)?
2. Do the perceived professional development needs of Ohio’s physical educators vary according to school setting/location?

3. Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

4. Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?
CHAPTER III

Introduction

High quality professional development has been cited as an essential component of quality teaching, necessary for the continued growth and development of Ohio’s teachers (Governor’s Commission on Teaching Success, 2003). Specifically, the Ohio Department of Education defines high quality professional development as a type of professional development that is aligned with a school district’s comprehensive continuous improvement plan, is sustained and ongoing, and is focused on higher student achievement (Ohio Department of Education, 2006c). However, emphasis on student academic achievement inherently targets professional development activities in the direction of teachers held accountable for student learning; specifically teachers of core academic content areas. As a result, professional development experiences in the form of inservice education and training (INSET) are seldom viewed by physical educators as meaningful or relevant to their needs (Bechtel & O’Sullivan, 1996).

Therefore, this study was designed to explore the relationship of select teacher and school characteristics to the perceived professional development needs of physical education teachers in the state of Ohio. The intent was to provide professional developers a greater understanding of physical educators’ perceived professional development needs in effort to facilitate quality inservice education and training experiences (INSET) for physical educators. Given the purpose of this study, four research questions were developed to explore inservice physical educator perceived professional development needs and the variables that influence those needs. The following sections describe the research questions that guided this study.
Research Question 1

The first research question was designed to identify the perceived professional development needs of Ohio’s physical educators. According to Conkle (1997), professional development experiences are meaningful only when “teachers’ inservice needs are assessed and programs that meet such needs are implemented” (p. 50). Moreover, Lee (2004 & 2005) argued in order to design and deliver effective professional development experiences, programs must be designed based on “what participants need and what they already know” (p. 46). According to Lee, professional development experiences are effective in improving teachers’ learning when they are responsive to teachers’ personal needs. Thus, research question one is as follows: What are the perceived professional development needs of Ohio’s physical educators as measured by the Professional Development Needs Questionnaire (PDNQ-PE) (Conkle, 1994)?

Research Questions 2, 3, and 4

Although needs assessment has been documented as an essential element in the design and delivery of high quality professional development experiences, Conkle (1994) argued that needs assessment alone is not enough to ensure quality INSET experiences. Several studies have identified numerous variables, both teacher characteristics and school contextual factors (Conkle, 1994, 1995; Oliver, 1987, Sullivan, 2000), as critical in understanding the inservice needs of physical education teachers. Thus, in order to understand the potential influence of select independent variables on physical educators perceived professional development needs, the following independent variables and corresponding research questions were explored:

The first independent variable, teacher stage of concern (SoC), was selected to determine the degree to which SoC predicted perceived professional development needs. Consequently, the
research question was stated as follows: Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?

The second independent variable, school location (i.e. urban/inner city; suburban; small city; or local/rural district), was selected to explore the degree to which physical education teachers’ perceived professional development needs vary by school type. School location categories were based on the Ohio Department of Education’s Typology of Ohio School Districts (2007). Consequently, the research question was stated as follows: Do the perceived professional development needs of Ohio’s physical educators vary according to school type/location?

The final independent variable, grade level taught, was selected to explore the degree to which teachers perceived professional development needs vary by conventional grade levels (i.e. elementary, middle school, high school, or some combination). Therefore, the research question was stated as follows: Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

The remaining sections of chapter III provide an explanation and discussion of the following methodological components: a) the research design, b) the population and sample, c) select independent and dependent variables, d) the measurement instruments, and f) the data collection and statistical analysis procedures employed.

Research Design

This study utilized descriptive research techniques for the purpose of exploring the influence of select teacher and school characteristics on the perceived professional development
needs of Ohio’s physical educators. The strategy of inquiry employed a cross-sectional design for the purposes of examining differences in a variety of characteristics, with data collected beginning in May 2006 through December 2006.

The primary method of data collection employed in this study was survey methodology. Survey methodology was selected because it is an appropriate method for determining present practices, or opinions of a specific population, while also allowing for data collection covering a wide geographic area (Thomas, Nelson, & Silverman, 2005). In this case, survey methodology provided the researcher an opportunity to identify the perceived professional development needs and concerns of physical educators across the state of Ohio and to explore the relationship between those needs and select teacher characteristics and school characteristics.

Rather than utilizing traditional mail or telephone procedures to distribute and collect data, the researcher elected to implement a web-based survey. The World Wide Web has become an increasingly popular avenue for collecting survey data (Lazar & Preece, 1999). According to Lazar and Preece, web-based surveys offer the following three major advantages over traditional survey procedures: first, researchers can receive immediate responses, as well as access the data instantly; second, web-based surveys require minimal, if any copying or postage costs; and, third, data from a web-based survey can automatically be entered into statistical software such as SPSS 15.0, creating a more efficient method of data entry. Like traditional survey methodology, Lazar and Preece noted web-based surveys also provide access to a larger, more geographically diverse population.

The primary method of data collection employed in this study was web-based survey methodology through an electronic database supplied by the Ohio Association of Health,
Physical Education, Recreation and Dance (OAHPERD). In addition to email, the researcher also incorporated the use of traditional paper surveys. According to Lazar and Preece (1999), the use of a hybrid approach “allows for the advantages of web-based surveys, without excluding those who do not have network access” (p. 64). In this situation, the researcher elected to implement a paper version of the web-based survey in effort to increase the response rate. Therefore, additional data was collected during OAHPERD’s 77th Annual State convention. Face-to-face responses were solicited during conference registration, with conference registrants being invited to complete the paper version of the survey only if they had not previously accessed and submitted the web-based version. Of the 100 paper surveys distributed during conference registration, 89 were completed and returned.

Design and implementation of the web-based survey was on based Lazar and Preece’s (1999) four step design rules for successful implementation of web-based surveys. The following sections describe the major steps taken to design and implement the web-based survey utilized in this study.

Survey Design

According to Lazar and Preece (1999), the first step requires the design of the survey on paper. In this case the researcher utilized survey instruments from previous physical education studies (Conkle, 1994; McBride, 1993) eliminating the need to design and pilot-test the instrument. In addition, the paper version was formatted according to traditional paper survey rules.
Methodology Selected

Lazar and Preece (1999) recommend web-based surveys be used only if a large portion of the population of interest is known to have network access. A web-based survey was appropriate for this population as most teachers have access to computer networks as part of their daily work.

Creating the Web-based Version

According to Lazar and Preece (1999) successful implementation of a web-based survey requires attention to several elements. First, the design of the survey should minimize chances for user error. Second, for ease of use, the survey should be accessible from all major web browsers. Third, the survey should be tested to ensure access from multiple locations, both inside and outside the local network.

The web-based version of the paper survey was created with assistance from the institution’s information technology department ensuring adherence to implementation guidelines as suggested by Lazar and Preece (1999). The survey was created and launched using Zoomerang Survey Services (Markettools, Inc., 1999). Zoomerang is an online survey tool that allows the user to design and launch customized surveys, and efficiently and effectively analyze results. While there are numerous on-line survey tools, university access to Zoomerang made it the most feasible online method for collecting survey data. A copy of the survey instrument is provided in Appendix A.
Survey Distribution and Collection

Maximizing the Response Rate

When implementing web-based surveys, Lazar and Preece (1999) suggest that high response rates can be encouraged through the use of listservs, bulletin boards, and newsgroups, as well as direct electronic mail to a specified population database with periodic reminders throughout the period of study. This study began with the approval of Ashland University’s College of Education. Following approval a research proposal was submitted and subsequently approved by the university’s Human Subjects Review Board (HSRB). A copy of the approved HSRB form is included in Appendix B. Upon approval by HSRB the researcher contacted OAHPERD’s executive director and requested permission to survey the current membership via direct electronic email (refer to Appendix C – OAHPERD Participation Agreement). The intent was to offer members the opportunity to complete an electronic survey related to professional development needs and concerns of physical educators in various grade levels and districts. Once an agreement had been obtained a blast e-mail containing a brief introductory statement from the executive director followed by the actual cover letter was sent to every member listed in the current database. Those who met the guidelines and elected to participate were directed to a Zoomerang link where they could then complete and submit the survey. Data were collected at two points during the study period. Invitations were initially sent in May 2006 and again in September 2006. During that time period, follow-up e-mails were sent to encourage member to response before the stated deadline.
Population Sample

Members of the Ohio Association for Health, Physical Education, Recreation and Dance (OAHPERD) were invited to complete a web-based survey designed to identify the perceived professional development needs and concerns of physical educators. OAHPERD’s membership is comprised of more than 3,000 health, physical education, recreation, and dance professionals committed to the promotion of healthy, active lifestyles, and lifelong learning. This organization was selected as the sampling frame because the researcher was interested only in inservice physical educators’ perceived needs and concerns. As one of OAHPERD’s eight divisions, physical education represents the largest group of organized physical educators across all regions of the state. Therefore access to their database allowed the researcher direct access to a diverse population of physical educators (i.e. school type/location; grade levels taught). Secondly, the assumption was made that professional educators who join organizations such as OAHPERD are inherently concerned about their own professional development and would therefore provide a valid and useful source of data regarding perceived professional development needs and concerns.

The sample for this study was a convenience sample utilizing a single-stage cluster of all OAHPERD members who elected to provide e-mail information when completing their registration information. Unfortunately, the database was not designed to single out members by profession; as a result, all members of the organization, despite their profession, received the electronic invitation to participate in the study. However, great care was taken to ensure members understood the study was intended for inservice physical educators, and therefore, would only be pertinent to those members currently teaching in public or private Pre-K to 12th
grade physical education programs. In addition, because the database did not allow for
discrimination between or among members’ professions it was not possible to determine an exact
number of potential respondents. Thus, an exact response rate cannot be calculated. Based on e-
mail conversations with the organization’s executive director (C. Burford, personal
communication, February 27, 2008), I was able to ascertain approximately 625 members had
indicated physical education as their main area of interest when completing membership
information. When this number is viewed in light of the number of surveys returned via the web
(n=236) it would appear that the response rate was adequate for the purposes of this study. In
addition to the web-based responses 89 paper surveys were completed and returned for a total of
324 responses.

Of the 324 web-based surveys completed, 227 were deemed usable. Of the 89 paper
surveys completed and returned 77 were deemed usable bringing the actual number of responses
to 304. Surveys with missing data were deemed unusable and not considered in the analysis.
Respondents were asked to identify their school setting/location based on the following list: a)
urban/inner city, b) suburban, c) small city, d) local/rural. In addition, respondents were asked to
indicate their primary teaching responsibilities based on the following grade level categories: a)
elementary, b) middle school, c) high school. Respondents were also instructed to check all
grade levels that applied. Thus, for the purposes of coding responses, a forth category, labeled
“some combination”, was added.

Independent and Dependent Variables

In order to explore the relationship between physical educators’ perceived professional
development needs and variables that might influence those needs, the following independent
variables were identified as worthy of investigation: 1) teachers’ stage of concern, 2) school location/type, and 3) grade level taught. Each independent variable was selected based on the information most readily available to professional educators.

**Independent Variables**

The independent variables identified in this study as worthy of exploration included two categories: teacher and school characteristics. The teacher characteristic included identification of physical education teacher concerns based on Fuller’s theory (1969, 1974). Physical education teachers who identify with the self stage of concern may have perceived professional development needs that differ from those at the task, or impact stage. School characteristics included the setting/location of school and the grade level taught by the teacher. Elementary physical education teachers’ perceived professional development needs may differ from those of middle school and high school teachers. Likewise, the professional development needs of teachers in urban areas may differ from those of teachers in suburban and/or rural areas.

**Dependent Variables**

This study involved one dependent variable; the perceived professional development needs of physical education teachers based on Conkle’s (1994) five subscales of perceived professional development needs. The subscales include the following areas: 1) teacher knowledge and skills (TKS); 2) psycho-social aspects (PSA); 3) curriculum, evaluation, and supervision (CES); 4) strategies for instruction (STR); and, 5) current issues and trends (CIT).
Measurement Instruments

Data were collected using a self-report survey instrument comprised of three components. A complete copy of the survey instrument is included in Appendix A. The initial component contained demographic information designed to identify the physical educator’s school setting/location and grade level taught. The remaining components consisted of two scaled instruments: The Teacher Concerns Questionnaire for Physical Education (TCQ-PE) (McBride, 1993), and The Professional Development Needs Questionnaire for Physical Education (PDNQ-PE) (Conkle, 1997). Each questionnaire contained a series of items rated on a 5-point Likert-scale as well as space for written comments. Both questionnaire instruments were selected for this study because they had been utilized in previous physical education studies and were found to be both valid and reliable measures of physical educators’ perceived needs and concerns.

The Teacher Concerns Questionnaire for Physical Education

The Teacher Concerns Questionnaire for Physical Education (McBride, 1993) was based on the work of Fuller (1969, 1974). Prior to the development of McBride’s TCQ-PE, physical education teacher concerns were measured using George’s TCQ (McBride, 1993). Designed to assess classroom teachers’ concerns, and neglecting to consider the uniqueness of a movement oriented teaching environment, the TCQ according to McBride, may not be “entirely appropriate in a physical education setting” (p. 189). Specifically, McBride and colleagues (Boggess, McBride & Griffey, 1985; McBride, 1986; McBride, Boggess, & Griffey, 1986) argued that the task scale was problematic because of the unique nature of a physical educators’ teaching environment. Therefore, McBride argued that the TCQ was inappropriate, and an adaptation was
necessary in order to develop a concerns questionnaire that would be more suitable to physical educators’ task concerns.

McBride (1993) conducted a three phase study for the purpose of adapting the TCQ and validating the revised TCQ-PE version. The final phase involved 31 physical education teachers, 17 male and 14 female. To ensure face and content validity only experienced physical educators (as opposed to pre-service teachers) were invited to participate in each phase of the study. McBride tested the reliability of the TCQ-PE adaptation using a 1-week test-retest procedure, and reported total test correlations coefficients of 0.94. Individual scale reliability correlation coefficients were 0.93 for self, 0.94 for task, and 0.89 for impact (McBride, 1993). In addition, McBride noted no significant gender differences on the three subscales of the TCQ-PE. Furthermore, Conkle (1994) replicated McBride’s (1993) research and found the TCQ-PE adaptation to be both a reliable and valid instrument for “assessing in-service physical educators concerns about teaching” (p. 26). Therefore, the TCQ-PE was selected for this study because it represents a “valuable data gathering source for continued research into physical education teacher concerns” (McBride, 1993, p. 188).

McBride’s (1993) TCQ-PE was utilized in this study to determine physical education teachers’ current stage of concern. The TCQ-PE consisted of a series of question items correlated to Fuller’s three stages of concerns. A total of 15 questions were included with five questions corresponding to each of the three stages of concern. The questions and corresponding stages of concerns were not identified on the instrument, and respondent’s were simply asked to read each question, think about their teaching, and rate each item based on their level of concern. Rating choices ranged from one which equaled not concerned to five which equaled extremely
concerned. Space was also provided for respondents to express any additional concerns not addressed in the previous 15 questions.

*The Professional Development Needs Questionnaire for Physical Education*

The final component of the survey included The Professional Development Needs Questionnaire for Physical Education (PDNQ-PE) (Conkle, 1994). According to Conkle, inservice programs that consider teacher’s needs and concerns are necessary if teachers are to remain current in their field. Although classroom teacher inservice issues have long been a focus of needs-based research (Brimm & Tollett, 1974, as cited in Conkle, 1994), Conkle points out that few studies have addressed the inservice needs of physical educators. Thus, Conkle revised an instrument previously developed and used by Oliver (1983) to identify secondary physical educators’ inservice needs. The purpose of the revision was to “develop a relevant and modern tool for physical educator INSET needs assessment” (Conkle, 1994, p. 37) that would also be appropriate for physical educators regardless of the grade level taught.

Conkle (1994) conducted a three phase pilot-study for the purpose of revising and validating the PDNQ-PE version. The PDNQ-PE (Conkle, 1994) was reviewed for face and content validity during the initial phases, and deemed appropriate for assessing inservice needs by a panel of practicing teachers as well as four experts with specialized skill in research design (Conkle, 1994). The resulting PDNQ-PE consisted of a 30—item questionnaire in which respondents were asked to rate their need for an item by ranking it on a Likert-scale with one equaling no need to five equaling extreme need. Each item corresponded to one of five nonlabeled subscales: 1) Teacher Knowledge and Skills (TKS); 2) Psycho-Social Aspects (PSA); 3) Curriculum, Evaluation, and Supervision (CES); 4) Strategies for Instruction (STR); and, 5)
Current Issues and Trends (CIT). In addition, space was provided for respondents to express any additional needs not addressed in the previous 30 questions.

To test the validity and reliability of the revised instrument, Conkle (1994) conducted a final phase involving 145 elementary; 165 junior/middle; and 89 secondary school physical educators. According to Conkle, the PDNQ-PE was found to be a reliable and valid instrument for the assessment of physical educator’s perceived needs. Specifically, Conkle reported that the PDNQ-PE yielded reliability estimates ranging from 0.79 to 0.86 for the five subscales and an overall internal consistency reliability estimate of 0.95 for the instrument.

Conkle’s (1994) PDNQ-PE was utilized in this study to determine the respondents’ perceived professional development needs. Respondents were asked to read each item and rate it by marking an “X” through the number representing their personal professional development needs. Respondents were also invited to write in any perceived needs not addressed in the previous 30 questions.

Qualitative Responses

Open-ended questions were included in both the TCQ-PE and the PDNQ-PE instruments as suggested the instruments designers (Conkle, 1994; McBride, 1993), but not examined as the number of responses were not enough to determine any substantial conclusions regarding perceived needs or concerns.

Statistical Analysis Procedures

Data analyzed in this study were collected using the Professional Development Needs Questionnaire-Physical Education (PDNQ-PE) (Conkle, 1994) and the Teachers Concerns...
Questionnaire-Physical Education (TCQ-PE) (McBride, 1993). Responses were collected, entered into excel spreadsheets and then exported into SPSS files for statistical analysis. In order to determine the soundness of the data descriptive statistics were employed. Pearson correlation coefficients were analyzed to determine the strength of the relationship between the independent and dependent variables. Multiple regression using stepwise methodology was further conducted to determine the degree to which a teachers’ stage of concern, grade level taught and school setting predict their perceived professional development needs.

Summary

This chapter presented an explanation of and discussion regarding the methodological components employed in this study for the purposes of determining the perceived professional development needs of physical education teachers and the variables that may predict those needs. The OAHPERD’s membership served as the population sample. Data were collected using survey methodology, and analyzed using descriptive statistics, reliability comparisons, and regression analysis. The results of this analysis will be discussed in depth in chapter four.
CHAPTER IV

Introduction

The purpose of this study was to explore inservice education and training (INSET) as a viable professional development strategy for Ohio’s physical educators. The intent was to provide professional developers a greater understanding of physical educators’ perceived professional development needs, and the factors that influence those needs in order to aid in the design and implementation of effective INSET experiences. This study explored the relationship of select teacher and school characteristics to the perceived professional development needs of physical educators in the state of Ohio. Given the purpose, four specific research questions guided this investigation:

1) What are the perceived professional development needs of Ohio’s physical educators?

2) Do the perceived professional development needs of Ohio’s physical educators vary according to school setting/location?

3) Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

4) Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?

This chapter presents the results of the data analysis in three sections. The first section includes descriptive statistics related to the independent and dependent variables. The second section examines the extent to which the variables are related. The third section presents the results of the multiple regression model designed to explore the relationship between selected teacher and school variables and teachers’ perceived professional development needs as
introduced in Chapter III. The final section concludes with a discussion of the overall results as presented in this chapter.

Descriptive Statistics

The three independent variables examined in this study were divided according to school characteristics and teacher characteristics. School characteristics included the location of the teachers’ school (e.g. urban, suburban, small city and rural), and the grade level taught by the teacher (e.g. elementary, middle school, high school, and some combination of the three). Teachers’ stage of concern (e.g. self stage, task stage, and impact stage) comprised the teacher characteristic. Inservice physical educators completed a survey which consisted of three components; the first two components were designed to collect data related to the independent variables while the third component permitted collected data related to perceived professional development needs. The first component asked survey participants to identify their school setting/location and teaching responsibilities. The second component was comprised of the Teacher Concerns Questionnaire-Physical Education (TCQ-PE) (McBride, 1993). The final component consisted of the Professional Development Needs Questionnaire–Physical Education (PDNQ-PE) (Conkle, 1994).

Participants

Elementary teachers (n=131) comprised the largest grade level category at 43.3 percent. 17.8 percent of the respondents indicated middle school (n=54) teaching responsibilities while 14.5 percent indicated high school (n=44) responsibilities. 23.7 percent of the respondents
indicated responsibility for teaching multiple or combined grade levels (n=72). Table 1 represents the percentage of respondents in each grade level.

Table 1

*Percent of respondents as reported by grade level taught.*

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>131</td>
<td>43.1</td>
</tr>
<tr>
<td>MS</td>
<td>54</td>
<td>17.8</td>
</tr>
<tr>
<td>HS</td>
<td>44</td>
<td>14.5</td>
</tr>
<tr>
<td>Combination</td>
<td>72</td>
<td>23.7</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>99.0</td>
</tr>
</tbody>
</table>

Teachers from suburban schools represented the largest group in the sample at 38.8 percent. Rural teachers followed as the second largest group at 25.5 percent. 18.4 percent of the sample indicated they were teachers from urban schools while 17.4 indicated they were from small city schools. Table 2 represents the percentage of respondents according to school setting/location.
Table 2

Percent of respondents as reported by setting/location of school.

<table>
<thead>
<tr>
<th>Setting/Location</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>56</td>
<td>18.4</td>
</tr>
<tr>
<td>Suburban</td>
<td>118</td>
<td>38.8</td>
</tr>
<tr>
<td>Small City</td>
<td>53</td>
<td>17.4</td>
</tr>
<tr>
<td>Rural</td>
<td>77</td>
<td>25.3</td>
</tr>
<tr>
<td>Total</td>
<td>304</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Participants’ Stage of Concern

The Teacher Concerns Questionnaire—Physical Education (TCQ-PE) (McBride, 1993) was used to identify the collective concerns of inservice physical educators. Participants were instructed to read the 15-item questionnaire and ask themselves the following question: “When I think about my teaching, how much am I concerned about this”? Participants were then instructed to select the number best representing their level of concern related to each statement. Participants chose from 1) not concerned, 2) a little concerned, 3) moderately concerned, 4) very concerned, and 5) extremely concerned. Although not indicated on the survey, each statement was directly related to one of three sub-scales each consisting of five items. The three sub-scales and corresponding questions consisted of the following categories: a) Self Concerns = items 3, 7, 9, 13, and 15; b) Task Concerns = items 1, 2, 5, 10, and 14; c) Impact Concerns = items 4, 6, 8, 11, and 12. According to Fuller’s Concerns Theory, teacher concerns are defined as “teachers’
perceived apprehension, distress, or interest regarding the interrelationship of themselves and the elements of their work environment” (Conkle, 1996, p.122).

Analysis of the Teacher Concerns Questionnaire–Physical Education (TCQ-PE) began by calculating reliability estimates of internal consistency using Cronbach’s Alpha for the overall instrument as well as for each sub-scale. Reliability estimates were then compared to those reported by Conkle (1994). The overall internal consistency reliability for the instrument was estimated at .91 as compared to Conkle’s estimate of .89. Reliability estimates of internal consistency for each of the three five-item sub-scales ranged from .77 to .88 as compared to Conkle’s sample which yielded a range of .79 - .87. Reliability coefficient estimates, both overall as well as each sub-scale, indicated strong internal consistency. In addition, when compared to results reported by Conkle, the current study further substantiates the TCQ-PE as a reliable measure of in-service physical educators concerns about teaching. Table 3 represents reliability estimates of internal consistency for the current study as compared to Conkle’s sample.

Table 3

Reliability estimates for the overall TCQ-PE as compared to Conkle’s sample.

<table>
<thead>
<tr>
<th>TCQ-PE Sub-Scales</th>
<th>Item Numbers</th>
<th>Reliability Estimates</th>
<th>Conkle (1994)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Concern</td>
<td>3, 7, 9, 13, 15</td>
<td>.85</td>
<td>.87</td>
</tr>
<tr>
<td>Task Concern</td>
<td>1, 2, 5, 10, 14</td>
<td>.77</td>
<td>.79</td>
</tr>
<tr>
<td>Impact Concern</td>
<td>4, 6, 8, 11, 12</td>
<td>.88</td>
<td>.85</td>
</tr>
<tr>
<td>Valid N = 245 (listwise)</td>
<td>1 – 15</td>
<td>.91</td>
<td>.89</td>
</tr>
</tbody>
</table>
Descriptive information for the three sub-scales was calculated to determine if the distribution of scores was normal. Mean sub-scale scores, standard deviation, skewness, and kurtosis were examined. Self concerns mean sub-scale score was 13.87, while the mean scores for task and impact scales were 15.89 and 16.83 respectively. According to skewness and kurtosis scores, all TCQ-PE sub-scales were slightly flatter than expected in a normal distribution, but overall the data set appeared to be approximately normal. Table 4 represents descriptive statistics for the three TCQ-PE sub-scales by mean, std., skewness, and kurtosis.

Table 4

*Descriptive statistics for the TCQ-PE sub-scales by mean, std. skewness and kurtosis.*

<table>
<thead>
<tr>
<th>TCQ-PE Sub-Scales</th>
<th>N</th>
<th>Mean</th>
<th>Std.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Concerns</td>
<td>297</td>
<td>13.87</td>
<td>5.18</td>
<td>.147</td>
<td>-.886</td>
</tr>
<tr>
<td>Task Concerns</td>
<td>298</td>
<td>15.89</td>
<td>4.67</td>
<td>-.294</td>
<td>-.638</td>
</tr>
<tr>
<td>Impact Concerns</td>
<td>296</td>
<td>16.83</td>
<td>4.47</td>
<td>-.257</td>
<td>-.636</td>
</tr>
<tr>
<td>Valid N(listwise)</td>
<td>245</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participants Stage of Concerns – Results

The TCQ-PE (McBride, 1993) is comprised of three five-item subscales. Respondents in this sample produced mean scores of 3.3 within the impact scale. This suggests that respondents were on average moderately concerned about the impact of their teaching on student learning and achievement. Impact sub-scale items 4, 8, 11, and 12 had the highest overall mean scores with items 4 and 12 being the strongest at 3.5. Items 8 and 11 followed at 3.4 and 3.3. Being able to meet the needs of different kinds of students (item 4) appears to be a moderately strong source of
concern for in-service physical educators. Because physical educators commonly face large class sizes (item 10; task sub-scale), their concern for meeting individual student needs seems appropriate. Physical education classes typically include students with a wide range of skill levels and abilities making it even more difficult to ensure students receive the instruction and assistance they need (item 12). Challenging unmotivated students (item 8) and guiding students toward intellectual and emotional growth (item 11) also appear to be moderately strong sources of concern. In addition, inservice physical educators in this sample were moderately concerned with diagnosing student learning problems (item 6).

The second highest sub-scale was that of task concerns. The mean score for the task sub-scale was 3.17 indicating moderate concerns for items related to the task sub-scale. Item 14 (poor/inadequate scheduling of physical education classes) produced the highest mean score within the task sub-scale at 3.35. Inservice physical educators in this sample appear to be moderately concerned with how classes are scheduled. Scheduling middle and high school physical education classes around the academic core classes is not uncommon practice given the priorities that accompany the No Child Left Behind Act (NCLB) (2001). Because 32 percent of the population sample in this study included middle and high school physical educators, moderate concerns related to scheduling seem logical. Items 2 (lack of administrative support for the PE program) and 10 (working with class sizes that are too large) generated identical mean scores of 3.20 suggesting moderate concerns related to both items. Given the current educational climate (e.g. NCLB, high stakes testing) physical educators’ moderate concerns related to administrative support seem appropriate. In addition, large class sizes limit physical educators’ ability to provide appropriate instructional experiences for their students. Large classes not only
make it difficult to include all students, but also limit the number of practice opportunities available to students in a given class period. Items 1 (lack of continuity on the yearly PE program) and 5 (lack of consistent or equitable grading policy in PE) generated mean scores of 3.01 and 3.10 indicating some concern with issues related to continuity across the yearly PE program as well as slightly higher concerns related to an equitable grading policy.

Overall, the lowest mean scores generated were for items related to the self sub-scale. The self sub-scale is related to items that indicate concern for feelings of self-adequacy as a teacher, and the ability to survive the demands of the teaching profession. Mean scores ranged from 3.01 (item 9; being accepted and respected by professional persons) to 2.47 (item 3; doing well when supervisor is present). Item 9 generated the highest mean score within the self sub-scale indicating a moderate concern for professional relationships and mutual respect among peers. With the exception of item 9, all items within the self-score indicated minimal sources of concern. Items 7 (feeling more adequate as a teacher), 13 (getting a favorable evaluation of my teaching), and 15 (maintaining the appropriate degree of class control) generated similar scores ranging from 2.73 to 2.88. Refer to Appendix D for TCQ – PE sub-scales, corresponding questions, raw mean scores, and overall rank of each item.

Participants’ Perceived Professional Development Needs

The Professional Development Needs Questionnaire – Physical Education (PDNQ-PE) (Conkle, 1994) was used to identify participants perceived professional development needs. Participants were instructed to read the 30-item questionnaire and select the number best representing their perceived professional development needs. Participants chose from 1) no need,
2) little need, 3) moderate need, 4) strong need, and 5) extreme need. Although not indicated on the survey, each question was directly related to one of five sub-scales consisting of six items each. The five sub-scales and corresponding questions consisted of the following categories: a) Teacher Knowledge and Skills (TKS) = items 1–6; b) Psycho-social Aspects of physical education (PSA) = items 7–12; c) Curriculum/Evaluation/Supervision (CES) = items 13–18; d) Instructional Strategies (STR) = items 19–24; and e) Current Issues and Trends (CIT) – items 25–30.

Analysis of the data began by determining the reliability of the instrument using Cronbach’s Alpha. Reliability estimates were then compared to the estimates obtained in Conkle’s (1994) sample. The overall reliability coefficient for the instrument, estimated at .95, was identical to results reported in Conkle’s study. Reliability estimates of internal consistency for each of the five sub-scales ranged from .79 to .89 as compared to Conkle’s sample which yielded a range of .79 to .86. Reliability coefficient estimates, both overall as well as each sub-scale, indicated strong internal consistency. In addition, reliability estimates generated in this study were consistent with those reported by Conkle suggesting that the PDNQ-PE is indeed a reliable measure of in-service physical educators’ perceived professional development needs. Table 5 represents reliability estimates for the current study as compared to Conkle’s sample.
Table 5

*Reliability estimates of internal consistency for the overall PDNQ-PE as compared to Conkle’s sample.*

<table>
<thead>
<tr>
<th>PDNQ-PE Sub-Scales</th>
<th>Item Numbers</th>
<th>Reliability Estimates</th>
<th>Conkle (1994)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Knowledge and Skills (TKS)</td>
<td>1 – 6</td>
<td>.85</td>
<td>.86</td>
</tr>
<tr>
<td>Psycho-social Aspects of PE (PSA)</td>
<td>7 – 12</td>
<td>.89</td>
<td>.85</td>
</tr>
<tr>
<td>Curriculum/Evaluation/Supervision (CES)</td>
<td>13 – 18</td>
<td>.88</td>
<td>.86</td>
</tr>
<tr>
<td>Strategies (STR)</td>
<td>19 – 24</td>
<td>.79</td>
<td>.79</td>
</tr>
<tr>
<td>Current Issues and Trends (CIT)</td>
<td>25 – 30</td>
<td>.84</td>
<td>.82</td>
</tr>
<tr>
<td>Overall Questionnaire</td>
<td>1 – 30</td>
<td>.95</td>
<td>.95</td>
</tr>
</tbody>
</table>

Descriptive information for the five sub-scales was calculated to determine if the data set was normal. Mean sub-scale scores, standard deviation, skewness, and kurtosis were examined. TKS, PSA, and CES sub-scales indicated normal distribution with mean sub-scale scores ranging from 18.32 to 18.74. The mean sub-scale score for CIS was 20.97 with a moderately negative skew while the mean sub-scale score for STR was 17.02 with a moderately positive skew. According to skewness and kurtosis scores, all PDNQ-PE sub-scales were slightly flatter than expected but overall the data set appeared to be approximately normal. Table 6 represents descriptive statistics for the five PDNQ-PE sub-scales.
Table 6

**Descriptive Statistics for the five PDNQ-PE sub-scales by mean, std., skewness, and kurtosis.**

<table>
<thead>
<tr>
<th>PDNQ-PE Sub-scales</th>
<th>N</th>
<th>Mean</th>
<th>Std.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TKS</td>
<td>289</td>
<td>18.32</td>
<td>4.42</td>
<td>.041</td>
<td>-.129</td>
</tr>
<tr>
<td>PSA</td>
<td>284</td>
<td>18.85</td>
<td>5.06</td>
<td>-.045</td>
<td>-.646</td>
</tr>
<tr>
<td>CES</td>
<td>280</td>
<td>18.74</td>
<td>4.90</td>
<td>-.081</td>
<td>-.302</td>
</tr>
<tr>
<td>STR</td>
<td>287</td>
<td>17.03</td>
<td>4.53</td>
<td>.201</td>
<td>-.313</td>
</tr>
<tr>
<td>CIT</td>
<td>295</td>
<td>20.98</td>
<td>4.88</td>
<td>-.313</td>
<td>-.450</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>251</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Perceived Professional Development Needs – Results**

RQ1: What are the perceived professional development needs of Ohio’s physical educators?

The first research question that guided this study involved identification of in-service physical educators’ perceived professional development needs. In effort to determine if in-service physical educators in this sample indentified specific perceived professional development needs descriptive analyses of responses on the Professional Development Needs Questionnaire – Physical Education (PDNQ-PE) (Conkle, 1994) were conducted.

Analysis of descriptive statistics indicated that in-service physical educators in this sample had definite preferences regarding perceived professional development needs. Overall, 50% of the in-service physical educators expressed a need for in-service training in all of the pre-named sub-scales measured by the Professional Development Needs Questionnaire – Physical...
Education (PDNQ-PE) (Conkle, 1994). Appendix E presents perceived professional development needs by sub-scale, corresponding questions, percent indicating “moderate” to “strong or extreme” needs, and overall rank-ordered percent by item.

Although in-service physical educators expressed needs in a variety of areas, more than 75% indicated “moderate” to “extreme” needs in the six items related to Current Issues and Trends (CIT). Furthermore, at least 50% of the respondents indicated “strong to extreme” needs in four of the six CIT items. Specifically, 59.2% indicated “strong to extreme” needs for professional development related to item 27 (learning of grant availability and writing grant proposals). Items 28 (fitness-testing strategies that motivate students to develop lifetime wellness programs), 29 (teaching skills for implementing a wellness-oriented PE program), and 25 (economically acquiring and using technologically advanced equipment) received similar ratings with 55% indicating “strong to extreme” needs. Items 26 (developing and using media in physical education) and 30 (methods for fitness-testing large classes) followed closely with 47% expressing “strong to extreme” needs.

Clearly, in-service physical educators in this sample desire professional development activities related to CIT items. Responses for the six CIT items yielded the highest overall mean sub-scale score (20.98). Individually, items 29, 25, 28, and 27 received the highest (second through fourth) rankings, while items 26 and 30 also received favorable ratings of seventh and eighth. The fact that the CIT sub-scale items received the strongest ratings was not unexpected. Issues related to these items could be a product of current concerns surrounding the obesity epidemic plaguing American youth. Thus, moderate to extreme needs related to “implementing wellness-oriented fitness programs” (item 29; overall rank = 2), developing “fitness strategies
that motivate students to develop lifetime wellness (item 28; overall rank = 4), and acquiring “methods for fitness-testing large classes (item 30; overall rank = 8) could be expected. Likewise, “strong to extreme” responses related to items 25, 26, and 27 could be a product of the current economic concerns plaguing most districts. Thus, “learning of grant availability and writing grant proposals” (item 27; overall rank = 5) could assist physical educators in “economically acquiring and using technologically advanced equipment” (item 25; overall rank = 3) as well as providing opportunities to “develop and use media in physical education” (item 26; overall rank = 7).

The Psychosocial sub-scale received responses that generated an overall mean score of 18.85, and was the second highest rated sub-scale behind CIT (20.98). Overall, 70% - 75% of the respondents indicated at least a “moderate” perceived need for items 7 (dealing with the social forces that affect student existence, life, and survival; overall ranking = 9), 12 (using physical education to develop student self-concept; overall ranking = 12), and 10 (techniques for motivating students in PE) respectively. The remaining three items related to the PSA sub-scale generated responses in the lower half of the rankings. In particular, item 8 (administering feedback and reinforcement to students) received the lowest ranking (25) suggesting physical educators perceive “little need” for professional development related to this item. Effectively administering feedback to students is a skill typically achieved during the pre-service years and expected of beginning teachers. Therefore, a low rating on this item could be expected from in-service physical educators.

Responses related to the Curriculum, Evaluation and Supervision (CES) sub-scale yielded a mean score of 18.74 also suggesting physical educators in this sample perceive a
“moderate” need for professional development related to items within this sub-scale. Specifically, items (13, 16 and 18) generated moderately favorable rankings placing them in the top half overall. 78.9% of the respondents indicated “moderate to extreme” needs related to item 18 (designing curricula resulting in maximum student success and optimal evaluation; overall ranking = 6). Item 16 (curriculum improvement, implementation, and evaluation; overall ranking = 10) also generated moderately favorable rankings with 73.7% of the respondents indicating a “moderate to extreme” need. Item 13 (developing and using student evaluation instruments for improving my teaching) followed with an overall ranking of 11. The fact that these items generated responses indicating “moderate to extreme” needs, could be expected given the lack of physical education standards and a curriculum model in the state of Ohio. However, items 14 (developing self-evaluation skills for improving my teaching; overall ranking = 17), and 17 (Using “curriculum models” in PE; overall ranking = 18), received lower overall rankings with only 68% indicating “moderate to extreme” needs related to these items. Item 15 (supervising and evaluating student teachers, parent volunteers, or teaching aides; overall ranking = 28) received the lowest overall ranking within the CES sub-scale with only 17.4% indicating “strong or extreme” needs. The lower ranking could be attributed to the fact that few in-service teachers have such responsibilities on a regular basis. In addition, in-service teachers who choose to participate in such opportunities typically work closely with other personnel (e.g. university supervisors) and receive professional development outside in-service experiences. Therefore, it is likely teachers may not perceive needs related to this item as a necessary in-service topic.
The Teacher Knowledge and Skills (TKS) sub-scale generated the fourth lowest overall mean score at 18.32 suggesting that in-service physical educators in this sample perceived “little need” for several of the items (3, 5, and 6) related to this sub-scale. Item 5 (improving my activity skills so I can teach better) received the lowest overall ranking in the TKS sub-scale (26). Item 6 (developing observational skills for use in diagnosing student skill errors) and item 3 (the use of scientific principle in teaching PE) also yielded poor responses.

Despite generating overall low positive responses, one item in the TKS sub-scale generated “strong to extreme” perceived needs. Item 1 (learning innovative PE activities that are fun and positive for students; overall ranking = 1) generated the highest expressed need by in-service physical educators in this sample. Specifically, 86.2% of the respondents indicated a “moderate to extreme” need for professional development related to item one. The majority of items within the TKS sub-scale are related to knowledge and skills typically acquired during the pre-service teaching years (Conkle, 1994). Thus, it could be expected that in-service physical educators may not perceive a need for further development related to these items. However, as Conkle pointed out, item one implies professional development related to student interests, and as such, stands out among the other items within this sub-scale.

Items related to the Strategies sub-scale received the lowest overall ratings generating a mean score of (17.03). Items 21 (coaching techniques and strategies; overall ranking 30) and 22 (team teaching strategies; overall ranking = 29) received the lowest positive responses suggesting that at least 50% of the in-service physical educators in this sample perceived “little need to no need” for professional development related to both items. Finding similar results, Conkle (1994) suggested that low positive responses related to item 29 could be a product of the
teaching context (e.g. small schools with limited physical education staffs offer few opportunities for team teaching options). Furthermore, Conkle suggests that low responses related to item 21 could likely be the result of non-coach participants. In addition, those currently coaching may feel they already possess adequate knowledge or may seek sport specific professional development from sources (e.g. sport specific workshops and conferences) other than in-service activities.

Variables that Influence Perceived Professional Development Needs

Given the limited number of studies related to in-service physical educators perceived needs and variables that predict those needs, a three-step exploratory analysis was conducted to determine what if any association exists between the dependent and independent variables. The first step involved a correlation analysis using the Pearson correlation coefficient to determine the strength of the linear relationship between the five perceived needs (TKS, PSA, STR, CES, and CIT) that served as the dependent variable and the three independent variables that consisted of teacher (teachers’ SoC) and school (location/setting of school and grade level taught) characteristics. The second step involved an exploration of possible interactions within the independent variables and their effects on the dependent variables. To assess possible interactions and their influence on in-service physical educators perceived professional development needs, multiple linear regressions utilizing a system of dummy coding were conducted for each of the five perceived needs. To code each of the categories (e.g. teaching situation, school setting, and stage of concern), the dependent variable was indexed as one for the attribute and zero for all others. For instance, respondents indicating their teaching situation as elementary level were coded as one and all other teaching situations were coded as zero. For
school setting, respondents indicating their school setting as rural were coded as one while all others were coded as zero. For stage of concern, respondents identifying with the self stage of concern were coded as one and all other stages were coded as zero.

Analysis of the relationship was conducted as stated above in effort to explore the following research questions:

RQ 2: Do the perceived professional development needs of Ohio’s physical educators vary according to school setting/location?

RQ 3: Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

RQ 4: Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?

Correlation Analysis of Setting/Location of School - Results

A Pearson correlation coefficient was calculated to determine the strength of the linear relationship between the setting/location of the school in which physical educators’ taught and their perceived professional development needs related to the following subscales: teacher knowledge and skills (TKS); psychosocial aspects of physical education (PSA); curriculum, evaluation, and supervision (CES); strategies (STR); and current issues and trends (CIT). Specifically, correlation coefficients were calculated for the relationship between physical educators’ setting in the following categories: urban, rural, suburban, and small city, and their perceived professional development needs.

Correlation coefficients were calculated for each setting/location and no significant relationships were found. All correlation coefficients generated were less than .10 indicating
little if any relationship between the setting/location in which physical educators teach and their perceived professional development needs in any of the five perceived needs sub-scales identified.

Correlation Analysis of Grade Level Taught - Results

A Pearson correlation coefficient was also calculated to determine the strength of the relationship between grade level assigned to physical educators and their perceived professional development needs related to the following subscales: teacher knowledge and skills (TKS); psychosocial aspects of physical education (PSA); curriculum, evaluation and supervision (CES); strategies (STR); and current issues and trends (CIT). Specifically, correlation coefficients were calculated for the relationship between physical educators’ grade level taught in the following categories: elementary, middle school, high school, and some combination (e.g. elementary and middle school), and their perceived professional development needs.

Correlation coefficients were calculated for each grade level. All correlation coefficients for TKS, PSA, and CES sub-scales generated were less than .10 indicating little if any relationship between grade level assignment and a perceived need for professional development related to these sub-scale items. STR and CIT correlations generated coefficients less than .20 indicating at best, a moderate relationship between grade level assignment and in-service physical educators’ perceived professional development needs. Specifically, combination physical educators, those assigned multiple grade level teaching responsibilities, generated the following coefficient scores: (r (271) = .131, p < .05) indicating a modest relationship between combination physical educators’ perceived professional development needs and items related to the STR sub-scale. Furthermore, elementary physical educators generated coefficient scores (r
(271) = -.155, \( p < .05 \) suggesting non-elementary teachers have at best, a modest perceived need for professional development related to STR sub-scale items. Similar results were generated for high school teachers (\( r (271) = .123, p < .05 \)) suggesting a modest relationship between high school grade level assignments and professional development needs related to STR sub-scale items.

*Correlation Analysis of Teachers’ Stage of Concerns - Results*

A Pearson correlation coefficient was also calculated to determine the strength of the relationship between physical educators’ stage of concern (SoC) as defined by Fuller’s Concerns theory (1969) and their perceived professional development needs. Specifically, correlation coefficients were calculated for the relationship between physical educators’ identifying with Self, Task, and Impact concerns, and the following perceived professional development needs: teacher knowledge and skills (TKS); psychosocial aspects of physical education (PSA); curriculum, evaluation, and supervision (CES); strategies (STR); and current issues and trends (CIT).

A moderately positive relationship was found between in-service physical educators’ identifying with Self concerns and perceived professional development needs related to all five perceived needs sub-scales. Specifically, coefficients ranging from PSA (\( r (268) = .563, p < .01 \)); TKS (\( r (275) = .515, p < .01 \)); STR (\( r (271) = .497, p < .01 \)) and CES (\( r (266) = .489, p < .01 \)) and CIT (\( r (279) = .296, p > .01 \)) suggested a moderate degree of association between in-service physical educators’ identifying with Self concerns and their perceived professional development needs.
Correlation coefficients for physical educators’ identifying with Task concerns indicated a moderately positive relationship in each of the five subscales. Specifically, coefficients ranging from CES (r (266) = .534, p < .01); STR (r (271) = .510, p < .01); PSA (r (268) = .504, p < .01); TKS (r (275) = .498, p < .01) and CIT (r (279) = .462, p < .01), indicated a moderate degree of association between in-service physical educators’ identifying with Task concerns and their perceived professional development needs.

Correlation coefficients for in-service physical educators’ identifying with Impact concerns indicated a moderate to marked positive relationship in each of the five subscales. Specifically, coefficients ranging from PSA (r (268) = .591, p < .01); TKS (r (275) = .546, p < .01); CES (r (266) = .522, p < .01), STR (r (271) = .470, p < .01) and CIT (r (279) = .331, p < .01) indicated a moderately significant association between in-service physical educators’ identifying with Impact concerns and their perceived professional development needs. Appendix F illustrates the Pearson Correlation Coefficients for the five perceived professional development needs and the three independent variables.

Multiple Regression Analysis – Results

Multiple Linear Regression analysis was conducted to determine the extent to which select teacher and school characteristics significantly influenced physical educators’ perceived need for professional development experiences related to each of the five PDNQ – PE perceived need sub-scales. Specifically, items grouped in the Teacher Knowledge and Skills (TKS) sub-scale suggested a physical educator’s Stage of Concern (SoC) is a moderately significant predictor of perceived need for professional development experiences related to this sub-scale. Using the stepwise method, a significant regression equation was found (F(3, 273) = 49.554, p <
.001), with an $R^2$ of .353 indicating a physical educator’s SoC is a moderately significant predictor of perceived professional development needs relative to the TKS sub-scale. Specifically, 35.5% of the observed variability in perceived need for professional development experiences related to TKS sub-scale is explained by a physical educators’ SoC. Teaching situation (elementary, middle school, high school, and some combination) and school setting/location (urban, suburban, rural, and small city) as indexed by dummy variables for grade level and setting/location were not significant predictors for the TKS sub-scale.

Although stages of concern (Self, Task, Impact) emerged as the strongest predictors for professional development needs related to the TKS sub-scale, the Impact stage was the most prevalent predictor (beta = .288) followed by Task stage (Beta = .229) and finally Self stage (Beta = .158). Standardized Beta Coefficients indicated a moderately significant relationship between a physical educators’ SoC and a perceived need for professional development relative to the TKS sub-scale. Table 7 indicates significant and non-significant variables related to the TKS sub-scale.
Table 7

Regression analysis – teacher knowledge and skills (TKS) sub-scale.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact SoC</td>
<td>.277</td>
<td>.075</td>
<td>.288</td>
</tr>
<tr>
<td>Task SoC</td>
<td>.212</td>
<td>.059</td>
<td>.229</td>
</tr>
<tr>
<td>Self SoC</td>
<td>.133</td>
<td>.056</td>
<td>.158</td>
</tr>
<tr>
<td>Urban</td>
<td>n/s</td>
<td>n/s</td>
<td>-.003</td>
</tr>
<tr>
<td>Rural</td>
<td>n/s</td>
<td>n/s</td>
<td>.004</td>
</tr>
<tr>
<td>Suburban</td>
<td>n/s</td>
<td>n/s</td>
<td>.013</td>
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<td>Small City</td>
<td>n/s</td>
<td>n/s</td>
<td>-.019</td>
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<tr>
<td>Elementary School</td>
<td>n/s</td>
<td>n/s</td>
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<tr>
<td>Middle School</td>
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<td>n/s</td>
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</tr>
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<td>High School</td>
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<td>.031</td>
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<tr>
<td>Combination</td>
<td>n/s</td>
<td>n/s</td>
<td>.064</td>
</tr>
</tbody>
</table>

n/s = non-significant variable

Results of the multiple regression analysis conducted for the PSA sub-scale revealed patterns similar to those found in the TKS sub-scale. Specifically, stages of concern (Self, Task, Impact) emerged as the strongest predictors for professional development needs related to the PSA sub-scale. Like the TKS sub-scale, Impact stage was the most prevalent predictor (Beta = .324) followed by Self stage (Beta = .202) and finally Task stage (Beta = .188). Standardized
Beta Coefficients indicated a moderately significant relationship between a physical educators’ SoC and a perceived need for professional development experiences relative to the PSA sub-scale.

Using the stepwise method, a significant regression equation was found \( (F(3, 266) = 59.031, p < .001) \), with an \( R^2 \) of .400 indicating a physical educator’s stage of concern (SoC) is a moderately significant predictor of perceived professional development needs relative to the psychosocial aspects (PSA) sub-scale. Specifically, 40% of the observed variability in perceived need for professional development experiences related to PSA sub-scale is explained by a physical educators’ SoC. Teaching situation (elementary, middle school, high school, and some combination) and school setting/location (urban, suburban, rural, and small city) as indexed by dummy variables for grade level and school setting/location were not significant predictors for the PSA sub-scale. Table 8 indicates significant and non-significant variables related to the PSA sub-scale.
Table 8

*Regression analysis – psycho-social aspects (PSA) sub-scale.*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact SoC</td>
<td>.358</td>
<td>.085</td>
<td>.324</td>
</tr>
<tr>
<td>Task SoC</td>
<td>.201</td>
<td>.066</td>
<td>.188</td>
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<tr>
<td>Self SoC</td>
<td>.193</td>
<td>.073</td>
<td>.202</td>
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<tr>
<td>Urban</td>
<td>n/s</td>
<td>n/s</td>
<td>.001</td>
</tr>
<tr>
<td>Rural</td>
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<td>.025</td>
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<td>Small City</td>
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<td>n/s</td>
<td>-.005</td>
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<td>Elementary School</td>
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<td>n/s</td>
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</tr>
<tr>
<td>Middle School</td>
<td>n/s</td>
<td>n/s</td>
<td>-.001</td>
</tr>
<tr>
<td>High School</td>
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<td>n/s</td>
<td>.074</td>
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<tr>
<td>Combination</td>
<td>n/s</td>
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<td>.018</td>
</tr>
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</table>

n/s = non-significant variable
Regression analysis conducted for the curriculum, evaluation, and supervision (CES) sub-scale revealed patterns similar to those found in the TKS and PSA sub-scales. Specifically, physical educators identifying with the Task stage (Beta = .361) emerged as the strongest predictor variable followed by Impact stage (Beta = .302). In this case, Task and Impact concerns accounted for 35% of the observed variability in perceived need for professional development experiences related to the CES sub-scale items. Standardized Beta Coefficients indicated a moderately significant relationship between physical educators’ stage of concern (Task and Impact) and teaching assignment (non-middle school physical educators) and a perceived need for professional development experiences relative to the CES sub-scale.

Using the stepwise method, a significant regression equation was found (F(3, 264) = 50.12, p < .001), with an $R^2$ of .363 indicating that physical educators, particularly non-middle school teachers, identifying with the Task and Impact stages of concern are concerned about specific aspects of professional development related to the CES sub-scale. Unlike the TKS and PSA sub-scales, the CES sub-scale suggests that non-middle school physical educators (middle school teachers; Beta = -.117) are primarily concerned about issues of professional development relative to the CES sub-scale. With the exception of middle school physical educators, teaching situation (elementary, middle school, high school, and some combination) and school setting/location (urban, suburban, rural, and small city) as indexed by dummy variables for grade level and school setting/location were not significant predictors for the CES sub-scale. Table 9 indicates significant and non-significant variables related to the CES sub-scale.
Table 9

Regression analysis – curriculum, evaluation, and supervision (CES) Sub-scale.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task SoC</td>
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<td>.361</td>
</tr>
<tr>
<td>Impact SoC</td>
<td>.324</td>
<td>.066</td>
<td>.302</td>
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<tr>
<td>Middle School</td>
<td>-1.44</td>
<td>.610</td>
<td>-.117</td>
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<tr>
<td>Self SoC</td>
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<td>.131</td>
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<tr>
<td>Urban</td>
<td>n/s</td>
<td>n/s</td>
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<tr>
<td>Rural</td>
<td>n/s</td>
<td>n/s</td>
<td>-.014</td>
</tr>
<tr>
<td>Suburban</td>
<td>n/s</td>
<td>n/s</td>
<td>.051</td>
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<tr>
<td>Small City</td>
<td>n/s</td>
<td>n/s</td>
<td>.035</td>
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<tr>
<td>Elementary School</td>
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<tr>
<td>High School</td>
<td>n/s</td>
<td>n/s</td>
<td>.078</td>
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<tr>
<td>Combination</td>
<td>n/s</td>
<td>n/s</td>
<td>.044</td>
</tr>
</tbody>
</table>

n/s = non-significant variable

Multiple regression analysis of the Strategies (STR) sub-scale also revealed several significant predictor variables. Specifically, physical educators identifying with the Task stage (Beta = .328) emerged as the strongest predictor variable followed by the Self stage (Beta = .296). In this case, Task and Self concerns accounted for 31% of the observed variability in a
perceived need for professional development experiences related to the STR sub-scale items. Standardized Beta Coefficients indicated a moderately significant relationship between physical educators’ stage of concern, teaching assignment and their perceived need for professional development experiences relative to the STR sub-scale.

Using the stepwise method, a significant regression equation was found ($F(3, 269) = 45.364, p < .001$), with an $R^2$ of .336 indicating that physical educators, particularly non-elementary teachers, identifying with the Task and Self stages of concern are primarily concerned about specific aspects of professional development related to the STR sub-scale. With the exception of elementary teachers, teaching situation (elementary, middle school, high school, and some combination) and school setting/location (urban, suburban, rural, and small city) as indexed by dummy variables for grade level and school setting/location were not significant predictors for the PSA sub-scale. Table 10 indicates significant and non-significant variables related to the STR sub-scale.
Table 10

Regression analysis – strategies (STR) sub-scale.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task SoC</td>
<td>.312</td>
<td>.059</td>
<td>.328</td>
</tr>
<tr>
<td>Self SoC</td>
<td>.253</td>
<td>.053</td>
<td>.296</td>
</tr>
<tr>
<td>Elementary School</td>
<td>-1.233</td>
<td>.442</td>
<td>-.139</td>
</tr>
<tr>
<td>Impact SoC</td>
<td>n/s</td>
<td>n/s</td>
<td>.110</td>
</tr>
<tr>
<td>Urban</td>
<td>n/s</td>
<td>n/s</td>
<td>-.001</td>
</tr>
<tr>
<td>Rural</td>
<td>n/s</td>
<td>n/s</td>
<td>-.029</td>
</tr>
<tr>
<td>Suburban</td>
<td>n/s</td>
<td>n/s</td>
<td>-.009</td>
</tr>
<tr>
<td>Small City</td>
<td>n/s</td>
<td>n/s</td>
<td>.047</td>
</tr>
<tr>
<td>Middle School</td>
<td>n/s</td>
<td>n/s</td>
<td>-.105</td>
</tr>
<tr>
<td>High School</td>
<td>n/s</td>
<td>n/s</td>
<td>.047</td>
</tr>
<tr>
<td>Combination</td>
<td>n/s</td>
<td>n/s</td>
<td>.093</td>
</tr>
</tbody>
</table>

n/s = non-significant variable

Multiple regression analysis of the current issues and trends (CIT) sub-scale identified two significant predictor variables. Analysis of Standardized Beta Coefficients indicated a moderately significant relationship between physical educators’ stage of concern, teaching assignment and their perceived need for professional development experiences relative to the
CIT sub-scale. Specifically, physical educators identifying with the Task stage (Beta = .460) emerged as the strongest predictor variable followed by high school teaching responsibilities (Beta = .115) in the CIT sub-scale. In this case, Task SoC and high school teaching responsibilities accounted for 23% of the observed variability in a perceived need for professional development experiences related to the CIT sub-scale items.

Using the stepwise method, a significant regression equation was found ($F(2, 278) = 40.781$, $p < .001$), with an $R^2$ of .227 indicating that physical educators, particularly high school teachers, identifying with the Task stage of concern, are primarily concerned about aspects of professional development related to the CIT sub-scale items. With the exception of high school physical educators, teaching situation (elementary, middle school, and some combination) and school setting/location (urban, suburban, rural, and small city) as indexed by dummy variables for grade level and school setting/location were not significant predictors for the CIT sub-scale. Table 11 indicates significant and non-significant variables related to the CIT sub-scale.
Table 11

*Regression analysis – current issues and trends (CIT) sub-scale.*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task SoC</td>
<td>.478</td>
<td>.055</td>
<td>.460</td>
</tr>
<tr>
<td>High School</td>
<td>1.564</td>
<td>.719</td>
<td>.115</td>
</tr>
<tr>
<td>Self SoC</td>
<td>n/s</td>
<td>n/s</td>
<td>.033</td>
</tr>
<tr>
<td>Impact SoC</td>
<td>n/s</td>
<td>n/s</td>
<td>.077</td>
</tr>
<tr>
<td>Urban</td>
<td>n/s</td>
<td>n/s</td>
<td>.018</td>
</tr>
<tr>
<td>Rural</td>
<td>n/s</td>
<td>n/s</td>
<td>-.039</td>
</tr>
<tr>
<td>Suburban</td>
<td>n/s</td>
<td>n/s</td>
<td>.042</td>
</tr>
<tr>
<td>Small City</td>
<td>n/s</td>
<td>n/s</td>
<td>-.028</td>
</tr>
<tr>
<td>Elementary School</td>
<td>n/s</td>
<td>n/s</td>
<td>.062</td>
</tr>
<tr>
<td>Middle School</td>
<td>n/s</td>
<td>n/s</td>
<td>-.080</td>
</tr>
<tr>
<td>Combination</td>
<td>n/s</td>
<td>n/s</td>
<td>.033</td>
</tr>
</tbody>
</table>

n/s = non-significant variable
Summary of Results

This chapter explored the relationship between select teacher (Stage of Concern) and school characteristics (setting/location) and the perceived professional development needs of physical education teachers in the state of Ohio. Descriptive statistics, correlation and multiple linear regression analyses were employed to investigate the following research questions:

RQ1: What are the perceived professional development needs of Ohio’s physical educators?

RQ2: Do the perceived professional development needs of Ohio’s physical educators vary according to school setting/location?

RQ3: Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?

RQ4: Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?

This chapter presents the results of these analyses accordingly. To identify Ohio physical educators’ perceived professional development needs and explore possible predictors of those needs data were collected through a web-based, self-report survey instrument. The survey instrument consisted of identification of grade level teaching responsibilities and the setting/location of the school. In addition, the survey included the Professional Development Needs Questionnaire – Physical Education (PDNQ-PE) (Conkle, 1994) and the Teacher Concerns Questionnaire – Physical Education (TCQ – PE) (McBride, 1993).

A total of 304 surveys were analyzed and results indicated that 43% of the respondents were currently employed as elementary school physical educators. Respondents indicating
teaching assignments at the middle school, high school, and multi-grade levels were distributed fairly evenly among the remaining 57% of the sample. Physical educators in suburban and rural settings accounted for 64% of the sample with urban and small city accounting for the remaining 36%. Because the sample was collected from the Ohio Association of Health, Physical Education, Recreation and Dance’s (OAHPERD) membership database, participants could simply be a reflection of the organization's member demographics.

Further descriptive analysis of the TCQ-PE (McBride, 1993) suggested that respondents in this study primarily identified with concerns related to Fuller’s Impact Stage of Concern. The mean score of 3.3 suggested physical educators in this sample were moderately concerned about issues related to student learning and achievement and the degree to which instruction facilitates achievement. Response patterns indicated that physical educators in this sample were primarily concerned about their ability to meet individual student needs and ensure students received the instruction and assistance they needed.

Physical educators in this study were not only concerned about issues related to the effectiveness of their instruction and student achievement, but also about issues related to the teaching environment and their professional responsibilities. Fuller’s Task Stage of Concern received the second-highest mean score (3.17) indicating moderate concerns for items related to the task sub-scale. Response patterns indicated respondents were primarily concerned with items related to scheduling issues, large class sizes, and lack of administrative support.

Fuller’s Self Stage of Concern received the lowest mean scores suggesting items related to the Self sub-scale were of minimal concern to physical educators in this sample. With the
exception of concerns for professional relationships and the desire to be mutually respected among peers, all items related to the Self SoC were considered of “little” concern.

Based on the TCQ-PE (McBride, 1993) findings, data obtained could be used to provide professional developers with appropriate professional development topics based on the concerns, needs and interests of teachers. Utilization of the TCQ-PE would allow professional developers the opportunity to provide inservice education and training experiences that are responsive to physical educators’ perceived needs and concerns.

Further descriptive analyses were conducted in effort to identify the perceived professional development needs of physical educators in Ohio. According to data obtained through the PDNQ-PE (Conkle, 1994), physical educators in this sample identified very specific professional development needs. Response patterns indicated one-half of the respondents perceived “moderate” to “strong” needs in all of the pre-named sub-scales. Of the five pre-named sub-scales Curriculum Issues and Trends (CIT) yielded the highest overall mean score while Strategies (STR) yielded the lowest. The ten highest ranked individual perceived needs included learning innovative activities, teaching skills for wellness oriented physical education programs, technological equipment, fitness strategies that motivate students, grant writing, designing curricula, large class fitness testing, dealing with social forces that affect students, and curriculum improvement, implementation and evaluation.

Pearson correlation analyses were conducted to determine the strength of the linear relationship between the independent variables (setting/location of the school in which physical educators’ taught; grade level taught, and teachers Stage of Concern) and the dependent variables (perceived professional development needs). Correlation analysis of the setting/location of the
school in which physical educators taught and the five pre-named perceived needs sub-scales (TKS, PSA, CES, STR, and CIT) revealed no statistically significant relationships. Further analyses found similar patterns between grade levels taught and perceived needs sub-scales. However, several statistically significant relationships, although moderate at best, were found in the STR, CES, and CIT sub-scales. For example, non-elementary and combination/multi-grade level physical educators indicated perceived professional development needs related to the STR sub-scale. Specifically, physical educators indicated interest in items related to “using multiple teaching strategies” and “strategies for inclusion”. Non-middle school physical educators indicated perceived professional development needs related to the CES sub-scale. Two items indicated moderate needs related to “designing curricula” and “curriculum improvement, implementation, and evaluation”. High school physical educators indicated perceived professional development needs related to the CIT sub-scale. Three items indicated strong to extreme perceived needs related to “teaching skills for wellness oriented PE programs”, “technological equipment”, and “fitness-testing strategies that motivate students to adopt lifetime wellness”.

The Pearson Correlation analysis of physical educators’ SoC revealed statistically significant relationships in all five pre-named sub-scales suggesting physical educators’ perceived professional development needs are driven by their SoC. Specifically, physical educators identifying with concerns representative of Fuller’s Self, Task and Impact stages perceived professional development needs in all five pre-named sub-scales. Based on this analysis perceived professional development needs and interests are significantly related to the teacher’ stage of concern while school setting/location were not. With the exception of specific
grade level needs for the STR and CIT sub-scales it appears physical educators teaching situation and school context are not significantly related to the perceived professional needs of the physical educators in this sample.

To further explore the degree to which the independent variables influence the dependent variables, Multiple Linear Regression analyses were conducted for each of the perceived needs sub-scales. Several statistically significant relationships were found relative to physical educators’ SoC and their perceived professional development needs. Specifically, physical educators’ perceived professional development needs appear to be principally centered on Task and Impact issues of concern. Physical educators identifying with the Task SoC indicated moderate to strong perceived needs for professional development related to the CES, STR, and CIT sub-scales, while physical educators identifying with the Impact SoC indicated moderate to strong perceived needs for professional development related to the TKS and PSA sub-scales. Physical educators identifying with Self concerns indicated moderate perceived needs for professional development related to the TKS, PSA, STR, and CIT sub-scales.

Although school setting/location revealed no statistically significant relationships, the physical educators’ grade-level assignment generated several modest interactions. For example, non-elementary and combination or combination/multi-grade level physical educators indicated professional development needs related to the STR sub-scale. Non-middle school physical educators indicated professional development needs related to the CES sub-scale while high school physical educators were primarily interested in items related to the CIT sub-scale.

Although physical educators in this sample identified specific professional development needs, the importance of those needs appear to depend on concerns related to their effectiveness
in facilitating student achievement and meeting students’ individual needs. In addition, physical educators’ professional development needs appear to be related to concerns associated with lack of administrative support for the PE program, and being able to manage physical education classes that are too large and poorly scheduled. In specific cases, professional development needs also appear to be related to grade level responsibilities; particularly, physical educators’ at non-elementary, non-middle, high school and in combination or multi-grade levels indicated professional development needs related to STR, CES, and/or CIT sub-scales.

The results presented in this chapter detail the perceived professional development needs of physical educators in this sample, and the relationship of those needs to specific teacher and school characteristics as defined by SoC, grade level taught, and setting/location of the school. The following chapter presents a more detailed summary of the results as well as a discussion regarding the implications of the findings.
CHAPTER V

Introduction

This chapter summarizes the results of this study, offers discussion related to the implications those results, and provides recommendations for future research related to the design and delivery of quality professional development experiences for physical educators.

Summary of Results

The following section will present a review of the research problem, the subsequent purpose of the research study, and the research methodology employed. In addition, the research questions that guided this study are presented in conjunction with a summary of the results.

Research Problem

Although in-service education and training represents the customary approach to teacher professional development in public schools across the nation, research consistently points out few in-service education and training programs are effective in bringing about the kind of teacher learning necessary for effective teaching in the twenty-first century. The primary problem with in-service education and training lies in the fact that most teachers fail to find value in traditional, one-shot approaches to teacher learning. Such experiences, as described by Corcoran (1995), tend to ignore teachers’ expertise and typically approach teacher learning as a passive process. Furthermore, traditional in-service experiences are typically narrow in design and commonly fail to consider what teachers believe to be important and necessary to their daily work (Dilworth & Imig, 1995).
Purpose of the Research

Because research findings suggest physical educators have unique job related concerns as well specific inservice program needs (Conkle, 1994; Oliver, 1987), understanding those needs and the variables that influence them is critical in providing physical educators with meaningful in-service learning experiences. According to Glickman, Gordon, and Ross-Gordon (2007), “professional development must be geared to teachers’ needs and concerns” (p. 368), and must consider both individual and group characteristics if it is to be meaningful to participants. Thus, the underlying purpose of this study was to aid in the design and delivery of quality in-service education and training experiences for physical educators. Through a greater understanding of physical educators’ perceived professional development needs and the variables that influence those needs, professional developers may be in better position to facilitate quality in-service education and training experiences (INSET) that are meaningful and responsive to the needs and concerns of Ohio’s physical educators.

Methodology Employed

The strategy of inquiry for this study employed a cross-sectional design for the purposes of examining the influence of select teacher and school characteristics on the perceived professional development needs of Ohio’s physical educators. Data for this study were collected utilizing web-based and paper survey methodology beginning May 2006 through December 2006. Data were analyzed through descriptive statistics, reliability comparisons, and multiple linear regression.
Research Questions and Results

In order to gain a better understanding of the factors that influence physical educators’ perceived professional development needs, four research questions were developed to guide this study. The following section presents each research question and a corresponding summary of the results.

RQ1: What are the perceived professional development needs of Ohio’s physical educators?

Participants in this study consisted of elementary, middle school and high school physical educators identified as members of the Ohio Association for Health, Physical Education, Recreation and Dance. Participant profiles found that forty-three percent of the physical educators indicated teaching responsibilities at the elementary level; thirty-three indicated secondary teaching responsibilities while twenty-four percent indicated combined teaching responsibilities. The majority of participants taught in suburban and rural districts (64%) while urban and small city teachers comprised the remainder of the sample.

In effort to identify the perceived professional development needs of Ohio’s physical educators, all participants completed the Professional Development Needs Questionnaire – Physical Education (PDNQ – PE) (Conkle, 1994). The PDNQ – PE consisted of five pre-named sub-scales. Although not indicated on the survey, each question was directly related to one of five sub-scales consisting of six items each. Items within each sub-scale were ranked using a Likert-type scale in which participants chose from (1) no need, (2) little need, (3) moderate need, (4) strong need, and (5) extreme need. Each sub-scale contained six items related to the following themes:
1. Teacher Knowledge and Skills (TKS) = Items 1-6
2. Psychosocial Aspects (PSA) = Items 7-12
4. Instructional Strategies (STR) = Items 19-24

Data analysis revealed that physical educators in this sample expressed definite professional development needs in all of the pre-named sub-scales as measured by the PDNQ-PE. The following section presents the perceived professional development needs as indicated by physical educators in this sample.

Current Issues and Trends

The sub-scale theme ranked highest among participants in this sample was Current Issues and Trends (CIT). Seventy-five percent of the participants indicated “moderate to extreme” needs in all CIT items. Over eighty percent of the participants indicated “strong to extreme” needs in four of the six CIT items related to “learning of grant availability and writing grant proposals”, “developing wellness oriented PE programs”, “economically acquiring and using technologically advanced equipment”, and “learning fitness-testing strategies that motivate students to adopt lifetime wellness”. Clearly, physical educators in this sample perceive a “strong to extreme” need for in-service experiences related to the CIT theme.

Psychosocial Aspects

Psychosocial aspects of teaching physical education received the second highest mean score and ranked second in terms of perceived needs behind the CIT theme. Specifically, three
items “dealing with social forces that affect students’ existence, life and survival”, “using physical education to develop self-concept”, and “techniques for motivating students” received the highest individual rankings within this sub-scale.

Curriculum, Evaluation, and Supervision

The third highest ranked theme included responses related to Curriculum, Evaluation, and Supervision needs. Specifically, one item “designing curricula resulting in maximum student success” stood out in this theme, and received responses indicating seventy-nine percent of the participants perceived a need for professional development experiences related to this item. Additionally, items related to “curriculum improvement, implementation and evaluation”, and “developing and using student evaluation instruments for improving my teaching” received favorable responses indicating further need for professional development experiences with a focus on curriculum development and evaluation.

Teacher Knowledge and Skills

Participants in this sample indicated “little” to “moderate” need for professional development experiences related to the teacher knowledge and skills theme. Items such as “acquiring knowledge about the use of ability grouping”, “the use of scientific principle in teaching PE”, “developing skills for individualizing instruction programs”, “improving my activity skills so I can teach better”, and “developing observational skills for use in diagnosing student skill errors” are all related to basic teaching competencies expected of in-service teachers. Therefore, the low positive response rate could be due to the fact that participants in
this study consisted of in-service physical educators who would require little need for basic
teaching knowledge and skills.

Interestingly, one item within the TKS domain, “learning innovative PE activities that are
fun and positive for students” generated the highest individual perceived need. Eighty-six
percent of the participants in this sample indicated a “moderate to extreme” need for professional
development related to this item. Multiple regression analysis indicated that perceived needs
related to this domain were driven primarily by impact concerns. Impact stage concerns,
according to Fuller (1969, 1974), are concerns centered on the impact of one’s teaching on
student learning and achievement. As such, high positive responses may be attributed to the fact
that the item implies teacher learning that is directly related to student needs.

Strategies

Items related to the Strategies (STR) theme received the lowest overall positive responses
among the five pre-named theme. Physical educators in this sample indicated “little to no need”
for professional development experiences related to items within the STR theme. Items related to
“coaching techniques and strategies”, and “team teaching strategies” received the lowest overall
responses. However, low responses may be a result of the teaching context given that forty-two
percent of the sample taught in rural and small city schools where opportunities for team
teaching are typically limited. As Conkle noted (1994), small schools with limited physical
education staffs may not allow opportunities for team teaching experiences to occur. Little need
for professional development activities related to coaching techniques may be a product of sport
specific avenues of training, and as such physical educators in coaching roles may seek coaching
knowledge from sources outside school based in-service activities.
“Instructional strategies for inclusion” received the highest individual item responses within the STR theme. As in the case with the TKS domain, the highest ranked item within the STR theme, “instructional strategies for inclusion”, may stand out among the other items as it implies meeting the needs of all students within a given classroom.

Based on perceived professional development needs as measured by the PDNQ – PE (Conkle, 1994), participants in this study clearly indicated specific perceived professional development needs. With the exception of Teacher Knowledge and Skills (TKS) the most prominent individual item needs fell within the Current Issues and Trends (CIT) domain suggesting that physical educators in this sample perceive a need for professional development experiences related to current trends in society and the profession of teaching physical education.

Physical educators in this sample indicated “little to no need” for professional development activities related to the TKS and STR domains. The majority of items describing the TKS and STR domains either do not apply to teachers at the in-service stage and/or do not apply to the context within which the teacher must work.

RQ2: Do the perceived professional development needs of Ohio’s physical educators vary by school setting/location?

According to the Ohio Department of Education’s Typology of Ohio School Districts (2007), rural districts are generally categorized as districts located within rural agricultural districts. Rural agricultural districts include those within the Appalachian Ohio area and are characterized by higher-than average poverty rates, low median income levels, and the lowest percent of the population with post secondary education as compared to all other groups. Rural agricultural districts located outside the Appalachian Ohio area are similar to those within except
they tend to have a higher median income range and lower poverty rates. Small town districts located outside the Appalachian Ohio area are characterized by high median income levels and lower than average poverty rates. Urban districts include high population density areas that encompass small or medium-sized towns or cities and are characterized by low median income levels and very high poverty rates. Major urban districts include those districts that encompass major cities with very high population densities and are characterized by very high poverty rates and typically very high percentages of minority students. Urban/Suburban districts are typically located around major urban areas and are characterized by high to very high median income levels, low to almost no poverty levels and high percentages of college completers and professional occupations.

Given the unique demographic characteristics of each district type, an assumption may be made that teachers across various districts would identify different professional development needs. However, based on the responses of physical educators in this sample, the data suggests that setting/location (e.g. urban, rural, suburban, and small city) of the school has little, if any influence on a physical educator’s perceived professional development needs as measured by the PDNQ – PE (Conkle, 1994). Correlation comparisons revealed little if any relationship between perceived professional development needs and school type. Multiple regression analyses revealed no association between the participant’s school setting/location and their perceived professional development needs in all sub-scales as measured by the PDNQ – PE (Conkle, 1994).

RQ3: Do the perceived professional development needs of Ohio’s physical educators vary by grade level taught?
Based on the responses of physical educators in this sample, the data suggests that in certain situations grade level taught is a moderately associated with perceived professional development needs. Multiple regression analyses revealed moderately significant relationships between grade level taught and perceived needs for professional development activities related to the STR, CES, and CIT domains. Specifically, non-elementary and combination or multi-grade level physical educators indicated a perceived need for professional development activities related to the STR domain while non-middle school physical educators preferred activities related to the CES domain. High school teachers preferred activities related to the CIT domain. Teaching situation was not significantly associated with perceived professional development needs related to the TKS and the PSA sub-scales.

RQ4: Do the perceived professional development needs of Ohio’s physical educators vary according to their stage of concern as measured by the TCQ-PE (McBride, 1993)?

Based on the results of this study, it appears that a physical educator’s stage of concern is the primary determinant of perceived professional development needs. Results indicate physical educators in this sample are principally concerned about issues of professional development driven by task and impact concerns. Task concerns were significantly associated with participant’s perceived professional development needs in all five pre-named sub-scales. In particular, participants identifying with the Task SoC indicated moderate to strong preferences for PD needs related to the CES, STR, and CIT domains, while those identifying with the Impact SoC indicated moderate to strong preferences for PD needs related to the TKS and PSA domains. Participant’s identifying with Self concerns indicated moderate preferences for PD needs related to the STR and CIT domains.
Discussion

The results of this study identify the perceived professional development needs of Ohio’s physical educators and the influence of select teacher and school characteristics on those needs. In the sections that follow, the results are interpreted and compared to previous research related to understanding physical educators’ perceived professional development needs and the importance of those needs in the development of meaningful professional development experiences. Two key points are discussed: 1) in-service physical educators’ perceived professional development needs; and 2) the relationship between select teacher and school characteristics and in-service physical educators’ perceived professional development needs.

Physical Educators Perceived Professional Development Needs

It has been suggested that “inservice education and training ostensibly improves teachers’ competencies and competent teachers are needed” (Conkle, 1997, p. 50). However, physical educators consistently cite traditional inservice education and training experiences as irrelevant to their needs and essentially a waste of time. The primary reasons for this disconnect are attributed to the fact that inservice experiences are generally designed to cater to the masses, typically emphasize the latest hot topics, and are by and large not responsive to the intrinsic needs of the teacher (Lee, 2004 & 2005).

Despite the fact that much of the research related to the design and implementation of effective professional development suggests that participant needs and concerns should be a critical factor in the design and development of inservice activities research consistently points out that “physical educators’ needs are often not considered when inservice programs are
developed” (Conkle, 1997, p. 50). Although classroom teacher research has provided insight into this issue, as Conkle notes, classroom literature has limited application in the physical education setting due to the unique needs physical educators face in their daily work. Thus identifying the unique needs and concerns of physical educators and understanding the variables that influence those needs should be a primary objective of the professional developer.

Research related to identifying physical educators’ perceived needs has consistently reported that physical educators’ clearly have distinct professional development preferences (Conkle, 1994; Oliver, 1987). For example, Oliver (1987) examined the inservice preferences of eighty-five secondary physical educators using a 25-item Likert-type questionnaire. Results of the questionnaire indicated physical educators’ inservice preferences centered around four distinct themes: 1) student-centered needs, 2) instructional improvement needs, 3) motivation needs, and 4) behavior needs. In addition, Oliver reported that fifty percent of the physical educators sampled indicated a perceived need for additional in-service training in all but four items as measured by the questionnaire.

Conkle (1994) conducted a study exploring the perceived professional development needs of Alabama’s physical educators. Conkle’s sample included 265 inservice physical educators at the elementary, middle and secondary school levels as well as across various district types (rural/small town, urban, and suburban). Data was collected using the Professional Development Needs Questionnaire – Physical Education (PDNQ – PE). Conkle reported physical educators in his sample indicated perceived professional development needs that centered around five domains: 1) teacher knowledge and skills (TKS); 2) psycho-social aspects of physical education (PSA); 3) curriculum, evaluation, and supervisions (CES); 4) strategies
(STR); and 5) current issues and trends (CIT). The CIT domain received the highest positive responses. In addition, Conkle reported that fifty percent of the participants indicated perceived professional development needs in all areas as measured by the questionnaire.

Consistent with previous research (Conkle, 1994; Oliver, 1987), physical educators in the current study identified definite preferences for in-service education and training experiences. Such results provide further support that physical education INSET experiences should be driven by the needs and concerns of the physical educators for whom the experiences are planned.

As previously stated in chapter one, professional development is defined as a “range of activities that affect how a teacher learns to teach and how they mature intellectually and professionally” (Corcoran, 1995, p. 1). This vision differs dramatically from the traditional PD format where in-service experiences, consisting mainly of one-shot workshops or guest speakers, defined the extent of professional development. Today’s vision of professional development as explained by Glickman, Gordon, and Ross (2007) must be geared toward teachers’ needs and concerns in order to be meaningful. Without meaning, teachers will find it difficult to commit to the goals of a particular program despite their worthiness. Furthermore, “consideration for individual and group characteristics can help make professional development more relevant to the participant” (p. 368).

**Physical Educators Stage of Concern and Perceived Professional Development Needs**

Clearly, physical educators in this sample have definite perceived professional development needs. However, Conkle notes that “needs assessment alone is insufficient to provide quality INSET” (1994, p. 36). As such, for professional developers charged with the design and implementation of INSET experiences understanding the variables that may drive
those needs must also be considered. The results of this study suggest that participants’
perceived professional development needs are driven primarily by a physical educators’ issues of
concern rather than their teaching situation (e.g. grade level taught; school setting/location).

Results of this study are somewhat inconsistent with the results reported by Oliver (1987)
and Conkle (1994) in which significant relationships were found between select teacher and
school characteristics and preferences for INSET and training experiences. In the current study,
none of the school characteristics as defined by school setting/location were significantly
associated with participant’s perceived professional development needs. Furthermore, with the
exception of specific teaching situations (non-middle school, non-elementary, combination or
multi-grade and high school physical educators), results of the study suggest that by and large
grade level taught is not a significantly associated with participant’s perceived professional
development needs.

On the other hand, Oliver (1987) reported that school size, and ethnic make-up of the
classroom influenced the perceived professional development needs of physical educators in his
sample with respect to student-centered needs and behavior management aspects of teaching.
However, Oliver also noted that while significant correlations were found for certain teacher and
school characteristics, the “number and magnitude of the relationships were so small that the
strength of the relationship was inhibited” (p. 43). Conkle (1994) also reported significant
correlations between select teacher characteristics (e.g. percent of time a teacher spends as a
physical educator; number of in-service hours attended in the past two years) and the five
perceived needs sub-scales as measured by the PDNQ – PE. Specifically, Conkle reported
significant relationships between school type (rural/small town, urban, and/or suburban) and
perceived needs for INSET experiences related to the STR domain. In addition, Conkle reported that physical educators’ school level (elementary, middle, and secondary) was a predictor of PD needs in all but the CIT domain. However, results of the current study found that school type was not significantly associated with participants’ perceived professional development needs in any of the PDNQ – PE domains.

One variable that consistently influenced the perceived professional development needs of physical educators in the current study included the participants’ stage of concern as defined by Fuller’s Stages of Concerns Theory. In the current study, a participant’s SoC was moderately associated with perceived professional development needs in all five PDNQ – PE domains. This suggests that a teacher’s professional development needs are driven primarily by their stage of concern. Interestingly, Conkle reported that student skill level was a primary predictor of participant’s INSET preferences in all five pre-named PDNQ – PE domains. It could be that student skill level represents specific student needs and as such stands out among all other variables as critical to effective teaching.

Implications

This study contributed to understanding the professional development needs of in-service physical educators and the variables that influence those needs. It is expected that the findings in this study will be used to guide the design and delivery of in-service education and training experiences that consider the unique needs of physical education teachers in Ohio’s public schools.
Although effective professional development literature represents a considerable knowledge base, Glickman, Gordon and Ross (2007, p. 353) identify a number of common characteristics that describe effective professional development programs:

1. Involvement of participants in planning, implementing, and evaluating programs
2. Programs that are based on school wide goals, but that integrate individual and group goals with school goals
3. Long range planning and development
4. Programs that incorporate research and best practice on school improvement and instructional improvement
5. Administrative support, including provision of time and other resources as well as involvement in program planning and delivery
6. Adherence to the principles of adult learning
7. Attention to the research on change, including the need to address individual concerns throughout the change process
8. Follow-up and support for transfer of learning to the school or classroom
9. Ongoing assessment and feedback
10. Continuous professional development that becomes part of the school culture

Based on the characteristics of successful PD programs as described above, the results of the current study provide further support for the design and development of needs-based professional development programs.

Needs-based professional development programs are based on adult learning and teacher developmental theory, as well as consideration of teachers’ contextual situations and as such
must be developed collaboratively (Lee, 2004 & 2005). According to Lee, the objective of professional development programs such as the teacher needs-based model (TNB) is to maximize the effects of a professional development program, and facilitate and sustain long term teacher learning. In order to facilitate the design and delivery of a successful needs-based professional development program, Lee offers several suggestions. First, include participants as decision makers and consumers. Professional development programs must include teachers in the planning process. A key piece of that process requires helping teachers discover their basic and educational needs (Terehoff, 2002). Furthermore, Lee argues that project goals must be aligned to the participants’ needs and expectations of the PD experience.

Lee (2004 & 2005) also suggested that teachers be recruited from the same context during in-service experiences. Results of the current study suggest that grade level and teaching setting/location are not associated with professional development needs. Therefore, programs that target specific grade level groups or specific schools within a district may not be necessary. Rather, Lee suggested recruiting or targeting a team of teachers from the same building or in several buildings across a district may be a more effective approach. The advantage may be that it provides an existing support group as well as a greater potential for development a strong commitment to the project. In addition, Lee proposes, that having participants from different buildings within a school district provides a balance between individual needs and organizational goals of the district.

Results of this study indicated that participants’ stage of concern may have some influence on INSET preferences. Such results indicate that professional developers should not only assess physical educators’ INSET needs, but would be wise to consider the relationship
between those needs and a physical educators’ developmental stage of concern. Research has consistently shown that teachers go through developmental stages during their teaching careers (Oja, 1990). According to Oja, much of that work suggests that teachers at higher stages of development appear to be more effective in the classroom than their peers at lower stages of development. Understanding the various stages and how those stages impact professional development needs could have an impact on the design and delivery of PD activities. As Trotter (2006) explains, “through the understandings of these various stages of development, and the recognition that teachers can, with appropriate professional development activities, move to a higher stage of development, activities could be structured and presented to increase stage growth …” (p. 10).

Recommendations for Future Research

Additional research needs to be conducted on the effects of a teacher needs-based program (Lee, 2004 & 2005) in the physical education setting. While Lee purports the TNB model is “applicable not only with mathematics teachers, but also with any professional educators” (p. 46), researchers need to examine the TNB model and its applicability as an effective professional development program specific to physical educators.

The results of the current study also provide further evidence that meaningful professional development activities can be planned that are responsive to the unique needs and concerns of physical educators. Furthermore, the current study supports the use of survey instruments such as the PDNQ – PE (Conkle, 1994), and the TCQ – PE (McBride, 1993), and provides further evidence that they are indeed reliable measures of in-service physical educators’
perceived professional development needs and concerns. Therefore, such instruments should be utilized by professional developers in the design and development of professional development programs. Understanding and taking into account the basic needs and concerns of their staff allows professional developers to create an environment where teachers “know that the learning experience will provide them with a sense of growth in their knowledge, understanding, skills, attitude and interests” (Terehoff, 2002, p.72).

In addition, future research related to both perceived professional development needs and stages of concerns should include qualitative and/or mixed method studies (Conkle, 1994). Such research would provide a more comprehensive understanding of physical educators’ perceived professional development needs and concerns as well as the influence of professional development programs on perceived needs and stages of concern.

Although the developmental perspective provides a foundation for understanding and considering teachers’ individual needs and concerns in the design and implementation of in-service experiences, it has been criticized for its emphasis on a linear progression of development, as well as its failure to address the social, historical, and environmental factors that may influence a teacher’s growth and development (Huberman, 1995). Fessler suggested that professional developers and others charged with the design and implementation of in-service experiences consider teacher development as a dynamic process in which “teachers experience many shifts in stages throughout their careers, often meandering back and forth between periods of growth and frustration in response to factors in their personal and organizational lives” (Fessler, 1995, pp. 171-172).
In an attempt to expand the concept of teacher development, Fessler (1995) proposed the Teacher Career Cycle as a working model of the dynamic nature of the individual teacher and the environment in which they live and work. In Fessler’s model, teacher development is also viewed as a series of stages and/or phases that teachers progress through as they move across the career cycle. However, for Fessler, a teacher’s progression through various career stages is not a linear process, but rather a “dynamic ebb and flow…with teachers moving in and out of stages in response to environmental influences from both the personal and organizational dimensions” (p. 187). When viewed in light of Fessler’s model, the developmental perspective provides a foundation from which teachers’ needs and concerns regarding their teaching career are viewed in context of personal and organizational factors that influence a teacher’s growth and development. Furthermore, such a perspective offers an approach for individualizing professional development constructs in a way that meets not only the individual’s personal and professional needs, but also, the needs of the organization. Future research should be conducted to explore a more comprehensive set of organizational and personal factors (years of teaching experience, number of days per week students are in PE class, assessment expectations, family concerns/crises) and the degree to which those factors mediate professional development needs of physical education teachers.

Conclusions

Ultimately, the importance of healthy children and the potential role high quality, daily physical education programs can play in ensuring a generation of healthier, physically educated children depends on the skills and abilities of the physical educator. Consequently, understanding how to design INSET activities that serve the interests and needs of teachers in any discipline
area is critical to providing INSET experiences that conform to the criteria of high quality professional development, and that strengthens the individual and collective practices of teachers.

Recently, Ohio’s Governor Strickland released his plan for *Reforming Ohio’s Education System for the 21st Century* (2009) in which he identified high quality teaching as key component in the reform of Ohio’s education system. Specifically, the Governor’s plan includes the development of a teacher residency program and career ladder intended to provide new teachers with mentored clinical experience early in their careers and to base further advancement on the skills and accomplishments of teachers. In addition, the Governor’s plan includes additional time for teacher collaboration, mentoring and professional development.

As long as professional development continues to be cited as the critical piece in determining the success of systemic reform initiatives (Corcoran, 1995), the importance of quality PD experiences for all teachers, particularly in the form on inservice education and training, must be addressed. In order to accomplish the type of systemic reform outlined in the Governor’s plan, a new approach to professional development will be needed. As explained by Corcoran,

the laissez-faire approach to professional development must end. There is widespread recognition among teachers and researchers that the current system of professional development is ineffectual and inefficient….New approaches to professional development are needed to support the design, development, and implementation of more rigorous standards, new curriculum frameworks, authentic assessment, and changes in school organization and governance. (p. 2)
Without a teaching force prepared to facilitate high levels of student achievement and a system of professional development designed to help teachers learn, develop, and use the knowledge and skills needed to support education reform, Corcoran argues that the implementation of reform initiatives will largely remain unsuccessful.
REFERENCES


(ERIC Document Reproduction Service No. ED389682)


http://www.legislature.state.oh.us/BillText125?125_SB_2_CR_N.html


APPENDIX A

PHYSICAL EDUCATION TEACHER CONCERNS AND PROFESSIONAL DEVELOPMENT NEEDS SURVEY
May, 2006

Dear Fellow Physical Educator:

I am conducting a study to determine physical educators’ perceptions about professional development needs and teaching concerns. In addition, this study will include an overview of federal and state policies and their impact on opportunities for teachers to participate in quality professional development. This dissertation research is being conducted under the advisement of Dr. Ann Converse Shelly, Dr. Kathleen Flanagan-Hudson, Dr. John Fraas, and Dr. Simon Attle of Ashland University.

The Ohio Association for Health, Physical Education, Recreation and Dance physical educator members are invited to participate due to their involvement in professional organizations with the assumption that this population will provide a knowledgeable perspective regarding professional development concerns and needs of physical education teachers in Ohio. The e-mail invitation contains a link to an on-line survey comprised of three specific sections: demographic information, teacher concerns and professional development preferences.

I will be most grateful if you would take 15-20 minutes to visit the link provided below, carefully complete all sections of the survey and submit your responses by June 8, 2006. Although not required, please feel free to supply any additional information in the boxes provided at the end of the teacher concerns and the professional development needs sections.

The results of the survey will be analyzed and comparisons made with respect to participants’ perceived needs and stage of concerns as well as participants’ perceived needs and school context. Therefore, it is vital honest answers be given regarding each item on the survey. *Your responses will be treated as confidential and your information will in no way be linked to your name.*

I appreciate your participation in this study and will be pleased to provide a summary of the results should you express a desire. Thanks again and please remember the purpose of this study is to investigate professional development needs and the relationship of those needs to teacher concerns and select school characteristics in an effort to provide higher quality learning experiences for Ohio’s physical educators.


Sincerely,

Rhonda Hovatter
Rhonda Hovatter, Doctoral Candidate
Ashland University
A. Demographic Information - Directions: Please indicate only one answer for each category which best describes you and/or your situation.

1. School Setting:
   - _____ Urban/Inner city
   - _____ Suburban
   - _____ Small city
   - _____ Local/rural

2. School Organization:
   - _____ Public
   - _____ Private
   - _____ Charter

3. Level (check all that apply)
   - _____ Elementary
   - _____ Middle Grades
   - _____ High School

B. The Teacher Concerns Questionnaire Physical Education (TCQ-PE) - Directions: Please mark an “X” through the number representing your response. Please read each statement, then ask yourself:

WHEN I THINK ABOUT MY TEACHING, HOW MUCH AM I CONCERNED ABOUT THIS?

1 = Not Concerned  4 = Very Concerned  2 = A Little Concerned  5 = Extremely Concerned
3 = Moderately Concerned

1) Lack of continuity on the yearly PE program ................................................................. (1) (2) (3) (4) (5)
2) Lack of administrative support for the PE program ....................................................... (1) (2) (3) (4) (5)
3) Doing well when a supervisor is present ................................................................. (1) (2) (3) (4) (5)
4) Meeting the needs of different kinds of students ....................................................... (1) (2) (3) (4) (5)
5) Lack of consistent or equitable grading policy in PE ....................................................... (1) (2) (3) (4) (5)
6) Diagnosing student learning problems ................................................................. (1) (2) (3) (4) (5)
7) Feeling more adequate as a teacher ................................................................. (1) (2) (3) (4) (5)
C. The Teacher Concerns Questionnaire Physical Education (TCQ-PE) continued: - Directions: Please mark an “X” through the number representing your response. Please read each statement, then ask yourself:

WHEN I THINK ABOUT MY TEACHING, HOW MUCH AM I CONCERNED ABOUT THIS?

1 = Not Concerned  
2 = A Little Concerned  
3 = Moderately Concerned  
4 = Very Concerned  
5 = Extremely Concerned

8) Challenging unmotivated students ................................................................. (1) (2) (3) (4) (5)
9) Being accepted and respected by professional persons ........................................ (1) (2) (3) (4) (5)
10) Working with class sizes that are too large ....................................................... (1) (2) (3) (4) (5)
11) Guiding students toward intellectual and emotional growth .............................. (1) (2) (3) (4) (5)
12) Whether each student is getting what he/she needs ........................................... (1) (2) (3) (4) (5)
13) Getting a favorable evaluation of my teaching ................................................... (1) (2) (3) (4) (5)
14) Poor/inadequate scheduling of physical education classes ............................... (1) (2) (3) (4) (5)
15) Maintaining the appropriate degree of class control .......................................... (1) (2) (3) (4) (5)

Please express any additional concerns not mentioned above:

Please proceed to the next page:

D. Professional Development Needs Questionnaire Physical Education (PDNQ-PE)

Directions: Please mark an “X” through the number representing your personal professional development needs.

1 = No Need  2 = Little Need  3 = Moderate Need  4 = Strong Need  5 = Extreme Need

1) Learning innovative PE activities that are fun and positive for students .............................................. (1) (2) (3) (4) (5)
2) Acquiring knowledge about the use of ability grouping ................................................................. (1) (2) (3) (4) (5)
3) The use of scientific principle in teaching PE .................................................................................. (1) (2) (3) (4) (5)
4) Developing skills for individualizing instruction programs ......................................................... (1) (2) (3) (4) (5)
5) Improving my activity skills so I can teach better ........................................................................ (1) (2) (3) (4) (5)
6) Developing observational skills for use in diagnosing student skill errors ............................. (1) (2) (3) (4) (5)
7) Dealing with the social forces that affect student existence, life, and survival ..................... (1) (2) (3) (4) (5)
8) Administering feedback and reinforcement to students .............................................................. (1) (2) (3) (4) (5)
9) Developing empathetic counseling/intervention skills ................................................................. (1) (2) (3) (4) (5)
10) Techniques for motivating students in PE .................................................................................... (1) (2) (3) (4) (5)
11) Developing effective student discipline procedures ................................................................. (1) (2) (3) (4) (5)
12) Using physical education to develop student self-concept ...................................................... (1) (2) (3) (4) (5)
13) Developing and using student evaluation instruments for improving my teaching .......... (1) (2) (3) (4) (5)
14) Developing self-evaluation skills for improving my teaching ................................................... (1) (2) (3) (4) (5)
15) Supervising and evaluating student teachers, parent volunteers, or teaching aides .......... (1) (2) (3) (4) (5)
16) Curriculum improvement, implementation, and evaluation ................................................... (1) (2) (3) (4) (5)
17) Using “curriculum models” in PE ............................................................................................. (1) (2) (3) (4) (5)
18) Designing curricula resulting in maximum student success and optimal evaluation ........... (1) (2) (3) (4) (5)

Please Proceed to the next page:
E. Professional Development Needs Questionnaire Physical Education (PDNQ-PE) continued:

Directions: Please mark an “X” through the number representing your personal professional development needs.

1 = No Need  
2 = Little Need  
3 = Moderate Need  
4 = Strong Need  
5 = Extreme Need

19) Diagnostic/prescriptive instructional strategies for “inclusion” (mainstreaming) of disabled students …(1) (2) (3) (4) (5)
20) Instructional strategies for “coed” activities ……………………………………………………………… (1) (2) (3) (4) (5)
21) Coaching techniques and strategies ………………………………………………………………………………… (1) (2) (3) (4) (5)
22) Team teaching strategies ……………………………………………………………………………………………… (1) (2) (3) (4) (5)
23) Using “multiple” teaching styles and strategies ……………………………………………………………………… (1) (2) (3) (4) (5)
24) Strategies for involving parents in the schooling process ……………………………………………………………… (1) (2) (3) (4) (5)
25) Economically acquiring and using technologically advanced equipment …………………………… (1) (2) (3) (4) (5)
26) Developing and using media in physical education ………………………………………………………………… (1) (2) (3) (4) (5)
27) Learning of grant availability and writing grant proposals ……………………………………………………………… (1) (2) (3) (4) (5)
28) Fitness-testing strategies that motivate students to develop lifetime wellness programs ……… (1) (2) (3) (4) (5)
29) Teaching skills for implementing a wellness-oriented PE program ………………………………… (1) (2) (3) (4) (5)
30) Methods for fitness-testing large classes ………………………………………………………………………………… (1) (2) (3) (4) (5)

Other professional development needs I have are:

Please indicate your E-mail address if you would like to receive a summary of the results of this study: ______________________

Taken from: Conkle, M. T. (1994). Analysis of Alabama physical educator teaching concerns, inservice needs, and preferred inservice program features. Dissertation Abstracts International (UMI No. 9503387)
APPENDIX B

HUMAN SUBJECT REVIEW BOARD APPROVAL
TO: Dr. Ann Shelly
FROM: Patricia L. Edwards, Chair
DATE: April 24, 2006
RE: Human Subjects Review Board Approval

The Human Subjects Review Board has approved the research proposal that has been submitted by Rhonda Hovatter. The investigator may proceed with this project.

The primary function of the HSRB is to ensure protection of human research subjects. As a result of this mandate, we ask that you pay close attention to the fundamental ethical principles of autonomy, justice, and beneficence when establishing your research proposal. These ethical principles pertain specifically to the issues of informed consent, fair selection of subjects, and risk/benefit considerations.

If you have any questions, please contact me.

Sincerely,

Patricia L. Edwards
Phone: 419-289-5378
Fax: 419-207-6702
E-mail: pedwards@ashland.edu

PE: mfw
APPENDIX C

OHIO ASSOCIATION HEALTH, PHYSICAL EDUCATION, RECREATION AND DANCE

PARTICPATION AGREEMENT
Rhonda,

The Ohio Association for Health, Physical Education, Recreation and Dance is pleased to assist you in your research efforts. As we discussed, your survey can be posted on our web page at www.ohahperd.org. As you know, we are unable to share our membership list, therefore I will send a blast email to all members with viable emails (approx 1,500) inviting them to participate in the survey. All results will be sent directly to you when the survey has been completed. Once they volunteer to participate you are welcome to contact them directly.

Please let me know if you have additional questions. I look forward to working with you.

Diane Tomer  
Executive Director  
Ohio Association for Health, Physical Education, Recreation and Dance  
631 Wellesley Circle  
Avon Lake, OH 44012  
800-828-3468  
www.ohahperd.org

77th Annual Convention  
Stand Up! Speak Out!  
November 30 - December 1, 2006  
Greater Columbus Convention Center
APPENDIX D

TEACHER CONCERNS QUESTIONNAIRE – PHYSICAL EDUCATION (TCQ-PE)

(MCBRIDE, 1993)

SUB-SCALES, CORRESPONDING QUESTIONS, RAW MEAN SCORES, AND OVERALL RANK BY ITEM
Table D  
TCQ-PE Sub-Scales and Corresponding Concerns | Item Number | Raw Mean Score | Overall Mean Rank  
---|---|---|---  
**Self Concerns**  
Doing well when supervisor is present | 3 | 2.47 | 15  
Feeling more adequate as a teacher | 7 | 2.74 | 13  
Being accepted and respected by professional persons | 9 | 3.01 | 9  
Getting favorable evaluation of my teaching | 13 | 2.73 | 14  
Maintaining the appropriate degree of class control | 15 | 2.88 | 12  
**Task Concerns**  
Lack of continuity on the yearly PE program | 1 | 3.01 | 9  
Lack of administrative support for the PE program | 2 | 3.20 | 6  
Lack of consistent or equitable grading policy in PE | 5 | 3.10 | 8  
Working with class sizes that are too large | 10 | 3.20 | 6  
Poor/inadequate scheduling of physical education classes | 14 | 3.35 | 5  
**Impact Concerns**  
Meeting the needs of different kinds of students | 4 | 3.55 | 1  
Diagnosing student learning problems | 6 | 3.00 | 11  
Challenging unmotivated students | 8 | 3.44 | 3  
Guiding students toward intellectual and emotional growth | 11 | 3.31 | 4  
Whether each student is getting what he/she needs | 12 | 3.50 | 2  

APPENDIX E

PROFESSIONAL DEVELOPMENT NEEDS QUESTIONNAIRE–PHYSICAL EDUCATION (PDNQ-PE) (CONKLE, 1994)

SUB-SCALES, CORRESPONDING QUESTIONS, MODERATE TO EXTREME NEEDS, AND OVERALL RANK BY ITEM
<table>
<thead>
<tr>
<th>PDNQ-PE Sub-Scales and Corresponding Questions</th>
<th>% (3)</th>
<th>% (4-5)</th>
<th>Total Percent</th>
<th>Overall Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Knowledge and Skills (TKS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Learning innovative activities</td>
<td>35.2</td>
<td>51.0</td>
<td>86.2</td>
<td>1</td>
</tr>
<tr>
<td>2. Knowledge of ability grouping</td>
<td>37.2</td>
<td>29.6</td>
<td>66.8</td>
<td>19</td>
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<td>3. Using scientific principles in PE</td>
<td>43.1</td>
<td>23.1</td>
<td>66.2</td>
<td>20</td>
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<td>4. Individualizing instruction</td>
<td>36.2</td>
<td>32.3</td>
<td>68.5</td>
<td>15</td>
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<tr>
<td>5. Improving activity skills</td>
<td>30.3</td>
<td>28.6</td>
<td>58.9</td>
<td>26</td>
</tr>
<tr>
<td>6. Developing observational skills</td>
<td>34.2</td>
<td>30.9</td>
<td>65.1</td>
<td>22</td>
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<td>Psycho-social Aspects of PE (PSA)</td>
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<td></td>
<td></td>
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<tr>
<td>7. Dealing with social forces that affect students</td>
<td>40.5</td>
<td>34.5</td>
<td>75.0</td>
<td>9</td>
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<td>8. Administering feedback and reinforcement</td>
<td>31.6</td>
<td>31.2</td>
<td>62.8</td>
<td>25</td>
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<td>9. Developing counseling and intervention skills</td>
<td>36.2</td>
<td>26.9</td>
<td>63.1</td>
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<td>10. Techniques for motivating students</td>
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<td>71.6</td>
<td>13</td>
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<td>11. Effective student discipline</td>
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<td>33.2</td>
<td>64.1</td>
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<td>12. Using PE to develop student self-concept</td>
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<td>44.7</td>
<td>72.7</td>
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<td>Curriculum/Evaluation/Supervision</td>
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<td>13. Developing and using student evaluation instruments</td>
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<td>36.5</td>
<td>73.0</td>
<td>11</td>
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<td>14. Developing self-evaluation skills</td>
<td>38.2</td>
<td>30.2</td>
<td>68.2</td>
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<tr>
<td>15. Personnel supervision (e.g. student teachers, parents, volunteers)</td>
<td>32.9</td>
<td>17.4</td>
<td>50.3</td>
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<td>16. Curriculum improvement, implementation, and evaluation</td>
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<td>45.1</td>
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<td>17. Using curriculum models in PE</td>
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<td>67.4</td>
<td>18</td>
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<td>18. Designing curricula</td>
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<td>44.7</td>
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<td>Strategies</td>
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<td>19. Instructional strategies for “inclusion”</td>
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<td>71.1</td>
<td>14</td>
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<td>20. Instructional strategies for coeducation classes</td>
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<td>28.3</td>
<td>56.3</td>
<td>27</td>
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<td>21. Coaching techniques and strategies</td>
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<td>18.1</td>
<td>48.0</td>
<td>30</td>
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<td>22. Team teaching strategies</td>
<td>32.6</td>
<td>17.4</td>
<td>50.0</td>
<td>29</td>
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<tr>
<td>23. Using multiple teaching styles and strategies</td>
<td>35.5</td>
<td>32.9</td>
<td>68.4</td>
<td>16</td>
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<td>24. Strategies for involving parents</td>
<td>37.5</td>
<td>27.2</td>
<td>65.4</td>
<td>21</td>
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<td>Current Issues and Trends</td>
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<td>25. Technological equipment</td>
<td>27.6</td>
<td>54.2</td>
<td>81.8</td>
<td>3</td>
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<td>26. Developing and using media in PE</td>
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<td>46.7</td>
<td>78.6</td>
<td>7</td>
</tr>
<tr>
<td>27. Learning about and writing for grant proposals</td>
<td>22.0</td>
<td>59.2</td>
<td>81.2</td>
<td>5</td>
</tr>
<tr>
<td>28. Fitness-testing strategies; motivate students to adopt lifetime wellness</td>
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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
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* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Table F5

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* Correlation is significant at the 0.05 level (2-tailed).
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