

THE IMPACT OF TEACHER EDUCATION ON BEGINNING PHYSICAL
EDUCATION TEACHERS' PRACTICES

by

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(Under the Direction of Paul G. Schempp)

ABSTRACT

The purpose of this study was to determine the perceptions beginning teachers' hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study assessed the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education.

Six beginning physical education teachers were purposely selected based upon criteria established by the researcher and supported by Woods and Lynn (2001). Data collection consisted of interviews (two individual and one focus group), observations, and artifact analysis. The qualitative data were analyzed using techniques for data management and reduction described by Huberman and Miles (1994). Trustworthiness was addressed through data triangulation, member checks, and an audit trail.

The findings revealed a total of 18 themes addressing each of the six standards that constitute the National Standards for Initial PETE (NASPE, 2009): (1) Scientific and Theoretical Knowledge, (a) knowing the basics, (b) retention difficulties, (c) value and

utility of knowledge in practice, and (d) teaching motor skills; (2) Skill-based and Fitness-based Competence, (e) variety of fundamental movements and physical activities, and (f) limited accountability for and knowledge of fitness; (3) Planning and Implementation, (g) lesson plan template with inconsistencies in practice, (h) student exceptionalities: assistance, understanding, and accommodations, and (i) instructional technology: computer programs and lack of resources; (4) Instructional Delivery and Management, (j) field experiences and student teaching, (k) methodology classes and peer teaching, (l) management: routines, and (m) instruction: feedback and cues; (5) Impact on Student Learning, (n) knowledge of basic assessment techniques, (o) nature of physical education and grading, and (p) reflection: what, how, in practice; (6) Professionalism, (q) defining a professional physical educator, and (r) being a professional educator.

Through examination and final analysis of the interviews, observations, and artifacts several new recommendations were made for undergraduate PETE experiences: bridge the gap between theory and practice, increase knowledge of health-related fitness concepts, expand diversity education, include more hands-on teaching experiences, examine coverage of assessment techniques and reflective practices, and address professional behaviors and dispositions.

INDEX WORDS: Beginning Teachers, Physical Education Teacher Education (PETE)

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DEDICATION

With love to my wonderful wife Anna, and precious children, Cameron and Caden. This has been a long and challenging journey with many ups and downs. I could not have done it without your unconditional love and support! We did it!

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CHAPTER 1

INTRODUCTION

The impact of powerful teaching is increasingly important in contemporary society. Standards for learning are now higher than they have ever been before, as citizens and workers need greater knowledge and skill to survive and succeed. Education is increasingly important to the success of both individuals and nations, and growing evidence demonstrates that- among all educational sources- teachers' abilities are especially crucial contributors to students' learning (Darling-Hammond, 2006a).

Furthermore, the demands on teachers are increasing. Teachers need not only be able to maintain order and provide useful information to students but also to be increasingly effective in enabling a diverse group of students to learn ever more complex material. Demands are so challenging that 40% to 50% of teachers leave the profession within the first five years (Ingersoll & Smith, 2003). Our government and the public now expects teachers to be able to teach all students to world-class standards, be the linchpins in educational reforms of all kinds, and teach in a way that can guarantee a globally competitive labor force (Cochran-Smith, 2005). In the face of these daunting expectations, the question of how the nation's teachers are prepared has become one of the hottest topics in the public and academic discourse regarding education.

In addition, many believe academic performance in American elementary, middle, and high schools is declining sharply. This perceived decline has frequently been attributed to poor teaching and thus, by extension, poor teacher education programs

(Collier & Herbert, 2004). This perception has been supported by educational scholars as well as citizens committed to improving the educational process. As far back as 1983, *A Nation at Risk* (National Commission on Excellence in Education, 1983) outlined disturbing inadequacies in the way the educational process is conducted. Although this document moved universities and colleges to examine the way in which they prepare pre-service teachers, according to many, teacher education programs in the United States continued to be in disarray and are falling exceedingly short of their goal of preparing teachers for public schools (Goodlad, 1990).

Over the past decade, there has been further scrutiny by researchers, practitioners, parents, politicians and the press regarding goals, approaches, and content of teacher education programs. Concurrently, there had been a strong movement towards standard-based programming, as well as increased attention from national professional societies and accrediting agencies. To ensure that teacher education programs prepare qualified teachers, the Interstate New Teacher-Assessment and Support Consortium (INTASC), coalescing with the National Board Professional Teaching Standards (NBPTS) and the National Council for the Accreditation of Teacher Education (NCATE), developed the common core standards for beginning teachers (Darling-Hammond, 2001). The ten standards reflect the core tenets of effective teaching, and articulate what all beginning teachers should know, be able to do, and value in three unique but interrelated components: knowledge, skills, and dispositions.

The first Physical Education Teacher Education (PETE) content standards were developed 25 years ago (as referenced in Douglas & Wiegand, 1987). The 23 standards focused on the knowledge and skills needed to plan, implement, and evaluate physical

education programs and were clustered into three categories: (a) physical education teaching specialty- content knowledge and knowledge derived from sub-disciplines, (b) physical education as a profession- societal and philosophical underpinnings of physical education, and (c) pedagogical physical education- planning, teaching and evaluation.

Ten years later, and using the INTASC standards as a guide, the National Association for Sport and Physical Education (NASPE) developed the nine National Standards for Beginning Physical Education Teachers (NASPE, 1995). The NASPE beginning teacher standards provided targeted goals and objectives for preparing prospective physical education teachers (NASPE, 1995).

In 2001, the nine standards were retained, revised, and extended to produce 10 standards. The 2001 beginning teacher standards (NASPE, 2003) define what the beginning teacher should value about, have knowledge of, and demonstrate an understanding of (a) physical education content and discipline-related concepts, (b) how an individual's growth and development affects the student's learning in physical education settings, (c) how individuals differ in terms of skill, cognitive, social, emotional, and cultural aspects and how to meet the student's diverse needs, (d) providing students with a positive and productive learning environment to motivate their active engagement in learning, (e) using effective communication skills to enhance the students' learning, (f) planning developmentally appropriate learning experiences and using appropriate instructional strategies to facilitate the students' ability to achieve instructional objectives, (g) assessing, analyzing, and monitoring students' movement performance, cognitive understanding, and social development, (h) engaging in self-reflective practice to continually hone teaching skills, (i) applying current technology into

learning and teaching processes, and (j) working collaboratively with colleagues, parents, and communities to support the students' learning.

More recently (in 2006), NASPE's Initial PETE task force met to examine the 2001 standards, review publications on current best practices in teaching and pedagogical research, and discuss the critical skills, knowledge, and dispositions that should characterize physical education teachers entering the profession. The most recent 2008 standards now number six (revised from 10) and feature 28 elements (revised from 44). They reflect consensus among experienced physical educators at all levels as to what a beginning teacher should know, believe, and be able to do (NASPE, 2009). The standards are summarized in Table 1 and can be found in their entirety in *Appendix A*.

Although the new standards appear to be quite different from the 2001 standards, all of the earlier standards' essential knowledge, skills, and dispositions remain. Nevertheless, the new standards do reflect a paradigm shift: toward thinking about physical education as a performance-based discipline, similar to music, dance, and art. Under the new standards, teacher preparation programs need to also address teacher candidates' physical skills, performance concepts and health-related fitness, which are new expectations (NASPE, 2009).

Despite these efforts, many pre-service teacher education programs remain largely unchanged. Generally, these programs deliver a combination of subject matter knowledge, pedagogical knowledge, knowledge of learners and the learning of professional values and conduct (Metzler & Tjeerdsma, 2000). If anything has changed, it may be the relative amount of time given to each aforementioned area. Changes appear to

Table 1: 2008 NATIONAL STANDARDS FOR INITIAL PETE

<p>Standard 1: Scientific and Theoretical Knowledge</p> <p>Physical education teacher candidates know and apply discipline-specific scientific and theoretical concepts critical to the development of physically educated individuals.</p>
<p>Standard 2: Skill-Based and Fitness-Based Competence</p> <p>Physical education teacher candidates are physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health-enhancing fitness as delineated in NASPE's K-12 Standards.</p>
<p>Standard 3: Planning and Implementation.</p> <p>Physical education teacher candidates plan and implement developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students.</p>
<p>Standard 4: Instructional Delivery and Management.</p> <p>Physical education teacher candidates use effective communication and pedagogical skills and strategies to enhance student engagement and learning.</p>
<p>Standard 5: Impact on Student Learning</p> <p>Physical education teacher candidates utilize assessments and reflection to foster student learning and to inform instructional decisions.</p>
<p>Standard 6: Professionalism</p> <p>Physical education teacher candidates demonstrate dispositions essential to becoming effective professionals.</p>

be related to the priorities, resources and length of individual programs. Consistency across institutions is not apparent (Collier & Herbert, 2004).

Despite the acknowledged need for improved, high-level preparation, pre-service teacher education program assessment has not received systematic attention. Metzler and Tjeerdsma (2000) have referred to program assessment as the “orphan” of teacher education, as it lies somewhere between pedagogy and research. Although teacher preparation can be regarded as a lifelong process, the preponderance of research has focused on formal teacher preparation delivered in colleges and universities. Significantly, this research has narrowly examined only selected aspects of teacher preparation (e.g., student teaching, or the values held by pre-service teachers upon their arrival in college) (Collier & Herbert, 2004).

Despite general dissatisfaction with the preparation of teachers, there have been few curricular changes in teacher preparation (Metzler & Tjeerdsma, 2000). Changes made have come predominantly from “site-specific” discussions at individual institutions, as well as follow-up surveys with recent graduates and/or their supervising teachers. Thus, more research is necessary to understand and investigate those areas of teacher preparation that have not received as much attention, such as the impact of PETE programs on current physical educators’ practices. Arguably, one way this could be achieved is by understanding the perspectives of practicing teachers by examining what they have to say about their preparation programs.

Although the appropriate preparation of teachers in all curricular areas is of paramount importance, the preparation of physical education teachers requires particular attention. While physical educators believe that physical education holds value in our

society in general, and is vital to our educational system, there remains a lack of public appreciation for the value of physical education (Steinhardt, 1992). Indeed, many people have yet to grasp the importance of a quality physical education program taught by well-prepared and highly-qualified teachers. For example, research has indicated that regular exposure to quality physical education can increase the level of physical activity in childhood and extend into adulthood (Silverman, 2005). Furthermore, a more active lifestyle has been shown to reduce the risk for diseases such as heart disease, stroke, cancer, and diabetes (U.S. Department of Health & Human Services, 2006) as well as offering a way to tackle the increasingly obese United States population (Centers for Disease Control, 2009). In addition, physical education programs focusing on health-related physical fitness can address the soaring health care costs associated with diseases related to inactivity (Pratt, Macera, & Wang, 2000).

Despite these findings and because of the increased marginalization of physical education in schools (Bain, 1990); its very existence is threatened. Indeed, if the quality of teaching and learning in physical education is significantly sub-par, critics will have ample reason to argue for the program's reduction or, perhaps complete removal (Collier & Herbert, 2004). Therefore, it is imperative that we understand the perspectives of current physical educators with regard to their undergraduate teacher preparation program, and its impact on their practice. By doing so, the results of this study will offer a potentially valuable set of reference points for PETE faculty and program directors as well as contributing to the improved health and wellbeing of future generations.

According to Metzler (2009, p.294), "there is discernible consensus around the problems with teacher education that contributes to the reality or perception that teachers

are underperforming in our schools.” Issues such as low academic ability for those who enter teacher education, limited pathways into programs, weak content knowledge preparation, differences in demographics between those who enter teaching and P-12 students in schools, insufficient field experiences before student teaching, too much attention given to pedagogy, and an educational professoriate that is unfamiliar with the realities of day-to-day life in schools have contributed to this mindset.

Similarly, it has been suggested that not all graduates of PETE programs are well-prepared to teach when they graduate (Hill & Brodin, 2004). For example, some researchers have argued that PETE programs have been weakened because of the development of the disciplinary movement and an expanding exercise, sport, and health-enhancement industry have broadened the required curriculum in order to prepare students for careers other than teaching (Lawson, 1990; O’Sullivan, 1990; Rink, 2007). Furthermore, it has been theorized that the course content and instructional methods employed within the PETE curriculum may inadequately address the needs of prospective physical educators in the areas of physical activity promotion and health-related physical fitness (Barnett & Merriman, 1994; Bulger, Mohr, Carson, Robert, & Wiegand, 2000; McKenzie & Sallis, 1996; Miller & Housner, 1998).

There has also been confusion regarding how best to help students in PETE programs develop appropriate pedagogical skills (Hill & Brodin, 2004). It has been suggested that PETE programs should have a focus and that including too many approaches can dilute the quality of the program (Siedentop & Locke, 1997). Specifically, some physical education graduates are not adept at classroom management, assessment of student performance, and adapting curriculum to limited facilities and

equipment or differing student needs. Others simply are unprepared for the physical demands of teaching all day (i.e. fatigue) or able to deal diplomatically with parents, colleagues, and administration (Hill & Brodin, 2004). As a result, many who have completed a PETE program have not had a smooth transition from the university to student teaching and have either not entered the teaching profession or have experienced significant difficulties during their early years of teaching (McGaha & Lynn, 2000; Williams & Williamson, 1995). The frequency of this occurrence has led to a search for ways to improve the process of preparing teachers (Carter, 1996).

To date, research evaluating and assessing the impact of PETE programs in preparing pre-service teachers for acquiring a foundation of knowledge, skills, and dispositions has been led by Metzler and Tjeerdsma (2000). This was done by assessing the degree to which the PETE program at Georgia State University (GSU) was able to achieve the nine National Standards for Beginning Physical Education Teachers (NASPE, 1995). The creation, implementation, and analysis of the GSU PETE Assessment Project (PETEAP) have been extensively documented in a monograph written in the *Journal of Teaching in Physical Education* and represent the majority of the research in this area. The monograph provided guidance on various data sources used to collect assessment evidence; presented evidence on the GSU program's ability to promote student achievement; outlined how the assessment evidence has been used to make decisions to maintain or change certain parts of the PETE program; and described what the research team has learned about PETE program assessment. The data collection began by focusing on three "key players," – students, cooperating teachers, and program faculty. And the finding disseminated so far, have come from the analyses of data from

these particular groups. Researchers have specifically assessed student dispositions (Tjeerdsma, Metzler, Walker and Mozen, 2000), student knowledge (Tjeerdsma, Metzler, & Walker, 2000), student pedagogical knowledge (Metzler, Tjeerdsma, & Mozen, 2000) and perceptions of co-operating teachers (McCullick, 2000) using both quantitative and qualitative research methods. Program graduates (physical education teachers), their colleagues, and building administrators have been targeted for future expansion of this on-going project.

This study attempted to build upon and expand upon the seminal work of Metzler & Tjeerdsma (2000) by utilizing the latest National Standards for Initial PETE (NASPE, 2009) as a research-based framework to specifically examine undergraduate PETE programs, and the process of preparing physical education teachers. Unlike the PETEAP, this study specifically investigated the perceptions of program graduates (beginning physical educators) with regard to the impact of their undergraduate experience on current practice.

Purpose of Study

The purpose of this study was to determine the perceptions beginning teachers' hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study assessed the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education. To achieve this study's purpose, the following research questions guided the design and execution of this study.

1. What scientific and theoretical knowledge learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?
2. What skill-based and fitness-based competencies acquired in their undergraduate program do beginning teachers use in their practice as public school physical educators?
3. What knowledge and skills learned in their undergraduate program do beginning public school physical educators utilize when planning to meet the diverse needs of all students?
4. What instructional and managerial skills and strategies learned in their undergraduate program do beginning teachers recall and use in their practice as public school physical educators?
5. What assessment techniques and reflective practices learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?

6. What professional behaviors and dispositions acquired in their undergraduate program do beginning teachers apply in their practice as public school physical educators?

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this study was to determine the perceptions beginning teachers' hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study assessed the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education. To accomplish this, it is necessary to first examine the literature related to the impact of general teacher education programs, before looking specifically at PETE.

In this chapter, the literature base on teacher education programs informing this study is organized into two major sections: (1) impact of teacher education and (2) impact of PETE. Organized in this fashion, teacher education research in general, and PETE research specifically, stemming from various lines of inquiry can be summarized and synthesized to provide a better understanding of the impact of undergraduate PETE on beginning teachers' practices. Moreover, a review of this research offered both theoretical and methodological guidance with respect to this study's purpose.

Impact of Teacher Education

Critical Appraisal of Teacher Education Programs

This section reviews the major issues emerging from the general teacher education research that contribute to wide-spread skepticism about teacher preparation and may help to explain its often cited “weak” impact on teachers’ practices.

Most teachers enter teaching through a four-year undergraduate program that combines academic courses and professional studies or a fifth-year program that focuses exclusively on professional studies. Academic requirements typically consist of arts and science courses including an academic major. Professional preparation often includes courses in educational foundations and general and/or specific methods of teaching. Educational psychology is a staple in educational foundations, but courses in philosophy or history have often been replaced with an “introduction to teaching” course. All programs require some supervised practice called student teaching (Feiman-Nemser, 2001).

According to Metzler (2009, p.294), “there is discernible consensus around the problems with teacher education that contributes to the reality or perception that teachers are underperforming in our schools.” Issues such as low academic ability for those who enter teacher education, limited pathways into programs, weak content knowledge preparation, differences in demographics between those who enter teaching and P-12 students in schools, insufficient field experiences before student teaching, too much attention given to pedagogy, and an educational professoriate that is unfamiliar with the realities of day-to-day life in schools have contributed to this mindset.

Conceptual and structural problems with curricular arrangements have been regularly criticized (Goodlad, 1994; Howey & Zimpher, 1989; Feiman-Nemser, 2001; Zeichner & Gore, 1990;). According to Feimen-Nemser (2001) separate courses taught by individual faculty in different departments rarely build on or connect to one another, nor do they add up as a coherent preparation for teaching. Without a set of organizing themes, without shared standards, without clear goals for student learning, there is no framework to guide program design or student assessment. Programs that are largely a collection of unrelated courses, without a common conception of teaching and learning, have been found to be relatively feeble change agents for affecting practice among new teachers (Zeichner & Gore, 1990).

The weak relationship between courses and field experiences is further evidence of the overall lack of coherence (Feimen-Nemser, 2001). Teacher education students regard student teaching as the most valuable part of their preparation. Still, they cannot count on regular opportunities to observe, analyze, and practice teaching. At the same time, cooperating teachers often feel the need to protect students from “impractical” ideas promoted by education professors who are out of touch with classroom realities. When the people responsible for field experiences do not work closely with the people who teach academic and professional courses, there is no productive joining of forces around a common agenda and no sharing of expertise.

Fragmentation, weak pedagogy, and lack of articulation also extend to the arts and sciences and their relationship to education (Feimen-Nemser, 2001). For a long time, teacher educators took subject-matter preparation for granted, relying on the fact that prospective teachers completed a specified number of courses in the arts and sciences.

Indeed, serious questions have been raised about the adequacy of teachers' subject matter knowledge (Borko & Putnam, 1996). Some studies have shown that even when teachers major in their teaching subjects, they often have difficulty explaining basic concepts in their disciplines (National Center for Research on Teacher Learning, 1991).

According to Liston, Whitcombe, & Borko (2006), new teachers claimed that the theoretical grounding learned in teacher preparation does not equip them sufficiently for the demands of daily classroom life. One possible explanation for the difficulties that beginning teachers experience is that the curriculum in university-based teacher preparation programs does not prepare them for the specific tasks they must accomplish. This criticism goes beyond the typical concerns with classroom management; the basic argument is that teacher preparation programs devote too much attention to theory and not enough to the practical skills of teaching. A variation of this argument is that teacher educators teach the wrong theory.

Beginning teachers face many dilemmas with regard to curriculum (Liston et al., 2006). These teachers, like their veteran colleagues, have responsibilities for daily decisions about what and how to teach. District policies on standards, curriculum, and induction play a role in what materials and supports are available to beginning teachers (Grossman & Thompson, 2004). Yet even when these resources are plentiful and strong, many beginning teachers report spending significant time finding materials, understanding and adapting district-adopted curricula, and developing purposeful lessons (Johnson & The Project on the Next Generation of Teachers, 2004). They leave teacher preparation programs with an understanding of the democratic purposes of education, learning theory, a curricular vision (Darling-Hammond, Holtzman, & Gatlin, 2005), and a

basic repertoire of teaching strategies, but they often need support drawing on this foundational knowledge to plan and implement curriculum within their particular classrooms.

A different framing argues that teacher preparation programs teach the wrong theory. For example, a recent study conducted by the National Council on Teacher Quality (NCTQ, 2006) reviewed 222 syllabi from required reading courses at 72 randomly selected teacher education programs throughout the country to determine whether teacher candidates are being taught the science of reading. Finding that only 15% of institutions in their sample had courses that included all five components of effective reading instruction, the NCTQ report concluded that too many elementary teachers leave teacher preparation without important knowledge about the science of reading. In short, candidates exited programs having learned the “wrong” theory.

Moreover, both Lieberman (1984) and Zumwalt (1986) concluded that teacher education programs do not prepare teachers to cope with actual classroom situations. Indeed, many researchers have suggested that there may be a void in teacher education programs, in the acquisition of knowledge and teaching practices relevant to “real world” classrooms (Borko & Livingston, 1989; Griffin 1985; Lawson, 1989; Zeichner & Tabachnick, 1985;). Psychology, sociology, and philosophy courses tend to focus on the theoretical principles of education. Courses on methodology usually present ideal strategies rather than the classroom management techniques that are so desperately needed. Furthermore, student teachers learn these ideal strategies in “ideal” settings. As a result, beginning teachers often experience a disconnect between teacher preparation programs and the actual contexts in which they teach.

Furthermore, a growing number of beginning teachers who serve the most vulnerable students enter teaching before they have been prepared to teach and are increasingly ill-prepared for what they must accomplish (Darling-Hammond & Sykes, 2003). American education has become increasingly diverse (Blaine, 2000), and there have been strong calls for teacher education curricula to include diversity-based courses and clinical experiences that facilitate the candidate's ability to work with diverse students (Hodge, 2003). The National Council for Accreditation of Teacher Education (NCATE) now requires that teacher education programs include experiences working with diverse higher education and school faculty members, diverse candidates, and diverse students in K-12 schools. Moreover, many teacher preparation programs have added coursework in multicultural education, with courses focusing on teaching the urban child and teaching English language learners becoming more common (Sleeter, 2001). However, the impact of multicultural education coursework on actual teaching practice has not been clearly documented as very few studies have actually investigated this topic. Therefore, although increased attention has been given to diversity, many teacher education programs offer only an isolated course or two, with no attempt to infuse the key concepts into the other components of the program (Gallavan, 2000).

Recent research by Schalock, Schalock, & Ayres (2006), suggested that the affective domain of teaching is also highly neglected in the preparation and support of new teachers. Similarly, Liston and colleagues (2006) have claimed that pre-service teachers may suffer from a lack of emotional stability to deal with difficult students and large class sizes. Therefore, some researchers have suggested that more attention should be given to developing the affective dimensions of teaching in teacher preparation. For

example, Liston and colleagues (2006, p.) suggested that “teacher preparation programs must do a better job of preparing candidates for the emotional intensity that awaits them in their first years.” They recommend developing teacher candidates’ basic repertoire of practical skills to enhance their emotional well-being. Moreover, they encourage teacher educators to prepare candidates for the string of conflict associated with teaching by explicitly enhancing conflict resolution skills. Pre-service teachers needed conflict resolution and reflective skills to better react to the gap between school realities and their individual hopes and aspirations. According to these authors, conflict resolution and reflective skills prepare teachers to create and sustain a positive, productive class climate and to collaborate with other teachers and colleagues. Therefore, strengthening social and emotional skills may help teachers cope with daily issues and challenges.

Faculty has also been implicated in the myriad of reasons for why teacher education is perceived by many as having a “weak” impact on teachers’ practices. Those that work in college and universities, including teacher educators, contribute to what goes on in schools in at least four related ways (Murray, 1993). One contribution comes in the form of a gate-keeping function: allowing only those who have successfully demonstrated the “appropriate” skills to enter into the profession. A second contribution is made by preparing teachers to enter schools. Teachers need the skills to cope with the challenges of today and the ability to adapt to the changing demands of tomorrow; skills and abilities should be acquired from university programs where the latest and most effective strategies have been researched and refined for application. Third, disseminating the results of one’s own research and interpreting the implications of others’ work is a responsibility of teacher educators. Fourth, scholarly productivity is a prime

responsibility of professors. Through these contributions, current and future teachers may learn the best and most appropriate practices for teaching. Ideally, all of these responsibilities are woven together to yield informed professionals who can create and run quality education programs in the school system.

But the process seems to break down. Evidence of the breakdown of the relationship between actions of teacher educators and practice in schools can be identified on several levels. For example, very few professors appear to be involved in research and publication. Moreover, few professors appear to even read much of what is published (Metzler & Freedman, 1985). Hence, there is a dismally small chance that much of what is current or “cutting edge” knowledge is passed on to aspiring teachers as they are prepared to enter the field, or to teacher educators as they construct their own programs of teacher preparation and prepare future professionals.

Furthermore, teacher education faculty often fails to agree among themselves about program goals and educational processes. As a result, students in the same programs are likely to receive contradictory expectations, information, and sanctions, and these limit the impact of the program. Also, a shared technical culture may be difficult to identify because faculty have conflicting views of schools, teaching, and the appropriate knowledge and skills (Glazer, 1974). In addition, some faculty may reinforce the subjective warrant of recruits and further reduce the impact of teacher education programs.

High Impact Teacher Education Programs

Despite the perceived wisdom that teacher preparation has a “weak” impact on teacher candidates’ knowledge, skills, and dispositions, and the societal ambivalence

about preparing teachers, there is considerable evidence that teacher education can be quite powerful and the influence of teacher expertise can be quite large. In the early 1990s, Ronald Ferguson's seminal study of nine hundred Texas districts found that teacher expertise- as measured by the teacher scores on a licensing examination, along with teachers' experiences and education- had more powerful effects on student achievement than socioeconomic status (Ferguson, 1991). Since then, many studies have confirmed the importance of teachers' access to knowledge about teaching (Darling-Hammond, 2000; Wilson, Floden, & Ferrini-Mundy, 2001).

A recent study estimating the effects of several kinds of teacher qualifications on the learning gains of high school students in North Carolina found that teachers are more effective if they are certified in the specific field they teach, have higher scores on the teacher licensing test, are fully prepared when they enter, have taught for more than two years, and have graduated from a competitive college (Clotfelter, Ladd, & Vigor, 2007). The strongest negative effects on student achievement were produced by teachers who entered as "lateral entry recruits" without prior teacher preparation, those who lacked certification in the field being taught, and those who were inexperienced.

Similarly, a study of teachers in New York City also found that teachers' certification status, pathway into teaching, teaching experience, graduation from a competitive college, and math SAT scores were significant predictors of teacher effectiveness in elementary and middle grades mathematics (Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2007). A student's achievement was most enhanced by having a fully certified teacher who had graduated from a university pre-service program, who had a strong academic background, and who had more than two years of experience.

Students' achievement was hurt most by having an inexperienced teacher on a temporary license.

These studies provide strong evidence to support the claim that pre-service teacher education programs can positively impact teachers' practices, and ultimately student learning and achievement. Indeed, it has been shown that pre-service programs can make a difference, especially when they are organized around an explicit and thoughtful mission and conceptual framework, integrate courses and fieldwork, use student and/or faculty cohorts to intensify the experience and attend to students' entering beliefs and their evolving professional identity and practice (Howey & Zimpher, 1989; National Center for Research on Teacher Learning, 1991).

Further analyses of the New York City database found that some teacher education programs have much more positive effects than others (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008). The New York City team of researchers explored what these programs do, producing findings very similar to those from previous studies of exemplary programs. These features include (from Darling-Hammond, 2010): (a) programs' careful oversight of student teaching experiences, (b) the match between the context of student teaching and candidates' later teaching assignments, in terms of grade level, subject matter, and type of students, (c) the amount of course work in reading and mathematics content and methods of teaching, (d) a focus in courses helping candidates learn to use specific practices and tools that are then applied in their clinical experiences, (e) candidates' opportunity to study the local district curriculum, (f) a capstone project (typically a portfolio of work done in classrooms with student), (g) programs' percentage

of tenure-line faculty, which the researchers viewed as a possible proxy for institutional investment and program stability.

These findings were similar to those of researchers who have conducted case studies of effective programs (Darling-Hammond, 2006b; Zeichner, 1993), who have found that powerful teacher education programs have a clinical curriculum as well as a didactic curriculum. A recent study by Darling-Hammond (2006b) examined seven exemplary teacher education programs from various public and private, undergraduate and graduate, and large and small institutions. These programs produced graduates who were extraordinarily prepared from their first days in the classroom, and despite some outward differences, these programs had common features, including: a common, clear vision of good teaching that permeates all course work and clinical experiences; well-defined standards of professional practice; a strong core curriculum taught in the context of practice and grounded in knowledge of child and adolescent development and learning, an understanding of social and cultural contexts, curriculum, assessment and subject matter pedagogy; extended clinical experiences that are carefully chosen to support ideas presented in simultaneous, closely interwoven course work; extensive use of case methods, teacher research, performance assessments, and portfolio evaluation that apply learning to real problems of practice; explicit strategies to help students to confront their own deep-seated beliefs and assumptions about learning and students; and, strong relationships, common knowledge, and shared beliefs among school- and university-based faculty.

According to Darling-Hammond (2010) these exemplary programs “teach candidates to turn analysis into action by applying what they are learning in curriculum

plans, teaching applications, and other performance assessments that are organized around professional teaching standards. These attempts receive detailed feedback, with opportunities to retry and continue to improve, and they are followed by systematic reflection on student learning in relation to teaching.” Furthermore, these features of exemplary programs confront many of the core issues and critiques of teacher education; the strong influence of the apprenticeship of observation candidates bring with them from their years as students, the presumed divide between theory and practice, the limited personal and cultural perspectives all individuals bring to the task of teaching, and the difficult process of helping people learn to enact their intentions in complex settings (Darling-Hammond, 2006b).

Field Experiences

Field experiences are regarded as the involvement by pre-service teachers in various teaching environments ranging from observing public school teaching to teaching prior to student teaching practicum (Dodds, 1989; Myers, 1996). Since the advent of field experiences, there has been much agreement among scholars on their benefits (Curtner-Smith, 1996; McDiarmid, 1992). These experiences have provided opportunities to apply pre-service teachers’ knowledge and learning in a realistic setting, to reflect on their career choices as they become teachers, and to offer a smooth transition into student teaching (You & McCullick, 2001).

However, arguments and confusion still exist about the impact of field experiences, despite the clear rationales and extensive usage of the field experiences (Curtner-Smith, 1996; Dodds, 1989; Myers, 1996; O’Sullivan & Tsangaridou, 1992). While field experiences have had a significantly positive influence on pre-service

teachers, they also have had negative effects on pre-service teachers' learning to teach (Bell, Barrett, & Allison, 1985; Myers, 1996; O'Sullivan & Tsangaridou, 1992).

To date, research trends on field experiences have mainly focused on the examination of their impact on pre-service teachers and what they learn and experience. The main themes emanating from the research on field experiences in general education have focused on the change of attitudes and concerns toward teaching and teaching career, and the development of knowledge and skill necessary to teach. The results of some studies (Denton, 1982; Paese, 1987) have indicated that field experiences are an important means for procuring knowledge and skills such as interpersonal and reflective thinking, teaching effectiveness, and content and context of teaching. Conversely, other studies (Scherer, 1979; Sunal, 1980) reported no difference in performance on subsequent courses after the field experiences. This is also supported by another study (Luttrell, Bane, & Mason, 1981), which brought a "de-skilled" phenomenon to pre-service teachers. Goodman (1984) explained this phenomenon in that pre-service teachers tended to be trained as educational technicians rather to learn as craftspeople during early field experiences.

More recent studies, (Fry & McKinney, 1997; Ganser, 1997; Richards et al., 1994) have attempted to discover the overall impact of the field experiences on what and how pre-service teachers experience and learn during the field experiences. The positive effects included the worthiness of the field experiences (Ganser, 1997; Smith, 1993), a concern for students' needs (Richards et al., 1994), and an increased cultural awareness and preparedness to teach diverse and at-risk students (Fry & McKinney, 1997; Richards et al., 1994). Several negative effects were found; pre-service teachers felt frustrations,

adhered to management concerns, and did not develop their content knowledge (Richards et al., 1994).

Induction into Teaching

Induction has been defined as “a transitional period in teacher education between pre-service preparation and continuing professional development, during which assistance may be provided and/ or assessment may be applied to beginning teachers” (Huling-Austin, Odell, Ishler, Kay & Edelfelt, 1989, p.3). Schempp and Graber (1992) defined it as “a time period or phase beginning with entry into the teaching profession and ending when a teacher has developed veteran status.” The beginning of the induction phase is standardized for all teachers, i.e. the first day on the job. But, because teachers develop veteran status at different rates, the ending of induction is individualized, unique, and context-dependent for each school teacher (Mohr, 2000).

An induction (beginning) teacher is defined “as a teacher who is in the first three years of teaching” (Paese, 1990, p.160). Researchers have described the first three-to-five years of teaching as a difficult and complex time (Corcoran, 1981; Pataniczek & Isaacson, 1981). Beginning teachers in the first three years of teaching build upon teacher preparation experiences to accomplish a particular set of tasks: learn their specific context, design a responsive instructional program, create a classroom learning community, enact a beginning repertoire, and develop a professional identity (Feiman-Nemser, 2001). The evidence does suggest that by the end of the third year, teachers have learned to manage a class and teach content and have developed the skills to establish pedagogically functional relationships with students (Blase & Greenfield, 1982). Beyond the mechanics, beginning teachers must also come to grips with teaching as a profession

and with the influence that the profession has on them and their students (Veenman, 1984). Induction is arguably the most difficult time in the life of a new teacher because new teachers are likely to be charged with carrying out the same responsibilities as veteran teachers with many years of experience.

As beginning teachers make the transition into the workplace they encounter new challenges, responsibilities and must find a professional place within the school culture (Harrison & Worthy, 2001). As a result, they are faced with a myriad of problems common to their workplace. These problems can interact to create a less-than-ideal working environment for new teachers, stifling their ability to teach in ways that are congruent with their teacher education program and belief system, and therefore weakening the impact of such programs on their actual practice.

The beginning years of teaching are a critical time in the professional life of a teacher. It is a major life change from the role of student to teacher and working adult, from one who is guided and directed and stimulated to one who guides, directs, and stimulates (McDonald & Elias, 1983). The neophyte teacher becomes part of the profession Ryan (1970, p. vi) once described as the “ranks of the chalk-soiled, ink stained, over-challenged, under-supported, memo-ridden, privacy-riddled, patience-worn, school-fatigued, lovers of children and ideas.”

Unlike other occupations, beginning teachers assume responsibilities similar to those who have been teaching for twenty years or more (Feiman-Nemser, 1983; Locke, 1984; Lortie, 1975). They are asked to perform the same tasks as a veteran teacher and are often left to “sink or swim.” Indeed, this metaphor is so ingrained in North American teaching culture that it would be difficult to find a teacher unfamiliar with this cliché.

However, it is more than just a trite saying as nearly every teacher can relate to the difficulties encountered by beginning teachers during their induction years. This is not a new phenomenon and is widely considered a traditional “rite of passage” that all teachers must endure. Beginning teachers are typically given the most difficult classes, have more courses to teach, and more extracurricular duties imposed on them (Darling-Hammond & Sclan, 1996; Weiss & Weiss, 1999).

Studies of new teachers’ development outline typical stages (Berliner, 1994; Bullough & Baughman, 1997; Feiman-Nemser, 1983; Huberman, 1989). Whether beginnings are easy or painful, survival remains a prominent theme for the initial months, as new teachers resolve discipline and management problems. The intense survival stage gives way, often by the middle of the year, to a focus on curriculum, teaching practices, and eventually student learning. Most studies present a progression toward mastery or expertise, achieved some time in the fourth year or beyond.

Numerous studies report reasons why new teachers feel overwhelmed during their induction into teaching. Such feelings are linked to their school environment and characterized by poor administrative and parental support, difficult teaching loads (i.e. teaching unfamiliar subjects or classes that include students with known behavioral issues), heavy administrative expectations and additional responsibilities (e.g. supervision of buses, coaching duties), feeling powerless and isolated, and conflicts with colleagues (Ingersoll & Smith, 2003; Liston et al., 2006; McCormack & Thomas, 2003). Other reasons are linked to underdeveloped teaching skills, such as classroom management skills, management of students’ behaviors, and inadequate lesson preparation (Ingersoll & Smith, 2003; McCormack & Thomas, 2003).

Many beginning teachers experience “wash-out” when the attitudes and instructional practices they acquired during their teacher education program are progressively eroded during their first years of teaching (Zeichner & Tabachnick, 1981). As a result, many beginning teachers may revert to previously held beliefs about teaching while pruning away the beliefs and practices acquired during formal teacher education programs. Such pedagogical pruning may be a survival mechanism for beginning teachers and is likely attributed to the host of problems experienced during induction into teaching (Mohr & Townsend, 2001).

The beginning years of teaching also exposes many teachers to intense level of emotions and accompanying stress (Liston et al., 2006). Many factors shape beginning teachers’ emotional experiences. Even when they are given reasonable teaching assignments, the sheer quantity of the typical teacher’s workload is daunting. Unlike experienced teachers, beginning teachers typically have not yet honed efficient and consistent approaches to routine tasks so that they can focus their attention on matters more deserving; thus, every aspect of a teacher’s workload is time-consuming and cumulatively, and consequently, it is exhausting.

Second, the uncertainty and complexity endemic to teaching often stir anxiety. Given that teaching involves managing dilemmas and making hundreds of small decisions each day, significant uncertainty attends teachers’ daily tasks. New teachers are still integrating and consolidating their knowledge of teaching and learning, and they lack the wisdom of experience held by veteran teachers to trust their choices (Liston et al., 2006).

Third, moments of disillusionment often punctuate the induction years. Individuals choose teaching on the basis of powerful visions, ideals, or beliefs about what teaching will be like and the role they will play in learners' lives. These visions, often elaborated during teacher preparation programs, are not easily realized in many contemporary school settings. When the gap between vision and practice remains wide and appears insurmountable, despair sets in (Hammerness, 2006; Liston, 2000).

Fourth, conflict erupts at the interpersonal and the public level. The sting of conflicts with students, colleagues, or parents often catches new teachers off guard. In addition, because public education is a contested enterprise, new teachers seem surprised that they must defend their decisions, practices, and the profession itself in many forums (Liston et al., 2006).

Finally, although the above examples dwell on the disheartening, the emotionally charged moments when new teachers build rapport with students and when students engage and "get it" are equally intense; they are often what buoy teachers along in the beginning (Liston et al., 2006). The emotional texture of the beginning years has an impact on whether teachers stay in teaching and what kind of teachers they become.

"Reality shock" is another major event in the life of most beginning teachers during their initial exposure to teaching (Lawson, 1989; Smyth, 1995; Veenman, 1984). Reality shock occurs when previous educational experiences do not adequately prepare beginning teachers for their workplace environment (Stroot, 1996). As Veenman (1984, p.143) explains, there is a "collapse of the missionary ideals formed during teacher training by the harsh and rude reality of everyday classroom life." Teachers in the Five Town Study (Lortie, 1975) explained that teaching had taken up much more time and

energy than they had expected. Also, disciplining the students had become a harder chore than they thought it would be. This initial confrontation with what one thinks will happen, and what really happens, is what sets the stage for reality shock.

Darling-Hammond (2006a) also identified three challenges that new teachers will face when learning to teach. These three concepts are important factors to consider when interpreting and understanding the perceptions of those participants involved in this study. Firstly, learning to teach requires that new teachers come to understand teaching in ways quite different from their own experience as students. Dan Lortie (1975) called this problem “the apprenticeship of observation” referring to the learning that takes place by virtue of being a student for twelve or more years in traditional classroom settings.

Secondly, learning to teach also requires that new teachers learn not only to “think like a teacher”- what Mary Kennedy (1999) has termed “the problem of enactment.” Teachers need not only to understand but also to do a wide variety of things, many of them simultaneously.

Lastly, learning to teach requires that new teachers be able to understand and respond to the dense and multi-faceted nature of the classroom, juggling multiple academic and social goals requiring trade-offs from the moment to moment and day-to-day (Jackson, 1974). They must learn to deal with “the problem of complexity” that is made more intense by the constantly changing nature of teaching and learning in groups.

Clearly, all of the aforementioned challenges experienced by beginning teachers during their induction into teaching can affect the impact of teacher education. Consequently, the induction years, and their associated challenges for beginning teachers,

need to be considered when determining the impact of teacher education programs on current practice.

Teacher Education Impact Studies

An impact study can be defined as a type of research commonly used to determine the effectiveness of a program. “Impact evaluation provides data that indicates whether or not participants learned the concepts, principles, and/or skills, and whether or not they are using them (subsequently) on the job” (Courtney & Holt, 1990, p.11).

Impact studies have certain advantages over other types of studies. First, impact studies attempt to get an insiders’ point of view. By using the participants’ perspective, researchers gather data to determine if the program is meeting the needs of the participants. The data collected not only provide the researchers with what was learned by the participant but whether or not they are applying what was learned (Gall, Borg, & Gall, 1996). If the desired objectives are not met, then it may be possible to identify specific deficiencies and recommend changes.

Second, the value of a program can be measured by its overall impact both intended and unintended (Patton, 1990). Impact studies can provide information about the extent to which a teacher education program has influenced beginning teachers’ current knowledge and practices. For example, the actual adoption of teacher education program documents, artifacts, and recommended practices by practicing teachers can indicate the positive impact of a program.

Third, participants may provide examples and/or illustrations of their current experiences that were influenced by their teacher education program. These participants

have real world experiences and can therefore provide data that indicates whether or not the program is relevant in the various contexts in which they now teach.

Finally, trustworthiness of the data can be increased as time and distance separate the participants from their teacher education programs, and thus decrease any threat of influence by the institution (DeVaus, 1986).

A review of general education literature revealed that most of the research examining the impact of teacher education programs has utilized questionnaires and survey-based instruments to gain perspectives from graduates of these programs. Rosser and Denton (1977) surveyed 123 elementary and secondary graduates from an NCATE accredited institution. Information was sought on the worth of different instructional components (importance) and ratings were sought on the quality of instruction provided for that unit (effectiveness). The findings suggested that some discrepancies were apparent between the quality and content of instructional material and the perceived needs of the classroom teacher. More specifically, classroom control techniques, interpreting test results, and maintaining effective student-teacher relationships were highlighted as areas where discrepancies existed.

Al-Ahmad (1978) conducted a follow-up study to evaluate the quality of teacher preparation programs at Kuwait University as perceived by 221 graduates. All graduates rated their preparation in the “audiovisual” course as excellent to good, and rated their preparation in “foundation of education, curriculum, and development of educational thought” as below average, or of little value. It was recommended that professional courses in education be evaluated in terms of whether they were actually providing prospective teachers the competencies they need to enable them to function effectively in the school.

Brown (1980) surveyed 263 graduates of the undergraduate education program at Northwestern State University of Louisiana. The results of the study indicated that the graduates felt that the program had improved them academically and professionally, and had adequately prepared them to teach in the program area in which they had studied. Faculty advisement was rated by the students as valuable in aiding them toward completing a degree. Coursework and the faculty were considered strengths of the program; the program itself was considered adequate. Student teaching was considered the single most valued learning experience in the program. The students felt that the program did not adequately prepare them to teach reading skills or to deal with the exceptional child in the classroom.

Kramer (1982) surveyed the 1978 to 1981 graduates of the elementary and secondary teaching education programs at the University of Southern Mississippi about the extent to which the graduates felt the program prepared them to work in the teaching profession. The findings of the study indicated that, while the graduates were generally satisfied with their respective program, certain required educational foundation courses were unnecessary and a course in classroom management should be added to the required curriculum. A recommendation was made to implement a regular follow-up evaluation of the programs, with the information gained from the constant evaluation being used to continually modify and improve the programs.

Sefzik (1983) used survey questionnaires to examine the effectiveness of teacher preparation programs as perceived by 390 elementary teachers during their first three years of teaching in Texas. The following major findings were noted: (a) elementary teachers in Texas considered the effectiveness of their preparation in the area of

classroom discipline, human relations skills, and student evaluation as being moderate; and (b) they considered the effectiveness of their preparation in teaching reading, mathematics, and language arts as being high, but rated the effectiveness of their preparation in science studies, physical education, and music as being moderate.

The Pooumpai (1985) study of the effectiveness of the teacher preparation program at Mississippi State University revealed that the 104 individuals who graduated from this program between 1971 and 1984 felt that they were adequately prepared to teach in schools. When the graduates were questioned about their perceptions of the program's ability to prepare students to be secondary school teachers, the students indicated that they felt most secure in knowledge of subject matter. The graduates felt less secure in their knowledge of the process skills needed for implementation of inquiry models of teaching. It was recommended that more emphasis be placed on teaching methods courses. A significant correlation was found between number of credit hours a graduate had obtained and the graduate's self-perceived teaching competencies. Recommendations were made for adding courses in classroom management, cultural subjects, and a class to teach the technique for developing inquiry skills for the secondary students.

Moore (1995) conducted a study using a questionnaire to determine the teacher perceptions of their first year of teaching based on their professional program. 29 beginning teachers who were recent graduates of Livingston University participated in the study. Results of the study indicated that the beginning teachers perceived themselves prepared at an above average level by their professional program of study. However, preparation in music, health and physical education, interpretation and use of

standardized test scores, and management of specific behavior problems in the classroom were the four areas ranked lowest by the respondents. Graduates also indicated a need for follow-up assistance from the professional institution. The need for communication and continued support was expressed as the most needed follow-up assistance.

Miller and Losardo (2002) conducted a study using a mailed survey to gather graduates' perception of their preparation in a statewide system of early childhood education and early childhood special education interdisciplinary teacher preparation programs during their first year of employment. All of the 91 respondents were employed in an early childhood education field and had graduated from a state and NCATE-approved degree program. The findings revealed that the major strength of the programs were in the areas of general early childhood education and child development, whereas the overall special education preparation was weaker. The participants reported a need for more content and application in areas including working with families, behavior analysis, and working with children who have moderate to severe disabilities.

Whitney, Golez, Nagel, & Nieto (2002) developed a study to examine the successes and failures of a teacher preparation program. They administered a survey and conducted focus group interviews of 900 program graduates who taught in schools in a large urban district in California. The participants teaching experience ranged from three to fifteen years. The findings revealed practicing teachers' perceptions of their elementary teacher education experience and how it impacted their current practice. For example, fieldwork contextualized in a real classroom setting was found to significantly influence what teachers carry from pre-service programs into their classrooms. In addition, program graduates suggested bolstering classroom management and parent

communication components of teacher education programs. Additionally, of those contributing to pre-service teacher education programs, the master teacher had greater influence on student teachers' future classroom behaviors than did university supervisors. Finally, the findings indicated that program graduates lacked clarity regarding the influence of theory on practice, even what to consider as theory or practice.

Sottile, Williams, McKee, and Damron (2005) utilized a survey and interviews to assess student's beliefs, satisfaction, and dissatisfaction with a teacher education program. The purpose of the study was to identify the impact of a teacher education program on its graduates' success. The study included 22 graduates, with the majority currently working in the teaching and education field. The participants ranked their overall satisfaction with the teacher education program highly and felt that their professional education courses met their expectations. The qualitative analysis described twelve themes, such as the value of teaching and children, useful aspects of the program, overall preparedness, and clinical experience preparation.

The vast majority of the aforementioned impact studies utilized quantitative methods of data collection and analysis. In addition, these studies focused on ratings of worth, satisfaction, and importance without probing further to elicit a deeper understanding of teacher education experiences and their impact on current practices. Therefore, there is clearly a need for more impact studies employing qualitative research methods, similar to Whitney and colleagues (2002) work with practicing elementary school teachers.

Impact of Physical Education Teacher Education (PETE)

Overview of Current PETE Programs

The goal of all physical education teacher education programs should be to graduate highly competent students who will become effective teachers (Hill & Brodin, 2004). In order to accomplish this task, departments of Physical Education, in accordance with the requirements of State Offices of Public Education Instruction, have traditionally identified components that should be included in every student's coursework.

Specifically, most PETE programs include the following: (1) required liberal arts courses; (2) completion of a major in physical education which consists of skills and knowledge in sports and fitness activities, scientific foundations, socio-cultural and philosophical constructs, and health-related fitness concepts; (3) pedagogical knowledge including methods of teaching, curriculum, management, discipline, and assessment; (4) early field experience and observation and opportunity for practice teaching with peers; and (5) a teaching internship under the supervision of a master teacher who serves in a mentoring role. The goal of all of these requirements is that graduates will be well-qualified to teach physical education at the K-12 level (O'Sullivan, 1990).

Over the past twenty years, three studies describing PETE programs in higher education throughout the United States have been reported (Strand, 1992; Bahneman, 1996; Ayers and Housner, 2008). In the first of these studies, Strand (1992) utilized a survey questionnaire to provide a descriptive profile of teacher preparation practices in PETE. The survey was administered to answer questions regarding various teacher preparation practices, specifically (a) coaching preparation, (b) skill/ activity course requirements, (c) peer teaching, (d) pre-student teaching, and (e) student teaching

supervision. In summary, first, less than one-half of the institutions required coaching credits, although over one-half recommended or required a field-based coaching experience. Second, those graduates from semester system programs had a greater breadth and depth of activities class offering than graduates from quarter system programs. Significantly, it appeared that public school teachers taught those activities they practiced and learned as undergraduate students in their teacher preparation program. Third, peer teaching opportunities were common and infused into both skill and pedagogy courses. Fourth, it was found that the most common sites for pre-student teaching experiences was in urban sites with the trend toward more field experience opportunities than in previous reports. Lastly, it was found that most student teaching supervisory responsibilities are conducted by PETE faculty averaging five visits per apprenticeship experience.

In the second of these descriptive studies, 29 undergraduate PETE programs from institutions at which a PETE doctoral degree was offered were analyzed (Bahneman, 1996). The findings indicated that certain courses (i.e. curriculum, secondary methods, philosophy, basketball and volleyball) and learning activities (i.e. peer teaching, student teaching) were offered by all institutions. However, there were other areas that showed little consistency. Fewer than 50% of the institutions offered course or learning experiences in officiating (28%), middle/ junior high school methods (35%), and certain activity courses (e.g., field hockey, archery, speedball and bowling). Surprisingly, 33% of the institutions did not provide clinical experiences in teaching public school children prior to student teaching.

Most recently, Ayers and Housner (2008) attempted to describe, in greater detail, the nature and content of PETE programs from a standards-based perspective (NASPE/NCATE standards). The intent was to identify areas in which PETE programs are allocating courses, field experiences, and other learning activities as well as areas that may be receiving inadequate curricular attention. The goal was to view PETE programs from a descriptive perspective, focusing on the overarching areas of physical education content, curricular issues, technology, and diversity. As a result, the questionnaire employed in this study contained items that were developed based on professional consensus about key components of PETE programs, NASPE K-12 physical education and PETE standards in general. Some key findings were that (a) small, primarily Caucasian faculty deliver large (55-credit-hour) programs that have a large number of discipline-oriented courses as suggested many years ago by Henry (1964); (b) pre-student teaching field experiences, beginning as early as the first year, have become a central component of virtually all PETE programs; (c) the use of curricular models has expanded in some PETE programs, but many still have no defined curricular emphasis; (d) integration of technology and diversity is improving, but there is still a reliance on single courses and unsystematic sets of experiences; and (e) the PETE programs appear to be responding in positive ways to revise their curricula so contemporary standards (NASPE, 2003) are reflected relative to the thematic areas addressed in the study.

Critical Appraisal of PETE Programs

This section highlights some of the major issues and concerns with PETE and the impact it has on teachers' practices. Some researchers have argued that PETE programs have been weakened because of the development of the disciplinary movement and an

expanding exercise, sport, and health-enhancement industry have broadened the required curriculum in order to prepare students for careers other than teaching (Lawson, 1990; O'Sullivan, 1990). Specifically, with the increase of other fields within physical education, including sport management, athletic training, and exercise science and fitness, departmental resources for PETE have been reduced. For example, a study of the physical education programs in two hundred and forty universities documented a 50% decrease in courses that addressed performance skills and teaching methods and a corresponding 500% increase in scientific courses over the twenty-nine year period from 1960 to 1989 (Lawson, 1990).

In addition, some states have merged health and physical education in an attempt to elevate fitness and wellness as essential outcomes for K-12 students. The result is that physical education programs are becoming more likely to require courses such as wellness, first aid and safety, and health issues within the major, leaving less curricular time to focus on how to teach traditional physical education (Hill & Brodin, 2004).

Therefore, as the knowledge base for teacher education grows, essential content expands, and more requirements are imposed by certification agencies, accreditation agencies, and administrative units, the portion of time available for professional studies is shrinking. There is simply not enough time (i.e. credit hours) in professional studies to allow students to learn all they need to enter practice.

Cultural diversity has also become an important issue in American society and schools, and calls for increased emphasis on diversity-based education have been prominent (Burden, Hodge, O'Bryant & Harrison, 2004; Gallavan, 2000). The infusion of multicultural, multiethnic, and disability-related content into the curriculum plus the use

of practicum and teaching internships in varied diverse contexts have been suggested to better prepare PETE students and practicing teachers for working with a diverse group of learners (Hodge, 2003; Stroot & Whipple, 2003). However, many future and current “physical educators have had limited direct knowledge, minimal shared interactions, or have not been exposed to diverse populations” (Hodge, 2003, p.16).

Although, a majority of PETE programs have indicated that they include multicultural experiences (Ayers & Housner, 2008), the majority of these experiences were single, stand-alone classes, integrating diversity issues in methods classes, or providing adapted physical education classes or programs. Using single courses or including diversity issues in methods classes has been a major criticism leveled at PETE programs (Burden et al., 2004).

Similarly, the promotion of lifelong physical activity has become an increasingly important responsibility of the physical education teaching profession (Pate & Hohn, 1994). McKenzie and Sallis (1996, p. 223-224) suggest that “engaging children and adolescents in physical activity and teaching them behavioral skills related to developing and maintaining appropriate physical activity could help prevent future generations of adults from becoming so sedentary.” Indeed, our growing appreciation for physical activity and its health-related benefits supports the definitive need for physical educators who are adequately prepared to facilitate the development of the skills, knowledge, attitudes, and fitness levels that will enable a child to maintain a physically active lifestyle across the life span. Nevertheless, there is evidence to suggest that many school physical education programs fail to positively influence the physical activity and health-related fitness levels of our children and youth (McKenzie, 1999; Pate and Hohn, 1994;

Pate, Leavy Small, Ross, Young, Flint & Warren, 1995; Strand, Scantling, & Johnson, 1997). While a number of diverse factors, including limited curricular space and financial support, have contributed to the ineffectiveness of some school physical education programs, it has been theorized that the course content and instructional methods employed within the PETE curriculum may inadequately address the needs of prospective physical educators in the areas of physical activity promotion and health-related physical fitness (Barnett & Merriman, 1994; Bulger et al., 2000; McKenzie & Sallis, 1996; Miller & Housner, 1998). These curricular inadequacies may ultimately result in the inability of PETE students to make meaningful connections between their academic coursework and its practical application in their future profession of teaching physical education. Indeed, PETE programs that fail to systematically revisit critical health-related physical fitness concepts throughout course work, field experiences, and other educational experiences may inhibit the development of a level of subject expertise that will enable prospective teachers to apply what they have learned in the gymnasium (Miller & Housner, 1998).

Moreover, the variability among school physical education curricula makes it impossible for teacher education programs to correspond to all curricula. The lack of a perceived fit between teacher education and school curricula weakens the impact of PETE.

There has also been confusion regarding how best to help students in PETE programs develop appropriate pedagogical skills (Hill & Brodin, 2004). It has been suggested that PETE programs should have a focus and that including too many approaches can dilute the quality of the program (Siedentop & Locke, 1997).

Specifically, should the primary focus in physical education courses be: (1) to acquire information and skills that are related to the activity or (2) how to best teach the activity?

Some teacher preparation programs have attempted to incorporate both approaches by requiring prospective teachers to complete fundamental of skill/activity courses early in their programs with teaching and curricular strategies occurring during their final year (Strand, 1992). Siedentop (1990), a leading proponent of undergraduate physical education teacher preparation with a stronger emphasis on pedagogy, contended that evidence suggests that failures in teaching derive primarily from a lack of pedagogical skill rather than inadequate subject matter knowledge. In contrast, Hastie and Vlaisavljevic (1999) and Ball and McDiarmid (1990) stated that teachers who enhance their understanding of subject matter develop more elaborate strategies to teach their subject area.

In addition, the results of Schempp, Tan, Manross, & Fincher (1998) supported the position that deepening teachers' subject matter knowledge as a documented way to improve teaching since teachers who have demonstrable expertise in a subject matter are more comfortable and enthusiastic in their work. Subject area specialists, according to Schempp et al. (1998), are also better able to plan lessons that are richer in activities, develop contingency plans that accommodate classroom variations, assess student learning difficulties, and devise remedies to those difficulties. Schempp and colleagues (1998) concluded by saying that teacher education programs that stress the acquisition of subject matter expertise may enable teachers to become both more effective and enthusiastic. However, it is important to remember that, eventually, perspective teachers will need to assimilate new knowledge into existing instructional skills so that they are

equipped not only with the knowledge about movement, sport, and exercise, but with the procedural methods necessary to communicate that knowledge (Amade-Escot, 2000; Walkwitz & Lee, 1992).

These issues may be somewhat diluted when you take into account the socialization of beginning physical education teachers. Most new physical education teachers come from teacher education programs in which student learning is one of the primary objectives for school instruction. Beginning teachers, however, often find themselves in a school environment within which student learning in physical education is not a primary expectation of the administration, faculty, parents, students, or even physical education teachers themselves. There is certainly evidence to suggest that not all teachers give priority to student learning as an outcome of physical education (Earls, 1981; Placek, 1983). Instead, the objectives of many teachers consist of keeping students “busy, happy, and good” in their classes (Placek, 1983). As a result, beginning physical education teachers may abandon goals promoted in their pre-service preparation in favor of goals more acceptable in the local context.

High Impact PETE Programs

Despite those citing the potentially “weak” impact of PETE programs, a few researchers have been able to specifically described effective PETE characteristics associated with “high” impact programs (Graber, 1996; Rovegno, 1992, 1993a, 1993b;). One such study, conducted by Graber (1996), investigated a teacher education program that had been documented as having a strong influence on the teaching beliefs and subsequent actions of program graduates. The study was conducted in the School of Physical Education, Wellness, and Sports Studies at the University of South Florida. The

author deliberately selected this particular program because it was the only program that could be located in which a series of studies indicated that students in the elementary (K-8 track) appeared to retain the influence of the program (Rovegno, 1992, 1993a, b). Graber (1996) describes and highlights “overall program characteristics that may, in part, account for why the program produces graduates who had learned, retained, and remain committed to a particular version of good teaching.”

The results of Graber’s (1996) research indicated that the following nine program features are logical candidates for explaining why students appear to retain the influence of the program: (a) thematic approach, (b) adequate contact with cohort groups, (c) constant programmatic reinforcement, (d) professional development courses, (e) professional conduct expectations, (f) early and progressive internships in compatible placement settings, (g) awareness of studentship, (h) faculty consensus, and (i) political involvement. While a number of these features may be observed in the form of process or structural features in other programs throughout the nation, it may be that it is the deliberate combination of these features, coupled with the faculty’s intensive commitment to them that is responsible for the evidence of strong impact on students.

Field Experiences

In spite of the potential “weak” impact and critiques of PETE programs, the positive effects of field experiences in preparing physical educators for today’s schools has been often cited in the literature (Curtner-Smith, 1996; Larson, 2005; O’Sullivan & Tsangaridou, 1992; Smith, 1993; Wood et al, 2000). Studies on field experiences have investigated positive effects including the consciousness of their responsibility with pupil learning and teaching effectiveness (O’Sullivan & Tsangaridou, 1992), the recognition of

the field experiences (Smith, 1993), the acquisition of greater comprehension about teaching concepts (Curtner-Smith, 1996) and the development of pedagogical content knowledge (Wood et al, 2000).

On the other hand, pre-service teachers tended to focus on the technical aspects of teaching without awareness of the social or ethical dimensions in teaching (O'Sullivan & Tsangaridou, 1992). In particular, the study by Smith (1993) officially acknowledged the washout effect of the pedagogical skills, initiated the teaching isolation of physical education teachers, and led them to question whether or not they have made good decisions in selecting their careers.

PETE programs have sought to increase the amount of time that students spend in K-12 schools through early field experiences and student teaching experiences (O'Sullivan, 1990). Despite some of the weaknesses relative to the assignments and processes, teachers most often view their student teaching experiences as the most beneficial component in their preparation to teach (Guyton & McIntyre, 1990). The development of a positive and productive working relationship between cooperating teachers and student teachers is most significant factor in determining successful field experiences (Knowles & Cole, 1996). Other important factors in a successful student teaching experience include relating to, understanding, and developing positive relationships with students. Knowles and Cole (1996) indicated that there is a general consensus among university supervisors that most student teachers who fail are unable to determine and respond to students' needs and relate to students well enough to engage their interest and participation. Often this is a result of such high level of preoccupation

with their abilities and planning, that the students' needs are neglected (Hill & Brodin, 2004).

Guidelines to ensure effectiveness of field experiences have been gleaned from the aforementioned studies. According to Curtner-Smith (1996), field experiences are especially effective when they , “(a) take place at schools in which PETE programmatic messages are reinforced, (b) are closely supervised by PETE faculty and trained cooperative teachers, (c) are linked tightly with on-campus methods courses, and (d) focus on specific teaching skills derived from teacher effectiveness research.” Similarly, Rikard and Knight (1997) made the following suggestions for pre-student teaching field experiences: (a) planned interactions with skilled clinical teachers, (b) multiple opportunities for school-based field experiences, (c) multiple opportunities to teach students from various grade levels and in groups of increasing size.

Induction into Teaching

It has been suggested that physical education teachers experience eased entry into the profession due to a lack of accountability and that induction for physical education teachers may be less stressful than induction for their classroom counterparts (Schempp & Graber, 1992). Indeed, studies conducted by Kreider (1985) and O'Sullivan (1989) do not describe anything resembling reality shock.

Although the available data may support the notion of eased entry for beginning physical education teachers, it does appear that they often encounter frustrations related to institutional messages they receive about the nature and status of physical education as a subject (O'Sullivan, 1989; Schempp & Graber, 1992; Sparkes, Templin, & Schempp, 1990; Stroot, Faucette, & Schwager, 1993). This struggle for academic legitimacy in

physical education is referred to as “marginalization”. Many people involved in education perceive physical education as playtime and stereotype physical education teachers as dumb jocks (Stroot, 1996). The same view is often shared by administrators, parents, and the community. Consequently, many beginning physical education teachers struggle to overcome the negative stigma associated with physical education curriculum and instructional practices. These new teachers are frequently confronted with others’ preconceived notions of physical education. Because of this negative stigma, the marginalization of physical education can be particularly troublesome for beginning physical educators.

Another significant problem that many beginning physical educators experience is isolation (Mohr & Townsend, 2001). Isolation may be characterized by geographic and/or professional isolation. School teachers are often isolated due to spatial arrangements within the school. For example, the gymnasium or physical education facilities may be located at the far ends of the school. Additionally, teachers, and in particular physical education teachers, have little professional adult interaction during the school day (Stroot, 1996). Accordingly, most of the teacher’s time is spent interacting with students. As a result, this isolation may increase the students’ influence on the teacher (Schempp & Graber, 1992). Due to such isolation, beginning physical education teachers may feel pressured to “give in” to student desires and use unproven curriculum and instructional methods (Mohr, 2000).

Within the school setting, teachers are often required to perform many duties and fulfill multiple roles. The compilation of multiple duties and roles in addition to teaching responsibilities often results in colossal workloads for teachers. Such relentless workload

results in a self-negotiation and pedagogical reprioritization process called role conflict (Mohr & Townsend, 2001).

Role conflict can be a problem for all teachers and represents a significant problem for the beginning teacher. New physical education teachers are particularly vulnerable, as they are required to coach scholastic teams. Due to the seemingly insurmountable workload, beginning physical education teachers often find themselves treading water and being resolved to situations where sound pedagogical practices and once revered student learning outcomes have taken a backseat to mere survival (Mohr, 2000).

Similarly, beginning physical education teachers often revert to unproven instructional practices while simultaneously rejecting principles acquired during teacher training (Mohr & Townsend, 2001). This “de-professionalization” is the result of many beginning physical education teachers discovering that the knowledge, skills, and philosophies they possessed at graduation were rendered ineffective in the workplace.

PETE Impact Studies

Physical education teacher preparation programs, like other aspects of education, need evaluation. However, as Bain (1990) and Tinning (1993) noted, the evaluation of teacher training programs in institutions of higher education is one of the most critical aspects of programs, yet most ignored. Realizing the important role that physical education teachers can play in our society, the program of professional preparation must be of high quality and utility. According to Siedentop (1991), the quality of physical education begins with the quality of the teachers, who are the product of professional education preparation programs. Phillips (1983) argues that physical education programs

are part of professional preparation, and their future will be determined by their professional quality. Without more periodic and systematic evaluation of these programs, it is difficult to determine the impact of the teacher preparation program in physical education.

The following studies were concerned with the impact of the PETE program based on the perceptions of graduates. Like many of the aforementioned studies, the dominant research method involved retrospective ratings of preparation programs through survey questionnaires completed by graduates. This research strategy benefits from tapping information from those who are familiar with the program at the level of impact, and are vitally concerned with its effectiveness as vocational preparation (Locke, 1984).

One of the earlier studies concerned with the evaluation of a physical education teacher preparation program based on the opinion of graduates was conducted by Clark (1971). The purpose was to investigate the opinions and professional status of 1960-1970 graduates from the women's physical education professional program at the University of Iowa. A questionnaire was sent to 299 graduates. The findings indicated that the basketball course and volleyball course were selected most frequently by the majority of respondents. Graduates rated "quality of instruction" and "irrelevant course material" as the main weakness of the program. The majority of the graduates rated the overall effectiveness of their teacher preparation program as good.

Martin (1978) used a mailed survey of one hundred and sixty-nine graduates to evaluate the professional preparation curriculum of the Health, PE and Recreation Department at Harding College. Only graduates who were in teaching fields were used in

the study. The study was set up to determine if the graduates were satisfied with the course offered by the department and if the objectives of the department were being met. Responses were received from 110 graduates who were in teaching fields and 24 who returned their questionnaires unanswered because they were not currently teaching. Two groups were examined, males compared to females, and graduates from 1970-1972 compared to graduates from 1973-1975. The results of the study showed that the graduates were satisfied with the professional preparation curriculum. The greatest strengths of the program were the faculty, intramural program, and teaching of sport skills. The graduates perceived weaknesses in the areas of inadequate preparation for coaching duties and some courses having limited practical application. Women graduates evaluated the curriculum less favorably than the men, and a significant difference was found between graduates of 1970-1972 and 1973 and 1974 in their evaluation of the curriculum.

McDonald (1978) developed a questionnaire to be used as the principal instrument for a study designed to determine the strengths of the professional preparation program in physical education at Towson State University as perceived by its graduates. 369 graduates indicated that a diverse faculty was available for the undergraduates. Graduates expressed a concern from relevancy of the theory courses to the realities of the classroom. The graduates felt that this concern could be improved by involving the students in the teaching process earlier in their college years.

In a follow-up study, Phillips (1983) evaluated the professional preparation program of the physical education department at Missouri Southern State College. A mailed survey questionnaire as used in order to determine the effectiveness of the

program and to solicit recommendations for curriculum revisions. 168 of the 278 graduates responded to the questionnaire. The results indicated that many graduates felt the theory classes offered in the curriculum did not adequately prepare them for the classroom. The alumni opinion was that teaching experiences early in the program would be beneficial. Recommendations made for improving the physical education program included: (1) develop a wider range of skills, (2) develop workshops in diverse areas of the curriculum, (3) modifications of special course, (4) improve the intramural program, (5) more writing and research, (6) develop a program to stimulate interest in graduate school, (7) develop a major's club, (8) stay in close contact with the graduates, (9) encourage physical education majors to become certified, and (10) develop and publish a department newsletter. All of the graduates surveyed said they would recommend the professional preparation program at Missouri Southern State College to others.

Locke (1984) reviewed seven studies on program evaluation based on graduates' opinions. Some of the general conclusions indicated that the graduates felt that (1) some courses were too theoretical and have no practical value, (2) more field experiences with real opportunities to teach were needed particularly in early stages of training, (3) students were unprepared to handle problems of class discipline, (4) students were unprepared to perform the tasks of evaluation and grading, (5) students were unprepared to deal with individual differences among their students, and (6) much more attention should be given to integrating theory with practice.

Gilbert (1985) conducted a study of the graduates from the University of Arkansas at Monticello in the years of 1975-1984 to determine the adequacy of the teacher preparation program in health and physical education. The responses of 177

graduates indicated that the overall preparation program in health and physical education at the University of Arkansas was adequate in preparing graduates for teaching. Among the various aspects of the instructional process graduates considered most satisfactory were the student-faculty relationships, and the overall quality of instruction. Areas that graduates considered having the least strengths of the preparation program included the facilities and equipment of the department, assistance in finding employment, and counseling for course selection. Graduates also indicated that theory classes needed to better prepare students for the realities of the classroom and coaching. About 93% of the graduates said they would recommend the program to others.

Oatman (1988) investigated the perception of the 1985-1986 physical education graduates of the five regional state universities in Missouri with regard to the overall quality of their physical education teacher training programs and the teaching of specific classroom discipline or management techniques. Questionnaires were sent to 241 graduates who rated their overall preparation in subject matter mastery and effectiveness of the teaching as good, while the area of specific discipline and management techniques was significantly lower.

Taylor (1990) conducted a study of alumni of the undergraduate and graduate physical education programs at Texas A & M University. There were two purposes of the study: first, to determine student opinions of the department, and second, to develop a model for continuous evaluation of the department. The population of the study included 617 graduates from 1985 to 1989 with undergraduate, master, or doctorate degrees. Both undergraduate and graduate alumni were found to have positive feelings regarding the programs. Eighty-eight percent of the undergraduates stated that they would recommend

the program to others. This model was recommended to be used for continuous evaluation of the department.

LeBoeuf's (1994) study examined the effectiveness of the physical education curriculum of the United States Military Academy (USMA) in the preparation of its women graduates for their role as Army officers. Participants were 181 women graduates of the United States Military Academy (USMA) from the classes of 1980, 1985, and 1990. Data were collected using a survey questionnaire that centered on the operational definition of program effectiveness. The major findings were that the majority of the women graduates' in the study derived satisfaction from the physical education program at the USMA and were satisfied with the amount of acquired knowledge and skill. In addition, the women officers in the study were committed to regular physical fitness activity and felt they had a positive impact on their units physical fitness program. In general, it was found that the curriculum of the physical education program was an effective component of the United States Military Academy's preparation of its women graduates to assume their role as teachers and leaders. Although this impact study did not utilize prospective PETE students, it did demonstrate that use of the participant perspective can be a useful approach when trying to determine the actual effect a program has on its graduates' years after they have completed the program.

Similarly, Woodworth (2000) examined the physical education program at United States Military Academy (USMA) to determine the extent to which the program features contributed to the graduates' effectiveness as Army officers. Participants were 266 graduates of the USMA from the 1990-1998 classes. The research instrument used to gather data on graduates' perceptions of the program was an electronic (web-based)

version of the USMA Physical Education Questionnaire (USMA-PEQ). Descriptive statistics were used to report the nominal and ordinal data while the constant comparative method of coding for inductive content analysis was used to examine critical incident responses. Generally, the graduates rated the physical education program features as positive. They rated the program's ability to contribute to their perceived effectiveness as Army officers as above average. Although relevance was not an outcome goal of the physical education program it did emerge as a key factor. The graduates valued the physical education program for its ability to provide relevant and realistic training that contributed to their success as Army officers. The findings of this study indicate that relevance of the program features and the development of knowledge, skills and the ability to promote and maintain personal and unit fitness are effective components of the USMA and contribute to effectiveness of its graduates as Army officers.

McCullick (1998) used interviews of 18 physical education teachers in Georgia to evaluate the teacher preparation curriculum in physical education. Analytic induction was used to analyze data and formulate themes from the interviews. Results showed that the teachers believed that those in teacher preparation programs should have a love for sports and the faculty should have recent experience in teaching in the public schools. The teachers perceived the knowledge of learners, content knowledge, and pedagogical content knowledge as the most important pieces of information that undergraduates should receive in the teacher preparation program. They also ascertained that methods classes were the most effective courses that undergraduates could take. Believing early field experiences to be important in the preparation of physical education teachers, the practitioners believed that these experiences should be longer in duration, occur earlier in

the career of the undergraduate, occur more often in the curriculum, and be conducted at schools of varying characteristics. The teachers felt strongly that their input would be beneficial in evaluating their teacher preparation program, although none had yet been asked.

Mulla-Abdullah (1998) conducted a doctoral study to evaluate the effectiveness of the Bachelor of Physical Education degree at the University of Bahrain. Perceptions of graduates, supervisors and faculty members were obtained to determine effectiveness of the program in various aspects and to provide recommendations to improve the quality of the program. A combination of quantitative and qualitative research designs were employed in the study. A questionnaire was used to collect data for the quantitative design and was completed by 130 graduates. An interview was used to collect data for the qualitative design and was conducted with four supervisors and eight faculty members. Descriptive and inferential statistical analyses were used to analyze the quantitative data. The concurrent approach was used to analyze the qualitative data. The overall findings of this study were as follows: (1) Graduates perceived the overall achievement of the program objectives to be above average; the quality of the program coursework to be important; the quality of faculty members to be average; the quality of the program procedures to be partially effective; the quality of the teaching competencies to be good; and the quality of student teaching practices to be satisfied. (2) Graduates and faculty members perceived the overall effectiveness of the program to be effective, while supervisors perceived the overall effectiveness of the program to be moderate.

Curtner-Smith (1999) explored the influence of one university's core PETE program on the perspectives and practices of two first-year elementary school teachers

and how this influence was mediated by the teachers' biographies and entry into the workforce. The theoretical framework used to locate the study was Lawson's model of physical education teacher socialization. Data were collected by means of participant observation, formal and informal interviews, document analysis and journal writing. Constant comparison and analytic induction methods were used to analyze the data and the results indicated that despite receiving poor quality physical education themselves and entering PETE with coaching orientations, the teachers attempted to improve the physical education programs at their schools. The study provided a detailed, considered, and cautious exploration of some of the perennial issues relating to the impact of, and possibilities for, PETE.

Hardy (1999) asked 62 pre-service teachers in England to complete a questionnaire in order to examine their perceptions of how a pre-dominantly school-based, government-imposed physical educator education program helped them learn to teach. The pre-service teachers placed much emphasis on the accumulation of experiences and "coming to terms" with the realities of teaching, serviced by the university element of the course. Although, some higher education institution-school partnerships were helping pre-service teachers to look beyond the immediate context, the quality of the collaborative venture was being affected by the variability in mentoring processes, school contexts, and the personal histories of both mentors and pre-service teachers. It was suggested that the continual extension of school-based experiences is not only privileging the practical over theory, and emphasizing doing more than thinking, but is replacing complexity with simplicity.

Metzler & Tjeerdsma (2000) wrote a monograph reporting on all the activities conducted within the Georgia State University (GSU) Physical Education Teacher Education Assessment Project (PETEAP) which began in the Fall of 1994. The PETEAP represents the most comprehensive examination of a university PETE program to date. It was designed as a “comprehensive and longitudinal effort to use research techniques to inform PETE program decision-making to facilitate program improvement” (Metzler & Tjeerdsma, 2000). The monograph provided guidance on various data sources used to collect assessment evidence; presented evidence on the GSU program’s ability to promote student achievement; outlined how the assessment evidence has been used to make decisions to maintain or change certain parts of the PETE program; and described what the research team has learned about PETE program assessment. The data collection began by focusing on three “key players,” – students, cooperating teachers, and program faculty. And the findings disseminated so far, have come from the analyses of data from these particular groups. Researchers have specifically assessed student dispositions (Tjeerdsma, Metzler, Walker and Mozen, 2000), student knowledge (Tjeerdsma, Metzler, & Walker, 2000), student pedagogical knowledge (Metzler, Tjeerdsma, & Mozen, 2000) and perceptions of co-operating teachers (McCullick, 2000) using both quantitative and qualitative research methods. Program graduates (physical education teachers), their colleagues, and building administrators have been targeted for future expansion of this on-going project.

Cicek and Kocak (2001) designed a study to evaluate the effectiveness of a PETE program through perceptions of graduates of a Turkish university. Twenty-five graduates, who were now working as teachers, were asked to complete a questionnaire developed by

the researchers. The results indicated that the graduates perceived themselves as very adequate in communicating effectively with students and in performing and demonstrating physical skills. The PETE program was perceived as inadequate in terms of time allotted for field practice. The graduates identified theoretical knowledge of subject matter, language of instruction, and availability of adequate sport facilities as the greatest strengths of the program. Lack of preparation for national day ceremonies and lack of exposure to the real world of teaching were cited as weaknesses.

Chen (2003) investigated pre-service physical education teachers' self-assessment of their competence levels in achieving the national standards for beginning physical education teachers (NASPE, 1995). He surveyed 173 pre-service teachers in ten PETE programs using an inventory based upon the NASPE standards. The study provided a profile of whether teacher education programs were aligned with the beginning teacher standards from pre-service teachers' perspectives. In addition, the study presented insights about teacher education programs' strengths and weaknesses in relation to meeting the standards. In general, the results indicated that the pre-service teachers rated their competence in achieving the standards as a whole at the "competent" or "acceptable" level. The results also suggested that pre-service teachers' dispositions of pedagogy could be shaped and enhanced by teacher education programs, although these programs need to better prepare teachers with beliefs about teaching. Furthermore, the results of the study confirmed the assertion that pedagogical skills can be acquired and enhanced when pre-service teachers have opportunities to teach content to students in a teaching context. Moreover, the results suggested that comprehensive and sequential subject matter courses in which content and content-specific pedagogy are blended

together better equip pre-service teachers with knowledge of and competence in the subject matter.

Collier and Herbert (2004) conducted a study with the purpose of providing practitioner data to assist faculty in determining curricular decisions and future directions in undergraduate physical education programs. Data were collected using a survey that incorporated twenty-four quantitative questions to elicit information regarding participant demographics as well as the perceived value and importance of various areas. In addition, the survey encouraged qualitative comments and suggestions at the end prompted by the open-ended wording. A total of 359 K-12 physical educators from Wisconsin, Idaho, and the Pacific Northwest responded. The majority of those respondents (67%) had been teaching for at least 10 years, and approximately half (44%) of those were educated to at least the master's degree level. The study highlighted the most important areas of the curriculum as perceived by the practitioners; exercise and health-related fitness, fundamental movement skills, classroom management, exercise physiology, and special needs populations. In contrast, the study also identified the least important areas of the curriculum, such as adventure education, sports and games, and dance and rhythms. The authors recommend using the data to help guide the curricula revision process.

Hill and Brodin (2004) surveyed one hundred and thirty-two physical education department heads within the State of Washington to determine the content of their undergraduate PETE programs, the perceived value of these components in preparing them to teach, and the level of difficulty specific teaching responsibilities presented during the first year of teaching. These results were viewed as a potentially valuable set of reference points for directors of PETE programs. As with the Collier and Herbert

(2004) study, the participants were relatively experienced teachers with an average of fifteen years teaching experience. The participants rated sports skills, student teaching, first aid/ CPR, and classroom organization as highly valuable in preparing them to teach. In contrast, sports law, grading practices, integration of movement, and the historical perspective of physical education were ranked as little or no value. The challenges of the first year were highlighted by discipline, special needs populations, schedule interruptions, and a lack of facilities and equipment. Teaching sport skills, lesson planning, locker room supervision and developing teacher- student relations were areas in which the participants felt comfortable and presented little or no difficulty during the first year of teaching.

Hardin (2005) conducted a study to identify practicing physical education teacher's perspectives regarding the adapted physical education curriculum of their respective PETE programs, and to explore how their preparation programs have affected their feelings of competence and confidence when teaching students with disabilities in inclusive environments. Five beginning teachers, with two to five years of teaching experience, who graduated from five different southeastern institutions, participated in the study. Interviews, field observations, stimulated recall interviews, and Q-Sort interviews were used to gather the data for analysis. The findings clearly illustrated that PETE programs must become proactive in assuring that their pre-service teachers receive opportunities to teach students with disabilities in their regular field experiences and student teaching internships. Training laden with hands-on experience is likely to increase pre-service teachers' perceptions of students with disabilities and improve their confidence.

Summary

Clearly, research on the impact of teacher education in general has identified some major problems with teacher preparation programs. For example, curriculum fragmentation, weak content knowledge preparation, too much attention given to theory, a lack of diversity-based experiences, and an educational professoriate that is unfamiliar with the realities of day-to-day life in public schools have all been linked to wide-spread skepticism about teacher preparation (Feiman-Nemser, 2001; Gallavan, 2000; Goodlad, 1994; Hodge, 2003; Howey & Zimpher, 1989; Liston et al., 2006; Metzler, 2009; Zeichner & Gore, 1990). This in turn has led to the perception that teacher education programs impact on teachers' practices is only "weak" at best.

Similarly, the research on the impact of PETE has also identified some major issues and concerns. For instance, an increase in science-based courses with a corresponding decrease in pedagogy and skills-based courses, a lack of diversity and adapted physical education content, inadequate exposure to lifetime physical fitness concepts, and the debate over the importance of subject matter versus pedagogical knowledge have all been linked to the often cited "weak" impact of PETE on teachers' practices (Burden et al., 2004; Hastie & Vlaisavljevic, 1999; Hill & Brodin, 2004; Lawson, 1990; McKenzie, 1999; McKenzie & Sallis, 1996; O'Sullivan, 1990; Pate & Hohn, 1994; Schempp et al., 1998; Siedentop, 1990).

In contrast, there is considerable evidence to suggest that teacher education can be quite powerful and the impact of teacher preparation on teachers' practice can be "strong" (Darling-Hammond, 2006b, 2010; Ferguson, 1991). Indeed, the extensive work of Darling-Hammond in this area has highlighted many positive features of these

exemplary programs. These features include: (a) careful oversight of student teaching experiences, (b) courses that help candidates learn to use specific practices and tools that are then applied to their clinical experiences (c) a common, clear vision of good teaching that permeates all course work and clinical experiences, (d) extensive use of case methods, teacher research, performance assessments, and portfolio evaluation that apply learning to real problems of practice and (e) explicit strategies to help students to confront their own deep seated beliefs and assumptions about learning and students.

In addition, a few researchers have also been able to specifically document effective PETE characteristics associated with “high” impact programs that produce graduates who appear to retain the influence of the program (Graber, 1996; Rovegno, 1992, 1993a, 193b). The results of Graber’s (1996) research underscored the importance of the following nine program features: (a) thematic approach, (b) adequate contact with cohort groups, (c) constant programmatic reinforcement, (d) professional development courses, (e) professional conduct expectations, (f) early and progressive internships in compatible placement settings, (g) awareness of studentship, (h) faculty consensus, and (i) political involvement.

Research on the impact of teacher education has also described in some detail the experiences associated with induction into teaching. This is a particular important area of research to consider, as the challenges experienced by beginning teachers can affect the impact of their teacher education program on current practice. As beginning teachers make the transition into the workplace they encounter new challenges, responsibilities, and must find a professional place within the school culture (Herbert & Worthy, 2001). They are, therefore, faced with a myriad of problems common to their workplace. Many

are left to “sink or swim” (Feiman-Nemser, 1983; Locke, 1984; Lortie, 1975) and “wash-out” is common; when the attitudes and instructional practices they acquired during their teacher education program are progressively eroded during the first years of teaching (Zeichner & Tabachnick, 1981). As a result, many beginning teachers may revert to previously held beliefs about teaching while pruning away the beliefs and practices acquired during formal teacher education programs. Moreover, the beginning years expose many teachers to intense level of emotions and accompanying stress (Liston et al., 2006). The concept of “reality shock” is also commonplace as previous educational experiences do not adequately prepare beginning teachers for their workplace environment (Stroot, 1996).

Darling-Hammond (2006) also identified three challenges- apprenticeship of observation (Lortie, 1975), problem of enactment (Kennedy, 1999), and problem of complexity (Jackson, 1974) - that beginning teachers will face when learning to teach. These concepts are all important factors to consider when interpreting and understanding the perceptions of those participants involved in this study.

Although the research suggests an eased entry into the profession for physical education teachers (Kreider, 1985; O’Sullivan, 1989; Schempp & Graber, 1992), they still have to deal with some challenges that are unique to their particular area of expertise, in addition to those experienced by their classroom counterparts. For example, many beginning physical educators have to deal with marginalization, isolation, role conflict, and de-professionalization (Mohr & Townsend, 2001; Schempp & Graber, 1992; Stroot, 1996).

Impact studies, in general teacher education and PETE, have commonly been used to determine the effectiveness of teacher preparation programs. We have seen how graduates of these programs have utilized ratings of worth, satisfaction, and importance to communicate each program's effectiveness in preparing them to teach. Studies with current elementary and physical education teachers conducted by Whitney et al. (2002), Sottile et al. (2005), Collier & Herbert (2004), and Hill and Brodin (2004) have been particularly helpful in this area. Similarly, the seminal work of Metzler and Tjeerdsma (2000) and colleagues have been equally insightful, particularly with regard to PETE program assessment. In addition, the work of Chen (2003) investigating pre-service physical education teachers' self-assessment of their competence levels in achieving the National Standards for Beginning Physical Education Teachers (NASPE, 1995), has begun to incorporate NASPE guidelines as a research framework.

However, this research had only begun to explore the undergraduate preparation of physical education teachers. Little is known about the perceptions beginning teachers' hold regarding the impact of their undergraduate PETE experience on their current practice, and no work to date has examined these perceptions utilizing the latest National Standards for Initial PETE (NASPE, 2009) as a research framework. What scientific and theoretical knowledge learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators? What skill-based and fitness-based competencies acquired in their undergraduate program do beginning teachers use in their practice as public school physical educators? What knowledge and skills learned in their undergraduate program do beginning public school physical educators utilize when planning to meet the diverse needs of all students? What

instructional and managerial skills and strategies learned in their undergraduate program do beginning teachers recall and use in their practice as public school physical educators? What assessment techniques and reflective practices learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators? What professional behaviors and dispositions acquired in their undergraduate program do beginning teachers apply in their practice as public school physical educators?

To answer all of these questions, the framework outlined in this review offered some conceptual guidance. The use of the latest National Standards for Initial PETE (NASPE, 2009) also provided a fresh approach and theoretical framework to study the impact of undergraduate PETE on beginning teachers' practices.

Furthermore, several of the methods and procedures used in previous teacher education and PETE research proved to be quite useful. As demonstrated throughout this chapter, researchers in general teacher education and PETE have used a variety of methods to investigate and determine the impact of teacher preparation on classroom and "gym" teaching practices. Studies in this area have largely defined program impact or "effectiveness" through pre-service and graduate ratings of worth, satisfaction, and importance, employing predominantly quantitative techniques. Surveys and questionnaire have been the instruments of choice for the majority of these studies. While this quantitative approach has proved to be useful, it presents only one method for studying the impact of PETE on teachers' practices.

Some effective teacher education and PETE impact studies have also employed qualitative techniques including focus groups, interviews, open-ended questionnaires, and

document analysis to gather perspectives from pre-service and in-service teachers. For example, Whitney et al. (2002), Sottile et al. (2005), and Graber (1996) used these methods to examine the successes and failures of a variety of teacher preparation programs by seeking to better understand the perceptions of those involved. This qualitative approach to the study of teacher education enabled the researchers to provide rich descriptions of teachers' perceptions of their teacher preparation programs and how they impacted their current practice. Clearly, more work utilizing qualitative techniques is warranted. Therefore, this study employed a variety of qualitative research techniques, including individual interviews, a focus group, and artifact analysis to allow for a more in-depth examination and understanding of the impact of undergraduate PETE on teachers' practices.

In the next chapter, the methods and procedures that were used to answer the research questions in reference to each of the six National Standards for Initial PETE (NASPE, 2009) will be discussed in greater depth. Using these methods, the impact of undergraduate PETE experiences on current teachers' practices will be interpreted from the perspectives and actions of the participants, lending insight into the physical education teacher preparation process and also bringing new light to the nature of undergraduate PETE at four different institutions.

CHAPTER 3

METHODS AND PROCEDURES

The purpose of this study was to determine the perceptions beginning teachers' hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study assessed the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education.

As mentioned in Chapter Two, researchers have examined teacher preparation and its impact on program graduates in various ways, some of which were particularly useful in guiding this study. In this chapter, the methods and procedures selected for use in this investigation will be discussed. These are organized and outlined in the following sequence: (a) study design, (b) subjectivity, (c) gaining entry (d) participant selection (e) data collection, (f) data analysis, (g) pilot study, (h) trustworthiness and credibility, and (i) transferability.

Study Design

In order to capture a rich picture of the impact of the PETE programs, and to achieve the purpose of the study, this research employed a qualitative design. More specifically, this interpretive study involved what Polkinghorne (1995, p.21) referred to as “paradigmatic analysis of narrative data, in which data from several individuals in a similar set of circumstances are examined to identify common themes.” As shown in

Chapter Two, previous research in general teacher education and PETE has focused predominantly on quantitative methods to quantify the impact of teacher education on graduates. To make sense of, and describe in detail, the impact of PETE on beginning teachers' practices, a qualitative appraisal of beginning teachers' perceptions, practices, and related artifacts was necessary.

Qualitative research capitalizes on people, their words and actions, and the meanings that language and behavior carry. As a paradigm of inquiry, qualitative research differs from quantitative research in several significant ways, most importantly in its unique ability to capture intimate portrayals and perspectives of individuals in action (Denzin & Lincoln, 2000). In addition, the thoughts, feelings, values, and opinions of individuals that are expressed in the individuals' own words provide full-bodied, descriptive narrative that cannot be captured through quantitative measurement procedures (LeCompte & Goetz, 1982). Unlike quantitative research, qualitative studies are concerned more with description than with prediction. The methods and procedures advanced through the qualitative tradition find their strength in securing rich descriptions of people and events within a well-circumscribed setting (Denzin, 1978; Lincoln & Guba, 1985; Patton, 2002).

Accordingly, a qualitative research design was chosen for purposes of data collection and analysis in this study, where the intent was to examine and understand the perceptions of beginning teachers regarding the impact of their undergraduate PETE experience on their current practice. Patton (2002) noted that multiple sources of information are necessary because no single source of information can be trusted to paint a complete picture. Collecting data using a variety of methods adds to the credibility of a

study because the strengths of one approach compensate for the weaknesses of another (Patton, 2002). Interviewing (individually, as a group and informally), observing, and collecting artifacts are the three methods typically used in qualitative inquiries, and they were the primary methods of data collection used in this study.

Subjectivity

According to Merriam (1998, p.20), when conducting qualitative analysis, the investigator is the “primary instrument” of the research. In this instance the researcher was uniquely prepared to conduct this study. Initially, as a student, who first obtained a bachelor’s degree in physiology and sports science and then completed a master’s degree in health and physical education; more recently, as a PETE faculty member with 10 years of experience teaching and preparing undergraduate PETE students. The researcher acknowledges that subjectivity—my own perspectives and biases—was part of the research process, from the framing of the research question to the writing of the study (Glesne, 1999). The researcher’s work was influenced not only by the nature of the research study and by the characteristics of the research site, but also by the skills, interests, needs, and points of view brought by the researcher into the study (Patton, 2002). The researcher had to consciously and systematically bring to the surface personal biases, values, and interests to produce work that was both trustworthy and credible. Furthermore, the researcher was aware that some of the participants were former students and therefore were professionally acquainted with the researcher.

Gaining Entry

Completing and gaining approval from the University of Georgia’s Institutional Review Board (IRB) was necessary before initiating this study as it involved human

subjects and access to public schools. The writing and approval of the consent forms, permission forms, potential interview questions, observational protocols, audio-taping, and promise of confidentiality had to be assured and documented. All appropriate steps were taken before the initiation of the study in November 2010.

Permission to conduct research in the public schools selected for this study was first sought by contacting and meeting with school administrative personnel (principal and/or assistant principal and/or building coordinator). An additional meeting with a member of the Board of Education was scheduled to gain official access to the school, if deemed necessary, following the initial discussions with each school's administrative staff. Furthermore, an informational letter (*Appendix B*) - including a brief description of the study- was disseminated during the meetings with school administrative staff and Board of Education members to facilitate official approval of the research proposal. These meetings provided the administration with detailed information on the study, and gave them an opportunity to ask any questions related to the purpose, content, confidentiality, or any other issues or concerns they may have had with the research being proposed.

Participant Selection

Since this study aimed to investigate a pre-specified group of teachers according to specific criteria, purposeful sampling was employed to select participants (Patton, 2002). The physical educators selected for this study completed and graduated from an undergraduate PETE program between the years of 2006 and 2009 and were employed as public school physical education teachers with at least one year, and no more than four years, of elementary or middle school teaching experience. This ensured that their

recollections of their undergraduate PETE experience were still relatively fresh. In addition, the participants selected worked in one of four local counties within reasonable distance from the researcher's home. This ensured that graduates from different PETE programs were represented. Moreover, it encouraged full attendance and exchange of ideas at the scheduled focus group meeting. In summation, the six participants in this study were selected based on the following criteria:

- (a) Graduated from an undergraduate PETE program between 2006 and 2009,
- (b) One-to -four years of elementary and/or middle school teaching experience,
- (c) Teaching full-time at elementary or middle school level in public school system,
- (d) Teaching in one of four counties in Georgia,
- (e) Living and working within reasonable driving distance (45-minutes) from researcher's base.

Note: In addition, four different undergraduate PETE programs were represented.

Six beginning teachers were purposefully selected (based upon meeting all the aforementioned criteria) to participate in this study, so that their recollections of their PETE programs were relatively fresh. Although Tinning (2001) cautioned us about a fascination with the “perceptions and concerns” of teaching and coaching education program participants, the views of these individuals still remain a legitimate source of information. The term “beginning teacher” was deemed an appropriate designation based upon the research of Woods and Lynn (2001) and after guidance from teacher development literature that suggested teaching behavior starts to mature after approximately five years of service (Ericsson, Krampe, & Tesch-Romer, 1993; Katz, Raths, Mohanty, & Kurachi, 1981).

Beginning teachers (with one-to-four years of teaching experience) were able to offer valid feedback on the design of the PETE program as they have been given an opportunity to apply the skills and content stressed in their pre-service preparation. With “real world” experience, the graduate is in a more tenable position to critically assess the effectiveness of their recent teacher preparation program (Rosser & Denton, 1977). Indeed, graduates are often used in university evaluation processes because of the unique perspective they are able to give to the program (Delaney, 1995). One advantage of using practitioners in the evaluation process instead of current students is that graduates have a better perspective on the overall curriculum and they have work experience to test their preparation (Davis, 1978). Moreover, practicing teachers play a pivotal role in the socialization of future teachers and have much to offer those wanting to improve teacher education programs (McCullick, 2000), so they are often willing to share how they see the preparation for their job.

A list of potential participants (with help from administrative staff and faculty from various institutions) was developed based upon the aforementioned criteria. Each participant was then be contacted by email (*Appendix C*) and/or telephone to confirm their interest in participating in the study and to schedule dates and times for data collection. During this initial telephone conversation, the researcher asked specific questions to ensure that each beginning physical educator met the criteria for participation in the study. Once this was established, a face-to-face meeting was set-up with each participant (as soon as possible), to discuss the study in more detail, answer any questions or concerns they may have, and to give them an opportunity to complete the informed consent form (*Appendix D*).

A brief description and overview of the four institutions and each undergraduate PETE program is presented below:

University A

University A was a relatively small institution (with around 6,000 students) located in the state of Georgia that offered a B.S.Ed. degree in health and physical education for grades P-12. Three general education courses and a special education course (required by all education majors) as well as two anatomy and physiology courses (required by all kinesiology and health science majors and other allied health professionals) formed the basis of the core education courses. These courses were supplemented by sub-disciplinary courses, such as motor behavior, exercise psychology, exercise physiology, measurement and evaluation, and structural kinesiology. The majority of the courses were related to teacher certification with three specifically directed towards health, a number of sports, recreation, and dance-related method courses, elementary and secondary methods, first aid/ CPR, and a history and philosophy of physical education course. Field experiences were embedded into many of the general education courses and methodology courses with the majority of these experiences being conducted during the junior and senior years. The program culminated with a 15-week apprenticeship (student teaching) experience at two different schools and grade levels—typically elementary and middle/high school. *Bob*, *John*, and *Stuart* all graduated from this undergraduate PETE program.

University B

University B was a medium-sized institution (with around 11,000 students) located in the state of Georgia that offered a B.S.Ed. degree in physical education for

grades P-12. Similar to University A, three general education courses and a special education course (required by all education majors) as well as two anatomy and physiology courses and a first aid/ CPR course formed the basis of the core education courses. However, in contrast to University A, the anatomy and physiology courses were offered exclusively for those majoring in physical education. These courses were supplemented by a “foundations block” completed during the fall semester of the junior year that included a mix of health, motor behavior, educational psychology, and basic methods course covering rhythms and strength and conditioning. An “elementary block” followed that included methodology courses, exercise physiology, and health classes. The “secondary block” was next with similar methodology courses for the upper grade levels as well as courses in assessment, health, integrating technology and applied biomechanics. Again, field experiences were a part of numerous courses particularly in the junior and senior years. The program culminated with a semester-long teaching internship in local elementary, middle and high schools. *Cameron* graduated from this undergraduate PETE program.

University C

University C was a relatively large institution (with around 15,000 students) located in the state of Tennessee that offered a K-12 degree in physical education. Three general education courses were part of the “professional education” core, in addition to two human anatomy and physiology courses that were needed to satisfy the natural sciences “general education” core. The major-related courses were divided up into core classes, physical education concentration, and professional education. The core classes included a foundation of PE course, legal issues, first aid/ CPR, athletic injuries, and

child development course. The physical education concentration included measurement and evaluation, the scientific basis of human performance, and methodology courses in aquatics, rhythms and gymnastics, and sports skills. The professional education concentration included educational technology, instructional delivery, educational psychology, atypical populations, and elementary and secondary methods. Student teaching was taken in the final semester and included two placements at two different grade levels for the duration of the semester. *Caroline* graduated from this undergraduate PETE program.

University D

University D was a medium-sized institution (with around 11,000) students located in the state of Tennessee that offered a degree in K-12 physical education. Like Universities A, B, and C, the general education requirements were very similar with courses being required in foundations of education and one anatomy and physiology course. Sub-disciplinary courses included physiology of exercise, kinesiology, and motor learning. Courses on curriculum design, assessment, instructional strategies, and use of technology were an integral part of the major's core. In addition, classes specifically targeting adapted physical education and orthopedic and motor impaired students were included in the program. Again, field experiences and an intensive internship were embedded into the program and represented the final semester of study. *Graham* graduated from this PETE program.

A brief sketch of each participant and their public school physical education setting is presented below:

Bob

Bob was in his second year of elementary physical education teaching at the same school he started working at following his graduation from his undergraduate PETE program in Georgia. He was a non-traditional student coming from a military background. His Title I school had around seven hundred students with many on free-and-reduced lunch. It also had a relatively large Hispanic population. Bill worked with a female certified physical educator who had been at the school for more than 15 years. A typical day for Bill included bus duty, six physical education classes, a 30-minute lunch break, a 30-minute planning period and coaching duties at a local middle school. His sixteen-day rotation meant seeing each class every other day, or two-to-three times per week, with class sizes of around 40 to 50 students. Bill had access to a typical elementary gym with an equipment room full of items that allowed him to teach a wide variety of activities. There was also access to an outdoor area with concrete and grassy surfaces.

Caroline

Caroline was in her second year of elementary physical education teaching at the same school she started working at following graduation from her undergraduate PETE program in Tennessee. She had been a student-athlete throughout her undergraduate experience, playing basketball. Her Title I distinguished school had around 430 students with almost all on free-or-reduced lunch. It had a very large African-American population. Caroline had a full-time teaching aid with more than 20 years of experience in physical education to assist her. A typical day for Caroline included breakfast duty, seven physical education classes, two 30-minute breaks, a one-hour planning period and coaching duties at a local high school. Her largest class size was around 60 to 70

students. Caroline taught in an older and relatively small gym with a poorly stocked equipment room that made it challenging to teach a wide variety of activities. She was unable to utilize any outdoor space mainly due to concerns for the safety of students and faculty.

John

John was in his third year of elementary physical education teaching at the same school he started working at following graduation from his undergraduate PETE program in Georgia. Like many of the other participants, he grew up with a love for athletics, sports, and competition and felt that physical education was his ideal career choice. His school had around 800 students with approximately half on free-or-reduced lunch. It had a large African-American population. John worked with another male certified physical educator with around 10 years of teaching experience. A typical day for John included car/bus duty, 10 or 11 physical education classes and a 30-minute lunch break with John leading classes for grades K-2, and assisting for grades 3-5. His class sizes ranged from around 50 to 70 students. John utilized a large gym area (with adjoining stage) with an equipment room full of the basic essentials needed to teach elementary physical education. He had access to an outdoor area, but seldom used it.

Graham

Graham was in his fourth year of elementary physical education teaching in Georgia, after graduating with an initial certification in physical education from an institution in Tennessee. He had worked for a short time in the business world, before moving into the field of physical education and pursuing his passion for teaching and coaching. He worked at two different schools, going to each on alternate days of the

week. The first school was a Title I distinguished school with around 400 predominantly white students with many on free-or-reduced lunch. Here he worked with another certified male physical educator with around 15 years of teaching experience. A typical day for Graham included car/bus duty, 45-minute planning period, 45-minute lunch break, and seven physical education classes. His class sizes ranged from around 20 to 45 students. The gym he taught in was small and partially separated from the lunch room by large doors that could be moved to divide the two spaces. He used the outdoor space on a regular basis and had a basic range of equipment to meet his needs. His second school had around 900 predominantly white students with very few receiving free-or-reduced lunch. Here he worked with two certified physical educators (one male and one female), each with around 10 years of teaching experience. A typical day for Graham included car/bus duty, planning period, 75-minute lunch break, six physical education classes and coaching duties at a local high school. He would see each class every other day. His class sizes ranged from 75 to 95 students, although they would split them up into three separate classes at times as the gym was barely large enough to accommodate all of the students; hence, the use of the expansive outdoor space available. The equipment room was well-stocked with all of the essentials as well having some of the latest technology, such as the Wii.

Stuart

Stuart was in his third year of elementary physical education teaching at the same school he started working at following graduation from his undergraduate PETE program in Georgia. He was a non-traditional student who was always active growing up and played a variety of sports with positive roles models that influenced his decision to go

into teaching and coaching. His school had around 500 students with many of them on free-or-reduced lunch, and approximately half being African-American. Unlike many of the participants, Stuart did not have a colleague in the physical education department- he worked alone. A typical day for him included monitoring students in the computer lab, a 90-minute lunch break/ planning period, five 50-minute classes, and car/bus duty. Stuart had very well-stocked equipment rooms (due to the recent award of a large monetary grant) allowing him to teach a wide variety of activities. The gym was moderate in size, but large enough to accommodate the smaller class sizes of 18 to 22 students.

Cameron

Cameron was in his fourth year of middle school health and physical education teaching at the same school he started working at following graduation from his undergraduate PETE program in Georgia. He had been a student-athlete throughout his undergraduate experience, playing football. His small rural school had around 275 students with many of them on free-or-reduced lunch, and approximately half being African-American. Like Stuart, Cameron did not have a colleague in the physical education department- he worked alone. A typical day for him included teaching a reading class in the morning, bus duty, assisting other teachers, maintaining athletic facilities, three health/physical education classes, and coaching duties. His class sizes were small with 15 to 25 students per class. Cameron had access to a large gym facility with bleachers that was completely separate from the main school buildings. His equipment room was relatively sparse with only a few basic items to use for instruction, and many of those were older items. He was close to a gravel track and athletic fields that he utilized infrequently to conduct his classes.

Data Collection

Data collection included formal and informal individual interviews, a focus group, observations, and artifact analysis. School visits included classroom observations, formal and informal interviews (conversations with the participants before and after their physical education lessons), and artifact analysis. The artifacts included documents such as transcripts, course syllabi, unit/lesson plans, textbooks, and materials from their undergraduate PETE programs as well as instructional items and props used in planning, executing, or reflecting on the lessons.

Data collection was conducted during the 2010-2011 public school year, commencing in November, 2010 and concluding in May, 2011. The actual timeline for the study is shown in Table 2.

Individual Interviews

As Fraenkel and Wallen (1993) explain, qualitative research is used to find out the “why’s” and “how’s” of an experience. When we want to know a person’s perspective of a situation or experience, we ask them. The individual interview questions (*Appendix E*) were written to encourage the participants’ to express their thoughts and feelings about the impact of their undergraduate PETE program on their current practice; specifically, the knowledge, skills, and dispositions they learned; and the application of those in practice.

The participants were formally interviewed twice, once during the fall semester of 2010 and again during the spring semester of 2011. The first interview focused on the first three of the National Standards for Initial PETE (NASPE, 2009); standard #1 (scientific and theoretical knowledge), standard #2 (skill-based and fitness-based

Table 2: TIMELINE FOR STUDY

SEPT-OCTOBER 2011	Obtained IRB approval. Obtained approval from school administration. Completed <u>PILOT STUDY</u> . Began participant selection and recruitment. Scheduled initial meetings with each participant.
NOVEMBER 2010	
Week 1 (1-7)	School visits: 1st Individual Interview with Teacher A & B
Week 2 (8-14)	School visits: 1st Individual Interview with Teacher C & D
Week 3 (15-21)	School visits: 1st Individual Interview with Teacher E & F
Week 4 (22-28)	<i>Open</i>
DECEMBER 2010	
Week 5 (29-5)	School visits: Observe/ Follow-up with Teacher A & B
Week 6 (6-12)	School visits: Observe/ Follow-up with Teacher C & D
Week 7 (13-19)	School visits: Observe/ Follow-up with Teacher E & F
Week 8 & 9 (20-2)	<i>Open</i>
JANUARY 2011	
Week 10 (3-9)	School visits: 2nd Individual Interview with Teacher A & B
Week 11 (10-16)	School visits: 2nd Individual Interview with Teacher C & D
Week 12 (17-23)	School visits: 2nd Individual Interview with Teacher E & F
Week 13 & 14 (24-6)	<i>Open</i>
FEBRUARY 2011	
Week 15 (7-13)	School visits: Observe/ Follow-up with Teacher A & B
Week 16 (14-20)	School visits: Observe/ Follow-up with Teacher C & D
Week 17 (21-27)	School visits: Observe/ Follow-up with Teacher E & F
MARCH 2011	
Week 18 & 19 (28-3, 4-10)	<i>Open</i>
Week 20 (4-10)	Follow-up with Teacher A & B
Week 21 (11-17)	Follow-up with Teacher C & D
Week 22 (18-24)	Follow-up with Teacher E & F
Week 23 & 24 (25-7)	<i>Open</i>
APRIL 2011	
Week 25, 26, & 27 (8-28)	Follow-up with Teachers A-F
Week 28 (29-5)	<i>Open</i>
Week 29 (6-12)	Focus Group
Week 30 (13-19)	Follow-up with Teachers A-F

competence), and standard #3 (planning and implementation). The second interview focused on the last three; standard #4 (instructional delivery and management), standard #5 (impact on student learning), and standard #6 (professionalism). Each standard had additional elements associated with it, and these elements provided an organized framework for each interview guide.

The interviews were 45 minutes to 90 minutes in duration. They were primarily conducted at the participants' schools and were scheduled at convenient times for them. Although an interview protocol was utilized with specific, open-ended questions to allow the participants an opportunity to give full, descriptive answers, the interviews themselves were somewhat flexible in that the responses determined the directions of the interviews. Patton (2002) called this a combining approach connecting a conversational strategy and a standardized interview format. All interviews were audio-taped and transcribed fully.

Focus Group

Focus group interviewing is considered to be an appropriate method of data collection for qualitative studies. The focus group is considered to be a flexible data collection technique that is most useful in exploratory research (Krueger & Casey, 2000). The main purpose of focus group interviewing is to understand how people feel or think about an issue, product, service, or idea. Participants are selected because they have certain characteristics in common that relate to the topic of the focus group. Exploring perceptions of beginning physical education teachers in this study was consistent with the use of focus groups. "The basic goal in conducting focus groups is to hear from participants about the topics of interest to researchers" (Morgan and Krueger, 1993, p.

11). The focus group also presents a more natural environment than that of an individual interview because participants are influencing and influenced by others- just as they are in real life. This promotes the emergence of ideas from the group, as a collection of individuals possesses the capacity to become more than the sum of its parts, to exhibit a synergy that individuals alone do not possess.

Group composition must be carefully considered when using focus groups. It was once thought that groups must consist of persons, strangers to each other, in order to be effective. This condition is no longer considered necessary (Krueger & Casey, 2000). Otherwise, researchers could not examine work or social environments with this collection technique. Moreover, focus groups need to be somewhat homogeneous in composition (Stewart & Shamdasani, 1990). Diversity in group composition may lead to one being unduly influenced by another's position. The group therefore should be composed of those who are similar to each other. This similarity can be narrowly or broadly defined based on the nature of the research being conducted. In this study, the similarity of focus group participants will be delineated as those who are beginning physical education teachers with one to four years of teaching experience.

The number of focus groups used is also an important issue (Krueger & Casey, 2000; Stewart & Shamdasani, 1990). Multiple groups are encouraged to assure that trends and patterns can be detected. Using only one group may provide less accurate evidence as individual groups may be influenced by many factors that would cause results to be compromised. Time (including transcription and analysis), cost, and availability are also considerations when deciding upon the number or groups to include in data collection. In an ideal setting, the researchers would continue to hold focus groups until theoretical

saturation (the point when you have heard the range of ideas and aren't getting new information) of data is reached. Krueger and Casey (2000, p.26) suggested the use of "three or four groups with any one type of participant," while Morgan (1997) suggested the use of three to five groups depending on the variability of group composition. Based upon geographical and logistical challenges, only one focus group was conducted for this study, after the completion of all individual interviews and a move towards theoretical saturation.

The number of participants in focus groups is also an important issue. The group must be small enough for everyone to have an opportunity to share insights, and yet large enough to provide diversity of perceptions. Participant numbers should range from five to twelve. Fewer than five limits insights and interaction between participants. More than twelve can negatively impact how group members participate (Krueger & Casey, 2000; Stewart & Shamdasani, 1990). Consequently, this study included six participants to moderate the negative effects of smaller or larger groups, and to insure that an adequate number was available to satisfy the minimum number of five referenced in the literature.

The researcher served several functions: moderator, listener, observer, and eventually analyst using an inductive process. According to Krueger & Casey (2000), twelve questions are typically asked during a two-hour focus group interview. Types of questions that should be included are opening questions, introductory questions, transition questions, key questions, and ending questions. The opening question is the first question answered by all group members. It is designed to place participants at ease, is usually fact-based, and requires a quick response (one minute or less). Introductory questions introduce the topic to participants, while transition questions connect

participant experience with the topic to be explored. Key questions are the central focus of the study. Usually, participants are asked two-to-five key questions which specifically drive the study, and require the greatest attention during data analysis. Ending questions are designed to facilitate closure and summarize the findings of the focus group interview. This study structured the focus group interview guide based upon the guidelines and recommendations put forth by Krueger & Casey (2000).

Furthermore, focus group interview question development should be guided by a few basic principles. Questions should be “asked in a conversational manner...The wording of questions should be direct, forthright, comfortable and simple” (Krueger, 1998, p. 3). Questions should be clear, using words understood by participants. They should also be uni-dimensional and brief in order to avoid redundancy or confusion (Krueger, 1998). Once again, these guidelines were implemented in this study. Moreover, in order to determine if the interview questions were clear and valid, they were pilot-tested on a small group of pre-service physical education teachers.

Validity is a term that is not often used in qualitative research. However, focus group interviewing is considered to have high face validity. “Considerable credibility is given to individual testimony. As a result, focus group interviewing is given considerable face validity (Krueger, 1994, p. viii). High face validity indicates that the results look valid; they measured what they were supposed to measure. In this instance, the researcher with the assistance of the pilot test determined if the questions really provided for the investigation of the phenomena. Prior to data collection, a focus group was held with three physical education teachers to pilot the use of interview questions for clarity and usefulness. None of the three pilot test group members were eligible for participation in

this study. Feedback on clarity and construction of questions were taken into consideration. Questions were revised and a final interview guide was developed.

Since focus groups are a form of group interviewing a list of open-ended interview questions were developed to guide the interview and group interaction (*Appendix E*) focused on all six of the National Standards for Initial PETE (NASPE, 2009). Each standard has additional elements associated with it, and these elements provided an organized framework for the focus group interview.

The focus group interview was 2-hours in duration and took place in the conference room of a local higher education institution within easy commuting distance of all of the participants. The focus group interview was audio-taped and transcribed for analysis. Transcriptions were completed close to verbatim. It was better to edit as little as possible “because one use of focus group interviewing is to learn how respondents think and talk about a particular issue, too much editing and cleaning of the transcript is undesirable” (Stewart & Shamdasani, 1990, p. 64). In addition, the researcher kept extensive field notes to supplement the transcription.

Observations and Field Notes

Classroom observations were conducted throughout the study along with the task of compiling field notes. Each teacher was visited on at least two occasions throughout the official data collection cycle (November 2010 to May 2011) with one visit taking place during the fall semester of 2010 and another visit occurring during the spring semester of 2011. Each visitation day was structured to include a visit to one teacher in the morning hours and to another in the afternoon hours. Typically, this allowed the research to observe multiple lessons with different grade levels. The time between each

“visitation block” was used by the researcher to conduct initial analysis of the data and plan for the subsequent interviews and to generate further questions for the informal follow-up sessions with each participant.

Non-participant observation was utilized to minimize the effect on the subjects being observed, and in an attempt to obtain as complete a record as possible of behavior relevant to the observer’s interest (Borg and Gall 1989, p. 396). The researcher’s main objective as the sole data collection instrument was to observe the teachers at work, document their office and classroom environments, and to record what occurred in each class session(s). It was important to sit close enough to observe and listen to what went on in class. However, it will be equally important to be as “invisible” as possible to students and teachers.

Patton (2002, p.302) described field notes as descriptive notes of everything that “has been observed” and everything “worth noting.” The researcher compiled field notes describing the physical education teacher’s practices before the lesson, during the lesson, and after the lesson. During all observations the researcher recorded extensive notes in to a field log, focusing on all events that transpired and recording quotes verbatim whenever possible. A notebook was used to gather, record, and organize the observational field notes. Personal comments were included in “bold” letters in the field notes, and were also used to describe unusual situations that occurred during the observations. As observations become more focused, only those events that had a direct bearing on the research questions being asked were recorded.

Informal Interviews

Data from other sources was supplemented with information acquired during informal conversations with the participants. The focus of these interviews was to gather additional information about the classes that were observed, to clarify or question initial analyses, and to provide questions for future interview sessions. No formal interview guide was employed, and most information was derived from spontaneous conversations before and/or after the class observations. In the later stages of the study, informal interviews were conducted over the phone and provided an opportunity for follow-up and member-checking under non-threatening conditions. Immediately after such interactions, notes were recorded in a field log.

Artifact Analysis

Merriam (1998) indicates that documents are communicated information—written, visually seen, or physically acquired—that supports the research. Documents such as transcripts, course syllabi, unit/lesson plans, textbooks/materials from their undergraduate PETE programs, and instructional items/props were collected as a source of data. These documents and artifacts added context and depth to the study.

Documents and artifacts were used for the purpose of substantiating data collected via the focus group interviews, informal interviews, and observations. They were not used as the primary data source; however, they served to validate participant opinions and perceptions, and improved the credibility and trustworthiness of the data. Many researchers (LeCompte & Preissle, 1993; Lincoln & Guba, 1985) advocate the use of documents for the following reasons: (a) they are frequently available at little cost (primarily investigator time), (b) they are a stable source of information that can be

analyzed and reanalyzed without having any changes occur between analysis opportunities, and (c) they are a rich source of information that can be used to supplement the primary data sources. In addition, artifact analysis can also be utilized to contribute to triangulation of data collected.

Data Analysis

Analytic induction is the process of drawing themes and commonalities from data and is a suitable way to ascertain the experiences and thoughts of participants. This process is the best way to truly understand the experiences and beliefs of the participants (Vidich & Lyman, 1995), which is, ultimately, the goal of any research that seeks the input of those integrally involved.

Nevertheless, inducing themes in a specific manner and using a specific process is often difficult because “themes are abstract (and often fuzzy) constructs that investigators identify before, during, and after data collection” (Ryan & Bernard, 2000, p. 780). The researcher, however, was guided by a specific analytic process.

This study followed the guidelines laid out by Huberman and Miles (1994) using four stages of data analysis in qualitative research. According to Huberman and Miles (1994), the actual process of data analysis can be broken down into four distinct phases: 1) data collection, 2) data reduction, 3) data display, and 4) drawing and verifying conclusions.

In the first stage of data collection, the researcher conducted early analyses. After each interview, observation, and artifact analysis notes were written in his journal of the predominant themes that developed during the data collection episodes. These notes served as the basis of the initial analyses.

The second stage was data reduction in which data are coded, summarized, and clustered. The researcher analyzed the data from the interviews, observations, and artifacts and identified common themes in order to assess the participants' perceptions of their PETE programs, and its impact on current practice. This process benefitted greatly from the use of the National Standards for Initial PETE (NASPE, 2009) as a research framework in this study. Indeed, the framework and related research questions were extremely useful when organizing the vast amount of data collected from this study into the color-coded ideas, hunches, and structures that formed the basis of the initial analyses and themes. Merriam (1998, pp. 181-182) stated that "categories are abstractions derived from the data, not the data themselves . . . these categories have a life of their own apart from the data from which they came." By focusing on common themes, one will be better able to understand the participants' viewpoints and perceptions (Patton, 2002). Attention was also given to alternative themes that emerge from the data in order to "demonstrate intellectual integrity and lend considerable credibility to the final set of findings offered." (Patton, 2002, p. 553). From this process, a composite of the participants' views regarding their PETE program was conceived. These views were related to what each of the participants had learned or acquired from their undergraduate programs and what they were applying or using in practice. By determining the participants' perceptions on what they learned and what they apply in practice, and interpreting these views using the six National Standards for Initial PETE (NASPE, 2009) as a research framework, this study examined the impact of their undergraduate program on current practice.

The third stage of the analysis entailed data display in which "an organized, compressed assembly of information . . . (permitted) conclusion drawing, and/or action

taking” will occur. In this stage, the researcher placed the data into smaller forms that took on different constructs which varied from vignettes to diagrams. During the interviews, and the writing of the field notes of the observations and the artifacts, the researcher color-coded similar comments and relationships between the participants and sequences. Also, differences and negative or positive comments were coded to give an overall summation of the research (Miles & Huberman, 1994). By continuously writing, revising, and compacting the themes using inductive analysis (Patton, 2002), the researcher found the patterns that became the basis of the research. The researcher transcribed the interviews personally in order to become immersed in the data. Moreover, several factors- frequency, specificity, emotion, and extensiveness- were considered when deciding on how much emphasis to give comments or themes found in the focus group transcript (Krueger & Casey, 2000). Field notes were also coded, according to content after collection, to retain insights and thoughts brought about through the process.

Finally, the fourth stage of data analysis was conclusion-drawing and verification. It was during this phase that the researcher attempted to make meaning of the displayed data and conduct member checks. Final drawing and verifying conclusions were consistent with the themes and patterns that evolved from the data reduction and data display. The researcher analyzed all data collectively, considering the views of all participants as a whole. “The meanings emerging from the data will be tested for their plausibility, their sturdiness, their ‘confirmability’ – that is, their validity. Otherwise, we will be left with interesting stories about what happened, of unknown truth and utility” (Miles & Huberman, 1994, p. 11). The final categories “reflected the purpose of the

research” (Merriam, 1998, p. 183). The categories told a story of the participants’ throughout the experience and provide an interpretation of the data.

Throughout the four-step data analysis process the six National Standards for Initial PETE (NASPE, 2009), and their associated elements, were utilized as a research framework to inform and interpret the data collected, and ultimately draw conclusions and offer recommendations.

Pilot Study

Prior to the start of official data collection in November of 2010, a pilot study was conducted to field test the data collection methods. The purpose was to test the initial drafts of the interview guides, refine field note-taking skills during school visits, and ensure that the information gathered was relevant to the study’s research questions. The initial interview guides were tested with three pre-service physical education teachers who were completing their student teaching experience in their final semester of undergraduate study at the researcher’s institution. In addition, observations were conducted at each of their elementary and middle school student teaching placements to practice and refine the recording of field-notes.

The pilot study allowed the researcher to test his ability to use the data collection methods in a setting similar to that of the study to be done. Digital-recording of each interview session gave the researcher the opportunity to review the verbal interactions and determine whether the questions being asked were eliciting responses required to answer the study’s research questions. Moreover, allowing the pilot study participants to share their perspectives on the interview sessions helped the researcher to identify any potential problems from the participants’ perspective and improve the organization,

management and content of the interviews. Based on the adequacy of the pilot data, the methods were minimally revised to focus more efficiently on those aspects of the study most closely related to the research questions.

Trustworthiness and Credibility

Issues of trustworthiness and credibility in qualitative research parallel the traditional notions of rigor and validity in quantitative research (Lincoln & Guba, 1985; Patton, 2002). Trustworthiness has been described as authenticity, balance, fairness, completeness, validity, generalizability, and triangulation. It has to do with the dependability and confirmability of the selected research approach and the corresponding findings. Dependability (i.e., reliability) involves tracking and documenting the research process so that the journey taken by the researcher to arrive at an interpretation of the data is clear and unambiguous (Guba & Lincoln, 1989). Confirmability (i.e., objectivity) is “concerned with assuring that data, interpretations, and outcomes of inquiries are rooted in contexts and persons apart from the [researcher] and are not simply fragments of the [researcher’s] imagination” (Guba & Lincoln, 1989, p. 243).

Miles and Huberman (1994) stated that in regard to validity and credibility, the analysis must make sense, be plausible, be well-linked to theory, identify areas of uncertainty, have findings replicated in data, and the conclusions judged to be accurate by the participants. Credibility is a qualitative referent for the internal validity criterion in quantitative research and is the extent to which participants’ interpretations and experiences match an investigator’s reconstruction of these phenomena (Janesick, 2000; Lincoln & Guba, 1985). Janesick (2000, p. 393) stated “Validity in qualitative research has to do with description and explanation and whether or not the explanation fits the

description.” The techniques selected to increase the level of trustworthiness and credibility in this study included: (a) triangulation, (b) member checks, and (c) an audit trail.

Triangulation

One way to enhance trustworthiness in a qualitative study is by triangulating the data. Triangulation is defined by Goetz and LeCompte (1984) as “a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation of interpretation.” It is the process of cross-checking theories and/or data using various techniques (Denzin, 1978; Guba & Lincoln, 1985; Patton 2002). Data was collected in the present study through multiple methods, including the interviews, observations, and artifact analysis. Since the study utilized multiple data sources it enabled data from one source to cross-check the accuracy of data gathered from another source (LeCompte & Preissle, 1993). A criterion that was used to determine if data was trustworthy was whether it was present in at least two of the three major data sources, because this seemed to be a way to be “balanced, fair, and conscientious in taking account of multiple perspectives, multiple interests, and multiple realities (Patton, 2002, p.575).

Member Checks

In addition to triangulation of data, this study employed member checks (Rubin & Rubin, 1995). Member checks can be defined as the process of sharing with the participants the research questions, data, preliminary categories, and interpretations to reduce misinterpretation and confirm the fidelity of the investigator’s research approach to the perspectives and beliefs of the participants (Guba & Lincoln, 1989). After audio-tapes and notes of interviews were transcribed, transcripts were given back to the

participants for a member check. Participants were asked to read the transcripts and to verify or dispute what had been said. In addition, they were encouraged to add any additional thoughts that may come to mind when reading through the transcripts. This allowed them to amend anything they said and/or believed to be inaccurate, or to add new information to the study that they had not initially discussed. A follow-up phone call was conducted to give each participant the opportunity to comment on the transcripts and notes.

As themes emerge from the data, these were checked with participants for comment and validation. Themes that were unclear were brought to the attention of the participants for clarification. By having the participants read and discuss all of the analyses for all data collection methods, the researcher provided a true source of validity and credibility. Also, the research questions provided a clear path to the final analyses. Peer review or examination was also conducted throughout the data gathering process to guide the research process.

Audit Trail

Finally, a researcher's journal was kept throughout the study, which served as a monitoring device to track the researcher's investigative decisions and to promote reflective thinking (known as an "audit trail"). The journal became a space for writing descriptions of people, places, situations, and interactions and a place for recording ideas, reflections, hunches, emotions, and notes (Glesne, 1999). This encouraged reflection throughout the study, and incorporated an additional important strategy to address issues of credibility and trustworthiness.

Transferability

A final consideration in a discussion of trustworthiness is the distinction made by qualitative researchers between generalizability and transferability (Patton, 2002). Strong quantitative designs are judged in part by their ability to control research conditions to the extent that the results of a study are deemed applicable to a relevant, broader context (Denzin & Lincoln, 2000). However, the merit of a strong qualitative study is evaluated based on its ability to describe in-depth the conditions of a specified context. Unlike most quantitative studies, the benefit of qualitative research is not that it permits generalization, but rather that it reveals the complexities and intricacies of certain phenomena of interest. Yet, through what Geertz (1973) called “thick description,” these phenomena might be explained in ways that allow transferability from one context to another.

This study endeavored to determine the perceptions of beginning teachers’ regarding their undergraduate PETE experience and how it impacts their current practice. It, perhaps, says little about professional preparation programs, teacher preparation programs, and coaching education programs. On the other hand, it would be difficult to argue that research conducted with beginning physical education teachers is not transferable in some measure to other educational and training contexts. Indeed, it can certainly be argued that most teacher preparation programs and coach education programs can benefit from research in this particular field. This study at least provided some helpful hints to those who are involved in teaching, administering, or designing such programs.

In the following chapters, the study's findings will be presented and discussed. Chapter Four will present the findings relative to scientific and theoretical knowledge gained and applied by the participants. Chapter Five will focus on the participants' acquisition and use of skill-based and fitness-based competencies. The knowledge and skills learned and utilized by the participants in planning to meet the diverse needs of their students will be the focus of Chapter Six. In Chapter Seven, the instructional and managerial skills and strategies learned and utilized by the participants will be explored. Chapter Eight will focus on the participants' knowledge and application of assessment techniques and reflective practices gained from their undergraduate programs. Finally, Chapter Nine will address findings from the analysis of the participants' acquisition and use of professional behaviors and dispositions. These findings will then be summarized and recommendations provided for continued research in the final chapter (Chapter Ten).

CHAPTER 4

SCIENTIFIC AND THEORETICAL KNOWLEDGE

The first standard in NASPE's Initial PETE Standards (NASPE, 2009) addresses "discipline-specific scientific and theoretical concepts" that "candidates know and apply to the development of physically-educated students." Through the interpretation of data from interviews, observations, and artifacts this chapter will attempt to answer the following research question: *What scientific and theoretical knowledge learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?*

Themes

Four strong themes emerged from the data analysis. The first theme indicated that scientific and theoretical knowledge learned by the participants throughout their undergraduate experience was basic and simplistic in nature. This resulted in very few references to any discipline-specific concepts and principles related to the field of health and physical education.

A second theme was the issue many participants had experienced with regard to remembering and retaining this type of knowledge. The common methods of instructional delivery typically used for these science-based courses, and the actual content associated with them, often made it difficult for the participants to internalized and recall the information that was presented to them.

A third theme was the perceived lack of value and utility when scientific and theoretical knowledge was actually applied in a real world setting. Many of the participants questioned the utility of that knowledge as beginning physical educators and just could not see the value as practitioners.

Finally, a fourth theme was the direct application of knowledge needed to analyze and correct motor skill performance when teaching. Many of the participants used this specific knowledge base on a regular basis when conducting their classes. They were fully aware of the need to apply this knowledge in their current practice, and credited their undergraduate experience for equipping them with the tools necessary to do so.

Knowing the Basics

Courses such as educational psychology, anatomy and physiology, exercise physiology, structural kinesiology/biomechanics, motor learning, motor behavior, and sports psychology were present in many of the documents examined and were frequently discussed by the participants when referencing general scientific and theoretical knowledge gained from their programs. These courses reflect a trend that began in the 1960s and 1970s when PETE programs began to adopt a curricular orientation that placed a greater emphasis on sub-disciplinary knowledge (Corbin, 1994). The sub-disciplines are considered to be the academic content areas from which the undergraduate physical education curriculum derives its foundational knowledge and conceptual framework (Estes, 1994). Foundational sub-disciplinary courses in the PETE curriculum often include biomechanics, anatomy, physiology, motor learning and history/ philosophy of movement (Bahneman, 1996; Estes, 1994). While this sub-disciplinary orientation has become firmly entrenched and provides a more substantial theoretical foundation for the

PETE curriculum, there is little evidence to suggest that the proliferation of research in the foundational components of physical education has significantly impacted the instructional practices of physical educators. (Ross, 1981; Siedentop & Locke, 1997). In addition, some methodology courses (such as team sports, elementary methods and secondary methods) were also discussed by the participants when addressing questions related specifically to the analysis and correction of motor skill performance.

The data analysis indicated that the scientific and theoretical knowledge learned by the participants was relatively basic, as many could only talk in simplistic terms when asked to provide examples of specific theories and scientific principles. For example, when John was asked about what scientific and theoretical knowledge he had learned, he offered the following overview:

We learned a lot! I have probably forgotten more than I learned. We have learned psychological theories- I am thinking about Dr. Z's class- the brain aspect. What works best in terms of motivation? Obviously there are different types of motivation depending upon the personalities. We have learned the science aspect, the structural class. Learning the anatomy of the body, how the muscles work, how they function, how they work that way. Rehabilitation- we have learned a lot related to things of that nature. Then you go back to your anatomy and talk about carbohydrates and proteins and how they affect your body, but in more depth.

Similarly, Caroline talked about the utility of her educational psychology course and what she had learned in terms of motivating students:

Yes, educational psychology. It was very useful; you have to think like a coach. You learn how to motivate a student who does not want to learn anything,

someone who does not want to do anything in PE- motivational theories, how to speak to students, how to communicate with them, and not just yell and get in their face. Some students do not really care about a grade; they just do it for their enjoyment. They do it because they want to please the teacher...a lot of elementary kids especially.

Caroline was also upbeat about what she had learned in her motor learning course with respect to general motor learning theory and motor development principles.

Motor learning was one of the most crucial classes. What I learned was the different motor skills- I was expecting all elementary kids to be able to do the same things. But, really they can't. Kindergarten was different from 1st grade- I learned when to do different loco-motor skills for different age groups. What a child can do...correct activities...you should not have a kindergarten kid playing one-on-one basketball. That was very important- even at the high school when I was student teaching. I would not have high school students just skipping, walking, listening to songs; you have to know how they develop- developmentally-appropriate activities.

This sentiment was echoed by Cameron who benefitted from a former veteran public school physical educator who taught his motor learning and development courses and was able to give him a “what it is like to be a PE teacher point of view- real-world stuff.”

The cool thing about Ms. Smith was this is how you break it down for a third grader if you want them to do this. This is how you can advance it for a junior in

high school to make this simple activity something they are really going to like.

So, it was great getting that real-life point of view from her.

Cameron also commented on the scientific knowledge he gained from his biomechanics class and how that was “good knowledge for someone going into teaching and coaching.”

It was good information for me when my body feels a certain way, the build-up of lactic acid- when that kind of stuff happened I knew why. And it was good especially when teaching and coaching kids new motor skills. Knowing the whys behind why certain things happen is great to help explain it to them. Kid does eat breakfast, doesn't eat lunch and is dragging; this is why your body needs to make energy. This is when you muscles are going to cramp-up and why- you can't sit there and explain the Krebs's cycle to them, but generic basic information behind it all; this is why you are doing it. Using these muscles when you are doing a power-clean...this is why...if you don't explode and get your legs involved as much as your upper body you are not going to be good at it- and those types of things. It is really good like I said because it gives you the why behind it.

He also expressed how that knowledge had been somewhat of a “wake-up call” for him as “you spend your whole life playing these sports and you take it for granted that you are doing it correctly and you finally learn that is why your body can do it.” He had an equally “eye-opening” experience after a particularly memorable project he was required to complete for his biomechanics class.

One of our projects was we had to pick an activity and a sport. It could be a pitch in a baseball game, or a bench press, and we had to go through it and dissect

everything that was happening as the movement happened. So, that was really eye-opening.

Similar knowledge was gained by John in his methodology classes where learning motor skills and performance concepts has positively impacted his ability to convey these concepts to his students.

Team sports, individual/dual, elementary methods, and secondary methods were good. But even the structural stuff helps. That even helps when you learn the proper way to throw, and how the muscle is supposed to function, I cannot explain it so well to the kids, but from my understanding it does help me to show them better what to do... does that make sense? Now, if you ask me if I knew about that previously sure, but just not as in depth.

This was also expressed by Cameron who talked about the knowledge he had gained from dissecting various motor skills and being able to use that information to teach middle school students of differing skill levels.

The motor skills...sports that I had not played before...but really did not know how to do it. That stuff you now know what to do...you learn those things like how to do a proper lay-up...especially at the middle school level. In sixth grade and especially when you get into 8th grade the true athletes start to surface, and you still get those like “I am not a good athlete” and they don’t get into sports. You have to cater for both, and once the kid figures out that he or she can do it, it becomes a lot easier for them, but knowing how to break it down for them that was great.

In addition, he talked fondly about an early teaching assignment in which he was required to breakdown “something as simple as jumping” and teach that topic to his fellow classmates. This learning experience taught him the basic principles of jumping and “really makes you think about what is actually involved in jumping.”

Stuart “did remember some basic science and retained some theories” such as “bike ergo-meter test, VO2 max, and seeing someone pushed to their limit and see how they react.” Like John and Cameron he was able to talk positively about what he had learned from his methodology classes in terms of the “science behind specific sports skills”.

In those classes we had a specific skill that we had to teach. Granted some of the students were not as good at teaching those, but you still learned a skill from everyone. I remember mine...I had the hammer throw and I did it with someone who had the discus throw. I knew nothing about it, but I learned it and taught it. Other people had the forehand and the backhand and you had to teach that particular skill... Something simple like soccer- I have never played soccer, never knew anything about soccer. Just learning to teach them how to plant kick with their foot, being able to stop the ball with the top of their foot...I never knew how to do that and just learning it by seeing it and through classes- it carries over.

Clearly, the analysis of data indicated that the participants learned some basic scientific and theoretical knowledge from a variety of classes throughout their undergraduate experience. This knowledge was expressed in simplistic terms with very few references to specific concepts or principles related to the field of health and physical education. This rudimentary level of knowledge was similar to that found in practicing

high school physical educators (Kelley & Lindsay, 1977) and in-service physical educators (Kelley & Lindsay, 1980) in the domain of exercise physiology and highlighted many of the difficulties associated with the delivery and application of theoretical concepts common to the sub-disciplines (Bulger et al., 2000).

Retention Difficulties

Despite the obvious knowledge gained from numerous courses, many of the participants expressed difficulty in remembering and retaining some scientific and theoretical knowledge often due to particular methods of instructional delivery and course content. Similarly, Bulger and colleagues (2000) also identified course content and instructional methods as two areas of particular concern for PETE programs. For example, when asked about her exercise physiology class, Caroline responded:

Don't remember much, but I do remember it was extremely hard. You had to take a lot of notes; it was different from the other PE classes. It wasn't much hands-on, a lot of note-taking.

Bob had a similar response when asked about what he had learned from his science-based courses.

I learned enough to pass the test. It was kind of simple- here's a PowerPoint, go read the book, now come back and test. I am not interested in that- show me, make me want to be in this classroom.

This vein of thought was also evident when specifically addressing his "sport psych class."

My sport psych class was not a good class either. I do remember talking about it, but what I remember thinking at the time is that I will learn it when I get there. It

is not that what he was teaching at the time was not important to me, but I learned the most from doing it myself. Learning from other people that are doing it...watching other people in action.

Similarly, Stuart shared his views on his exercise psychology class:

Torture! I remember it. The way I learned it did not do much good. Our class was straight from the book...theory, theory, and theory again and not what causes it and what to look for. I just remember theory, and terrible theory. It was a tough class because the theories were all so close- it was all book- the class was very boring. It was a lot of read this, and regurgitate it, rather than how to apply it...That class read material out like a fourth grade class, and then it was put on a test. Theories? I couldn't tell you the first theory!

He explained his struggle to remember and understand the theories because “theories are wordy, and to understand them...you need to be given a situation and be asked to apply a theory to that situation.” Evidently, this instructional practice was somewhat of a rare occurrence in many of the science-based courses. As a result, many of the participants had difficulty remembering and retaining some of the concepts and principles covered in those courses. Caroline claimed that a reason for that may be because “a lot of PE teachers are kinesthetic learners” and this was reiterated by Bob who suggested that “physical education students are more hands-on learners anyway:”

I think that any class that can show us how it applies to our profession will make a significant difference. If you are going to spit out theories and then we have to take a test I am not going to remember it. I have to see it...show me...and show me how it works...why it works.

He further lamented about this issue of retention by discussing the “many important concepts that I really wanted to know about” in courses such as structural kinesiology. However, the instructional delivery and course content made it difficult for him to “make sense of the information presented” and “remember it to this day”:

It wasn't put into practice for me. They weren't giving me experiments say outside of the classroom. As far as, here is how this works. This is what you would do at an elementary school with this; this is what you would do at a middle school, maybe a high school. They don't make it practical for you...

This sentiment was also evident in Cameron's response to a question asking him about the knowledge gained from his History and Philosophy class.

In that class we had to write our own philosophy on teaching physical education and we learned about the Olympics and that kind of stuff, and how sport got started. I didn't get much out of sitting in a class and having to continually think about my philosophy.

Value and Utility of Knowledge in Practice

In addition to the retention issues and associated instructional practices, in many cases the participants were struggling to comprehend the “real-world value of theory,” and some even questioned the utility of learning these concepts and principles particularly for those participants currently teaching at the elementary school level.

Cameron had strong views on the value of theoretical knowledge as opposed to practical knowledge for a beginning physical educator:

You can talk about all the theory you want to- even folks that write books, but there is nothing that replaces being in a classroom, getting your hands in there, getting your feet wet- just seeing what it is like.

Stuart expressed the need to “know the theory to better understand what is going on” but like Cameron he felt that “applying it and the application is far more important.” He referenced the typically large class sizes physical educators have to teach on a daily basis and suggested that “most people would say you need the book smarts but when you have 40 to 50 kids they do not really apply- that is where it is much more application than book smarts and theory.”

This mindset was also evident when John offered his opinion on what he encounters in his classroom on a daily basis and the value and relevance of various theoretical concepts and principles:

The theory-type stuff ... when you have seventy kids one theory may work for one student, but another work for another one, and I try my best to individualize my teaching, but with a window of thirty minutes I have to focus more on the group than each individual, not because that is the way I want it, but because I have no choice, that is the reality. The theory-stuff not so much, the more practical aspects are more helpful than the theory.

One of the perennial dilemmas of teacher education is how to integrate theoretically based knowledge that has traditionally been taught in university classrooms with the experience-based knowledge that has traditionally been located in the practice of teachers and the realities of classrooms and schools (Darling-Hammond, 2006a). This integration of theory into practice is also a problematic issue in many PETE programs

(Corbin, 1993; Feingold, 1994; Metzler, 1994), and was clearly evident with many of the undergraduate programs in this study. This area of concern emanates directly from the foundational sub-disciplines of physical education (Bulger et al., 2000) and has also been recently addressed with Rink's (2007) commentary about the value of discipline knowledge for the preparation of teachers in physical education.

According to Bulger and colleagues (2000), a number of related factors have contributed to the current gap between theory and practice in physical education. Ross (1981) proposed that the primary variable accounting for the widening gap between theory and practice is the assumption that undergraduate physical education students possess the ability to integrate theoretical knowledge into professional practice on their own, without deliberate assistance from the PETE faculty. A similar idea is presented by Rink (2007) who suggests that "a major assumption of generic courses designed for a variety of majors is that it is not the responsibility of these courses to apply knowledge." PETE programs typically include courses based on sub-disciplinary knowledge (Bahneman, 1996), but fail to integrate the pedagogical concepts that will enable the practitioner to successfully apply this information in a physical education setting (Bain & Poindexter, 1981; Loughery, 1985; Robertson & Heyden, 1985). This was certainly evident from the conversations with, and observations of, the participants in this study.

Furthermore, the expectation of a successful leap from theory to practice may become even more unreasonable as undergraduates are repeatedly placed in less than ideal instructional environments (Collier & O'Sullivan, 1997; Siedentop & Locke, 1997). These questionable contexts provide future physical educators with inappropriate practice opportunities for the application of complex physiological and kinesiological concepts.

Collier and O’Sullivan (1997) reported that students are generally not afforded opportunities to apply theoretical knowledge from their previous educational experiences until concluding field placements and internships. Moreover, Tinning (1988) suggested that teacher education programs typically reinforce the passive routines of students rather than immersing them in the types of engaging activities that foster the development of rich and flexible knowledge structures.

The doubt expressed by many participants regarding the value of the scientific and theoretical knowledge gained during their undergraduate experience was further exacerbated by those faculty members’ they had encountered who lacked public school teaching experience. A similar concern was expressed by Metzler (2009) regarding “professoriate that is unfamiliar with the realities of day-to-day life in schools.” For many participants, this made it more difficult to accept and apply the scientific and theoretical knowledge they were being taught. Bob was quick to point this out when asked about what he had learned from his science-based courses:

A lot of professors went straight from high school to college to doctorate and as a result they do not understand a lot of the things they need to teach us- to get us ready and prepared for the school.

Likewise, Cameron talked about a professor he had for his measurement and evaluation courses who “had gone through and got their Specialist and then their doctorate, but had never really taught...so did not have the real world stuff.” Stuart also referenced the need to hear from professors who “have done it before” as you have a tendency to “gravitate towards those type of professors and steer away from those who do

not have that hands-on experience.” Moreover, Bob reinforced the perceived value of a professor with teaching experience:

Professors who have gone from degree to degree to degree and then on to college teaching are totally different from the professors who have taught in the public schools. They are a different type of teacher- they have the hands-on component.

According to Bulger and colleagues (2000), the problem of faculty credibility (in the eyes of the participants) is aggravated by changes in the preparation of faculty in the scientific disciplines and in pedagogy. In the past, exercise physiologists and other professionals who specialized in the disciplines of kinesiology had their roots in physical education or sport (Rink, 2007). Rikli (2006) also points out that faculty whose roots and interest is not in physical activity and the broader issues of kinesiology have been a major contributor to the fragmentation of the field. Like many of those faculty members referred to in this study, many of the instructors in the scientific and theoretically-based courses do not have the experience to be able to apply what they are doing to school settings- leaving much of the content at a low cognitive level (Rink, 2007).

In addition to the struggle many participants had with comprehending the “real-world value of theory,” the utility of the scientific and theoretical knowledge they learned during their undergraduate experience was uncertain for many; particularly those at the elementary school level.

Once again Bob had strong views on this topic:

A lot of the material- for an elementary school teacher- is over your head. High school- motor behavior, motor skills definitely. Anything to do with the body in general you need to know, as you are a teacher teaching health there. We are not

teaching health here- we teach kids about taking care of themselves, cleanliness, and their teeth and stuff like that, but nothing that we had to know to pass our test in college.

John also had issues with the “scientific side of it” and was aware that the majority of the scientific and theoretical knowledge he learned during his undergraduate experience may be “applied more at the high school level” and “being at the elementary level a lot of that stuff you learn just doesn’t work.” He recognized that it was “very informative” and certainly “makes us more knowledgeable about the subject, but as far as applying it and taking it to the students, not so much.” He wondered about the viability of the “theoretical side” and concluded that in many cases “it is just not feasible.”

Furthermore, he commented specifically on those courses that included instruction and content related to various psychological and behavioral theories and how they “tended to focus more on the mind of the athlete rather than a kid’s mind.” He went on to say:

For the most part it was focused on teaching athletes, and the thing is I am not teaching athletes I am teaching kids. Now if I was a college instructor, coach of the track team or baseball team, or even at the high school level, football, baseball, whatever that may be. But, at the elementary level... it is not so much our focus.

Graham also questioned the utility of his sport psychology class taught by a former professional tennis player which was “geared more towards athletes, not really kids” and was “not as useful from a PE perspective, but helped with coaching.” In

addition, he expressed limited use for the knowledge gained from his exercise physiology course when applying it to the elementary school level:

I guess if I were to teach health at the high school it would be a big help more so than here- right here it is just getting the kids out and playing...teaching them some skills.

Likewise, Karper (1997) questioned why PETE programs continue to educate prospective physical education teachers in courses that emphasize adult responses to physical activity. The research argued that it is unnecessary for a physical education major to develop a knowledge structure that is representative of the usual material covered in a traditional exercise physiology course. For example, Karper (1997) stated that educational materials concerning resistance training, cardiovascular dynamics, and exercise prescription have limited significance or applied value for the practicing physical educator unless they are specifically related to children.

A similar sentiment was expressed by Bob who experienced anatomy and physiology courses along with prospective nurses and doctors and those interested in the medical field. He felt that those classes were tailored towards the medical field and as a result he was now questioning how useful the material was to physical educators.

I believe that in order for it to be ideal for a PE teacher it would need to be programmed for the PE teachers, not an anatomy and physiology that a nurse or a doctor would necessarily take. Someone in kinesiology really needs to teach it so that it is useful to us when we actually have to leave.

Caroline was in agreement with Bob as she had had a similar experience with her anatomy and physiology classes that consisted of students pursuing degrees in the

medical field in addition to those in kinesiology and physical education. She referenced having to attend “lab,” how “that had nothing to do with PE” and that she “did not get much out of the class.” She believed that this “class alone turned away many students who would have been good PE teachers.” Interestingly, she made reference to the level of difficulty commonly associated with these classes.

Rink (2007, p.105) also discussed the “explosion of majors within departments” and how “that has led to course work in the disciplines being inappropriate for teacher preparation.” She goes on to say:

Most of the disciplines are now serving students of a variety of majors: exercise science, sport management, teacher preparation, athletic training, and physical therapy to name a few. Many of these courses are designed for majors who will specialize in one of the disciplines and therefore go on to graduate school or professions very unrelated to teaching in schools. What do you teach in biomechanics to a class of students in both athletic training and teacher preparation? The athletic trainer needs much more of a kinesiology approach and the teacher education student needs a lot of time practicing and observing movement and applying mechanical principles to real world settings.

Similarly, Dodds (as cited in Van Donsellar & Leslie, 1990) commented that introductory exercise physiology course enrollment traditionally includes students from a variety of majors who have different intentions for the application of the course content in their future professions. Course enrollment typically includes students who are majoring in physical education, athletic training, exercise physiology, athletic coaching

and physical therapy. It is highly unlikely that the unique educational needs of each student can be satisfactorily addressed in a course with this type of diverse enrollment.

To further compound the problem, the introductory anatomy and physiology courses required in many PETE programs (including some of those in this study) are likely to be (a) taught outside of the PETE program, (b) instructed by non-teacher educators, and/or (c) influenced little by PETE faculty regarding course content and instructional methods (Verner, 1991). While sub-disciplinary specialists possess a more complete understanding of the involved subject matter, they may lack the knowledge and ability to integrate the essential pedagogical concepts that make the theory to practice transition a workable proposition. The diverse nature of the course enrollment, associated time constraints, and instructor characteristics may interact to produce an educational environment that does not readily facilitate the translation of theory into the practice of teaching physical education.

Teaching Motor Skills

The practical application of scientific and theoretical knowledge was evident from the data; however, it was somewhat scarce and focused predominantly on the use of basic anatomy and the analysis and correction of motor skills.

In his discourse, Cameron recalled a particularly positive experience he had during his biomechanics class and how he has applied that knowledge in student- teacher interactions:

We had to take sport-specific movements and had to break it down, analyze it. We had to film each other doing it, we had to film someone experienced doing it, and we had to film someone who had never done it before to show the differences in

the movements. Dr. Z showed us what he did when he was in graduate school- he got a couple of pitchers from his university and showed them slow-motion pitching... and a kid is always talking about how they are hurting, how they are sore after pitching, especially if done incorrectly... and then you talk to your kid about slow-pitch softball and why a girl can pitch fifty innings a week because it is a more natural movement. But, really seeing that and talking about the why, connecting the theory to the practical, making that connection does so much for them and when I was learning it myself it did so much for me- figuring that stuff out, it was a great class and good knowledge for me. It is definitely something that I apply every day in my teaching here.

“How to correct students if they are doing it incorrectly” by “re-emphasizing cues” was something Caroline also learned from her motor learning and methodology classes and now applies on a regular basis. Stuart talked about the positive impact lessons on the fundamentals of throwing and shooting a basketball had, and how those instructional cues and acronyms- “step, point, throw and BEEF”- are “something I still teach my kids.” Bob credited his methodology classes for equipping him with the relevant knowledge to “go around and correct my students when I don’t think they are doing the right thing, as far as jump rope, or throwing, or catching.” He was aware of the need to apply this knowledge in his current role- “of course you put that into practice that is definitely one of your jobs as a physical educator.”

Graham was also conscious of the important role a physical educator plays in the development of motor skills. His student teaching experience gave him the platform to

learn and apply that critical knowledge required to analyze and correct motor skill performance. It is something he feels is a “big part of his teaching.”

We learned some of those things. I think it is very important. For example, when we are doing basketball in here- they need to learn the right way to shoot or the right way to dribble. While they are doing it, we like to walk around...and if they are doing a pass and their elbows are not out...hey...elbows out and step. So, it is very important they learn these fundamental skills at an early age, as there are some issues at the high school level. We see kids with bad throwing mechanics, and we can't change it, by then it is too late. So, correcting their mechanics is very, very important.

The anatomy and physiology classes that were an integral part of the undergraduate program for all of the participants did provide some of them with basic knowledge of muscles and bones applicable to their current practice. For example, Stuart addressed his anatomy and physiology courses and recognized that “I do use a small part, for example the body parts, the muscles.” Likewise, Bob acknowledged his use of basic anatomical knowledge to teach his elementary students a unit related to muscles and bones:

I do use it... we have a Mr. Muscle and Mr. Bone and we go through the muscles and bones with the students and although I do not remember all of them, we do go through them. But, that is pretty much all that I needed to know, because I teach elementary kids, so I am not going to get into the cellular level of DNA or anything like that!

CHAPTER 5

SKILL-BASED AND FITNESS-BASED COMPETENCE

The second standard in NASPE's Initial PETE Standards (NASPE, 2009) addresses skill-based and fitness-based competencies of candidates and focuses on whether they are "physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health-enhancing fitness as delineated in the NASPE K-12 standards." Through the interpretation of data from interviews, observations, and artifacts this chapter will attempt to answer the following research question: *What skill-based and fitness-based competencies acquired in their undergraduate program do beginning teachers use in their practice as public school physical educators?*

Themes

Two strong themes emerged from the data analysis. The first theme indicated that the participants had been exposed to a wide variety of fundamental movements and physical activities in their undergraduate programs. They felt competent demonstrating and performing basic loco-motor movements and tasks, particularly in elementary physical education settings. However, that competence for teaching fundamental sports skills, typically learned in short instructional units, was limited when considering more complex movements taught to upper grade levels due to knowledge and skills that were lacking in depth and breadth.

The second theme highlighted the participants' lack of accountability for fitness in their undergraduate programs and limited knowledge of health-related fitness. The participants did not recall having to complete any fitness testing in their undergraduate programs, despite occasional references from faculty on the importance of being physical role models for their students. In addition, the participants' gained minimal health-related fitness knowledge in their undergraduate experience, as it was not an integral part of any classes.

Variety of Fundamental Movements and Physical Activities

Many of the participants recalled being exposed to a variety of fundamental movement patterns and physical activities in their undergraduate programs. Traditional American sports such as football, basketball, and baseball/softball were common in many of the methods-based classes. These staples were often supplemented by a myriad of additional sports and activities such as volleyball, soccer, lacrosse, team handball, flag football, ultimate Frisbee, track and field, tennis, badminton, and golf. Moreover, the participants were well-versed in the basic loco-motor movements that are commonly taught at the elementary school level and remembered learning about and applying these fundamental movements throughout their undergraduate education and continue to do so now in their current practice.

For example, John recalled learning about loco-motor movements in his elementary methods classes and how they were utilized to teach a variety of lessons with different objectives and content throughout his undergraduate experience. This knowledge was reinforced during field experiences and student teaching where he was

able to see these activities being incorporated into many different lessons and grade levels:

We were always jumping, hopping, skipping, and galloping. We learned about these loco-motor movements in our classes focused on elementary students. You remember these things as we were often the ones doing it! Other classes also used them for warming-up... adding variety... and challenging fitness. Young kids really need these skills. My observations at the elementary level showed me many different ways to use these basic movements. I also had a master teacher who appreciated the need to teach these loco-motor skills to her students...so I got a good snapshot of what that looked like in a real classroom.

It was evident from my field notes and observations that these undergraduate experiences had positively impacted John's actual practice. Indeed, I witnessed John incorporating various loco-motor movements into his lessons, demonstrating proper form, and reinforcing correct technique with his students during my school visits.

Caroline also recalled learning about loco-motor movements in her classes and having to perform them quite often. Like John, she uses them on a regular basis with her classes and recognizes the importance of doing so for elementary students. She expressed a high level of confidence and competence in demonstrating these basic movements for her students, which is not surprising considering her athletic background.

I found out that the best way to get elementary student moving is by using loco-motor movements. My professors and peers were always using them to get us moving. Most of them were easy to do...but we were expected to be able to do all of them and demonstrate them properly. It was not really a problem for us, as

most of our majors were pretty athletic. I have seen students here who are not very coordinated and struggle to do some of the more complex moves, like galloping and skipping. I know it is important, so I show them how, and give them lots of chances to practice. They are second nature to me, so it is easy for me to demonstrate how to do it right for the students.

Similarly, Bob discussed his use of fundamental movement patterns and how his current practice was shaped by what he learned about loco-motor skills in his undergraduate program. Once again, he expressed the ease with which he is able to perform these movements.

We have kids walking, running, skipping, jumping, leaping, and hopping a lot. We like to incorporate a lot of different movements so that the kids can develop their motor skills. It is a little different from me showing them how to play soccer or how to dance- it is easier for me. We had lots of practice doing these types of movements in our undergrad program. I remember them being used a lot for warm-ups, tag games, and relay races. We learned about them in my elementary methods class... rhythmic movements... a lot of teachers I observed used them.

In addition to basic loco-motor skills, many of the participants also recalled learning about a wide variety of sports and physical activities in their undergraduate programs. These were typically introduced in methodology classes (such as “team sports, individual/ dual activities and sports skills”) as short instructional units where the fundamental skills, basic rules, and game play would be covered. For example, Cameron recalled a collection of methodology classes that introduced him to many sports and activities that he had had limited exposure to previously.

A lot of us were baseball, basketball, and football players, so it was good to find out about some sports that we had not played much as well as covering those that we were familiar with. Things like...soccer, handball, volleyball and ultimate. We would spend three-to-four weeks on each one. Talk about the history, rules, practice the fundamentals, and play a game. We taught each other how to perform the skills.

Stuart recalled a similar set of classes that also exposed him to a variety of physical activities and gave him an opportunity to practice the fundamental skills required to effectively teach and participate in each activity.

We had a class for team sports and another class that covered individual and dual activities. I remember learning about basketball, volleyball, handball, soccer and softball in the team sports class. I remember badminton, tennis, golf, orienteering, and track and field in the other class. Each unit lasted for about three weeks and most of that was peer teaching- dribbling, passing, shooting, and so on. The fundamental skills for each sport were covered and some basic rules and strategies. We each taught two or three times and by the end of the semester we had seen a lot of skills.

The two classes that were referenced by Stuart were also discussed by John. He also remembered a mix of traditional and non-traditional American sports being offered.

I learned about the history and rules of numerous sports. My team sports class was very hands-on. Everyone had the chance to teach each other. I learned how to teach and perform different skills from my peers. I remember learning how to kick a soccer ball, how to spike and block in volleyball, modified games for team

handball. My individual and dual class was similar. We learned how to do the triple jump, grip and stance for golf, badminton smash, and tennis serve.

Instructional cues were a big part of those classes and demonstrating how to perform each skill correctly. Not all of us could do everything well, but at least we had a chance to see what it was supposed to look like, have a go, and practice.

John went on to discuss his perceived competence in performing and demonstrating a wide variety of sports and activities while questioning the relevance of historical information to the students that he now teaches. He felt that his undergraduate program certainly contributed to the level of motor skill proficiency that he had acquired, but he was also quick to point out that part of that was due to his inherent athletic abilities.

The kids want the skills so it is up to me to teach them. I need to know that aspect of it. I think when we were in undergrad we went a little too far into the other stuff- the history of it, the origin- you are not going to use any of that stuff! I couldn't tell you who founded the NFL because it doesn't matter. I feel very competent with many sports and activities... but I don't know how much to credit that to undergrad...although it certainly helped! Playing sports growing up and being an athlete made it easier to learn some of those skills that we were taught. I am able to demonstrate proper form for my students and know the basic fundamentals, rules and strategies for lots of sports- undergrad definitely helped with that. It was more than adequate, especially for the elementary school level where I only teach them the basics and may not even get into many of the rules, strategies, and tactics.

Candace also recalled learning about a variety of physical activities and sports in her undergraduate program. Like John, she expressed a high level of confidence and competence regarding her ability to perform and demonstrate many fundamental skills and movement patterns at the elementary school level. However, she did point out that the instructional units that she was familiar with at the undergraduate level were very short, and as a result she was not sure if her acquired knowledge and skills in this domain would be adequate for the middle and high school level. This concern is similar to the one expressed by Siedentop (2002) who criticized the content knowledge provided by PETE programs that often results in “short-term multi-activity programs with little progression and few real outcomes” taught by physical educators who are “ill-equipped to teach anything beyond a beginning unit of activity.”

We had sports skills one and sports skills two and we did a lot of activities- tennis, bowling, badminton...badminton is something I use a lot because it was fun in undergrad... volleyball, golf. We spent about a week on each sport and I do not think that was enough time. I feel like we could have had more practice. We could have done with more. They wanted us to focus more on non-traditional sports- limited basketball, football, and baseball. The program did a good job of teaching me the basics, how to demonstrate techniques, and it helped me to feel very comfortable doing these movements now in front of my students. Some of the more advanced skills and techniques were not really covered so it may be a little more difficult to show middle and high school students how to do everything properly. But, all in all, my program really helped and I learned a lot of the basics that I still use today.

The wide variety of physical activities and sports that were part of Graham's undergraduate program helped him to develop a "solid foundation of fundamental skills" and were certainly enough to ensure that he had no problem demonstrating various techniques to his students. Again, like many of the other participants he was aware of the relative ease of doing so at the elementary level, and the challenge the middle and high school contexts would potentially present. He enjoyed learning about new sports and activities that he was not exposed to growing up and really felt that these experiences in his undergraduate program made him more likely to include them in his classes.

My program gave me the opportunity to learn about a lot of different activities and sports. I had classes that focused on teaching fundamental skills and they were great! They gave you a chance to practice lots of techniques- some more familiar than others! You came away from those classes with the knowledge of how to perform and the experience of doing it. This has helped me now, particularly with my upper (elementary) grades when a good demonstration and a visual aid can really help the learner. I guess it would also help me to teach and show them at the middle school, and high school, and with coaching. Just not sure if I would be able to do everything I need with those older kids. I have tried to incorporate some new games, such as team handball, into my classes and I feel comfortable doing that as I know enough... and can show them enough to pull it off.

Cameron simply credited his instructors for "creating a positive experience" and "making me feel comfortable and competent teaching a variety of skills." Again, he learned some activities (such as "pickle ball" and "team handball") that he now includes

in his program as he “developed an appreciation for the games” and was “given the tools to play and teach them effectively.”

The value the participants in this study placed upon learning about and utilizing fundamental movement skills was consistent with elementary physical educators surveyed by Collier and Herbert (2004). The comprehensive set of activity courses that the participants were exposed to provided them with instruction regarding how to effectively teach a variety of basic movement skills, particularly at the elementary level. Again, this finding was similar to that found by Hill & Brodin (2004) who reported that teaching movement and sport skills was the least perceived area of difficulty for physical educators in the State of Washington due to their adequate undergraduate preparation.

Limited Accountability for and Knowledge of Fitness

There has been discussion in several journals over the past few decades regarding issues related to what physical education teachers and physical education majors should actually know and be able to do in relation to fitness. For example, should physical education teachers be fit (Hinson, 1998; Issues, 1992)? should fitness be a factor in hiring a physical education teacher (Melville & Cardinal, 1997)? should fitness testing be a requirement for graduation at the university level (Issues, 2001)? In addition, there has also been research related to the use of fitness tests in PETE programs (Staffo & Stier, 2000), what physical education majors know and can do in relation to fitness (Peterson, Byrne, & Cruz, 2003) and what teachers believe and know about fitness and fitness testing (Kulinna, Silverman, & Keating, 2000; Miller & Housner, 1998).

As they recalled the transition from their undergraduate program to a full-time teaching position and the demands placed upon them, both physically and mentally, many

of the participants discussed the necessity for physical educators to be “physically-fit and in-shape” in order to conduct their duties. This was not surprising since the combination of first time preparation for classes, developing relationships with colleagues and students, being on one’s feet all day, and having vigor and enthusiasm for each class session is demanding, physically, mentally and emotionally (McGaha & Lynn, 2000). Indeed, a large number of Washington State physical educators perceived personal fatigue as a high area of difficulty during their first year of teaching (Hill & Brodie, 2004). For example, Bob remembered those first few months on the job and the physically-demanding nature of his work.

I guess in the beginning it is tough... it is nothing you learn from college. It is physically demanding and you just do not appreciate it, or understand it. In the beginning, my first three-to-four months, I was ready to go to sleep as soon as I got home. I stay physically active all the time, I have done my whole life, but nothing prepares you for being on your feet for seven-to-eight hours a day. The large class sizes and back-to-back-to-back classes mean you are constantly on the go.

Graham found the transition equally challenging and remembered the first semester being “a culture shock” as it was “night-and-day” from what he had experienced in his undergraduate program.

It was a wake-up call. I have been in situations where I have been at the school or on the field from seven in the morning until eight at night. That is just part of the job, especially if you want to coach, like many of us do. My first semester was tiring- I was beat! Being a new teacher, learning all the rules, one class after

another, bus duty, meetings, it was overwhelming at times. You definitely had to be in shape- especially with our job being so active. You need to be moving... you need to be active... all day long... and that takes some getting used to. “Being on my feet all-day-long” also took Stuart a while to get accustomed to. He was quick to point out that “physical education teachers are typically more active than other teachers because teaching in a gym-setting demands involvement- physically-active teaching.” He recalled his first week or so in his new job:

I was physically and mentally exhausted. Nothing could have prepared me for the energy needed to do everything a physical education teacher does. It was hectic! Talk about a baptism of fire! It was a whirlwind of emotions. That coupled with all the other duties that you do not think about or were not aware of. Thankfully, I was in reasonable shape... otherwise I would not have lasted this long.

The induction phase was also a challenge for Cameron and reinforced his belief in the need for physical educators to be “appropriately conditioned to fulfill their duties.” Cameron was also adamant about “setting a good example for the kids” and was acutely aware of the “negative message associated with an overweight, out-of-shape physical education teacher.” This belief (“one thing I personally took to heart”) was often reinforced by faculty in his undergraduate program- “they would say you want to be in-shape as a physical education teacher.” Some faculty would also provide specific examples such as “you cannot be a cardiologist if you eat donuts and fried chicken all day” and “you don’t want to be an overweight physical trainer.”

Candace also recalled faculty who were trying to reinforce the message that “being fit and leading a healthy lifestyle” was important. She mentioned “practicing what

you preach” and remembered one specific professor who used to say “you cannot teach something that you are not practicing.” This message still resonates with Candace as she referenced her commitment to working-out every day and monthly consultations with a nutritionist “because you cannot teach a child to be healthy if you are not healthy.”

Similarly, Graham’s heightened awareness of the need to be physically fit impacts what he does today. The value placed upon that in his undergraduate program is still very evident in what he does in his current teaching position. He continues to exercise regularly to stay physically fit as he feels this is necessary to be a “role model” and to get respect and gain credibility from his students.

I believe I need to be physically fit as you are setting an example for the kids. If they look at you and see that you are not able to do what they are doing, then they are probably not going to have much respect for you. I stay fit so what I say in class is believable to the kids... you should certainly be a role model for these kids- absolutely.

The importance of leading a healthy lifestyle and how that can positively impact teaching was not lost on Chris, either. He was acutely aware of how important his “image” can be to those students he is teaching.

I learned that you do not want to be smoking like a freight train and then going in and teaching a lesson on drugs and alcohol. You can pass whatever laws you want to pass... get whoever you want to do things...I know Michelle Obama is getting involved... and the NFL is doing their thing with Play60... which is great- you will get a lot of kids involved with that. But, the ones who are with them every day at school need to instill physical activity and promote a healthy lifestyle. I

need to be in-shape and healthy, so I can deliver that message. You need to practice what you preach. If you really want them to fall in love with activity, you have to do it yourself.

There also seems to be agreement in the literature that physical educators need to be active and fit in order to serve as appropriate role models for their students (Issues, 1992). Many others in the profession agree that teachers can reinforce the basic tenets of physical education by being physically fit and active (Corbin, 1984; Pangrazi, 1991) and there is abundant research demonstrating the positive effects that good physical role models can have on students (Clark, Blair, & Culan, 1988; Spencer, 1998).

Despite the participants' acknowledgement of the need to be a physically-fit teacher and positive role model and the occasional reminders of "appropriate" (from the perspective of PETE faculty) physical conditioning and appearance, the majority of the participants did not recall learning about, or being required to meet, any explicit standards of health-related physical fitness.

Stuart's undergraduate program did not set any clear standards or expectations for fitness levels. There was little, if any, dialogue regarding an appropriate level of fitness, and structured fitness assessment and monitoring of physical education majors did not take place.

No expectations... never mentioned. Our group was in reasonable shape so it never really came up. We did not spend a lot of time learning about aerobic fitness, strength, endurance, and flexibility. Although, we did do a few basis tests in our measurement and evaluation class to evaluate aerobic capacity and flexibility. I remember a PACER test and a sit-and-reach test. They were a small

part of the class and certainly not a focal-point for the program- just a chance to have a go and get a basic sense of how to do them. We did not really interpret the scores or keep track. I remember that we had some students who did really well and others who struggled a little bit. But, it didn't really matter and I don't think it was ever discussed after class- don't know if there is actually a way to enforce a standard like that.

Cameron had a similar experience at his institution where students of varying fitness levels and physiques were all part of the health and physical education track. His program never explicitly addressed health-related physical fitness standards for cardio-respiratory endurance, muscular strength and endurance, flexibility and body composition. Moreover, as far as he was aware, these students with "less-than ideal body weight and composition" successfully graduated from the program without any targeted interventions or dialogue related to these issues.

I do remember we had guys and girls who were heavy and needed to shed a little weight, but there was never anything said to them openly in class as a group. We were never officially tested to see if we met any particular standards. It was implied that you needed to be in-shape, but when it came down to it we knew very little about fitness standards and it was not a part of our program. Everyone graduated, whether they were fit or not, and I know nobody was held back or failed for being overweight or anything like that.

Candace acknowledged that her undergraduate program had an "in-built expectation for the students to be fit and healthy." However, much like Stuart and

Cameron, she learned little about health-related physical fitness standards, and did not partake in any structured evaluation of her fitness levels at any point in her program.

I think there was an expectation to be fit back then. Most of the students were in-shape and I don't remember any of them being overweight- having said that, we were never asked to complete any official fitness testing apart from the occasional run, walk, or flexibility exercise that was done in some of the classes. We did not have to meet any specific standards in my undergrad program, so everyone made it through whether they were in great shape or not.

Bob talked about a general wellness course taken early in his undergraduate program that did touch upon fitness, but like many of the other participants his knowledge of health-related fitness concepts and participation in fitness assessments was minimal.

I had a wellness course that covered some of the basics of aerobic fitness, strength-training, and flexibility. But, that class was required by everybody at the university so it did not go into much detail. My major-level classes did not really cover much health-related fitness stuff. I do remember some basic tests, like a one-mile walk, a PACER test, and some stretching exercises, but that is just about it- definitely no organized fitness testing for our majors. Most of us were in pretty good shape, I think, but we did not have to prove it.

The few studies (Issues, 1992; Melville & Jones, 1990; Staffo & Stier, 2000) that have looked at the use of fitness testing in undergraduate PETE programs suggested that fitness assessment of pre-service physical education majors was not common. Most recently, Staffo and Stier (2000) reported that the vast majority (69%) of the PETE

departments they surveyed did not require physical education majors seeking teacher certification to take a physical fitness test. These findings hold true for those undergraduate programs investigated in this study and indicates that fitness assessment is still not a priority for many PETE programs.

Despite some evidence suggesting that physical education teachers do attain health-related fitness knowledge during their teacher preparation (Ayers, 2002; Barnett & Merriman, 1994), participants in this study did not recall learning about health-related fitness in their undergraduate programs. This was in agreement with a study conducted by Miller and Housner (1998) who investigated what pre-service and in-service physical educators knew about (a) body composition, (b) flexibility, (c) muscular strength, (d) muscular endurance, and (e) cardiovascular conditioning. Their findings revealed that the health-related fitness content knowledge of in-service and pre-service physical educators was considered below adequacy (65.22% on a 100-point scale). More recently, Castelli and Williams (2007) also revealed deficiencies of health-related fitness knowledge among physical education teachers that similar to those findings reported by Miller and Housner (1998).

CHAPTER 6

PLANNING AND IMPLEMENTATION

The third standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates planning and implementation of “developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students.” Through the interpretation of data from interviews, observations, and artifacts this chapter will attempt to answer the following research question: *What knowledge and skills learned in their undergraduate program do beginning public school physical educators utilize when planning to meet the diverse needs of all students?*

Themes

Three strong themes emerged from the data analysis. The first theme indicated that the participants learned a basic lesson plan template from their undergraduate experience to assist them in addressing the diverse needs of their students. This framework had varying degrees of applicability in the field and was dependent upon the particular context in which they were teaching.

A second theme was related to dealing with the student exceptionalities that is frequently encountered by public school physical educators in today's schools. For many participants, this meant working with other educators to address the diverse needs of all students; developing a better understanding of these students with exceptionalities; and not having the specific knowledge and skills to accommodate these individuals.

A third theme was the knowledge of instructional technology gained by the participants throughout their undergraduate experience and the lack of resources to support the use of technology in their current practice. Many of the participants gained knowledge of computer-based programs to assist with planning and implementation of appropriate learning experiences; however, actual use of technology in practice was sporadic, as issues of accessibility and funding were commonplace.

Lesson Plan Template with Inconsistencies in Practice

Many of the participants were aware of the need to develop and create lesson plans and expressed knowledge of the basic format, framework, and structure learned during their undergraduate experience. Bob was aware of the “need to be organized” when designing and implementing appropriate plans to meet diverse student needs and suggested that “it starts with lesson plans.” He credited his undergraduate education for providing him with this knowledge- “I would not have known how to do a lesson plan if it were not for my undergrad.” He remembered having “no idea what a lesson plan was...no concept of how it works...how you use it” prior to beginning his undergraduate program and “now I do.”

Similarly, Caroline recalled the emphasis her undergraduate program placed on the design and implementation of plans- “we had to develop a lot of lesson plans” and “we had a whole class on how to do lesson plans for PE.” This resulted in the development of a “lesson plan book” that she still has in her possession- “it is in my apartment and I still look at that...I refer back to it.” The pack was full of lesson plans created during her undergraduate experience that have helped Caroline to expand upon

the topics she teaches to her classes and ensure that they are exposed to a wide variety of activities- “I want these kids to know more than just basketball and football.”

John also credited his undergraduate experience and his methodology classes in particular, for helping him “learn how to create a lesson plan.” Although, he was conscious of the simplistic nature of that knowledge- “lesson plans as far as undergrad...I would call it pretty basic.” This sentiment was echoed by Stuart who felt the knowledge gained regarding lesson planning was “pretty useful” as “the classes I remember you having to do lesson plans for were very generic, especially when talking about the structure and make-up of the actual plan itself.”

The lesson plan template referred to during the interviews had some common elements that were mentioned by the majority of the participants. For example, when asked about what she learned about the content of a lesson plan, Caroline responded:

It has your name; the grade level; the time; what the students should learn; the lesson unit; the equipment; what your goal is in teaching the lesson; your objectives. One thing that stood out is that they wanted us to write for every lesson plan...the students will be able to...so that is something that stood out.

They wanted to know what students would be able to do...the opening, the work period, the closing. What will they be doing throughout the class and how will you close the class- those were the major things that were important.

Bob also felt that he had learned the “basics of how to set it up” and felt he understood the framework of a lesson plan based upon his undergraduate experience.

I get the concept- here's our basics, here are our objectives, and here is what we need to do. This is how we close a class out, here is how we start a class- warm-ups or whatever, and it is simple.

John was also conscious of learning the basic structure of a lesson plan- "you have your objectives, your equipment needed, the meat of the lesson, and certain cue words." Similarly, Stuart "knew what to do...I had seen it from undergrad...name, lesson, objective, equipment used."

Many teacher education programs ask undergraduates to develop detailed daily lesson plans that are felt to be beneficial to pre-service and beginning teachers (Hill & Brodin, 2004; Hall & Smith, 2006). Indeed, the participants in this study learned about planning for a lesson by developing and writing lesson plans based upon a relatively standardized template. This template was based upon the formulation of objectives learned in their undergraduate programs and supported in the literature by theorists who believe that training pre-service teachers to plan by first specifying objectives, followed by the selection and organization of activities, and finally evaluating outcomes is both logical and sound (Goc-Karp & Zakrajsek, 1987; Housner & Griffey, 1985; Placek, 1984). This outcome approach to planning, taught in the undergraduate programs and applied in practice, is a reflection of standard-driven education where teachers in many subject areas are now required to focus on learning objectives and outcomes (Twardy & Yerg, 1987).

Another element that was commonly discussed was the use of standards when developing lesson plans and implementing appropriate goals and objectives. Typically, these standards were established by national organizations prominent within the field of

health and physical education, adopted by state and local agencies, and taught by the undergraduate programs. All of the participants recalled their programs discussing specific standards with them and many were required to include standards on their lesson plans. This level of understanding was in contrast to a previous study conducted by Chen (2006) who found that many physical education teachers lacked understanding of the National Standards for Physical Education (NASPE, 2004) as well as the desire to learn about them. For example, when Cameron talked about his methodology classes he specifically addressed the importance of standards:

We always had a list of standards on our lesson plans- where this came from, what it is about...as far as having them listed on lesson plans...you had to be very specific. It usually ended up being three-to-four pages when you got done with it.

Stuart also remembered being exposed to standards during his undergraduate experience, and responded immediately when asked to talk about it:

Yes...one particular professor was really big on NASPE standards. How to find standards? What was in a standard? What covered a standard? It needs to be done in undergrad. I do remember it! You have to apply it- everything that we did had to cover a standard.

Bob admitted knowing very little about standards prior to his undergraduate experience- "I had no idea in the beginning- what standards were, where they came from, and why we needed them." He was aware of the positive impact his program, and one particularly memorable experience, had on his current knowledge related to the standards:

I learned why we had them: it keeps everyone on the same page as far as what has to be taught, and an idea of how to teach it. I got that from my program...

knowing NASPE... whatever the standards were at the time. Before, I had no idea what they were... what they meant. I even went to a state convention and it was nice to see things from different people, different lesson ideas. It was very interesting to see how they interpreted the standards. You can definitely interpret them differently from one lesson plan to another. A lot of them can be used in one lesson plan and I did not understand that, until then.

The standards were also a part of John's undergraduate experience, although not an area he was particularly focused on- "during my undergrad from good instruction we were informed that the standards were in a process of change, so when I was coming through I did not focus on them that much. But, we had to know how to access them...how to interpret them...and they were certainly taught."

As well as learning about the state and national standards during their programs, many of the participants now implement them as part of planned learning experiences to address the diverse needs of their students. For example, Bob discussed a new initiative being proposed by his county that encourages all physical educators to create and submit sample lesson plans (incorporating the standards) to a central database. These could then be viewed by all physical educators in the county and modified to meet their particular situation:

Right now as far as standards go, we are talking about getting a lesson tech program on our computer where we all send our lesson plans to one place. Where everyone can take pieces from each lesson and make their own and they will

include the standards, so we definitely use our standards. Our county wants to make sure we are using our standards. We have one lady who is in the Board office and in charge of curriculum who emphasizes that we use standards and makes sure we have our essential question up every day or every week depending on how long our lesson is.

John was also familiar with the required use of standards in practice and the need to include them in his lesson plans throughout the school year:

As far as now, we incorporate them into our lesson plans to make sure we are focused on PE. For example, like today we were focused on Standard 4- achieves and maintains a healthy level of physical fitness. What we do is usually focus on one standard, and do that standard for a week. There are six standards, and each of those can be broken down into more elements. We like to keep it simple, and since we are doing some integration as well, we just like to focus on one standard, and try not to get too complicated with it. We focus on that standard for a week- then change it. So every 6 weeks, we are doing the standard again. So over 180 days, we cover each standard many times.

Similarly, Stuart uses the “state standards” to developing his current lesson plans and keeps a record of these standards for “quick and easy reference” in his office to satisfy the requirements set forth by his administration.

When I do my lesson plans I just put the numbers- I have a folder with all the standards in my office. I do not turn those standards in with them, but if they did come to me and ask “what do these standards cover?” I can show them

immediately. I do not just write down any numbers the standards do actually show what each lesson is trying to cover.

Caroline also incorporates the state standards- this time by displaying them on posters in and around the gym. She also refers to these during the beginning and end of many lessons:

I go by the state standards and I have my standards posted. That is important to me. My administrator was even bragging during a faculty meeting- when I first got here- that the PE teacher has her standards up. How could you not have your standards up?

Clearly, the data indicates that many of the participants developed knowledge of a basic lesson plan framework as the result of their undergraduate experiences. This lesson plan template included common terminology related to lesson objectives, equipment, student learning, content, and closure. In addition, knowledge of national and state standards gained throughout their programs enhanced the creation of lesson plans and appropriate learning experiences. As a result, the participants left their undergraduate programs knowing more about a basic lesson plan format that included standards-based outcomes to assist them in addressing the diverse needs of their students.

Having said that, there were notable inconsistencies in the practical application of this knowledge and related skills as some participants expressed the need to know and do more, whereas other did not see the need at all! As a result of diverse contextualized settings, long- and short-term planning can vary from school to school and program to program (Hall & Smith, 2006). For example, John described a context in which he is

expected to produce lesson plans that are comprehensive in detail, much more so that what he experienced during his undergraduate education:

As far as what I did today in the reality setting, it is a little more complicated and it seems to be getting more complicated year to year. It seems like they are adding more to the lesson plans now, and it may not be that undergraduate was inaccurate back then, it just may be that it has evolved. For example, my current lesson plan must have ten different areas that I have to look at- it talks about what is my focus, what standards am I working on... we have materials, and things of that nature that we incorporate now, things like the word wall and essential questions... we incorporate what kind of technology we are using, what kind of assessment methods are we using. What kind of closure are we using, because lots of times when you get a lesson plan at undergrad it is just basic here, here, here, it does not necessarily tell you how you are going to open up that lesson, or how you are going to close that activity. And that is more of what I need as of today. And more about what my learning objectives are that was not as much of a focus, but still a part of my undergrad, but now it is much more of a focus and not only what are my learning outcomes as far as PE, but what are learning outcomes as related to the classroom setting- health, science, math, overall it is just a little more complicated now and it is hard to consolidate with what I had learned before.

In contrast, Cameron is currently working at a school where the template he learned during his undergraduate experience is very different from what he is expected to create now.

I can say now that I do not use the same format. My principal and assistant principal... what they want to know is where I am going to be and what I am going to be doing. I can honestly write down that we are going to be playing volleyball today, focusing on the serve and the set, and at the end of the day I am going to ask these questions to make sure at the end of the day they got something from it.

Candace was even more dismissive of the utility of structured lesson plans in her current context where “in PE they really don’t care about lesson plans anyway, I came to find that out.” These distinctly different experiences certainly raise questions regarding the necessary depth and breadth of knowledge and skills needed to plan a lesson and implement it to address the diverse needs of all students in actual practice.

Student Exceptionalities: Assistance, Understanding, and Accommodations

There is an increasing diversity within the society of the United States, and hence student population in public schools, requiring a cadre of teaching professionals who understand and respect diversity (Choi & Chepyator-Thomson, 2011). Differences associated with gender, ethnicity, national origin, social status, religion, age, ability and disability status, personality, sexual orientation and so on (DeSensi, 1995; Hodge, 2003) define an evolving and expansive meaning of diversity. Scholars in teacher education, including physical education, have called attention to the widening gap between cultural and ethnic diversity of school children and their teachers (Burden et al., 2004). With most novice teachers across various disciplines in teacher education programs being White Americans (McIntyre, 1997) and 35% of enrollments in elementary schools consisting of students of color (Futrell, Gomez, & Bedden, 2003), diversity is commonplace.

When describing his current teaching environment, Stuart was well aware of the aforementioned student diversity that is now commonplace in his gym, and others like it, and the challenges this presents to a beginning physical educator.

We are kind of thrown into the mix... PE is the true melting pot. We have kids of high intellectual ability and low intellectual ability, high physical ability and low physical ability- it is definitely not the easiest job in the world as many people would think.

A similar context was described by Bob when asked to address working with diverse students in his current position:

Most of the children in this area around our school are from a lower socio-economic class. Things are very minimal to them as far as experiences and stuff like that, so when they come to school there is a language barrier as their mother may stay at home and not learn English. You are trying to teach them something, when you are trying to get them to understand something like the language barrier really comes into effect. It is really not just our Hispanic kids- we also have around ten kids from the Middle East. The local army base is right there, so we are getting kids from all over the world coming here. The language barrier is hard to get them to understand some things.

Cameron also talked about some of his classes where there is often a mix of “regular ed.” and “special needs” students:

We do have that here, and not just learning disability students, because physically they can blend in. But, some of the severe and profound special needs students will come in every few weeks- and it is just different to get them to understand

what they are doing, to modify things as to where they can participate and have fun, but where the other kids aren't getting held back at the same time.

When describing their teaching environment, many of the participants also talked about the significant role that special education teachers and adapted physical education specialists often play in their day-to-day interactions with a diverse student population. This "support and guidance" was certainly viewed as a positive from the perspective of the participants and was not seen as a slight on their own ability to work with a variety of students. Similarly, Hardin (2005) found that other teachers were a valuable knowledge source for physical education teachers when learning how to teach students with disabilities in integrated environments. Indeed, Bob was aware of the important role they play and his limited knowledge base and skill set in this area- "I feel I can deal well with the milder kids and with the more severe cases you usually have an adapted PE person or someone else to assist. They have had more experience dealing with these kids than I have." He also talked very positively about his ESOL (English for Speakers of Other Languages) teacher who works closely with him to help him communicate more effectively with these particular students:

We have our ESOL teacher who is wonderful. You can ask her anything and if there is a behavior problem you are having with a child or something that you do not understand with a child. You can literally take the child to her, and she speaks Spanish. She may not speak Middle Eastern or Arabic, but she can understand them better than I can- she is amazing and helps me a lot with diverse students.

The special education teachers and assistants at Stuart's school are also frequent visitors to his gym and he has become accustomed to them providing a "safety net" for him and making it a lot easier to teach and work with diverse students on a daily basis.

When our special ed. teachers come, the special ed. teacher and two para-pros are with those kids. They have been around and they come every day, so they know how I do things and what to expect with these kids. So, it is easy on me.

This active supervision and monitoring by special education teachers or adapted physical education specialists in the gym was experienced by all of the participants and certainly made them feel more at ease when it came to working with a diverse group of students. In Graham's case this required (by law) support was extremely beneficial to address an area in which he felt he was lacking- "although working with diverse students is not a strength of mine, it is not a necessity, as you always have another teacher who comes with them to PE."

In preparation for working with these diverse students, the participants recalled a general special education course that was commonly taken during their early experiences in their undergraduate program. For some, this was supplemented by an adapted physical education course that was typically taken during the latter part of their program. In many instances, these courses were positive experiences for the participants as they learned relevant knowledge and skills to assist them in working with a diverse student population. These perspectives were in agreement with a previous study conducted by Hardin (2005) who also found that physical education teachers were positively impacted (improved confidence and competence) by their sole adapted class. For example, Stuart fondly

recalled his general special education course that was “insightful and memorable” and taught by a “respected instructor”:

Great instructor for SPED class- was a middle school teacher and had a kid with Asperser's- very passionate. I was not aware of that at the time and learned a lot from the teacher. Also, had reports where we had to watch a movie, break down the special ed. issue and talk about it. I learned a lot from that class! Such as medications- you cannot say something about a kid's meds. Stuff like that you remember. We also had to complete field experience hours and that helped to expose us to a variety of settings and gave us an opportunity to interact with different students. The special ed. class was fantastic- I certainly learned a lot!

This positive reaction to the course was replicated by Bob who had taken the same class and was able to talk about what he had learned and how it had helped him to work more effectively with certain special education students:

I loved our SPED class. Our professor, she was awesome! I learned about different types of children, and trying to understand them and their uniqueness. The chance to work with them in the public school setting was great- there was so much- autism, and everything else. We have some children here who are special ed. but they are not on a spectrum so far away that you cannot understand them or anything like that. Once you get to know them, what to look for, how they can perform in PE. As far as my class, I had a wonderful professor who really enjoyed what she was doing. I think she had a special needs child at home, and she used to be a special education teacher at a middle school, so she had a lot of experience.

Cameron was also complimentary about his adapted physical education course, particularly the hands-on experiences with various special education students that were an integral part of a class conducted primarily at a local high school. This class built-upon the knowledge and experienced gained from his general special education course and mirrored the call by DePauw and Goc Karp (1994) to integrate knowledge of disability across courses within the PETE curriculum using an infusion approach. Indeed, he was able to learn how to better interact with these students both individually and in a group setting, in addition to learning more about “what makes them tick.”

I loved the adapted PE class that I took. It was good; it was the high school that my middle school led into that we did that. It was great because it allowed me to focus on them, and it doesn't take much to keep them happy! They are glad to see somebody there, they are glad to be interacting, and to have fun. It was good for me- it was one of the few times I had ever been around that many special needs students at one time, and you got to work with this kid with cerebral palsy, and this kid with a mental disorder. But, you have got to learn what keeps this one happy, what really sets this one off. He might not get along with this kid, so it was good to get that from it.

Despite the positive impact of these courses, many of the participants expressed a desire to know more about adapting instruction for diverse student needs- particularly the inclusion of specific modifications and/or accommodations for student exceptionalities. Similarly, research on pre-service teacher education revealed that the students may personally respect and value diversity but may not be ready to take substantive actions or

pedagogical practices to change class environments to promote the inclusion of all students (Choi & Chepyator-Thomson, 2011).

They learned from their undergraduate experience that modifications were a part of lesson planning and execution- “it was emphasized to us that we had to modify things” and “our professors would always say that you would have to make modifications” and “we were given a disability to accommodate knowing that this was important.” However, as Stuart discussed:

In undergrad, there were no what ifs. If someone teaches games- no real discussion on how to modify...what to modify...the different activities or skills that you need to incorporate into the lesson.

Cameron had similar experiences and expressed that he was aware of the need to modify things and got that “loud and clear” from his undergraduate program, but like Stuart he was never really shown how- “but it wasn’t really here is how to do it every time.”

Now, you learn things, if you see a kid can’t serve a volleyball over the net, you move them up a little bit, without saying that you suck you need to move up! If you asked a specific question, the instructors could come up with something but...specific modifications and how to adapt for different students... yes, I wish I had had more of that. But, again it is one of those things that you pick up and learn on your own as you can, and struggle on with it.

Stuart was particularly vocal on this issue during the focus group and felt that the methodology classes fell short when it came to disseminating information that would

have improved his ability to modify lessons to accommodate a more diverse student population:

There should be a part of those methodology classes that includes modifications. Every game that you teach you should be able to show a modification. For instance, you have a child in a wheelchair. There was a school I was at in which they had to go around cones then they had to throw a ball. Well with this class they had to give the little girl a ball, wheel her around it, she loved it! But, they had to modify it and the other kids in the class helped. We are not taught enough about that... What if you have an autistic kid? What if you have a little girl who has braces and she can barely walk? I still have to modify activities for those kids?

Bob was also critical about the knowledge gained from his undergraduate program regarding modifications to accommodate a wide variety of students. He discussed a particular field experience placement in an adapted physical education setting that had no significant impact on his knowledge and skill-set in this area:

For our hands-on activity we had to do twenty-to-forty hours of adapted PE, and I enjoyed it but the guy that I did it with in our local county moved around from school to school all-day long. He went to so many different kids- so he may play with one kid outside on the basketball court, but at the next school he had ten students all of different level of disability and they are all in the regular PE class. Unfortunately, I never really got the opportunity to see changes you could make to a lesson to keep everyone involved. In that environment all I got to see was how to manage the children and your guess is as good as mine as to how you do that. He sees them once or twice a week at best. It was a good experience because

I got to see what they did... how to manage them... but not any real ideas on modifying each lesson based upon who you are teaching.

Instructional Technology: Computer Programs and Lack of Resources

Along with learning about and applying structured lesson plans, standards, and the need for modifications to accommodate diverse student needs during their undergraduate programs, many of the participants discussed instructional technology. A few articles in the recent physical education literature have also addressed technology and included strategies for meeting technology standards (Fiorentino & Castelli, 2005; Mohnsen, 2005) as well as current types of technology and their applications in physical education (Dunn & Tannehill, 2005; Trout & Zamora, 2005; Wegis & Van der Mars, 2006). In addition, Woods, Goc Karp, Hui, & Perlman (2008) recently examined K-12 physical educators' technology competencies and usage through surveying. Some of the available technologies mentioned in these research articles (such as computers, projectors, interactive presentation boards, audio systems and electronic presentation programs) were familiar to the participants as they had had some exposure and practice using them in their undergraduate programs. Those technologies that were more specific to physical education (such as electronic exercise equipment, body composition analyzers, heart rate monitors, pedometers, and interactive dance machines) were not typically a part of the participants' undergraduate programs.

The instructional technology theme expressed by the participants was made up of two main elements- exposure to and use of basic computer programs at the undergraduate level and sporadic use of instructional technology in practice associated with lack of resources and issues of accessibility and funding. For example, Cameron talked about

two courses he remembered taking in the area of instructional technology that improved his knowledge of computer-based technologies as well as positively impacting his organizational skills:

I had two instructional technology classes. One was just a generic pre-major class that you had to take- it was good for me because I learned certain things about the computer that I did not know before. The other one I took coincided with my internship and we had to get a portfolio and all kinds of artifacts, which again was good and I learned how to organize and put things together.

Bob also remembered being introduced to some computer programs (specifically Power-Point) in a basic technology class as well as in his health classes. He valued the opportunity he had to utilize Power-Point in presenting material to his colleagues and how that could apply to teaching at the middle and high school levels.

A couple of the health classes...we got some good experience as far as using the PowerPoint and teaching a class to our peers. I think it was good because a lot of middle and high school PE teachers are going to be doing that when they teach their health classes. The kids are going to get those big thick health books and the teacher is going to have to figure out how to teach it, besides take it home to read. Give them some good Power-Points or stuff like that. I also had to take a technology class near the end of my classes- I had to do a PowerPoint. But, it was not until my health classes that I actually had to use a PowerPoint to enhance my ability to teach and help students learn.

Caroline simply acknowledged that “we did Power-Point presentations a lot!” and Stuart also recalled that “Power-Point was required for all of our presentations during

undergrad.” He also mentioned the “use of Excel for a measurement and evaluation class” and how, like Stuart, that “helped him organizationally” and was “beneficial when recording data such as grades.” The use of technology as a convenient method of record keeping (student grades, equipment lists, and weekly reports) was also cited by numerous physical educators in a recent study by Woods and colleagues (2008).

In addition to computer-based programs used for instructional purposes, a few participants also mentioned learning about and experiencing other basic technologies during their undergraduate program. For example, Caroline recalled using “heart rate monitors for one class” and having access to “a giant screen for aerobics classes as part of her student teaching experience.” Graham discussed his “use of videos to supplement instruction” during his middle school student teaching experience. These fleeting examples of other technologies certainly suggest that the participants’ knowledge and skills in the realm of instructional technology were generally confined to computer-based programs, such as Power-Point and Excel, as a result of their undergraduate experience.

Another interesting element that emerged from the data analysis was the sporadic use of instructional technology in practice. For some, this simply meant showing the class a video or DVD during the lesson, turning on some music, using a timer, or playing the Wii. Bill talked specifically about his current use of technology to address particular topics that they cover throughout the school year:

There are certain things we have like safety week, swimming and drowning prevention and a whole other bunch of things that we do. We used to have a VCR and TV and the kids would sit and watch a cartoon about fire prevention. Now we have got to the point where we have a projector and DVD player, and it projects it

on the wall. We also use it for the hygiene classes. We do a hygiene class for our 5th grade class at the end of the year. It is a hygiene class and it also talks about their anatomy...sexual content...we use that at the end of the year, and we are thinking about including third and fourth grade as well.

Similarly, Caroline discussed using “a small T.V. to teach aerobics to the little kids on Thursdays and Fridays when I have a small group.” When asked about technology use at his current job, Graham responded- “we use music...we have a smart-board, a screen, about to get a projector mounted, we have a timer going on...so yes, we incorporate it every day.”

Despite the use of some basic instructional technologies, such as videos and DVDS, it was clear from the data that the participants did not utilize much of what they had learned from their undergraduate program. Indeed, the participants’ application of Power-Points and other computer-based instructional technologies learned during their undergraduate was not a common part of their current practice. For Bob, his reasoning was quite simple:

We don’t really use technology that much at the elementary school level. If there are any other ideas, I wish I had known. But, I don’t know and I don’t use any other ones because I do not know any more about technology use in physical education.

John had a similar sentiment that included a doubt over the value of technology in teaching health and physical education. This skepticism towards educational technology use in physical education was also found recently with German physical education teachers (Kretschmann, 2012) and is in stark contrast to the findings of Thomas and

Stratton (2006) who investigated the attitude towards the use of technology with English physical education teachers. John went on to say:

In the PE setting when you talk about technology I would say that there are only a few things to consider. You roll out a TV or put in a video...use a Wii. I think that what I have learned now is that technology is not just about the teaching aspect of PE. They want you to integrate technology by going on to the school's daily T.V. show and sharing the high scores for the mile-run. I think it is a little overrated as far as the classroom is concerned, but if it works, it works. I do not think it should be something that is forced.

Graham went even further when he suggested that "consideration of instructional time is important when thinking about using technology in class." He went on to add that he has to be "careful about using technology as it can take a little while longer to get set-up, organized, and ready to go." He was cognizant of the "limited time" he had to teach his elementary students and was "worried about using technology as it can take away from activity time." This sentiment was echoed in Woods and colleagues (2008) recent study where physical educators "believed that the use of technology took away from precious activity time." This was clearly indicated "in the revolving-door reality whereby teachers greet one class as the previous one exits the gymnasium" and "elementary physical educators prioritize activity time and are protective of the few sessions most have each week with their students."

For some of the participants, the limited use of technology in practice had more to do with the general lack of resources and specific issues related to accessibility and funding. Indeed, the availability of technology, especially in physical education, can vary

from school to school (Ince, Goodway, Ward & Lee, 2006). Also, the high cost of technology affects its availability and must be weighed out against other education needs (Postman, 2000). When physical education budgets are already stretched thin with other equipment needs, technology may not be well supported. Consequently, physical educators are often found with little or no instructional technology to support their teaching. For example, Caroline talked about the “need for an overhead projector to teach health classes” and the “need for a larger T.V. or screen to teach my larger classes.” As a result of her struggles, she often has to “ask for a lot of volunteers” such as the local golf coach and the Harlem Globetrotters who have access to some instructional technologies “I can only dream of.”

Cameron talked at length about the challenges and difficulties he encounters every day in his position at the middle school. Again, the issues discussed by Cameron are similar to those reported by Woods and colleagues (2008) where limited budgets, accessibility, and inadequate space negatively impacted the incorporation of technology in physical education.

We are not the most fruitful of counties. I do not have an active board. Our computer labs are limited. We also have a unit that has laptops that you can take to a class. To be honest with you, classroom teachers get first pick of those, and very rarely do I get those. In my classroom, there is very little technology I can use within my grasp. I would love to have a projector... an active board to show kids this is what a compound fracture looks like, this is what the inside of a blocked heart looks like, and this is why you have to be active. The books we have are at least ten years old, if not older. They are good, they have a lot of

useful information, but the medical world is constantly changing. To get technology, or new information in, I have to do a lot of research on my own, and get that stuff into them. But, how it is delivered to them, I don't get to use very much technology. My first year, I did not even have a classroom. I had to find a class when a teacher was on her planning period. Now the last couple of years I have had my own classroom where I have been able to keep my own stuff in there. But, even having money to buy computerized models or a skeleton, those types of things really show a kid what something looks like...those finds are few and far between.

CHAPTER 7

INSTRUCTIONAL DELIVERY AND MANAGEMENT

The fourth standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates' use of "effective communication and pedagogical skills and strategies to enhance student engagement and learning." Through the use of interviews, observations, and artifacts this chapter will attempt to answer the following research question: *What instructional and managerial skills and strategies learned in their undergraduate program do beginning teachers recall and use in their practice as public school physical educators?*

Themes

Four strong themes emerged from the data analysis. The first theme indicated that the participants learned the most about instructional and managerial skills and strategies from their observations in the field and their student teaching experience. These two common elements of their undergraduate programs offered the participants the opportunity to observe and work with real teachers as they conducted their duties on a daily basis with real students. The participants particularly valued the hands-on approach to learning that was an integral part of these experiences, under the guidance of a "mentor" or "master" teacher.

A second theme was the positive impact that methodology classes and peer teaching had on the participants' knowledge of instructional delivery and classroom management. The participants felt that methodology courses that included peer teaching

were important elements of their undergraduate education. The opportunity to practice and experiment with various instructional and managerial skills and strategies was seen by the participants as a “stepping stone” towards improved instruction and management.

A third theme was the routines that the participants had learned from their undergraduate program and how important they felt these skills and strategies were in managing the class effectively. Two main areas- opening and closing a lesson and grouping of students- were prominent in the data analysis with participants learning about these areas in their undergraduate program. Indeed, many of those routines are part of the lessons now taught by the participants in their schools.

A fourth theme was what the participants had learned in their undergraduate program with regard to instructing the class. Again, two main areas of focus emerged: instructional feedback and instructional cues. The knowledge related to these two areas of instructional delivery was limited in breadth and depth. Nevertheless, the participants were regularly applying those basic instructional skills and strategies in their current practice.

Field Experiences and Student Teaching

All of the participants discussed in detail their experiences associated with observations in the field (or “field experiences”) and student teaching (or “apprenticeship”). These “field experiences” were an integral part of the undergraduate programs under investigation and offered the participants a planned sequence of experiential learning opportunities predominantly during their junior and senior years. This was complimented by the student teaching experience that was administered during

the participants' final fifteen-to-sixteen week semester in the program under the guidance of a "mentor" or "master" teacher.

For many participants, the opportunity to see physical educators in practice and to work with them for an extended period of time was invaluable and a common finding; none more so than Bob:

Our apprenticeship and going out to do observations was by far the most beneficial thing I ever did in college. Because, I put into practice...I saw what I was going to do in real-time. I saw teachers teaching children, I saw routines being made every day- teachers getting them ready for an activity, the way they use their stop and start commands, to lining them up, behavioral management, to time-out. You are not going to learn that in classroom, and without a doubt those experiences made me the teacher I am today. Those experiences are by far the most beneficial thing that can happen to any person who wants to be a teacher... that classroom experience.

Bob's student teaching experience took place at both an elementary school and a high school and he was appreciative of those diverse hands-on experiences- "I think being exposed to all levels was a great experience and being out there and having to teach...to take responsibility...that was good." This was evident when he offered more insight into why he felt the "apprenticeship" experience was "a totally different animal", and provided a useful platform to expand his knowledge base.

It is good to observe, but the best experience is you doing it, because you know once you make your mistakes how you are going to fix them. You can fix it then, you can fix it later. O.k. this worked really well... this did not work really well...

I am going to do this again. You do not get unique behavioral reactions from the children until you do it yourself. You can get the reaction from the teacher that is teaching it, but if you are not doing it you are not going to know how to respond because you have never done it before... An observer's point of view is totally different from a teacher's perspective.

Similarly, John was also aware of the value of more hands-on teaching opportunities during his field experiences and addressed that specifically when asked to comment on his "observation hours." In his view, these field experiences worked well when you just "throw them in there" and "commit to making them hands-on" and lessen the observational time.

I will say this. When you have field experiences that you just go and sit and watch... observational... it was good at the beginning but I think there was too much of it. It is more beneficial to be thrown into the mix and told here is a class to teach, and more of that would have been very beneficial. There were a lot of classes where I just went, and sat, and watched, and sometimes I would want to get up and be more active but you come across some teachers that do not want you to get involved and then there are other teachers who want to get you involved. I think that less observation and more hands-on would be better.

Stuart, like Bob and John, also benefited from two diverse placements for his student teaching experience and recognized the positive impact of his field experiences:

The way it is split- elementary and middle or high school is great! I think classes with observation hours are great. I can tell you just about everywhere that I went...I remember...those classes probably helped me the most because you see

what good things happen, you see different games that are played, you see routines and management...because usually when they get a student teacher in there you see their best stuff. But that is good because that is what I need to see. What I got was to take the best from each place.

In contrast, Cameron was placed at one middle school for his entire student teaching but once again responded favorably when asked to recall that experience:

It lasted for fifteen or sixteen weeks and for fifteen of those I pretty much taught- it was great! You had the cookie-cutter profile of what teaching is like, and then you got the real deal. Girls getting into fights...kids making out in the bathroom...the kind of stuff you do not see in a textbook!”

Like many of the other participants, he appreciated the opportunity to work with current practitioners during his student teaching and experience what physical educators have to deal with on a daily basis. In addition, he remembered fondly his field experiences that were a “mix of observation and actual teaching.”

It was definitely interesting. You go and observe a teacher for two-to-three weeks. They have a plan in place, and it looks easy- this is a piece of cake! But, you start teaching one day...like a deer in the headlights...it will kill you sometimes! I can say that most of my observation experiences have been very good...You can see the interaction with the kids, you can see how different children respond in different ways, and you get to know those kids. And, you know there is no cookie-cutter mold for students, each and every one of them is individual. You can see how this teacher works...What do kids do when they first come into the classroom? What is their routine? Do they stretch, or do they just go straight into

activity? The observations were great because you could see what worked for some teachers, and what didn't...that's not a good idea, that doesn't work. You modify it for your own context. Observing someone is good, especially during those early years. When you are a student in high school or middle school, you see the PE teacher, but you do not understand why they do stuff a certain way. You really gain a lot of knowledge, like any other career, by seeing someone in action, by seeing someone do it.

Knowledge of general instructional and managerial skills and strategies was also gained by Stuart throughout his student teaching experience. However, it was acquired very differently at his elementary and middle school placements. First, at the elementary school he "learned more of what not to do." He expressed that it was "a great experience for me because it was so bad!" He specifically discussed the poor class management techniques associated with students entering and leaving the class, creating groups, transitions between activities and supervision. He learned "what doesn't work" and "things that I will never do" and "how bad class management can create chaos."

In contrast, at his middle school placement he "learned control...routine...as far as management- the way they organized the kids, the way the kids respected them- it was perfect." Interestingly, these completely opposite student teaching experiences were both able to positively impact his general knowledge of classroom management as he "got to see both sides of it."

The positive impact of field and student teaching experiences on the participants' was not unexpected, as these experiences have long been identified as an indispensable component of a PETE undergraduate program. In the past decade, research findings have

illustrated that pre-service teachers were found experiencing considerable professional learning and development in their field experiences (Curtner-Smith, 1996; Larson, 2005; Woods et al., 2000). Furthermore, student teaching has also been perceived by many teachers as valuable in their preparation to teach (Hill & Brodie, 2004; Knowles & Cole, 1996;) and acknowledged as the most beneficial component of their teacher preparation programs (Guyton & McIntyre, 1990). The findings from this study certainly support a positive role for field and student teaching experiences, particularly in relation to the development of instruction and management knowledge, and contrast with some studies that have identified some negative impacts of such experiences for physical educators (Askins & Imwold, 1994; Hardy, 1995; Wright, 2001).

Methodology Classes and Peer Teaching

Another area of their undergraduate experience that positively impacted the participants' general instructional and managerial knowledge was the methodology classes and embedded peer teaching opportunities. As with field experiences and student teaching, many of the participants acknowledged the positive impact these courses and teaching experiences had had on their basic knowledge of instructional delivery and classroom management.

Typically, the methodology classes were focused on developing the participants' pedagogical knowledge and skills at both the elementary and secondary (middle and high school) levels. These course commonly included peer teaching experiences where students were required to plan, execute, and often reflect on a lesson or series of lessons taught to their peers. For Graham, these "methods courses were where I learned the most-

lesson delivery was a big thing. That is where I learned the most as far as instructing and managing the class.”

A similar sentiment was expressed by Caroline when she was asked to talk about what she had learned from her methodology classes:

I learned a lot! I loved those classes. The elementary and secondary ones were awesome. We had a K-12 university school on campus that was easily accessible. We were able to observe, teach, and learn from our peers. I learned about managing a class and delivering commands and organization from those experiences.”

Josh also talked about the methodology classes and the peer teaching experiences that he felt were a useful component of those courses:

In a lot of those classes we peer taught...just the experience of having to speak in front of others... figuring out the best way and the quickest way to explain something. Of all the aspects of those classes I think that was the strongest element- being able to get in front of people and work on expressing yourself clearly... I think I did fairly well to get an understanding of what the PE setting is... as far as the structure of the class, how to group children according to their abilities... if we are doing an activity that requires a circle- standing inside, outside, on the perimeter of the circle to deliver instructions and supervise the class...things of that nature are really helpful.

He recognized that peer teaching was a “good introduction” and a “good stepping stone” as “other students at undergrad are probably going to listen more and know more about what you are teaching than your average elementary student.”

Bob thought the peer teaching experiences “helped to get the concept of teaching something to somebody.” Coming from a military background, he had some exposure to instructing and managing a group, however he recognized that “teaching in front of your peers was completely different from anything I had done before, and learning that was great.” Like many of the other participants, he specifically recalled the methodology classes and what he had learned from the peer teaching opportunities that were part of those classes:

A lot of our methods classes had a lot of peer teaching and I believe that helped a lot when it came to understanding what to do and what not to do when it came to having a lesson delivered and what works and what doesn't work. We might have seen a student teach before us and realize that I do not want to say that, or he didn't say this and I really want to say that, as far as delivering the lesson and making it manageable... making it work. As far as our methods classes and our teaching classes, that is where I learned the most from my peers. When you get to the school and you have to do you student teaching or when you become a teacher you may not always have someone to lean on, someone to bounce ideas off of. Did that work? Should I say that next time? Or one of us will say something and that will be better than what I thought- that is really good! I think I learned the most when watching the lessons being delivered by the other students and trying to go from there. Alright, we need to put this in... ok this is not going to work... I am not going to say that...I am not going to do that.

Cameron was in agreement with many of the views expressed by his fellow participants and felt that peer teaching “got your feet wet” and gave him “more

experience and some practice in organizing and teaching lessons on a variety of sports and skills.” He felt that teaching in front of your peers was beneficial for a couple of reasons. First, “the people in your class are relatively intelligent so if you do not know what you are talking about they will call you on it.” He went on to add- “your peers have developed their own opinions and are not afraid to ask questions and provide you with feedback.” For Cameron, this meant a “level of accountability” was always present when delivering a lesson to your peers. Moreover, this teaching environment helped to “make sure you have your information straight... make sure you know what you are talking about.”

Second, and in a similar vein to John, he valued those experiences as it gave him an opportunity to “face your fears...deal with the fear factor you have about getting in front of people.” This challenging, yet supportive environment meant that his peers would often “get on to you about messing up... but in a good way... to get that I am teaching something new feeling out of the way.” The “friendly faces” were able to provide some instant feedback about the lesson and those “multiple perspectives were important when trying to improve your instruction and classroom management.”

Similar to Schempp’s (1993) case study of a high school physical education teacher, the participants in this study valued knowledge that came from personal practice. Shulman (1987) called that process of learning from doing “wisdom of practice.” Similarly, Darling-Hammond (2010, p.40) recently argued that “learning from the wisdom of practice is perhaps the central issue for traditional teacher education” and “one thing that is clear of strong programs is that learning to practice in practice is essential to becoming a great teacher of students with a wide range of needs.” The beginning teachers

in this study believed strongly in their wisdom of practice and the wisdom of their colleagues' practice that was developed through their methodology classes and associated peer teaching experiences.

Despite the overwhelming positive views on methodology classes and peer teaching, the participants did highlight some basic limitations associated with peer teaching experiences, and expressed them during the interview sessions and focus group. For example, Bob was aware of a potential shortcoming- "I think it helps to a point, as it helps you to teach something, but it is not realistic." He did not feel that a group of twenty-year-olds could replicate "that goofy third grade kid misbehaving or getting off-task" and as a result "you are not going to get that same type of behavior and reaction...it is not realistic. This also manifested itself for Bob when giving feedback to his peers:

It is difficult to give feedback when your peers are already at a higher skill level. They may act like they are seven or eight years-old and try to portray that role, but it is hard to give them meaningful feedback, but you try. You try to help out your peers because you know at this grade level this is what this child may do. I think it helps to a point, but you learn a lot of that feedback from doing it yourself with the children at the school, once you do your student teaching.

Similarly, Stuart expressed how easy it often was to transition from one activity to another when teaching your peers; whereas in reality it can be a lot more difficult to do so with a large group of younger students who are not all going to automatically follow your directions.

Classroom management...alternating from one game to the other. The transition from one to the other, when you have twenty-five college students, you can just

say stop...we are going to do this... versus we are going to go from here, to here, to here, to here and you have to figure out how you are going to get those students in the right places. Because if you got 30 to 40 kids and 10 of them are hooligans just running around you have got to figure out how to manage all of those kids and get them into the right spots.

Cameron was also conscious of this potential deficiency- “you can’t bus an elementary class to your college and you can’t always go there. So, the hardest thing about peer teaching was that it was not the kids that I was going to be teaching.” In addition, he talked about “those one or two peers who will act stupid the whole time” and how that often detracted from the experience and did not give him the opportunity to “better myself.” Cameron was well aware of that downside and “certainly would not want it to be my only experience with teaching.”

Stuart complained about the “abundance of games and activities taught by our peers that were completely useless in real-life.” He recalled a particular methodology class that had his peers teaching “lots of tag games, over and over, just with different names.” He felt that these “generic activities were good for five minutes, and would not work very well with a class of thirty-plus kids.” John also expressed the need for peer teaching experiences to be structured in such a way that “you learn games that really work and then you examine them and critique them with your peers to best suit your needs.”

Managing the Class: Routines

Rink (2002, p. 136) defined class management as the “arranging of the environment for learning and maintaining and developing student-appropriate behavior

and engagement in content.” Within physical education, primary factors in classroom management include, but are not limited to (a) establishing routines (attendance, distribution and return of equipment, lesson closure); (b) developing class expectations and consequences with students; (c) teacher consistency; and (d) maintaining student cooperation throughout the lesson for maximum time-on-task.

For many of the participants, their undergraduate experience introduced them to a variety of teaching and learning contexts where classroom management policies and procedures were evident- some more successful than others! Participants learned various classroom management skills and strategies from their undergraduate courses, related field experiences and student teaching placements. The importance of managerial routines was commonly recalled by many participants with the opening and closing of a lesson and the grouping of students being the main focal points. Furthermore, many of those elements that were learned during their undergraduate experience are now being utilized in their current positions as physical educators.

For Stuart, routines are an integral part of what he now does on a daily basis and he first learned the importance of establishing order and maintaining order in the classroom during his undergraduate experience:

The biggest thing for me is routines! You have got to have one...that was ingrained into me from undergrad classes. My kids know if I am there or not there, they know when they come in that they do a certain routine. I do it every time, it is old for me, but they do not see it that way- it is like clockwork. Every day that they come in they do the same thing for the first ten minutes and the same thing for the last five minutes. Every single day...no matter what! I knew

that I had to develop a routine from undergrad. I think that classroom management and routines need to be taught in every class. These are the two most important things. If you can't manage your class and keep them under control- lost cause!

His current perspective as a beginning teacher supported what he had learned at the undergraduate level with "classroom management being by far the biggest thing." For Stuart, this view was solidified as a result of a "less-than perfect" student teaching experience, where his master teacher presided over a chaotic classroom environment that was the apparent result of poor classroom management and minimal use of routines.

They sat in their office...the teachers let them go, the kids come to the door and they start running. The PE teachers would come out and start yelling "Why are you running?" They had no control...they would have fourth and fifth grade students leading exercises then complain and write students up for not following directions- it was horrible! I knew right then from my classes- I would meet them at the door, every day and every class. When they come in they walk, they know the routine, when I blow the whistle they know to sit down on a spot...then we start exercises.

John also recognized the positive contribution his undergraduate experience had had on his knowledge and skills with regard to classroom management, particularly the variety of setting he was able to observe and teach in.

I have seen some elementary schools where kids will come in and they will do exercises on their own by themselves or they will sit a certain way and do something specific. And, then you will have some that will just get right into the

program. And, then there will be other ones, similar to me, who will have them sit down collectively, do things as a group, and then get started. I noticed that it works differently at different schools- it is really the kids. It is not really the teacher's preference because in a lot of cases you do not really have a choice- you do what is best for the kids. Now, if I were somewhere else, I may entertain doing something different. So, I would credit that to undergrad because I did get to see so many schools and the way the kids respond.

He was also aware of his "controlling nature" and suggested that that certainly made it easier for him to adopt and implement many of the managerial skills and strategies that he had learned during his undergraduate program.

I am a huge on routines! I guess I would credit that to both my undergrad and my experiences here. But, it may have more to do with my nature. That is probably something I would have had regardless... I am more of a control freak as it is. As far as my management skills, it is really crucial for me that every day starts the same- every day. We run through five or six exercises, and it maybe takes two-to-three minutes. That to me is very effective. One day they may come in "wild and crazy." The next day they may come in "calm and cool." But, either way, it is that routine that gets us back to that same spot. After getting done with our exercises it is just clear sailing after that. They are the same for me because of that.

Bob also remembered the basic classroom management techniques that he had learned from his undergraduate program and his student teaching experience in particular, and how he has taken those ideas and made them fit into his current school context.

What I remember from undergrad is... even when the children enter the room they have to understand the rules, the routines, everything. I know that when I was in college talking about implementing rules, being consistent with your rules and not letting some kids get away with things while being on others. And having routines set in so that they know that when they come into the classroom what to expect. And, transitioning I do remember talking about it but I am the type of person that even though we have talked about it and we have done it a little bit with our peers, I learned the majority of it through my apprenticeship and by teaching. I now have a routine of implementing my routine and rules, and transitioning and walking with the children back to their classrooms, keeping them in a straight line and keeping them quiet and facing the front.

His recent teaching experiences coupled with exposure to routines and procedures throughout his undergraduate program convinced him of how important it is to have well-established routines.

There is no getting around the importance of having a routine. If you have routines, you do not have chaos. If you have routines, your kids have expectations- they know what they are supposed to do when they enter the gym. They know what happens to them if they do not do it right- there are good and bad consequences for what they choose to do.

When asked to provide an example of a specific classroom management technique that she had learned during her undergraduate experience, Caroline was quick to offer the following response:

Seating assignments when entering the class- but, it wasn't like markers on the floor- it was around the basketball court. They knew who you were meant to sit next to. So, they would automatically go to their area and then the leaders...that is one thing that I do now...my student teacher had leaders. The difference is the way they had them during student teaching- the seating arrangement. The seating arrangement was around the gym and they didn't have as many students as I do. So, the leaders were in the middle. But, me I have so many students, so I just put the leaders at the front. The way students start the class during my student teaching is how I do it here.

Like many of the other participants, what Caroline had actually experienced and seen in-action during her field experiences and student teaching was a consistent opening routine that she now implements for many of her classes. This routine was evident during my observations at her school where "exercise dots" signified seating arrangements and designated "leaders" were responsible for reading the standards, essential question, and taking the entire class through a well-orchestrated warm-up in preparation for the lesson.

This organization and consistency was also acquired by Cameron during his undergraduate experience and was molded into a basic routine that he now uses to open up many of his lessons. He recognizes the value of a consistent routine and how it positively impacts his students that he now teaches.

As far as organization goes and setting up a routine... kids may not admit it, but they like to have a routine, a lot more than they actually make out. Then sometimes when that routine is not the same they get all out of whack- even though they do not want to admit it. When they come to our gym they know

whose locker room they are assigned to, where to go and dress-out. They know as soon as they get out there it is their opportunity to get water. I would say it is like a typical PE classroom- we sit down, we check roll, we stretch, we do agilities, and then we get into the lesson for that day. I picked up that stuff from my undergraduate program. It is how my master teacher did it during my student teaching. I picked up that stuff from PE classes that I have been in...

observations... I think like any other good professional in any profession- if it works you are going to steal it and if it doesn't work you are going to trash it.

When visiting his school to conduct observations, I was able to witness the routine just described by Cameron on numerous occasions. On each occasion, the students in his class uniformly participated in the activities. The entire process was well-managed throughout and it was quite clear that the students were well aware of what was required of them, as they had performed the introductory activities many times before.

Like many participants, Bob talked specifically about the opening to a lesson and recalled a particular class and professor who had taught him a basic framework that he now implements.

I remember one class with Dr. Smith where she talked about warming-up the children, first coming out and telling them what we would be doing and giving them an idea of what they have to look forward to during the lesson, and then giving them a warm-up to get them ready for activity. We do that here with hula hoops and jump ropes and stuff like that- something simple, but it gets their body ready. I remember doing that in undergrad and having her talk about it before we had to implement it into our lessons. After a few classes of teaching you realize

that it works really well- I need to do this...I need to open up this way... I need to tell them what we are doing.

Again, my field observations were able to support what Bob described above. I was able to witness a consistent opening routine at his school where students were assigned to different colored squares on the floor, given information on what would take place that day, performed a pre-determined exercise routine, and were physically prepared for the lesson.

When discussing the opening to a lesson, many of the participants also commented on what they had remembered learning about closing a lesson. In general, these discussions were not as comprehensive in depth or breadth. Nevertheless, the participants' responses clearly indicated that they had learned about the importance of establishing a routine to close a lesson. Moreover, they were utilizing this managerial knowledge in their current practice much like they were doing for the opening to a lesson.

For Bob, the routine for closing a lesson was fairly simple- "it needs to include a review... I remember...what they learned...what is going to happen next." Caroline was also quick to offer a review as a key element of a well-managed lesson closure when asked to respond to what she learned from her undergraduate program about closing a lesson- "you had to review what you went over." She recalled a consistent routine that was in place during her student teaching placement at the elementary level. The master teachers would spend a few minutes reviewing the key learning outcomes for the lesson, before "lining them up around the basketball court, and having them leave the gym in two separate lines." For Graham, the end of a lesson "provided an opportunity to review what you have just taught." The routine put in place for the end of a lesson was "kind of like

the opening” for John- “I learned how to be short and to the point, stress what everyone was doing well, what some students were struggling with, and review important ideas.”

Caroline now uses a routine to her classes motivated by the one she was exposed to during her elementary student teaching experience:

I have a similar closing routine to what I was used to seeing during my apprenticeship. I have the students clean up their area and equipment, walk to their class lines, then review the essential question, and ask if they have any questions. And, then I will lead them out- first line goes, then second line, then third line.

Although, the remaining participants did not specifically describe how they closed a lesson during the interviews, I was able to observe a very similar routine for closing a lesson as the one described by Caroline during my school visits. The documented routines typically involved a brief review, often a short question and answer session, and frequently ended with students lining up quietly before being dismissed to their classroom teachers. On several occasions, Cameron’s classes at the middle school level were the only ones who did not follow this protocol (probably due to working with older age groups). Here a simple “alright time is up” is all that was needed to signal the end of the class- “they know to get the equipment and put it up...then they will get dressed.”

Some of the participants recalled learning another managerial routine during their undergraduate experience- the grouping of students. Bob was quick to point this out when asked to comment about what he learned about grouping students from his undergraduate experience, although he struggled to remember any particular strategies:

I certainly learned that from undergrad. I do remember that those smaller groups taught during undergrad were something new to me. What I did learn in undergrad is that there are different ways to do that. I guess I am so used to the way that I do it now that I do not remember specifics. But, I do remember that there are multiple ways to do it and it helps. Because there are some schools where you cannot just say go and get students into groups because it would take forever. I realized that at some of the schools that I observed at. These teachers need to realize that they need to use different ways to get these kids into groups. But, yes I do remember learning that from my undergrad. Anything new to me coming into the school I remember doing, but specific details not so much.

At his current school, the students are “so used to getting into groups that it does not take more than thirty seconds for a class of eighty kids to just disperse and get into groups and sit against the wall- they are so used to that.” He credited his undergraduate program for “giving him some fresh ideas on grouping students to complement what was already in-place.”

For Cameron, he recalled more of “what not to do” when asked to address what he learned about grouping students from his undergraduate experience.

There was really a big deal about not letting the kids pick the teams, and if you choose to do that try to encourage some of the less athletic kids...you don't want the overweight kids to be the last one getting picked every time. There was a lot of talk about that. That was the big thing that they always harped on about- don't let them pick the teams if you know it is going to hurt someone's feelings.

In practice, Cameron often uses a simple numbering system or prominent signage around the gym to quickly and efficiently organize his classes into groups or teams. This was evident when observing many of his classes and exemplified in the following quote:

One thing that I do a lot especially if we have two teams, or even multiple teams, is to give them a number and when I get done all the 1's here, all the 2's here...it is like a lottery for them. We also have one side of the gym with a big pad that says "Bees" and the other side that says "ABC" and I tell them if they are A's they go down to the ABC-side and if they are Bees they go to the Bees side.

Again, that is another way that you can get the team split up easily and it doesn't look like you tried to make it even, but you split it up as you go.

Similarly, Stuart also learned "what not to do" when asked to recall what he had learned about grouping students. Like Cameron, he remembered the emphasis his undergraduate program placed on the negative impact designating captains, and allowing them to pick teams, can have on the classroom dynamics and environment. In contrast to Cameron, he also learned about the difficulties associated with using numbers to group students as a result of his student teaching experience at an elementary school.

Yes, I do not do captains... I don't ever go 1, 2, 3, 4...I did learn that in undergrad, stuff not to do. I remember more of what not to do with regard to grouping students. Don't let anybody be singled out, that is the biggest thing for me. I get a lot of the little boys who are real athletic and they try to single people out. I learned a lot about what not to do because if you go 1, 2, 3, 4... it creates chaos and by the time you get to the end the first group do not remember what their number is anyway. That is something I learned not to do.

Despite acknowledging the potentially negative role that captains can play when picking teams at the elementary school level, Stuart does allow his students to self-select teams on a regular basis; albeit without actual captains being used. This was particularly evident during observations in the field where the class was expected to get into teams for a relay-type activity or group game. From Stuart's perspective, he sees this as a "routine that works well with practice and can be learned and executed quickly even at an early age." Again, these field notes and observations are supported by the following description from Stuart:

It depends on what we are doing. When we do any kind of game where there is a relay or a group game I let them pick their teams. If it is a relay I will set out cones and I will say "give me four people behind each cone- go." They kind of pick their team, but with some of these games they have to work together and they learn not to get on certain person's team as they cannot get on with them. If it is a class of third graders who have been here for a year, they usually know how things go. For second graders it may take them a little more time, but it is something that is learned for them to.

Pedagogical knowledge, particularly as it is related to classroom management, has not been a common focus of current research in education. The absence of investigations into teachers' pedagogical knowledge, which is related to management, is problematic because classroom management is an aspect of teaching that consistently challenges teachers of all experiential levels and content areas. Even rarer than research on teachers' pedagogical knowledge of management, however, is research that incorporates the voices of teachers and their perspectives on learning about class management, particularly in

special subject-matter areas outside the traditional classroom, such as physical education. Indeed, little information is currently available about how physical education teachers gain and use knowledge about management in their classroom.

The findings from this study add to the small body of knowledge in this area and expand upon a recent study conducted by Garrahy, Cothran, and Kulinna (2005) who specifically examined elementary physical education teachers' development and use of pedagogical knowledge related to class management. In their investigation of physical educators' knowledge origins, influences, evolution, and content, they revealed that teachers gave their teacher education programs little credit for their class management knowledge, with the exception of practicum experiences. The teachers believed that either their undergraduate experiences did not address management or they experienced a conflict between the material that was taught at the university and the material that was applied in the school setting. In contrast, participants in this study gave significant credit to their undergraduate program for imparting class management knowledge (particularly related to establishing routines) that they are now using in practice.

Instructing the Class: Feedback and Cues

Many of the participants learned some basic communication and pedagogical skills and strategies in their undergraduate program. The instructional skills and strategies gained from their undergraduate program were limited in breadth and depth, although they were certainly aware of effective instructional delivery at least in terms on what should be included in a well-executed lesson. Instructional feedback and instructional cues were the two main topics elicited from the various sources of data; however

participants were only able to express and demonstrate what they had learned and now apply in these areas in a relatively simplistic fashion.

Instructional feedback was an area of instructional delivery that was referenced by many of the participants. Bob learned most about delivering effective instructional feedback from his student teaching experience. He appreciated the real-world context that this placement provided, and the opportunity to develop “a genuine, real, learned behavior.”

You learn a lot about feedback from doing it yourself with the children at the school, once you do your student teaching. Then you really learn, as you realize that gosh that kid doesn't really know how to do any of it, so you have a little bit of one-on-one time with them. So you get to focus on proper progressions and what needs to be worked on. You learn a lot more about delivering feedback when you work with the children and have an opportunity to make it age-appropriate.

For Bob, instructional cues were an important in giving feedback, particularly when aiming to enhance student learning and skill acquisition. His undergraduate program taught him that instructional cues were an essential element of a lesson, and should be limited in number to avoid “information overload especially for beginners.”

I learned the basics regarding instructional cues from college. I just remember that they are fundamental to a lesson and that you need to have certain cues, you need to have about three cues to give them, and you do not want to give them too many cues or they are just going to be bombarded with too much stuff to learn and think about.

Caroline credited her program with “doing a good job of teaching me to provide feedback” and remembered “cues being stressed at the undergrad level.” This was evident in her undergraduate lesson plans where instructional cues were always an integral part of the planning phase for any basic fundamental skills that she taught. She talked about a particularly memorable throwing lesson where she had to develop cues such as “get your L’s up” and “follow-through” that formed the basis of her feedback to the class.

Cameron learned the importance of providing positive, meaningful feedback when correcting a skill and talked specifically about that when asked to share what he learned about feedback from his undergraduate program:

Even when critiquing, or what a student may perceive as negative feedback, try to make it as positive as you can. Learning to give short verbal feedback like good job, and using a specific cue to accompany that, can really help when teaching a skill. It means more to the student.

He also gave some examples of “key words” or “buzz words” that he remembered from a volleyball unit during his undergraduate experience that he includes in his lessons that he now teaches. Instructional cues such as “belt-buckle” to indicate the starting position of the ball when performing an underhand serve and “explode” to communicate the force required to get off the ground when performing a block. He expressed that use of these types of cues or “buzz words” were “definitely encouraged in the program” based upon the premise that they will enhance instructional delivery and student learning- “you can give the student a soliloquy about what you be doing to perform a skill

correctly, or you can give them this word, and this word, and they will know exactly what you are talking about.”

Similar to Cameron, Graham expressed that his undergraduate program had taught him the value of positive feedback and the effective use of feedback to correct fundamental movement skills. He felt this was critical for those younger students that he now teaches on a daily basis.

Let’s say I have explained how to throw, I will observe, monitor, make sure they are stepping with the opposite foot, bringing it back, and pointing at the target and throwing. I give them the positive feedback and then if I see that they are not following the correct steps I will correct them if need be. This is the basic idea that I learned from my undergrad classes. If they do not learn it right in PE, then they may not learn it right somewhere else. They need to start learning fundamentals at an early age.

A similar positive approach to delivering instructional feedback was recalled by John. He talked about a method of feedback that he referred to as the “sandwich approach” that was effective during his undergraduate program and could be effective in actual practice on an individualized basis.

The one thing that stuck with me from undergrad is the sandwich approach. I think that is what they called it. Start with positive remarks, then give them that feedback whether it be negative or what not, then follow up with something else that is positive. That seems to be pretty effective with the majority of students. Now as far as students now, you have some who are lacking in motivation and all they want to here is positive, so if they hear one negative thing they shut down. I

have other kids who think so highly of themselves that you have to tell them something negative at times, just to keep them down to earth! But, I will say that the sandwich approach really stuck and is pretty effective.

Stuart learned that instructional cues should be incorporated into his lessons- “it was mentioned during undergrad and we were told we should use them.” Some of them were memorable enough that he was still able to recall them and even use them when teaching certain fundamental skills to his current students.

When I teach throwing I use stuff that I learned from college- from teachers there... like step-point-throw. I do use those... the stuff for shooting free-throws... the BEEF. I use those and I realize how they have stuck with me. Like when they kick I get them to stand on one foot and swing the other leg. I will make cues as far as back and forward- just small cues. So yes for this age group I do use the cues occasionally.

In practice, he utilizes feedback on a regular basis and sees it very much as a motivational tool. Like many of the participants, he learned the value of positive feedback during his undergraduate experience and this has been reinforced in his current teaching position as an elementary educator.

I use feedback every class, all the time. I think for age group that I am teaching it is a different situation- I try to stay as positive as I can. I don't think there is anything negative unless we have behavior problems. But when they are playing I always encourage and motivate them. So, you encourage them to get in there and do it and for some of them it is because of their personality.

CHAPTER 8

IMPACT ON STUDENT LEARNING

The fifth standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates' "use of assessments and reflection to foster student learning and inform instructional decisions." Through the interpretation of data from interviews, observations, and artifacts this chapter will address the following research question: *What assessment techniques and reflective practices learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?*

Themes

Three strong themes emerged from the data analysis. The first theme indicated that the participants had been exposed to a variety of basic assessment techniques during their undergraduate programs. They recalled learning about and administering paper and pencil tests, rubrics and physical fitness tests to assess peer and student knowledge, skills, and fitness levels. These techniques were addressed in some of their classes with most of the practice in applying them being conducted during their student teaching experiences.

A second theme was the participants limited use of assessment techniques learned during their undergraduate experience due to the nature of teaching physical education and the logistical challenges associated with assessing student in that particular context. Many of the participants found themselves having to adopt alternative approaches to assessment (such as a rudimentary grading scheme) that did not quite replicate those techniques that they had become familiar with at the undergraduate level.

A third theme focused on reflection. Many of the participants recalled being required to reflect on the lessons they taught throughout their undergraduate experience. Regular written assignments and input from peers, instructors and physical educators assisted them in the process of reflection. In contrast, the reflective cycle they now go through as practitioners is somewhat different from the one they were exposed to during their undergraduate programs. Informal discussion with colleagues and occasional input from administrators, other teachers, and students now form the basis of the reflective process with written reflections a rarity- making these differences both interesting and instructive.

Knowledge of Basic Assessment Techniques

Many of the participants recalled learning about various methods of assessment during their undergraduate experience. These assessment techniques were commonly taught during “measurement and evaluation-based classes,” where the participants were exposed to a variety of ways and means of assessing student learning and achievement. They were often asked to create paper and pencil tests to assess knowledge; utilize rubrics to assess movement skills; and to administer fitness tests to evaluate aerobic endurance, muscular strength and muscular flexibility as part of their undergraduate education. These basic techniques were then applied in practice, sometimes during their field experiences, but more commonly during their student teaching. This was certainly evident when Caroline was asked to recall what she had learned from her undergraduate program about assessment in physical education:

Our professors thought that we should have an assessment for each unit. They talked about formal and informal assessment and summative and formative

assessment. They also talked about a paper and pencil test and a skill test. We learned about assessing knowledge...I did give the students written tests during my student teaching at the high school to compare scores and evaluate my lessons.

Bob also talked in general terms about what he had learned about assessment from his undergraduate program. Like Caroline, he remembered “specifically having to write and administer numerous paper and pencil tests” in one of his classes. He also recalled utilizing assessment tools to evaluate student competencies in numerous movement tasks and to get a measure of how successful a lesson was in terms of meeting the lesson goals and objectives:

I remember learning techniques to assess how a lesson went and if the students learned something...more like evaluating how they did and if it was a successful lesson and if you would do it again. I also remember assessing how well they could do it- different skills and movements.

Cameron felt that his undergraduate program developed his basic knowledge of assessment and that he had learned to create tests that were both valid and reliable, as his program taught him to interpret test questions from a student’s perspective.

I do feel that I got some basic assessment skills from my classes during the program which was good. I was exposed to the assessment of learning... we had a whole class over that... so fortunately we got the knowledge of it. I also picked up a lot of skills on how to assess and what it is like to be eleven or twelve years-old. It was good to go through that class and really just think about the way in which a question is asked. The way this question is asked to one kid may sound absolutely

foreign to another kid. It was good to think about that. We had to come up with our own test- we had to write it out. At times we would use it for student teaching or observing another teacher. Sometimes our professor would say “here is your topic, just come up with whatever kind of assessment specific to this topic or specific to that sport.” We will sit down and look at it and make sure that it is a valid assessment. I feel comfortable now making up an assessment. Looking at it and determining if it is valid and reliable. I feel certain now that when I give out an assessment it is legit.

Graham also recalled developing and administering some written tests during his student teaching- “as part of one of my classes I had to create a field hockey quiz. Basic stuff- rules, fundamental skills, simple strategies and tactics and stuff like that. I gave a few quizzes like that during my student teaching.”

John credited his undergraduate education with exposing him to “a lot of different ways to assess.” He remembered learning “a bunch of assessment options and having the freedom to choose how to manipulate them to work in a variety of situations.” He also learned about the “value of observation” as a means of assessment from his undergraduate program:

I learned that observation is by far the easiest and most productive as far as getting things documented when assessing. Checklists and rubrics can be used to assess skills, knowledge, and even behavior. I had the opportunity to see that in action during my apprenticeship. It seemed to work best with large groups and larger classes.

Many of the participants also mentioned learning about fitness testing as a means of assessment in physical education. Cameron remembered learning about the Presidential Fitness Test from his undergraduate program- “we did some work with the Presidential Fitness Tests at my university.” Similar sentiments were expressed by Graham- “in my university’s state they used the Presidential Fitness Tests, so that is what we were exposed to and learned during undergrad.” Caroline recalled learning about the Presidential Fitness Tests during her program with the application of that knowledge during her student teaching experience being particularly memorable. This prompted her to use the Presidential Fitness Tests as part of her school’s recent field day festivities.

I learned the Presidential Fitness Test during my elementary placement- that was a major thing they stressed at the university and the main theme of our field day this year. My master teacher recorded the scores in the computer, kids got awards for it, and they brought water bottles so they got very excited! I learned correctly how to do the Presidential Fitness tests- that was a big thing. Even though I learned it in my undergraduate program, I did not really see it done. It took my Apprenticeship experience to really see it in action.

Nature of Physical Education and Grading

The participants certainly learned about and had practice using a variety of basic assessment techniques throughout their undergraduate programs; they recalled being asked to create and administer paper-and-pencil tests to evaluate students’ knowledge; they remembered developing and utilizing rubrics to evaluate students’ fundamental and movement skills through observation; and they discussed learning about and administering the Presidential Fitness Tests. Some of the assessment techniques and

methods that were learned in their undergraduate program are still being used in their current practice. For example, Cameron discussed his use of rubrics and paper-and-pencil tests and talked about using these assessment techniques to evaluate both performance and knowledge of motor skills in his students:

In the PE classroom I do a lot of observation- we do some rubric stuff from time to time. Let them know that this is specifically what I am looking for. And something that I try to do is... understanding that you are going to have some kids that are really athletic and some who are not. And, even if a child can tell me this is what you need to do in order to perform a skill successfully and I can get that from them in a verbal sense I will definitely give the kid some credit for that. He or she may not be able to physically perform it as well as somebody else. A lot of observation... share the rubric with them... let them know where I am coming from... what I want to see. We even do some paper and pencil stuff in the gym. Making sure your kids know the rules; can they write down the cues that I have given them? If they were to teach it to someone else, what would they use to describe serving in badminton? Proper techniques of shooting a free throw, or whatever.

Similarly, Caroline talked about using basic rubrics and paper-and-pencil tests to evaluate her students' performance of motor skills and knowledge of correct technique.

The only skills that I really assess with a rubric are loco-motor skills. Because they are basic skills that everyone should know. And what I find is that is the child is having problems with the gross loco-motor skills then I ask the teacher if the child is having problems with their fine motor skills. It is a form that I check

off and give to the early elementary teachers. We also assess on their knowledge...very short tests, no more than 10 questions because it is PE and the kids are antsy already! So they are very short, mostly on the knowledge or how to do a skill. They should know how to do a skill, but maybe they can't do it, or they can't do it as well.

John discussed his use of checklists which was one technique ("from a bunch of things") learned during his undergraduate experience, and something that works well in his current teaching context of large class sizes and a limited budget.

Right now what I do- we have six standards that I have to meet, so I know that I have at least six assessments. The pre-assessment I will try to avoid as much paperwork as possible because they do not like us to use too much paper and also for the last assessment I will run out of paper! What I like to do is have a checklist- a checklist really works good for me. And I wish I could do more with peer assessment which is something we got in college, but that requires more paper, but I really love that idea. It keeps the kids focused on not only what they can learn, but what and how somebody else can learn. But, checklists with large groups seems to be best here- that is just what works best.

Despite the aforementioned use of paper-and-pencil tests and observation tools such as rubrics and checklists, the vast majority of participants do not fully utilize the assessment techniques learned in their undergraduate program in their current practice. The realities of teaching and the logistics of assessment often dictate that other alternatives means of assessing students are adopted that are not in agreement with much of what was learned during their undergraduate program.

For example, Cameron has implemented a modified fitness testing program with his students' that does not follow the recommended fitness assessment protocols that he was exposed to during his undergraduate education. Instead, he is utilizing ideas from past experiences with high school, college, and other coaches to inform his fitness assessment decisions.

Here, now when we fitness test, when we do weight lifting we will do a max-out test. I have timed the mile-run before. But, as far as sending scores in for the Presidential Fitness Awards, I haven't done a whole lot of that. I didn't do much of that during my internship, but we do try to keep track of some things and make sure some kids are improving with it. The class I have now it is mainly football players and the athletes, so we will give them 30-seconds to jump up on the boxes we have to work on their vertical jump. Count how many times you have done it, and we will keep track of that. Specifically what I go there I would not say I got directly from my program. I picked it up from other coaches, what I did in high school, what I did in college. The kids like to keep track of it and it is an easy way to keep a measuring tool for what they have been doing.

Graham thought that "a lot of assessment depends on the level that you teach and you can't really give a written test to a kindergartner." The following quote details a gymnastics lesson that he taught with a colleague that implements student-to-student assessment "which was something I was not exposed to in my undergrad program." Like Cameron, Graham used other sources (his colleagues) to inform his decision on an appropriate assessment technique for his class that was different from what he had learned in his undergraduate program.

At my elementary school, we teach them the four main areas of gymnastics and we give them a sheet of paper and tell them that they need to do at least two of each. So, if we are partners I am writing what you did and in what category it goes in, and you write what I do. So we use the student to assess each other. We all decided that that would be a good way to conduct the class as the students could help each other out as need be. They just write out what they did- we just wanted to make sure they know the skills and know which category they go in.

John was aware of the logistical challenge associated with assessing a large number of students- “it is kind of tough to do with over 800 kids...I have to cut corners.” He expressed a strong desire to incorporate fitness testing into his program, but was unsure of whether it could actually be done efficiently and effectively without negatively impacting the amount of time his students were active in class. As a result, he took certain parts of what he had learned about fitness testing and administered those elements that he determined could be done without disrupting his classes.

Honestly, I would love to do it, but I have to avoid it because it takes too much time. If you are doing, for example, the Fitnessgram stuff. To do 800 kids for the sit-and-reach! I am not sure how many total elements there are, around six or seven. To do all those with 800 kids would take at least a month. And, then you have to figure out a way to assess some while the others are being active, and it just gets complicated and pretty hectic. What we do is take some aspects of the test and use them. For example, the “Beep Test” we will do that because I can do a lot of kids at the same time. And, even in a small gym like this we can even do a

lot. So, we do do that one. And, that is kind of the breaking point- if I can do a lot of kids with it I will do it, if not I won't.

Bill also talked about utilizing the PACER test (which he learned in an undergraduate class) in his current classes, but expressed doubts about the appropriateness of some of the other tests that were now an integral part of his physical education program and mandated by law at the state level.

Our assessments on the kids are observations, but we do have the Fitnessgram for fourth and fifth graders. We do everything for the fourth and fifth graders that we do with the kindergartners in terms of observing their behaviors and assessing their skills, but they also get the Fitnessgram. They have to do a PACER test, which is a good test I like that test. The rest of them are kind of silly! There are sit-ups, push-ups... to see how many they can do. We are mandated by the county to do those tests. If I was doing it I would not do all of those tests- I do not think it is appropriate for some kids.

This collective resistance to the practical application of some assessment techniques learned in their undergraduate programs was also expressed by Stuart. He recalled a particular class that required the creation of a rubric and the subsequent use of that assessment tool during a lesson. This approach to skill assessment was questionable to Stuart back then and is now in opposition to what he feels is realistic and appropriate in his current teaching context.

Yes, I remember when we had to make a rubric but I remember thinking to myself that it was crazy because of the way in which we had to do it. For instance, we had one in which you had to shoot a free-throw. If they make it they get three

points; if they hit the rim they get two points; if they try and do not hit anything that is one point. I remember something to that extent in terms of how to grade. Maybe throwing- looking for different points that they do. I remember that stuff, but I am not sure if I just did not believe in it. It is not fair to everybody because it is so hard to...some people are better than others in certain sports...so my thing is more effort and participation rather than whether they accomplished it or not. If you try it and it is something they do over and over it is something they will learn, but in PE it is more effort and the physical activity more so than accomplishing the goal.

Many of the participants, talked about assessment of student learning and achievement simply in terms of “grading.” Rather than using many of the assessment techniques that they had learned, it was more common for these physical educators to assess students based upon factors such as “participation,” “dressing-out,” and “behavior.” Informal observations and basic record-keeping is all that is expected of these beginning physical educators, as their programs are not required to conduct extensive assessment of student learning and achievement (with the exception of the recent fitness testing mandates). This is in contrast to most of their counterparts in the traditional classroom setting. Graham was well-aware of this when he talked about his situation- “we see upwards of fifty kids for every class, and it is not like we are giving them a letter grade or a number grade, we are giving them an S, for satisfactory.”

This common conception of assessment in physical education (simply giving a grade) was also evident when Bob was asked to respond to how he now assesses his students:

Participation is one of the main things. If there is a child who wants to participate in some things, but not in others, that goes towards their grade. Whether they have the right shoes on, that has to do with their grade. Behavior is huge when it comes to their grades. Behavior is one of the most important things in terms of their grade. If they are at least trying even if they do not think it is fun. We have seven hundred-and-fifty students in total, and you get eighty at a time. So, you are like can I manage this kid, will he or she participate as hard as they can, and are they doing o.k. as far as skill-wise, and that is it pretty much, and it is all observation. When we go to grade we go through our class list and we go through the names and say which of them have done well this quarter and give them a satisfactory. If not, and their behavior is horrible, right now they get an NI- needs improvement.

Similarly, Stuart implements a grading system that does not incorporate many of the assessment techniques he learned and experienced as part of his undergraduate education. Like Graham and Bob, his simplistic approach to assessment meets the needs and demands of his current teaching context and takes into account the developmental level of his students as well as the overarching goals and objectives of his elementary program.

Thing is most of the kids enjoy PE, so I grade mostly on participation. If you can come in here and behave your grade is going to be very good. I do not have the issue of people coming in here and not wanting to have PE. I do not have to worry about the participation- it is almost always there. That is the biggest grade that they have in here. I do not have a separate rubric and they are not old enough where they are really able to grade each other. I know I have had it sometimes

where you get into partners, but here you cannot really assess in that way. I guess what is also age-appropriate in here. When you are K-5, my main focus is physical activity. My main focus is getting them moving. Now then, if I am in middle school or high school, I think I would base it more like the team sports class here just to get them involved. But, then you are grading on stuff they turn in to you and peer observation. I think high school should be based more on that.

Reflection: What, How, In Practice

In addition to learning basic assessment techniques and the limited application of those methods in actual practice, all of the participants recalled learning about and having to go through a process of reflection before, during, and particularly after many of the lessons that they taught in their undergraduate program. They were often asked to write reflective papers addressing “the good, the bad, and the ugly” parts of their lessons and what they could do to make them better for next time. Formal and informal discussions with peers, instructors, and other experienced physical educators were also part of the reflective process for many of the undergraduate programs under investigation. However, in practice, the use of reflection to evaluate teacher performance, student learning, and instructional goals and decisions was somewhat different from what the participants had learned in their undergraduate programs.

Bob recalled being “taught how to reflect and the importance of reflection” but found it “difficult to remember when and what classes.” He briefly discussed what he felt was one of the main purposes of reflection- “learning from your lesson...what worked and what didn’t work.” He was conscious that “there was never a perfect lesson plan” and was appreciative of the “many opportunities to reflect with peers.”

Caroline also remembered having to reflect on her lessons taught at the undergraduate level and specifically referenced her lesson plans that always included a reflective portion to be completed at the conclusion of the lesson- “we had to reflect as part of our lesson plan...it was on the bottom...how you taught.” She also talked about elements that were to be addressed as part of the reflective process, and like Bob, the regular use of peers to supplement the lesson evaluation and critique:

The delivery...do you think that your voice was clear... projection... how were the students? Did they learn what they were supposed to? The objectives- did you achieve your objectives? How did it go? Were there distractions? Were there problems with the class? Were some kids’ spazzing out? Anything they want you to reflect on. That was done for every lesson. Our peers would also give us feedback. So, even when we went to our university school our class went with us. So they had a feedback sheet, which was anonymous, to check for certain things, comments about each one, so you got feedback from your colleagues. It was very thorough. Even though it was a small class, everybody was watching you and even though they may join in to help, they still had to reflect on your lesson.

Reflecting on lessons was also an integral part of Cameron’s undergraduate experience and something that he felt was important as it encouraged you to think about the lesson and consider changes that could be made to improve future lessons. Similar to ideas expressed by Bob and Candace, this reflective process was often in written form (“we had to write a lot of reflection papers”) with opportunities for structured feedback and commentary from instructors and peers included.

We had to reflect often after lessons we taught- I guess the paper kind. They always wanted you to come up with something good, something bad and something you would change. It was good because it really encouraged you to think about it. A reflection doesn't have to be at the end of the day, at the end of the week, or at the end of a lesson. If you are thinking about it and you are smart you are constantly reflecting from the get-go. It was encouraged and even the stuff that you thought was good, you could still sit there and think about what you could do to make it better and anything you could do to improve it. And then when you get to thinking about is there a change I could make? Don't be afraid to go out and make that change or don't be afraid to go out and find something you could use to replace it with- really encouraging yourself to make it work... to make it better... and more successful for the program and for the kids. We were also required some to observe somebody else. There would be three or four of us placed in a group and we would have to share that feedback as a group with the teacher we just watched. "This is something I saw that you might want to change." It was one of those things if something was really awful you didn't want to say "you blew that."

Graham's undergraduate experience "preached that you have got to be flexible when it comes to teaching" and that was how he interpreted what he had learned about reflection:

I think that flexibility is a big part of teaching and reflecting on a lesson ties into that. If I see that a lesson is not going particularly well, we may change it up the next day. Let's try this, instead of this. That is a big part of it because what may

work over here may not work over there, and that is something I am still trying to figure out- just being flexible to change up a lesson because it is not always going to work, and reflection helps you do that.

Written papers and feedback from peers were also a part of the reflective cycle for John during his undergraduate education. He recalled having “to write short reflections and return them to the instructor after every lesson that we taught... whether that be individual lessons or partner teaching.” Furthermore, he remembered many lessons that he taught where his peers were given an opportunity to reflect on the lesson and provide him with another perspective. These short reflective episodes were typically informal in nature and took place immediately after the conclusion of the lesson where “colleagues were given the opportunity to critique the lesson and talk about what they thought went well, what didn’t, and any suggestions they may have had to make the lesson better.”

Like many of the participants, Stuart also remembered having to reflect upon the lessons he taught during his undergraduate program. He specifically recalled a journal assignment that he was required to complete as part of his student teaching and the process he went through every day to reflect upon the successes, or otherwise, of his lessons. Although this was a different approach to writing a reflection than those ideas referenced previously, the concept of documenting your thoughts on paper is consistent with what many of the other participants discussed.

When we did our student teaching there was a journal that we had to do every single day. I remember doing that and writing down how things went. What I thought I had done well, what I thought I didn’t do well... from my point of view.

It was written down, documented, and helped me to think more about how my lessons had went and what I could do to improve.

In addition, and like many others, Stuart also recalled peers being given the opportunity to reflect upon lessons taught during his undergraduate program. Again, these brief reflective episodes typically took place at the end of class and were informal opportunities to hear opinions and comments from his peers. Although these unstructured and sometimes impromptu discussions were of value to Stuart, he expressed the need for more structured reflective episodes with peers throughout his undergraduate experience.

When we were actually in undergrad and we taught classes I wish that we had had more time after or at the end of class (because most of the students were strong-willed and able to take constructive criticism) where you could criticize what went wrong with the lesson and also talk about what they did well. We did not get enough of that and I wish we had had more opportunities to help others because like I said the stuff that I did right or wrong I did not really see until I saw it on video. If I had heard more of it from others... of course it was talked about after classes... but, it was very informal and not-structured. If I do something wrong let me know... I need that input and peers can help with that!

In practice, the way in which participants reflect on their lessons and the source of that information is somewhat different from what they learned and experienced during their undergraduate education. In contrast to their undergraduate program, most of the participants do not routinely document their individual thoughts and ideas and personal written reflections are almost non-existent. Moreover, input from their instructors and peers that was part of the reflective cycle is now replaced by different perspectives

primarily delivered by administrators, colleagues, and students. Indeed, the process of reflection that the participants are now experiencing in practice is certainly different from the one that they learned and got accustomed to utilizing during their undergraduate program.

For example, Bob acknowledged that he still takes time to reflect on his lessons (“we do it a lot”), however the process is now different from the one that he became familiar with at the undergraduate level (“it does not sound good”). In practice, it is much more “about the big picture” and reviewing and evaluating the overall unit plan for the year with his teaching colleague as opposed to dissecting each individual lesson.

As far as our lessons go...we have a binder and we have all the lessons in there and what we do at the beginning of the year is make a unit plan for the whole year. So, when it gets closer to the actual lesson that we are going to do then we will talk about how we want to start it, if it went well last time. A lot of that is done during post planning when we will talk about whether we are going to do dance next year. If we are going to do it will it be as long. A lot of times I will write on my calendar that I don't want to do dance this long because it dragged on, the kids lost interest after a certain amount of days. But, it is mainly about us going back over the unit plan in our calendar and saying maybe we should move this to a different month, and do this some other time. That is typically what we do.

Bob was quick to point out that he still reflects on individual lesson at times (although he may not have really understood what reflection is), but he now includes his co-physical educator's thoughts and opinions to provide “quick, efficient, and practical

solutions to problems they encounter by going with their gut feelings.” Again, this contrasts with the more measured and structured approach to writing a reflection that he was used to at the undergraduate level.

That is the reality- that is what we do. And we know when something isn't working. We were doing a tossing and throwing lesson and we were using some type of equipment. But, once we did it with one class we did not use that same piece of equipment with any other classes that day. We were like this is just not going to work! Not sure if it was taking up too much space, so all the kids could not participate. Sometimes you think something is going to work and then you try to implement it and for some reason or another it does not work- so we just say that we are not going to do that. So, our reflection is just an overall assessment. It went well, so we still want it here or should we put it somewhere else.

Candace and Graham also benefit from having a teaching colleague with them every day and like Bob they reflect on lessons with them predominately through informal discussions. When asked to comment on how she reflects now, Candace simply responded as follows- “my colleague and I talk... we rarely write anything down... we just talk about it.” A similar sentiment was expressed by Graham when asked to comment on how he reflects now- “I discuss everything with my colleagues... we discuss a lot of our ideas and we try to come up with the best possible fixes.” Moreover, Cameron admitted having “never sat down and written a reflection as a professional, but always thinking about what went well... what didn't... what I can use in the future... what I need to scratch out completely.”

In addition to fellow physical educators, some of the participants discussed utilizing the students to provide them with feedback by reflecting on the lesson. This is analogous to getting feedback from their peers during their undergraduate programs. For example, Graham talked about getting feedback from his students after a recent t-ball lesson and how that input helped him to better reflect on the lesson he had just taught:

When we did t-ball with the little ones on the first day I showed them and I talked to them and then we modeled basic fundamentals of throwing and catching. Then at the end of the lesson I called on numerous students and asked them what they had learned from the lesson- to see what they understood, what they got from the lesson and what they understood. This information helps me to reflect on how good the lesson was from their perspective

Similarly, Cameron discussed some recent changes he had made to his warm-up routine and introductory activities predicated upon the feedback from his students and the reflective process he went through. He felt that giving the students an opportunity to talk about the lesson really made him reflect more effectively and ultimately helped him to make instructional decisions that improved the opening to many of his lessons. The student perspective is a particularly important part of his reflective cycle as he does not have a colleague to “bounce ideas off of,” unlike the majority of the participants.

“You can ask the kids sometimes and they will tell you if they would rather do something else. That is where I starting thinking about cutting the stretches down since they were asking if we really needed to do all this... maybe not. I got to thinking that I could take those stretches that we do before the main part of class and take them down from eight minutes to four minutes. If I cut some of that stuff

out that may not actually be necessary they will still get loose and be ready to go.

The thing about students is that if you ask for their honest opinion they will give you an honest opinion!”

Mirroring most of the teacher cognition research, reflection in education has largely been studied as a comparison of experienced and novice teachers. In physical education, the focus has mainly been on pre-service teachers, as the development of reflective abilities are a key to making good instructional decisions and is a persistent concern in pre-service teacher education (Hall & Smith, 2006). It was evident from this study that the participants had been exposed to reflective practices in their undergraduate program, recalling post-lesson write-ups and discussions as the basis of their “reflection-on-action,” as coined by Schon (1983, 1987). Nevertheless, the findings from this study offer new insights into ways and means in which reflection is learned and experienced in an undergraduate PETE program.

Very little research has examined reflection in practice in physical education and the research that has been conducted is still in its infancy (Graber, 2001; Tsangaridou & Siedentop, 1995). Additionally, the existing research has tended to focus on reflection-on-action, and rarely to reflection-in-action. The importance of reflection as a cognitive process is not in question. However, ways to refine, develop, improve, and maximize reflective processes is an area that needs significant investigation. The findings from this study can, therefore, begin to shed some light on reflection in practice by providing perspectives from practitioners.

CHAPTER 9

PROFESSIONALISM

Both the National Council for the Accreditation of Teacher Education (NCATE) and the Interstate New Teacher Assessment and Support Consortium (INTASC) now mandate the assessment of dispositions in teacher education programs. More recently, the National Initial PETE Standards (NASPE, 2009) added a new standard requiring the assessment of professionalism and professional dispositions. Standard six states that teacher candidates must “demonstrate dispositions essential to becoming effective professionals.” Through the interpretation of data from interviews, observations, and artifacts this chapter will address the following research question: *What professional behaviors and dispositions do beginning physical educators learn from their undergraduate program and apply in their current practice?*

Themes

Two strong themes emerged from the data analysis. The first theme indicated that the participants had learned some professional behaviors and dispositions in their undergraduate programs. A basic definition of “professionalism” and how it relates to teaching physical education was provided by the participants based upon what they were able to recall from their programs- attire, fitness, knowledge, and punctuality were prominent elements discussed by the participants.

A second theme was the participants’ extensive use of those behaviors and dispositions learned during their undergraduate education. Although what they learned

about professional attire did not always apply in practice, there were in fact numerous examples of real world practical application of professional behaviors and dispositions learned in their undergraduate programs that positively impacted their current practice.

Defining a Professional Physical Educator

Throughout the interviews, participants shared their thoughts and insights on professionalism and in doing so they began to define what a “professional physical educator” meant to them. Most of the participants recalled classes that had specifically addressed elements of professionalism and made them more aware of what is expected of a professional educator. Many of the descriptors they used, and the examples they shared, came from what they had learned from their undergraduate programs.

All of the participants were asked to share what they had learned about professionalism from their undergraduate experience and as a result a definition of a “professional physical educator” began to emerge. Bob recalled “talking about professionalism in a few classes and it is something that has always stuck with me.” He referenced one particularly memorable discussion from one of his undergraduate classes that focused on appropriate professional attire:

I think we were about to start our apprenticeship and we were talking about what we should wear. And, a lot of the students there- and I don't know if it was an age-difference thing or experience or what- but I always saw a PE teacher as with a polo-shirt on and khaki shorts. A lot of the students in there said that all they wanted to wear was athletic pants and a t-shirt. We learned that a polo shirt and khaki shorts were professional clothing.

His program also taught him that professional physical educators “should be fit, knowledgeable about what they do, confident (so the kids will take you seriously) and a good role model for a healthy, active lifestyle.”

Caroline also remembered learning about professionalism in her undergraduate program, and like Bob, dress was one of the elements that was emphasized particularly when trying to distinguish between a physical education teacher and a coach. The expectation to dress professionally was an integral part of her program and a requirement for her student teaching experience.

The one thing that stands out is how to be a professional- how to dress. I learned that you are a teacher not a coach. I think that makes a difference. That was a major thing there- you were not a coach, you coached after school. I remember one of my professors saying –you are not a coach, you coach after school. You are a teacher, so you have to be professional. The way you dress... if you did not have khakis and a polo shirt you would probably fail student teaching. You coach after school, so you can change after school. That was a major thing to dress like a teacher so your colleagues would respect you.

Another element of being a professional physical educator that was stressed during her undergraduate program was “always taking class seriously.” She had been taught in her “trends and issues” class that other teachers may not think that physical education classes were credible, but that part of being a professional educator meant that “she had to take them seriously, despite the perceptions of other teachers.” She also briefly mentioned that her program taught her that professionalism meant being “caring, active, vocal, and knowledgeable.”

Similarly, John acknowledged “learning that professionalism has a lot to do with appearance- a lot of people like to take it to appearance- and I certainly remember talking about it in class.” However, he was unable to recall any more specific instances where professionalism was discussed in any great detail during his undergraduate program. This was evident from the following excerpt:

As far as undergrad I remember- always tuck your shirt in. I think I remember that more than anything with regard to professionalism- having your shirt tucked-in. But, they certainly could have talked about it more, but it may be one of those things that I don’t recall as much. But, I definitely remember hearing tuck your shirt in a lot! Not to me personally but certainly to other students. I heard that more than anything.

Although unable to recall any other specific examples of appropriate professional behavior or conduct learned in his program, John was quick to point out that “I understood that there was way more to it than just tucking in your shirt... being somewhere in a timely manner... showing up for work on time... and being ready when it is time to work.” He used terminology such as “dignified, high character, morally sound, respectful, and respected” to describe a professional physical educator and gave his undergraduate program credit for influencing the descriptors he chose to use.

Graham also recalled learning about professionalism during his undergraduate experience. As with many of the other participants proper attire was addressed. He also learned that being a good role model and being knowledgeable about teaching various skills are all part of being a professional physical educator. In his particular program, the

emphasis was on physical fitness in order to conduct your professional duties and meet your responsibilities.

I learned that being a professional educator means that you do your job the way that it is supposed to be done and that you are a good role model to the kids. They talked about being somewhat knowledgeable, being fit, and that you dress appropriately. Doing your job the way you are supposed to do it and having the knowledge to do all of the skills and to teach it the right way so the kids will grasp it. Being physically fit and being in shape- that was really stressed. . I think in our line of work you need to be in pretty good shape. They wanted you to leave the program in shape to conduct your duties as a PE teacher.

When asked to discuss what he had learned about professionalism from his undergraduate program, Cameron offered the following response:

Just being the best that you can be in every aspect of what your job is. And conducting yourself in a manner that means other people will speak highly of you. One thing was just to make myself approachable. I try to be approachable...to be somebody who other people want to see when they come to work every day- don't just be that guy who is twirling the whistle. Be punctual... you need to be where you are supposed to be, when you are supposed to be there. You have duties and if duties are assigned to you, you need to be there.

His institution also “encouraged attendance at conferences, workshops, and other educational opportunities” and viewed this as being a professional educator. Moreover, professional behaviors and dispositions that were taught were also enforced and there were consequences for students who did not meet those expectations. Cameron recalled a

fellow student who was unable to complete his student teaching experience due to a lack of professionalism:

I remember this one guy who had been in our program a couple of years and about half way through his student teaching he was told to come back in the fall and try again. He wasn't showing up on time, he was wearing old t-shirts and gym shorts every day, he wasn't cutting it...not showing up on time, taking a few days off here and there- not what we had been taught! It definitely was not one of those programs where you just make it to the internship and then just take it easy and do what you want to. You learned how to be professional and were expected to act that way.

Clearly, the participants' undergraduate programs specifically addressed professionalism and this was evident from the analysis of the data. The participants commonly recalled their programs focusing on the following professional dispositions: being dressed appropriately, being physically fit, being knowledgeable, and being punctual.

Being a Professional Physical Educator

In addition to learning about professionalism and being able to offer a definition of a professional physical educator (based upon what they learned from their undergraduate programs), the participants also talked about being a beginning physical educator and whether the professional behaviors and dispositions they learned in their undergraduate program actually apply.

All of the participants agreed that acting in a professional manner and demonstrating the aforementioned dispositions (dress, fitness, knowledge, punctuality,

and others) that they learned in their undergraduate programs are essential to becoming an effective professional and a fully functioning faculty member. However, in actual practice some of the expectations regarding professionalism that they had become accustomed to in their undergraduate program are applied differently in certain situations and contexts.

For example, most of the participants referred to professional dress as khaki pants or shorts and a polo shirt (as this is what was expected and required of a professional physical educator during their undergraduate experience). In many instances, the beginning teachers now dress in exercise attire (athletic shorts and t-shirt) and are very rarely seen in khaki shorts and a polo shirt. For Stuart, he wears athletic attire for comfort and functionality as he is frequently active during his classes and often joins in with his students.

I have my own dress code. I am the only male teacher in the school and I teach PE, so this t-shirt and shorts is appropriate. I know a lot of the teachers look forward to wearing blue jeans to dress down- to me that is dressing-up! So, comfortable is appropriate I guess. I wear what is comfortable because I play, I get out there with those kids, and I don't care if I get sweaty. That has a lot to do with it to.

Caroline also wears athletic attire on a regular basis now that she is teaching in a different state. The administration at her current school does not require her to wear what she was taught was professional attire as she is viewed more as a coach (rather than a teacher) and "since she is teaching physical education she can wear whatever she wants" according to the principal.

John chooses to wear athletic clothing “to build rapport” with his students and to more easily relate to his predominantly lower socio-economic student body. Again, he has the flexibility to do so, unlike his counterparts in the traditional classroom setting.

The following excerpt provides a rationale for his chosen attire:

Because there are different backgrounds, the kids are different. I want the kids to see me as someone they can trust, as someone they have seen before. They don't see a suit and tie every day. They do not see a guy with khaki shorts and a collared shirt tucked in every time. If I wear that they will not relate to me the same. I feel that is true and this is the reason why- my co-worker dresses like that and the kids do not relate to him the same.

Cameron changes attire based upon what he is going to be doing on a particular day, and whether he has a collared shirt on or an old t-shirt he feels that (if it is appropriate for the task at hand) either could be referred to as professional attire. His role at the middle school is multi-faceted and often involves classroom teaching, athletic field maintenance and coaching, in addition to his duties as a physical education teacher.

Some days I may wear a collared shirt and shorts and some days I may wear something like this (athletic shorts and t-shirt). I may come to class in a collared shirt for reading class, and after class I may be out there cutting and marking the football field and I may look like crap. But, the kids know that I did that for them- he has the field looking right... he has all this stuff sitting out there for us. And that is how my trust is built up with them, so I can still be a professional with or without a collared shirt.

Despite the obvious differences between what is considered professional attire at the undergraduate level and the actual attire often worn in practice, the participants acknowledged the importance of “acting in a professional manner” and were able to share many instances where what they had learned in their undergraduate program had positively impacted their practice.

For example, Bob talked about the combination of dressing professionally and being physically fit and how that has helped him to be a role model for many of the students and to promote and encourage lifetime physical activity in his classes.

I was taught that it was a good look for a PE teacher (khakis and polo shirt) and I think that our students look up to you, in that you are not just an everyday Joe who can go out and get a pair of sweat pants and a t-shirt and teach a class. You are a role model in a way. I was also taught that being in shape is important professionally and there are PE teachers in this County that are extremely overweight and obese and you wonder what they are teaching? It is physical education and we are trying to teach them to be fit and to try and stay fit for a lifetime so they do live longer lives. If you are an overweight and obese person yourself you are contradicting what you are trying to tell the kids. So, being fit has helped me as well and given me more credibility... I think the kids are more willing to listen and take on board what you have to say.

Bob continued by addressing the importance of being on time as a professional and credited his undergraduate program for making him aware of just how critical this is in the public school system that relies so heavily on a strict schedule.

Just simple things like getting to class on time... being at our observations on time... meeting deadlines for assignments... completing your student teaching experience. They all help to make you stick to a schedule and manage your time. That was good preparation for morning duty or bus duty or faculty meetings- you have been trained to be there on time, every time, so it is not as difficult to show up when they need you. Now, you have to do everything on time and in the right way in order to show them that you are serious about what you are doing.

Cameron was also aware of the importance placed upon punctuality in the public school system from his undergraduate experiences, and this disposition has served him well in his current job, particularly when fulfilling his obligations as a teacher and coach.

Being on time is very important, especially as a coach. If I tell our guys that we are practicing at six o'clock- to me that means be there at 5.45! If I am doing a bus route to pick-up kids to go to football practice, I am on a time schedule and you need to understand that. So you need to be where you are supposed to be, when you are supposed to be there. But, at the same time, school is on a time schedule and this is not just show-up when you want to- you have to be here. So, those experiences in the school system throughout my undergrad really ingrained the need to be punctual. That has carried through to what I now do every day.

He also believed that the professional behaviors and dispositions that he learned in his undergraduate program were part of the reason why he secured his current position and were responsible in part for his continued effectiveness as a professional. His fondly recalled his interview with the assistant principal a few years ago:

I remember when I interviewed for this job and I was sitting in this room with the assistant principal we talked for about ten minutes and she said- I think we are going to hire you. You are well-spoken, you know what you are talking about, you look and act professionally, you are doing all of these things that other candidates haven't done. I am sure there were other people with more experience who applied for the job, but it was some of the professional stuff that she liked. Talking about some of the descriptors- a trustworthy person, letting them know that I am dependable and will do whatever it takes to get the job done. Acting that way and saying it during the interview and then backing it up with the last four years of service I have had here...let them know that I was not just talk. If you can just conduct yourself in a professional manner... it really helps! Being fresh out of college and really my first interview that I have ever had and then hearing that they would really like for me to come work here...some of those things I learned about being a professional are what helped me get the job.

This professional approach that was cultivated during his undergraduate experience and solidified by a "personal desire to be accountable and act appropriately" means that Cameron routinely attends faculty meetings and is an advocate for his profession. Even if he has to miss a meeting due to coaching obligations, he makes sure he is kept abreast of the pertinent information- again something he learned about professionalism from his undergraduate program.

Even if I can't make it to a meeting I will go in and sit down and talk to the principal to find out what was discussed- these are the changes, these are the things that are going to stay the same. Especially when I come to here and ask

what I am going to miss, and let her know that I am not going to be able to be there. It lets her know that I am paying attention to emails and announcements, and yes we do have a faculty meeting today. It lets her know that I am interested in what is going on, that I want to be in the loop- it shows that responsibility, it shows that dependability rather than me just not showing up and going to practice. Undergrad helped with that.

John thought that “carrying himself professionally was very important” and the dispositions that he was exposed to during his undergraduate program have helped him to mold into a more professional educator and compliment the behaviors that he felt he already possessed. In terms of communicating effectively with administrators, other teachers, parents, and students, John felt that his exposure to various contexts particularly during his student teaching experience helped significantly in this regard.

Professionalism is very important. It affects communication between parent and teacher. It affects communication between teacher and co-workers, teacher and administrators, teacher and students. It really affects communication period. If you don't act professionally when you do communicate it probably won't be taken seriously. If you try to go over the top with your professionalism it may be conveyed that you are trying to be better... that you are better than everybody else. Like I said, I can't be the same person I am with the students as I am with their parents. I can't be the same with my administrators as I am with the parents. So, it had got to be different with everybody, but there has to be a common denominator of how I carry myself professionally in each of those particular

contexts. I learned about how to do that effectively during my labs and student teaching and continue to learn more each and every day in the job.

Stuart also talked about the important of being on time and taking care of his responsibilities- two elements of professionalism that he was exposed to in his undergraduate program. He also referenced some specific descriptors that he interpreted from the information he received about professionalism in his undergraduate education that positively impact his current practice.

You have assigned duties and if you are not there then something is not done correctly, so I try to be on time. My biggest thing is in the morning and if I am not here there is no-one here for the morning duty. Being on time is important and that was certainly addressed during undergrad. They also talked about other things such as... doing what I am supposed to do... being consistent- I am the same way with everybody... not having any favorites. There will be some that say that I do not do anything because of the job and that I am not in the classroom- I am in the gym. Some will say that I have it made and I will agree with them! But, I do a lot of stuff that people do not realize and I needed that professional grounding I got in college to do what I do today. I think my colleagues would say that I have a good relationship with everybody. Respected... because I do what I am supposed to do.

In response to the need to “demonstrate dispositions essential to becoming effective professionals,” all of the undergraduate PETE programs in this study followed many other teacher education programs throughout the nation by addressing professional dispositions for prospective teacher candidates. This was evident from the recollections

shared by those beginning physical educators in this study clearly indicating that they had learned about professional behaviors and dispositions in their undergraduate programs, and were now applying much of what they had learned in actual practice. However, most of the research in this particular area has focused on the assessment of professional behaviors and has created considerable discussion and controversy among teacher education programs and teaching professionals (Whaley, 1999; Tjeerdsma, Metzler, Walker & Mozen, 2000; Young & Youngs, 2005; Wayda & Lund, 2005).

There have also been those who have been critical of efforts to gauge the dispositions of pre-service teachers and of attempts to influence the development of dispositions as part of teacher education training (McKnight, 2004). It is clear, however, that assessing teacher dispositions has taken a foothold in teacher education programs and will only continue to be more fully integrated into the undergraduate curriculum. However, very few studies to date have investigated the impact of a teacher education program on a teacher candidates' professional behavior and dispositions, particularly in PETE. Indeed, a recent study by Ignico and Gammon (2009), examined the professional disposition scores of physical education teacher candidates over time and reported on the validity and reliability of an instrument used to assess the professional behaviors represents what little research has been done in this area. Consequently, the findings from this study represent an important step to expand upon the fledgling work completed in this area to date.

The conclusion of this chapter signifies that all of this study's findings have been reported and discussed. Having reached this point, it is important to reflect on what was learned in the course of studying the impact of an undergraduate PETE program on

beginning teachers' practices. A summary of the study's findings and recommendations for future scholarship are provided in the next chapter.

CHAPTER 10

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to determine the perceptions beginning teachers' hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study assessed the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education. Based on these standards, six research questions guided data collection and analysis. These questions included: (a) what scientific and theoretical knowledge learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators? (b) What skill-based and fitness-based competencies acquired in their undergraduate program do beginning teachers use in their practice as public school physical educators? (c) What knowledge and skills learned in their undergraduate program do beginning public school physical educators utilize when planning to meet the diverse needs of all students? (d) What instructional and managerial skills and strategies learned in their undergraduate program do beginning teachers recall and use in their practice as public school physical educators? (e) What assessment techniques and reflective practices learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators? (f) What professional behaviors and dispositions acquired in their undergraduate program do beginning teachers apply in their practice as public school physical educators?

These research questions permitted the analysis to unfold in light of researcher interpretations of, and beginning teacher perspectives on, the impact of teacher education on practice. The findings relative to each research question were presented and discussed against the backdrop of research on the impact of teacher education in general, and PETE in particular. In this final chapter, the findings will be summarized and recommendations forwarded for future scholarship. This chapter is organized into seven sections; the first six present the findings with respect to each research question and related standard. The final section offers some recommendations for future research as well as practical implications based upon the findings.

Scientific and Theoretical Knowledge

The first standard in NASPE's Initial PETE Standards (NASPE, 2009) addresses "discipline-specific scientific and theoretical concepts" that "candidates know and apply to the development of physically-educated students." The following research question was addressed: *What scientific and theoretical knowledge learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?*

Four strong themes emerged from the data analysis. The first theme indicated that scientific and theoretical knowledge learned by the participants throughout their undergraduate experience was basic and simplistic in nature. This resulted in very few references to any discipline-specific concepts and principles related to the field of health and physical education. This rudimentary level of knowledge was similar to that found in practicing high school physical educators (Kelley & Lindsay, 1977) and in-service physical educators (Kelley & Lindsay, 1980) in the domain of exercise physiology and

highlighted many of the difficulties associated with the delivery and application of theoretical concepts common to the sub-disciplines of physical education (Bulger et al., 2000).

A second theme was the issue many participants had experienced with regard to remembering and retaining this type of knowledge. The common methods of instructional delivery typically used for these science-based courses, and the actual content associated with them, often made it difficult for the participants to internalized and recall the information that was presented to them. Similarly, course content and instructional methods were identified as two areas of particular concern for PETE programs, particularly when examining the scientific and theoretical sub-disciplinary courses that are now commonplace (Bulger et al., 2000).

A third theme was the perceived lack of value and utility when scientific and theoretical knowledge was actually applied in a real world setting. Many of the participants questioned the utility of that knowledge as beginning physical educators and just could not see the value as practitioners. Similar concerns have been expressed by many researchers in the past (Ross, 1981; Bain & Poindexter, 1981; Loughery, 1985; Robertson & Heyden, 1985; Karper, 1997) for a myriad of reasons. More recently, and in a similar vein, Rink (2007) has questioned the utility of generic science-based courses for physical education majors. The doubt expressed by many participants regarding the value of the scientific and theoretical knowledge gained during their undergraduate experience was further exacerbated by those faculty members' they had encountered who lacked public school teaching experience. A similar concern was expressed by Metzler (2009, p.

294) regarding “an education professoriate that is unfamiliar with the realities of day-to-day life in schools.”

Finally, a fourth theme was the direct application of knowledge needed to analyze and correct motor skill performance when teaching. Many of the participants used this specific knowledge base on a regular basis when conducting their classes. They were fully aware of the need to apply this knowledge in their current practice, and credited their undergraduate experience for equipping them with the tools necessary to do so.

Skill-Based and Fitness-Based Competence

The second standard in NASPE’s Initial PETE Standards (NASPE, 2009) addresses skill-based and fitness-based competencies of candidates and focuses on whether they are “physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health-enhancing fitness as delineated in the NASPE K-12 standards.” The following research question was addressed: *What skill-based and fitness-based competencies acquired in their undergraduate program do beginning teachers use in their practice as public school physical educators?*

Two strong themes emerged from the data analysis. The first theme indicated that the participants had been exposed to a wide variety of fundamental movements and physical activities in their undergraduate programs. They felt competent demonstrating and performing basic loco-motor movements and tasks, particularly in elementary physical education settings. The value the participants in this study placed upon learning about and utilizing fundamental movement skills was consistent with elementary physical educators surveyed by Collier and Herbert (2004). The comprehensive set of activity

courses that the participants were exposed to provided them with instruction regarding how to effectively teach a variety of basic movement skills, particularly at the elementary level. Again, this finding was similar to that found by Hill & Brodin (2004) who reported that teaching movement and sport skills was the least perceived area of difficulty for physical educators in the State of Washington due to their adequate undergraduate preparation.

However, that competence for teaching fundamental sports skills, typically learned in short instructional units, was limited when considering more complex movements taught to upper grade levels. This concern is similar to the one expressed by Siedentop (2002) who criticized the content knowledge provided by PETE programs that often results in “short-term multi-activity programs with little progression and few real outcomes” taught by physical educators who are “ill-equipped to teach anything beyond a beginning unit of activity.”

The second theme highlighted the participants’ lack of accountability for fitness in their undergraduate programs and limited knowledge of health-related fitness. The participants did not recall having to complete any fitness testing in their undergraduate programs, despite occasional references from faculty on the importance of being physical role models for their students. There also seemed to be agreement in the literature that physical educators need to be active and fit in order to serve as appropriate role models for their students (Issues, 1992) with abundant research demonstrating the positive effects that good physical role models can have on students (Clark, Blair, & Culan, 1988; Spencer, 1998). Despite this evidence, the few studies (Issues, 1992; Melville & Jones, 1990; Stier, 1999; Staffo & Stier, 2000) that have looked at the use of fitness testing in

undergraduate PETE programs suggested that fitness assessment of pre-service physical education majors is not common. Most recently, Staffo and Stier (2000) reported that the vast majority (69%) of the PETE departments they surveyed did not require physical education majors seeking teacher certification to take a physical fitness test. These findings would appear to hold true for the undergraduate programs investigated in this study and indicates that fitness assessment is still not a priority for many PETE programs.

Despite some evidence suggesting that physical education teachers do attain health-related fitness knowledge during their teacher preparation (Ayers, 2002; Barnett & Merriman, 1994), participants in this study did not recall learning about health-related fitness in their undergraduate programs. This was in agreement with a study conducted by Miller and Housner (1998) who investigated what pre-service and in-service physical educators knew about (a) body composition, (b) flexibility, (c) muscular strength, (d) muscular endurance, and (e) cardiovascular conditioning. Their findings revealed that the health-related fitness content knowledge of in-service and pre-service physical educators was considered below adequacy (65.22% on a 100-point scale). More recently, Castelli and Williams (2007) also revealed deficiencies of health-related fitness knowledge among physical education teachers that were similar to findings reported by Miller and Housner (1998).

Planning and Implementation

The third standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates' planning and implementation of "developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students." The following research question was addressed: *What knowledge and*

skills learned in their undergraduate program do beginning public school physical educators utilize when planning to meet the diverse needs of all students?

Three strong themes emerged from the data analysis. The first theme indicated that the participants learned a basic lesson plan template from their undergraduate experience to assist them in addressing the diverse needs of their students. This framework had varying degrees of applicability in the field and was dependent upon the particular context in which they were teaching.

Similarly, many teacher education programs ask undergraduates to develop detailed daily lesson plans that are felt to be beneficial to pre-service and beginning teachers (Hall & Smith, 2006; Hill & Brodin, 2004;). Indeed, the participants in this study learned about planning for a lesson by developing and writing lesson plans based upon a relatively standardized template. This template was based upon the formulation of objectives learned in their undergraduate programs and supported in the literature by theorists who believe that training pre-service teachers to plan by first specifying objectives, followed by the selection and organization of activities, and finally evaluating outcomes is both logical and sound (Goc-Karp & Zakrajsek, 1987; Housner & Griffey, 1985; Placek, 1984). This outcome approach to planning, taught in the undergraduate programs and applied in practice, is a reflection of standard-driven education where teachers in many subject areas are now required to focus on learning objectives and outcomes (Goc-Karp & Zakrajsek, 1987; Housner & Griffey, 1985; Placek, 1984; Twardy & Yerg, 1987).

Another element that was commonly discussed was the use of standards when developing lesson plans and implementing appropriate goals and objectives. Typically,

these standards were established by national organizations prominent within the field of health and physical education, adopted by state and local agencies, and taught by the undergraduate programs. All of the participants recalled their programs discussing specific standards with them and many were required to include standards on their lesson plans. This level of understanding was in contrast to a previous study conducted by Chen (2006) who found that many physical education teachers lacked understanding of the National Standards for Physical Education (NASPE, 2004) as well as the desire to learn about them.

A second theme was related to dealing with student diversity that is frequently encountered by public school physical educators in today's schools. For many participants, this meant working with other educators to address the diverse needs of all students; developing a better understanding of these students with exceptionalities; and not having the specific knowledge and skills to accommodate these individuals.

When describing their teaching environment, many of the participants talked about the significant role that special education teachers and adapted physical education specialists often play in their day-to-day interactions with a diverse student population. This "support and guidance" was certainly viewed as a positive from the perspective of the participants and was not seen as a slight on their own ability to work with a variety of students. Similarly, Hardin (2005) found that other teachers were a valuable knowledge source for physical education teachers when learning how to teach students with disabilities in integrated environments.

In preparation for working with these diverse students, the participants recalled a general special education course that was commonly taken during their early experiences

in their undergraduate program. For some, this was supplemented by an adapted physical education course that was typically taken during the latter part of their program. In many instances, these courses were positive experiences for the participants as they learned relevant knowledge and skills to assist them in working with a diverse student population. These perspectives were in agreement with a previous study conducted by Hardin (2005) who also found that physical education teachers were positively impacted (improved confidence and competence) by their sole adapted class.

Despite the positive impact of these other teachers and courses, many of the participants expressed a desire to know more about adapting instruction for diverse student needs- particularly the inclusion of specific modifications and/or accommodations for student exceptionalities. Indeed, research on pre-service teacher education has revealed that students may personally respect and value diversity but may not be ready to take substantive actions or modify pedagogical practices to adjust class environments to promote the inclusion of all students (Choi & Chepyator-Thomson, 2011).

A third theme was the knowledge of instructional technology gained by the participants throughout their undergraduate experience and the lack of resources to support the use of technology in their current practice. Many of the participants gained knowledge of computer-based programs to assist with planning and implementation of appropriate learning experiences; however, actual use of technology in practice was sporadic, as issues of accessibility and funding were commonplace.

Despite the use of some basic instructional technologies, it was clear from the data that the participants did not utilize much of what they had learned from their

undergraduate program. Indeed, the participants' application of Power-Points and other computer-based instructional technologies learned during their undergraduate was not a common part of their current practice.

The participants' skepticism towards educational technology use in physical education was also found recently with German physical education teachers (Kretschmann, 2012), but was in stark contrast to the findings of Thomas and Stratton (2006) who investigated the attitude towards the use of technology with English physical education teachers. For some of the participants, the limited use of technology in practice had more to do with the general lack of resources and specific issues related to accessibility and funding. Recently, similar findings were reported by Woods and colleagues (2008) where limited budgets, poor accessibility, and inadequate space negatively impacted the incorporation of technology in physical education.

Instructional Delivery and Management

The fourth standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates' use of "effective communication and pedagogical skills and strategies to enhance student engagement and learning." The following research question was addressed: *What instructional and managerial skills and strategies learned in their undergraduate program do beginning teachers recall and use in their practice as public school physical educators?*

Four strong themes emerged from the data analysis. The first theme indicated that the participants learned the most about instructional and managerial skills and strategies from their observations in the field and their student teaching experience. These two common elements of their undergraduate programs offered the participants the

opportunity to observe and work with real teachers as they conducted their duties on a daily basis with real students. The participants particularly valued the hands-on approach to learning that was an integral part of these experiences, under the guidance of a “mentor” or “master” teacher.

The positive impact of field and student teaching experiences on the participants’ was not unexpected, as these experiences have long been identified as an indispensable component of a PETE undergraduate program. In the past decade, research findings have illustrated that pre-service teachers were found experiencing considerable professional learning and development in their field experiences (Curtner-Smith, 1996; Larson, 2005; Woods et al, 2000). Furthermore, student teaching has also been perceived by many teachers as valuable in their preparation to teach (Hill & Brodie, 2004; Knowles & Cole, 1996) and acknowledged as the most beneficial component of their teacher preparation programs (Guyton & McIntyre, 1990). The findings from this study certainly support a positive role for field and student teaching experiences like many other studies, particularly in relation to the development of instruction and management knowledge, while contrasting with a few studies that have identified some negative impacts of such experiences for physical educators (Askins & Imwold, 1994; Hardy, 1995; Wright, 2001).

A second theme was the positive impact that methodology classes and peer teaching had on the participants’ knowledge of instructional delivery and classroom management. The participants felt that methodology courses that included peer teaching were important elements of their undergraduate education. The opportunity to practice and experiment with various instructional and managerial skills and strategies was seen

by the participants as a “stepping stone” towards improved instruction and management. Similar to Schempp’s (1993) case study of a high school physical education teacher, the participants in this study valued knowledge that came from professional practice. Shulman (1987) called that process of learning from doing, the “wisdom of practice.” The beginning teachers in this study believed strongly in their wisdom of practice and the wisdom of their colleagues’ practice that was developed through their methodology classes and associated peer teaching experiences.

A third theme was the routines that the participants had learned from their undergraduate program and how important they felt these skills and strategies were in managing the class effectively. Two main areas- opening and closing a lesson and grouping of students- were prominent in the data analysis with participants learning about these areas in their undergraduate program. Indeed, many of those routines are part of the lessons now taught by the participants in their schools. The findings from this study add to the small body of knowledge in this area and expand upon a recent study conducted by Garrahy, Cothran and Kulinna (2005) who specifically examined elementary physical education teachers’ development and use of pedagogical knowledge related to class management. In their investigation of physical educators’ knowledge origins, influences, evolution, and content, Garrahy and colleagues (2005) revealed that teachers gave their teacher education programs little credit for their class management knowledge, with the exception of practicum experiences. The teachers believed that either their undergraduate experiences did not address management or they experienced a conflict between the material that was taught at the university and the material that was applied in the school setting. In contrast, participants in this study gave significant credit to their undergraduate

program for imparting class management knowledge (particularly related to routines) that they are now using in practice.

A fourth theme was what the participants had learned in their undergraduate program with regard to instructing the class. Again, two main areas of focus emerged: instructional feedback and instructional cues. The knowledge related to these two areas of instructional delivery was limited in breadth and depth. Nevertheless the participants were applying what they had learned of those basic instructional skills and strategies in their current practice.

Impact on Student Learning

The fifth standard in NASPE's Initial PETE Standards (NASPE, 2009) focuses on candidates' "use of assessments and reflection to foster student learning and inform instructional decisions." The following research question was addressed: *What assessment techniques and reflective practices learned in their undergraduate program do beginning teachers know and apply in their practice as public school physical educators?*

Three strong themes emerged from the data analysis. The first theme indicated that the participants had been exposed to a variety of basic assessment techniques during their undergraduate programs. They recalled learning about and administering paper and pencil tests, rubrics and physical fitness tests to assess peer and student knowledge, skills, and fitness levels. These techniques were addressed in some of their classes with most of the practice in applying them being conducted during their student teaching experiences.

A second theme was the participants limited use of assessment techniques learned during their undergraduate experience due to the nature of teaching physical education

and the logistical challenges associated with assessing student in that particular context. Many of the participants found themselves having to adopt alternative approaches to assessment (such as a rudimentary grading scheme) that did not quite replicate those techniques that they had become familiar with at the undergraduate level.

A third theme focused on reflection. Many of the participants recalled being required to reflect on the lessons they taught throughout their undergraduate experience. Regular written assignments and input from peers, instructors and physical educators assisted them in the process of reflection. In contrast, the reflective cycle they now go through as practitioners is somewhat different from the one they were exposed to during their undergraduate programs. Informal discussion with colleagues and input from administrators, co-workers, and students now form the basis of the reflective process with written reflections a rarity.

Mirroring most of the teacher cognition research, reflection in education has largely been studied as a comparison of experienced and novice teachers. In physical education, the focus has mainly been on pre-service teachers, as the development of reflective abilities are a key to making good instructional decisions and is a persistent concern in pre-service teacher education (Hall & Smith, 2006). It was evident from this study that the participants had been exposed to reflective practices in their undergraduate program, recalling post-lesson write-ups and discussions as the basis of their “reflection-on-action,” as coined by Schon (1983, 1987). Nevertheless, the findings from this study offer new insights into ways and means in which reflection is learned and experienced in an undergraduate PETE program.

Very little research has examined reflection in practice in physical education and the research that has been conducted is still in its infancy (Graber, 2001; Tsangaridou & Siedentop, 1995). Additionally, the existing research has tended to focus on reflection-on-action, and rarely on reflection-in-action. The importance of reflection as a cognitive process is not in question. However, ways to refine, develop, improve, and maximize reflective processes is an area that needs significant investigation.

Professionalism

The sixth standard in NASPE's Initial PETE Standards (NASPE, 2009) states that teacher candidates must "demonstrate dispositions essential to becoming effective professionals." The following research question was addressed: *What professional behaviors and dispositions do beginning physical educators learn from their undergraduate program and apply in their current practice?*

Two strong themes emerged from the data analysis. The first theme indicated that the participants had learned some professional behaviors and dispositions in their undergraduate programs. A basic definition of "professionalism" and how it relates to teaching physical education was provided by the participants based upon what they were able to recall from their programs- attire, fitness, knowledge, and punctuality were prominent elements discussed by the participants.

A second theme was the participants' extensive use of those behaviors and dispositions learned during their undergraduate education. Although what they learned about professional attire did not always apply in practice, there were in fact numerous examples of real world practical application of professional behaviors and dispositions learned that positively impacted their current practice.

In response to the need to “demonstrate dispositions essential to becoming effective professionals,” all of the undergraduate PETE programs in this study followed many other teacher education programs throughout the nation by incorporating professional dispositions for prospective teacher candidates. This was evident from the recollections shared by those beginning physical educators in this study clearly indicating that they had learned about professional behaviors and dispositions in their undergraduate programs, and were now applying much of what they had learned in actual practice. However, most of the research in this particular area has focused on the assessment of professional behaviors and has created considerable discussion and controversy among teacher education programs and teaching professionals (Tjeerdsma, Metzler, Walker & Mozen, 2000; Wayda & Lund, 2005; Whaley, 1999; Young & Youngs, 2005;).

There have also been those who have been critical of efforts to gauge the dispositions of pre-service teachers and of attempts to influence the development of dispositions as part of teacher education training (McKnight, 2004). It is clear, however, that assessing teacher dispositions has taken a foothold in teacher education programs and will only continue to be more fully integrated into the undergraduate curriculum. However, very few studies to date have investigated the impact of a teacher education program on a teacher candidates’ professional behavior and dispositions, particularly in PETE. Indeed, a recent study by Ignico and Gammon (2009), examining the professional disposition scores of physical education teacher candidates over time and reporting on the validity and reliability of an instrument used to assess the professional behaviors represents what little research has been done in this area. Consequently, the findings from

this study represent an important step to expand upon the fledgling work completed in this area to date.

Directions for Future Research

The most recent NASPE Initial PETE Standards (NASPE, 2009) must continue to be utilized as a research framework to investigate the impact of undergraduate PETE programs on the practice of physical educators. Apart from the seminal work of Metzler and colleagues (2000) at Georgia State University (GSU), we know little about the effectiveness of PETE programs in preparing future practitioners for the field, particularly from the perspective of beginning teachers. These new standards offer a framework that can be used to further examine the impact of undergraduate PETE programs on actual practice and expand upon the research that focused on assessing numerous facets of the GSU PETE program.

As discussed previously, the vast majority of research studies in this area have been conducted using quantitative research methodologies; questionnaires and surveys being the most common. To continue this trend, the development of a survey-based instrument (similar to the work of Chen (2003) with “*Achieving the NASPE Standards Inventory*”) addressing each of the NASPE Initial PETE Standards (NASPE, 2009) is warranted. This could be designed to incorporate each of the individual elements associated with each standard and be tested for measures of validity and reliability similar to the aforementioned study. This would allow researchers to generate preliminary data with larger sample sizes than those used in this study.

Future research in this area also needs to employ more qualitative research methodologies to get more in-depth information related to the impact of PETE on

practice. The methods and procedures in this study provide one possible way in which to do so. Moreover, a mixed methods approach in future research would be beneficial by combining quantitative and qualitative methods to provide a more complete representation of the impact of PETE.

The studies in this area have also focused almost exclusively on pre-service teachers and/or recent graduates in their first (induction) year of teaching. Clearly, more work is required with current practitioners (or “beginning teachers”) who have had the opportunity to apply the skills and content stressed in their pre-service preparation and are in a position to recall those experiences. These beginning teachers play a pivotal role in the socialization of future teachers and have much to offer those wanting to improve teacher education programs (McCullick, 2000), so it is important to further examine their unique perspectives on their preparation.

Beyond research with pre-service teachers and graduates, future research that specifically addresses the perspectives of other stakeholders such as fieldwork supervisors, cooperating teachers, administrators, and other professional colleagues could also help teacher education programs to better prepare their students and graduates to meet the demands of current practice. Furthermore, longitudinal studies examining pre-service teachers just beginning their undergraduate programs and following them into their teaching careers are warranted. This would ensure a thorough examination of the impact of participants’ undergraduate experiences at numerous points in the journey.

With the introduction of standards-based education and the increased accountability placed upon institutions to meet these standards, future research also needs

to look specifically at PETE programs around the country and to examine what these programs are doing to meet these standards and expectations.

Practical Implications

The findings in this study can be used in many important ways. They can be used in curriculum development, allowing institutions and teacher educators to address what graduates do and do not perceive as important in their preparation. While faculty are unlikely to change a curriculum to include everything desired by graduates, the findings can help educators attend to the perceived strengths and weaknesses of an undergraduate PETE program. The linking of theory to practice was one example.

The findings suggested that PETE programs need to bridge the gap between theory and practice by increasing teaching applications in exercise physiology courses, reducing reliance on the student to make these applications, emphasizing fitness education concepts, and increasing collaboration between exercise physiologists and physical educators (Van Donselaar & Leslie, 1990).

The knowledge of fitness and health-related fitness concepts was another area of the curriculum that institutions and teacher educators need to attend to based upon the finding of this study. This could be done by infusing health-related fitness concepts throughout the PETE curriculum as suggested by Bulger et al. (2001), rather than the typical reliance on one exercise physiology-based course.

Diversity education must be addressed within PETE programs. While one course (or a collection of courses) had a positive impact on the basic knowledge base of the participants in this study, many perceived their preparation for working with diverse students as inadequate. Institutions and teachers educators need to consider facilitating

the inclusion of diversity education within all education courses. For example, it has been suggested that the infusion of disability knowledge in PETE programs will better prepare effective and competent practitioners to work in inclusive settings (Choi & Chepyator, 2011). Moreover, multicultural education and diversity-based training has been shown to help teachers meet the needs of students from all backgrounds.

PETE students need to have many experiences in the field and in methodology classes that offer hands-on teaching opportunities to develop instructional and managerial knowledge. The opportunity to observe, experiment, and practice with various instructional and managerial skills and strategies was seen by the participants as a “stepping stone” towards improved instruction and management. The beginning teachers in this study believed strongly in their wisdom of practice (Shulman, 1987) and the wisdom of their colleagues’ practice that was developed through their field experiences, student teaching, and methodology classes. Therefore, institutions and teacher educators need to continue to offer these hands-on experiences early and often throughout their undergraduate PETE programs as the classroom routines and instructional feedback and cues learned are directly applicable to actual practice.

In contrast, institutions and teacher educators should examine courses and instruction related to assessment techniques and reflective practices in undergraduate PETE programs based upon the findings from this study. The participants in this study made limited use of basic assessment techniques learned during their undergraduate experience due to the nature of teaching physical education and the logistical challenges associated with assessing student in their particular contexts. Moreover, reflective practices such as written reflections, were a rarity in actual practice suggesting that

undergraduate PETE programs need to reconsider how and what they are teaching prospective teachers with regard to assessment and reflection- keeping in mind that physical educators and their programs would certainly benefit from utilizing more assessment techniques and reflection in actual practice.

Another finding from this study that has practical implications for institutions and teachers educators is related to professionalism. PETE faculty need to ensure that they are addressing professional behaviors and dispositions throughout their program as the participants in this study utilized much of what they had learned in this domain in their current practice.

Finally, this study may serve to provide public schools with insights regarding the challenges that beginning physical education teachers' face in light of their undergraduate PETE experiences and their obligation in easing the transition from higher education to the practical world of teaching.

Conclusion

In conclusion, the present study offered an initial glimpse into the impact of undergraduate PETE on physical educators' practices by examining the perceptions of beginning teachers. New light has been shed on the preparation of pre-service teachers by utilizing the latest NASPE National Standards for Initial PETE (NASPE, 2009) to assess the transfer of teacher education knowledge, skills, and dispositions to the practice of teaching public school physical education.

The findings provide intriguing initial insights into the impact of four different undergraduate PETE programs on teachers' practices. This study has provided new insights, confirmed some of what had been found in other studies, and supported what

may have already been known intuitively but not supported empirically. Schmitz and Whitworth (2002, p.135) stated that “it is sadly ironic that universities, institutions so competent in the ways of discovery, often fail to look inward.” They challenged institutions to systematically investigate whether the education that students and practitioners receive actually has an impact in achieving its objectives. This present study has responded, in part, to this challenge. It has shown that there are implications for curriculum development and implications for institutions, public schools, administrators, and teacher educators as key stakeholders in the physical education teacher education (PETE) alliance. Thus, encouraging further systematic impact evaluation of other PETE programs throughout the United States and the world to contribute to the strength of individual PETE programs, PETE graduates and the revitalization of the profession.

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APPENDIX A
2008 NATIONAL STANDARDS FOR
INITIAL PETE

2008 National Standards for Initial Physical Education Teacher Education

Standard 1: Scientific and Theoretical Knowledge

Physical education teacher candidates know and apply discipline-specific scientific and theoretical concepts critical to the development of physically educated individuals.

Elements – Teacher candidates will:

- 1.1 Describe and apply physiological and biomechanical concepts related to skillful movement, physical activity and fitness.
- 1.2 Describe and apply motor learning and psychological/behavioral theory related to skillful movement, physical activity, and fitness.
- 1.3 Describe and apply motor development theory and principles related to skillful movement, physical activity, and fitness.
- 1.4 Identify historical, philosophical, and social perspectives of physical education issues and legislation.
- 1.5 Analyze and correct critical elements of motor skills and performance concepts.

Standard 2: Skill and Fitness Based Competence*

Physical education teacher candidates are physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health enhancing fitness as delineated in the NASPE K – 12 Standards.

Elements – Teacher candidates will:

- 2.1 Demonstrate personal competence in motor skill performance for a variety of physical activities and movement patterns.
- 2.2 Achieve and maintain a health-enhancing level of fitness throughout the program.
- 2.3 Demonstrate performance concepts related to skillful movement in a variety of physical activities.

* Without discrimination against those with disabilities, physical education teacher candidates with special needs are allowed and encouraged to utilize a variety of accommodations and/or modifications to demonstrate competent movement and performance concepts (modified/adapted equipment, augmented communication devices, multi-media devices, etc.) and fitness (weight training programs, exercise logs, etc.).

Standard 3: Planning and Implementation

Physical education teacher candidates plan and implement developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students.

Elements – Teacher candidates will:

- 3.1 Design and implement short and long term plans that are linked to program and instructional goals as well as a variety of student needs.
- 3.2 Develop and implement appropriate (e.g., measurable, developmentally appropriate, performance based) goals and objectives aligned with local, state, and /or national standards.
- 3.3 Design and implement content that is aligned with lesson objectives.
- 3.4 Plan for and manage resources to provide active, fair, and equitable learning experiences.
- 3.5 Plan and adapt instruction for diverse student needs, adding specific accommodations and/or modifications for student exceptionalities.

3.6 Plan and implement progressive and sequential instruction that addresses the diverse needs of all students.

3.7 Demonstrate knowledge of current technology by planning and implementing learning experiences that require students to appropriately use technology to meet lesson objectives.

Standard 4: Instructional Delivery and Management

Physical education teacher candidates use effective communication and pedagogical skills and strategies to enhance student engagement and learning.

Elements – Teacher candidates will:

4.1 Demonstrate effective verbal and non-verbal communication skills across a variety of instructional formats.

4.2 Implement effective demonstrations, explanations, and instructional cues and prompts to link physical activity concepts to appropriate learning experiences.

4.3 Provide effective instructional feedback for skill acquisition, student learning, and motivation.

4.4 Recognize the changing dynamics of the environment and adjust instructional tasks based on student responses.

4.5 Utilize managerial rules, routines, and transitions to create and maintain a safe and effective learning environment.

4.6 Implement strategies to help students demonstrate responsible personal and social behaviors in a productive learning environment.

Standard 5: Impact on Student Learning

Physical education teacher candidates utilize assessments and reflection to foster student learning and inform instructional decisions.

Elements – Teacher candidates will:

5.1 Select or create appropriate assessments that will measure student achievement of goals and objectives.

5.2 Use appropriate assessments to evaluate student learning before, during, and after instruction.

5.3 Utilize the reflective cycle to implement change in teacher performance, student learning, and/or instructional goals and decisions.

Standard 6: Professionalism

Physical education teacher candidates demonstrate dispositions essential to becoming effective professionals.

Elements – Teacher candidates will:

6.1 Demonstrate behaviors that are consistent with the belief that all students can become physically educated individuals.

6.2 Participate in activities that enhance collaboration and lead to professional growth and development.

6.3 Demonstrate behaviors that are consistent with the professional ethics of highly qualified teachers.

6.4 Communicate in ways that convey respect and sensitivity.

APPENDIX B
INFORMATIONAL LETTER

INFORMATIONAL LETTER

To Whom It May Concern:

I am currently an Ph.D. candidate in the Department of Kinesiology at the University of Georgia, working under the direction of Dr. Paul Schempp. I would like to invite your physical education faculty member to participate in a research study entitled “**Impact of Teacher Education on Beginning Physical Education Teachers’ Practices.**” The purpose of the study will be to determine the perceptions beginning teachers’ hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study will assess the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education.

This study aims to investigate a pre-specified group of physical education teachers, according to the following criteria:

- (a) Graduated from an undergraduate PETE program between 2006 and 2009,
- (b) Having 1-4 years of teaching experience,
- (c) Currently teaching full-time at elementary/ middle school level,
- (d) Currently teaching in 1 of 4 local counties in Georgia,
- (e) Living and working within reasonable distance from researcher’s base.

Participation will involve formal interviews (one focus group and two individual), observation of teaching, informal interviews, and analysis of various educational and teaching-related documents and artifacts. The study will require participation for 30 weeks, with one individual interview and up to two school visits scheduled in the fall of 2010, and then repeated in the spring of 2011. In addition, participation in one focus group interview will be necessary in the spring of 2011. Involvement in the study is voluntary, and your faculty member may choose not to participate, or to stop at any time without penalty or loss of benefits to which they are otherwise entitled. The results of the study will be confidential and will not be released in any individually identifiable form without your faculty’s prior consent, unless otherwise required by law. There will be no harmful use of the data collected in this study. The results of the research study may be published, but faculty names or institutions will not be used. In fact, the published results will be presented in summary form only. Your faculty’s identity will not be associated with their responses in any published format.

The findings from this project will provide information on physical education teacher education (PETE) programs from practitioners perspectives and provide valuable information to those involved in preparing quality teacher education programs. There are no known risks or discomforts associated with this research.

If you have any questions about this research project, please feel free to contact me at (706) 667-4882 or email gconnolly@aug.edu, alternatively you can contact Dr. Paul Schempp at (706) 542-4379. Questions or concerns about your faculty’s rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

Thank you for your consideration! I will follow-up soon. Please keep this letter for your records.

Sincerely,
Graeme J. Connolly

APPENDIX C
RECRUITMENT/INFORMATIONAL EMAIL

RECRUITMENT/INFORMATIONAL EMAIL

Dear physical educator:

I am currently a Ph.D. candidate in the Department of Kinesiology at the University of Georgia, working under the direction of Dr. Paul Schempp. I would like to invite you to participate in a research study entitled “**Impact of Teacher Education on Beginning Physical Education Teachers’ Practices.**”

The purpose of the study will be to determine the perceptions beginning teachers’ hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study will assess the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education.

This study aims to investigate a pre-specified group of physical education teachers, according to the following criteria:

- (a) Graduated from an undergraduate PETE program from 2006 to 2009
- (b) Having 1-4 years of teaching experience,
- (c) Currently teaching full-time at elementary/ middle school level,
- (d) Currently teaching in 1 of 4 local counties in Georgia,
- (e) Living and working within reasonable distance from researcher’s base.

Participation will involve formal interviews (one focus group and two individual), observation of your teaching, informal interviews, and analysis of various educational and teaching-related documents and artifacts.

The study will require participation for 30 weeks, with one individual interview and up to two school visits scheduled in the fall of 2010, and then repeated in the spring of 2011. In addition, participation in one focus group interview will be necessary in the spring of 2011.

The findings from this study will provide information on physical education teacher education (PETE) programs from practitioners perspectives and provide valuable information to those involved in preparing quality teacher education programs.

If you have any questions about this research project, please feel free to contact me at (706) 667-4882 or email gconnolly@aug.edu, alternatively you can contact Dr. Paul Schempp at (706) 542-4379.

I would appreciate if you could let me know if you would be interested in participating in the study at your earliest convenience. Thanks for your consideration! I will be in contact soon.

Sincerely,

Graeme J. Connolly

APPENDIX D
INFORMED CONSENT FORM

PARTICIPANT CONSENT FORM

I, _____, agree to take part in a research study titled “*Impact of Teacher Education on Beginning Physical Education Teachers’ Practices*,” which is being conducted by Graeme Connolly as part of his Ph.D. requirements for the University of Georgia, (706) 667-4882, under the direction of Dr. Paul Schempp, Department of Kinesiology, University of Georgia, (706) 542-4379. My participation is voluntary; I can refuse to participate or stop taking part at any time without giving any reason, and without penalty or loss of benefits to which I am otherwise entitled. I can ask to have information related to me returned to me, removed from the research records, or destroyed.

1. The reason for this study is to determine the perceptions beginning teachers’ hold regarding the impact of their undergraduate physical education teacher education (PETE) experience, on their current practice. Specifically, this study will assess the transfer of teacher education knowledge, skills, and dispositions as embodied by the National Standards for Initial PETE (NASPE, 2009) to the practice of teaching public school physical education.

2. The benefits that I may expect from it are: gaining an enhanced perspective of the challenges of teaching from other beginning physical educators’. By sharing and discussing my perceptions of my undergraduate teacher preparation program, I will develop an increased awareness of the educational issues I face on a daily basis, and learn from the experiences of other teaching professionals in my field.

3. The procedures are as follows:

My part in this study will last for a total of 30 weeks (from November, 2010 to May, 2011). Specifically, I will participate in the following:

A. Individual Interviews

I will participate in two scheduled one-on-one interviews at my school. The first interview will be conducted during the fall semester of 2010, and the second interview will be conducted during the spring semester of 2011. Each interview will last approximately 1-hour and will be audio-taped and transcribed fully.

B. Focus Group Interviews

I will participate in one focus group interview within reasonable distance (45-minute drive or less) from where I work and/ or live. The focus group interview will be conducted during the spring semester of 2011 and will last approximately 2 hours. The focus group interview will be audio-taped and transcribed fully.

C. School visits

I will be observed teaching physical education classes at my school on two occasions. The first observation will be conducted during the fall semester of 2010, and the second observation will be conducted during the spring semester of 2011. In addition, I will be asked to participate in brief (10-15 minute) informal interviews before and/ or after each observation.

D. Document/Artifact Analysis

I will be asked to supply copies (official or unofficial) of my undergraduate degree transcripts. My undergraduate program of study, course syllabi, mission, texts, and current curriculum/ program guides, unit/ lesson plans, and instructional materials will be examined and utilized for the study.

4. No discomforts or stresses are expected.

5. No risks are expected.

6. The results of this study will be confidential and will not be released in any individually identifiable form without my prior consent, unless otherwise required by law. To secure and maintain the confidentiality of all participants, only the principal investigator, co-principal investigator, members of the dissertation committee, and members of the University of Georgia Sport Instruction Lab will have access to the data, which will be used strictly for viewing and analytical purposes. Even though the investigator will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future. There will be no harmful use of the data collected in this study. Audio-tapes will be used by the researcher, and made available to me for review purposes. Code numbers will be used to conceal identities. The code list identifying names will be kept exclusive and secured. Individually-identifiable information and/or codes linking the data to individual identifiers will be retained for five years to allow the time necessary to write, revise, and publish the research study's results and findings, and for comparative purposes with future investigations. Audio-tapes will be transcribed/analyzed and then destroyed at the end of the study, in the fall of 2011.

7. The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at: (706) 667 4882.

8. *My signature below indicates that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.*

Name of Researcher

Signature

Date

Telephone: (706) 667 4882

Email: gconnolly@aug.edu

Name of Participant

Signature

Date

**PLEASE SIGN BOTH COPIES,
KEEP ONE AND RETURN ONE TO THE RESEARCHER.**

Additional questions or problems regarding your rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 629 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

APPENDIX E
INTERVIEW GUIDES

INDIVIDUAL INTERVIEW GUIDE (#1)

- *Standard #1: Scientific and Theoretical Knowledge*
- *Standard #2: Skill-based and Fitness-Based Competence*
- *Standard #3: Planning and Implementation*

1. Tell me about where you teach, and what you most enjoy doing when you're not teaching physical education.
2. Why did you get into the physical education teaching profession?
3. Talk about your undergraduate experience, in general.
4. Describe a typical work day at your current school.
5. Getting back to your undergraduate education. Talk about the knowledge and skills you learned specifically from your PETE program.

Prompts (areas to address, if needed):

- what physiological and biomechanical concepts?
 - motor development and motor learning theories and principles?
 - psychological and behavioral theories?
 - analyzing and correcting various motor skills?
 - performing a variety of activities and movement skills?
 - physical demands of job?
 - fitness testing?
 - planning learning experiences?
 - local, state, national standards?
 - lesson plans?
 - working with diverse students?
 - use of instructional technology?
6. How have you been able to use that knowledge and those skills in your current teaching?
 7. Talk about the knowledge (in these areas) you did not learn from your undergraduate PETE program, but now wish you had.
 8. Is there anything else you would like to add?
 9. Is there anything I should have asked, but didn't? Have we missed anything?

INDIVIDUAL INTERVIEW GUIDE (#2)

- *Standard #4: Instructional Delivery and Management*
- *Standard #5: Impact on Student Learning*
- *Standard #6: Professionalism*

1. Talk about the knowledge and skills you learned from your undergraduate PETE program.

Prompts (areas to address, if needed):

- lesson delivery?
 - communication?
 - feedback?
 - motivation?
 - classroom management?
 - assessment of learning?
 - reflection?
2. How have you been able to use that knowledge and those skills in your current teaching?
 3. Talk about the knowledge (in these areas) you did not gain from your undergraduate PETE program, but now wish you had.
 4. Define “professionalism.” What dispositions are associated with an effective physical education professional?
 5. Talk about the professional behaviors and dispositions you gained from your undergraduate PETE program.
 6. How have you been able to use these professional behaviors in your job?
 7. Talk about the professional behaviors and dispositions you did not learn for your undergraduate PETE program, but now wish you had.
 8. Is there anything else you would like to add?
 9. Is there anything I should have asked, but didn’t? Have we missed anything?

FOCUS GROUP INTERVIEW GUIDE

- *Standard #1: Scientific and Theoretical Knowledge*
- *Standard #2: Skill-based and Fitness-Based Competence*
- *Standard #3: Planning and Implementation*
- *Standard #4: Instructional Delivery and Management*
- *Standard #5: Impact on Student Learning*
- *Standard #6: Professionalism*

Opening question

1. Introduce yourself- tell us who you are, where you teach, and what you most enjoy doing when you're not teaching physical education.

Introductory question

2. Why did you get into the physical education teaching profession?

Transition questions

3. Talk briefly about your undergraduate PETE experience.
4. What experiences did you have in your undergraduate PETE program that you recall as particularly meaningful, useful, or applicable to your teaching?

Key question

5. Describe your ideal undergraduate PETE program.

Prompts:

- Knowledge
- Skills
- Professional Dispositions/Behaviors
- Learn
- Apply

Closing questions

6. Is there anything else you would like to add?
7. Is there anything I should have asked, but didn't? Have we missed anything?

APPENDIX F
OBSERVATION PROTOCOLS

OBSERVATION PROTOCOL FOR PHYSICAL EDUCATION LESSONS (#1)

- *Standard #1: Scientific and Theoretical Knowledge*
- *Standard #2: Skill-based and Fitness-Based Competence*
- *Standard #3: Planning and Implementation*

Elements to look for during the lesson(s):

(These elements will help to validate or dispute data gathered from the interviews and document/ artifact analysis)

Standard #1

- Use and application of physiological/ biomechanical concepts
- Use and application of motor development and motor learning theories and concepts
- Use and application of psychological and behavioral theories
- Motor skills analysis and feedback on performance of motor skills

Standard #2

- Teacher motor skill competence in a variety of physical activities
- Use and application of fitness-based activities
- Teacher competence in performing and utilizing demonstrations for a variety of physical activities

Standard #3

- Use and application of clear goals, objectives, & standards
- Use and application of specific accommodations/ modifications to meet needs of all students
- Implementing progressive and sequential instruction to meet needs of all students
- Use and application of instructional technology

******Obtain copy of lesson plan, if available******

OBSERVATION PROTOCOL FOR PHYSICAL EDUCATION LESSONS (#2)

- *Standard #4: Instructional Delivery and Management*
- *Standard #5: Impact on Student Learning*
- *Standard #6: Professionalism*

Elements to look for during the lesson(s):

(These elements will help to validate or dispute data gathered from the interviews and document/ artifact analysis)

Standard #4

- Use and effectiveness of verbal and non-verbal communication
- Use and effectiveness of demonstrations, explanations, and instructional cues
- Use and effectiveness of feedback
 - Skill acquisition
 - Student learning
 - Motivation
- Ability to recognize and adjust learning environment based upon student responses
- Effectiveness of classroom management
 - Use of rules
 - Use of routines
 - Transitions
- Use and implementation of strategies to help students demonstrate personal and social responsibility

Standard #5

- Use of appropriate assessments
 - Student achievement of lesson goals and objectives
 - Student learning- before
 - Student learning- during
 - Student learning- after

Standard #6

- Professionalism/ behavior
- Teacher communication with students & colleagues
 - Respect
 - Sensitivity

******Obtain copy of lesson plan, if available*****