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A Descriptive Analysis of Undergraduate PETE Programs

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The current study describes the nature of physical education teacher education (PETE) programs in the United States. Of the 200 institutions of higher education invited to participate, 116 PETE programs completed a comprehensive questionnaire regarding their undergraduate programs (58% response rate). Respondents reported employing an average of 3.84 ($SD = 2.80$) full-time and 3.07 ($SD = 3.52$) part-time faculty members, nearly equal in gender (females = 48%), and overly representative of Caucasians (92% of respondents reported employing a faculty of at least 60% Caucasian). First- and second-year field-based teaching experiences were provided by 77% of respondents. A majority (65.8%) of institutions provided student teaching experiences at the elementary and either middle or high school settings. These experiences typically lasted 9 weeks and were supervised by university personnel three times per setting, and 76.3% were conducted exclusively by PETE faculty. Emphasis on specific curricular models was reported by 83% of respondents, 45.3% reported electronic portfolio development as a primary technology experience, and 62% reported coursework as the primary means by which candidates received multicultural experiences.

Keywords: kinesiology, teaching, physical education

The National Council for Accreditation of Teacher Education (NCATE) has had a major influence on the way teacher education programs prepare teachers. Teacher education programs in all 50 U.S. states use NCATE standards and over two-thirds of newly licensed teachers are graduates from NCATE-approved programs (Butler, 2006). Current NCATE standards require teacher education programs to provide outcome-based evidence that candidates have achieved the knowledge, skills, and dispositions needed to be effective teachers. For subject matter specializations, NCATE has identified Specialized Professional Associations (SPAs) that are responsible for establishing standards and procedures for program review and accreditation. The SPA for physical education teacher education (PETE) is the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD) and is represented by the National Association of Sport and Physical Education (NASPE).

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The first PETE content standards were developed only 20 years ago (1985, 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: (1) *physical education teaching specialty*—content knowledge and knowledge derived from subdisciplines, (2) *physical education as a profession*—societal and philosophic underpinnings of physical education, and (3) *pedagogical physical education*—planning, teaching and evaluation.

Newer versions of PETE standards have been developed twice (NASPE, 1995, 2003), and each time, the standards have been influenced by significant societal events. In fact, over the last two decades, four thematic areas have become more relevant in our increasingly globalized society: physical education content, curricular issues, technology, and diversity.

As part of the content of physical education, fitness has always been a focus of PETE standards, yet several factors have made health-related fitness a central standard in PETE programs. These factors include the obesity crisis in America (Dietz, 2004); identifying sedentary behavior as a risk factor for diseases such as heart disease, stroke, cancer, diabetes (U.S. Department of Health and Human Services, 1996); increasing health care costs associated with diseases related to inactivity (Pratt, Macera, & Wang, 2002); and research indicating physical education programs may lead to increased levels of physical activity in childhood that extend into adulthood (Silverman, 2005). PETE standards focus on health-related fitness in schools, as well as collaboration with parents, colleagues, and the community to create physical activity opportunities.

Curricular issues were addressed in earlier versions of PETE standards—however, as an element rather than a standard. The first two versions (1985, as referenced in Douglas & Wiegand, 1987, and NASPE, 1995) alluded to curricular models but did not delineate exactly which models the teacher should be able to apply. The current PETE standards (NASPE, 2003) do not mention curricular models at all. Only in the standards for experienced teachers (NASPE, 2002b) is curricular knowledge included as a standard (PETE Advanced Standard #2). This is surprising when one considers that physical education researchers have developed a number of exciting curricular models in the last decade (Lund & Tannehill, 2005). Health-related models such as sport, play, and active recreation for kids (McKenzie, Sallis, Faucette, Roby, & Kolody, 1993) and curricular materials published by Physical Best (AAHPERD, 2005) have been developed for use in schools. Other prominent curricular models include personal and social responsibility (Hellison, 1995), integrated physical education (Placek, 1992), sport education (Siedentop, 1994), teaching games for understanding, (Griffin, Mitchell, & Oslin, 1997), adventure/outdoor education (Dyson, 1995), and skill themes (Graham, Holt/Hale, McEwen, & Parker, 1980).

Like curricular issues, technology was not included in the initial PETE standards (NASPE, 1985, as referenced in Douglas & Wiegand, 1987). However, technology was alluded to in the 1995 version (NASPE, 1995) and now is a standard in the 2003 version (NASPE, 2003; PETE Standard #9). There have been major advances in the use of technology in physical education. Personal digital assistants, heart rate monitors, pedometers, and digital video and cameras are available for teachers to use

for instruction and assessment. In addition, the development of electronic physical activity equipment, such as Dance Dance Revolution, interactive virtual cycling systems, and the Tri-fit fitness system are now available for physical education and all have built-in assessments that provide performance data. Finally, teachers now routinely use computers to access the Internet as an information resource and e-mail to communicate with colleagues, parents, and teachers.

PETE candidates need to have knowledge of the pedagogical applications of technology. Unfortunately, a recent study (Liang, Walls, Hicks, Clayton, & Yang, 2006) indicated that only 11.7% of the teacher candidates in PETE rated themselves as fluent in the use of technology and there was no increase as candidates progressed from pre-student teaching to initial licensure.

Diversity was mentioned as an underlying concept in the 1985 PETE standards but was included as a standard in the last two versions (NASPE, 1995, 2003). The intent of the diversity standard (PETE Standard #3) is to facilitate the teacher's ability to foster the equitable and respectful treatment of all children with an appreciation of diversity. This is reflected in inclusive teaching that is sensitive about and supportive of similarities and differences among students in terms of culture, ethnicity, gender, motor performance, socioeconomic status, and disabilities (AAHPERD, 2005; NASPE, 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). NCATE 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.

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). Similar concerns have been expressed for PETE programs (Burden, Hodge, O'Bryant, & Harrison, 2004). Prospective physical education teachers often have misconceptions about and lack confidence in teaching students of color or with disabilities (DePauw, 1996; Schultz, Neyhart, & Reck, 1996). However, PETE programs that address diversity can have a positive effect on candidates' attitudes and use of culturally sensitive pedagogy (Hardin, 2005; Hodge, 2003).

There have been significant advances in the standards for beginning teachers during the last 20 years. Metzler and Tjeerdsma (2000) have argued that PETE programs have changed with the revision of standards and that it is likely that there are differences in how PETE programs address standards. However, little is known about PETE programs and the ways that they address standards. Only one study has attempted to describe PETE programs (Bahneman, 1996). In that study, 29 undergraduate PETE programs from institutions at which a PETE doctoral degree was offered were analyzed. The findings indicated that certain courses (i.e., philosophy, curriculum, secondary methods, 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 courses 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.

The purpose of the present study was to provide a descriptive analysis of current undergraduate PETE programs. The data come from the undergraduate *Directory of Physical Education Teacher Education (PETE) Programs* (Ayers, Housner, & Kim, 2004). The directory included a questionnaire of PETE program practices that was based on NASPE/NCATE accreditation standards, current issues, and research on effective PETE programs. 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.

Methods

Participants

Using a list of NASPE/NCATE-accredited PETE institutions and the College and University Administrators Council (CUAC) Listserve, 200 institutions were contacted via e-mail to request participation three times during one academic year. Of those contacted, 116 programs responded with useable questionnaires (58% response rate). Using the most updated Carnegie Foundation (2006) categories of institutions of higher education, participating institutions represented master's college/universities (40.5%), doctoral/research universities (40.5%), baccalaureate colleges (17.2%), and associate's institutions (1.7%). These proportions were not representative of the Carnegie rankings as a whole. Our sample disproportionately overrepresented all categories except that of associate's institutions.

Questionnaire

The questionnaire employed in the present study was designed to access descriptive information about PETE programs. Respondents were asked to answer factual questions about the structure of their PETE program, so no latent psychological characteristics were targeted.

Although the original questionnaire included sections for undergraduate, master, and doctoral programs, this article is limited to undergraduate findings. Reflecting the descriptive nature of the study, areas in the questionnaire included (a) programmatic demographics (e.g., degrees granted, licensure and certifications awarded, and accreditations earned), (b) institutional demographics (e.g., administrative location of PETE programs, faculty and candidate demographics), (c) programmatic requirements (e.g., number and type of credit hours required, minors offered and required), and (d) curricular issues (e.g., timing and structure of field experiences, curricular models emphasized). Items were developed based on professional consensus about key components of PETE programs, NASPE K-12 physical education and PETE standards in general. In order to determine the

response of PETE programs to the advances in fitness, curricular models, technology, and diversity, programs were asked whether

- (a) candidates receive Physical Best or other fitness certifications,
- (b) the program emphasizes any particular curricular model(s),
- (c) the program emphasizes technology and how it integrates technology into the curriculum
- (d) the program includes courses and/or experiences in multicultural education

Given the descriptive nature of the questionnaire, content validity was established in multiple stages. A PETE professor with expertise in questionnaire design developed the instrument, which was then examined by another PETE professor, a questionnaire design expert, and a PETE doctoral candidate. Based on feedback from these individuals, the instrument was slightly modified to collect the targeted information. As defined by Messick (1993), "validity is an inductive summary of both the existing evidence for and the potential consequences of score interpretation and use" (p. 13). Based on this definition, validity is not applied to an instrument, but to the inferences about scores and the interpretation and application of actions based on those scores. The data from our study are strictly descriptive and are not intended to examine cause and effect or explain participants' programmatic quality.

Procedure

The first request to participate was sent to 200 institutions via e-mail in May, 2002. Each e-mail contained a description of the project with a request for participation, as well as a link to the Web site containing the questionnaire. An institutional review board statement and informed consent letter were provided so that agreement to participate was obtained before access to the questionnaire was allowed. Respondents could complete the questionnaire online or print out the questionnaire, respond by hand, and mail in the questionnaire. This initial invitation resulted in 34 responses. A second request for participation was sent in September, 2002, to all institutions except those that had already responded. This second request yielded 78 useable responses. A final reminder in March, 2003, yielded four additional respondents, thus bringing the total to 116.

The original questionnaire included a few items that yielded vague information about faculty size and student teaching. Therefore, requests for follow-up data were e-mailed to all participants, and 76 programs provided clarifying information. For this reason, explanations about student teaching experiences are based on data from the 76 programs that provided follow-up information.

Data from questionnaires completed online were automatically sent to a database and the lead author. Paper and pencil questionnaires were manually entered into the database and verified for accuracy by the lead author and a research assistant. The database was downloaded into SPSS software and verified for accuracy prior to analysis. Percentages, means, and frequencies were calculated and reported for trends and practices within PETE programs.

Results

The following data are descriptive in nature and are not intended to represent all PETE programs. These data describe the PETE content, the faculty, and the candidates of the programs included in the sample. The findings are organized into three categories: (1) institutional and program demographics, (2) program requirements, and (3) curricular issues.

Institutional and Program Demographics

The individuals reporting data for the 116 undergraduate PETE programs in the United States completed selected parts of the questionnaire and left some questions unanswered. Therefore, responses to items have different numbers of respondents, but at least 104 responses were provided for each item, except those related to student teaching, as noted above.

Institutional Demographics. The majority of respondents' PETE programs were located in a college of education (66.1%), with the second most common location identified as "other" (25%), which included locations such as colleges of professional programs and social science, arts and science, health and human performance, or health and human services. A few PETE programs identified as existing in colleges/schools of physical education (6.3%) or colleges/schools of health (2.7%).

A follow-up e-mail asked, "How many PETE faculty comprise your program? Full-time? Part-time?" When necessary, the clarification provided was that faculty with a majority of their teaching load in the PETE program should be considered full-time and those with one class in the program should be considered part-time. PETE faculties consisted of, on average, 3.84 ($SD = 2.80$) full-time and 3.07 ($SD = 3.52$) part-time employees. The number of full-time PETE faculty members ranged from 1 to 15, whereas part-time PETE faculty members numbered from 0 to 15. Over one-half (56.6%) of respondents reported the employment of three or fewer full-time PETE faculty members, and 25.3% reported having no part-time PETE employees.

Related to faculty size is the issue of graduates; on average, these 116 programs awarded 16.92 ($SD = 17.11$) degrees each academic year. The most common number of degrees conferred per year was multimodal, 8 ($n = 8$), 15 ($n = 8$), or 20 ($n = 9$), and reveals a clearer picture of how many undergraduate degrees most PETE programs in this sample grant annually. One-fourth of these programs graduated more than 20 candidates per year ($n = 29$). Neither attrition rates nor admission numbers were addressed in the questionnaire.

Respondents were asked to estimate the proportion of faculty members and candidates across gender and race. Faculties comprised nearly equal proportions of males (51%) and females (48%), whereas candidates included more males (56%). Relative to race, 92% of respondents reported faculties consisting of 60% or more Caucasian members. However, when the six historically black colleges in this sample were removed from the data set, the proportion of respondents reporting 60% or more faculty members of Caucasian descent rose to 96%. Between 60% and 79% of respondents reported employing fewer than 10% African American,

Asian, or Hispanic faculty members. Candidate and faculty racial demographics were similar (African American = 16.27%, Asian = 5.35%, Hispanic = 7.86%). Although faculty demographic data included larger proportions of having no faculty members of a given race (0%: African American = 24.3%, Asian = 45.8%, Hispanic = 45%), candidate profiles included lower proportions of non-Caucasian candidates (0%: African American = 1.6%, Asian = 14.7%, Hispanic = 10%). Thus, it is apparent that PETE programs are underrepresented in terms of minority faculty and candidates.

Programmatic Demographics. The vast majority of PETE programs award bachelor of science degrees (80.2%), some (10.8%) grant either bachelor of science or bachelor of arts degrees, and only 9% grant exclusively bachelor of arts degrees. Within these broad categories, 54.3% of our participants prepare graduates to become licensed as K–12 teachers, 31% prepare graduates for licensure as P–12 teachers, and the remainder prepare graduates to earn initial licensure in some combination of the above and/or with health licensure.

Similarly, the allied health–related certifications available across participating programs were consistent; 87.5% of respondents require first aid certification and 81.8% require CPR certification. Beyond these two certifications, the proportion of required certifications was small for the options listed on the questionnaire: Water Safety Instructor (11.6%), coaching certification (9.5%), lifeguard (7.2%), Physical Best (2.4%), strength and conditioning (1.2%), and aerobics instructor (1.2%).

Accreditation was the final programmatic characteristic analyzed. Although the sampling frame was limited by including only NCATE-accredited programs, we believe that this was defensible given the emphasis placed on standards-based accountability in education over the past decade. All participants were NASPE/NCATE accredited, but only 41.8% had NASPE/NCATE accreditation exclusively. The remaining 51.8% of our participants had some type of state or regional accreditation in addition to NASPE/NCATE.

Programmatic Requirements

Nearly all participants reported semesters as their institution’s measure for coursework (98.2%), with 1.8% matriculating in quarters and no reports of the use of trimesters. The two institutions reporting credits in quarters were contacted by phone about appropriate adjustments to convert credits into semester equivalents to allow all credit descriptions to be based on semester hours.

Respondents identified, in descending order, the number of credit hours initial licensure graduates complete for their bachelor’s degree (overall), in physical education (major) and in four overarching categories: (a) the disciplines of sport and physical education (e.g., anatomy, sport sociology/psychology, motor learning), (b) pedagogical studies (e.g., methods, curriculum, skill analyses), (c) sport skills and physical activities (e.g., basketball, dance, tennis), and (d) professional issues (e.g., introductory courses, multicultural courses) (see Table 1). Although specific courses were not examined, the presence of a required coaching strand in the curriculum was addressed. Of the 26% of programs requiring coaching classes, from 1 to 15 hours were required, with the majority (56%) requiring from 1 to 3 credits. Using the four categories just identified, the findings reveal that participants’

Table 1 PETE Credit Hour Breakdown

Credit hours	<i>M</i>	<i>SD</i>	Range
Overall	129.75	7.8	120–156
Major	54.57	15.5	20–90
Disciplinary	18.20	7.0	6–41
Pedagogy	16.10	8.3	3–40
Student teaching	11.60	2.3	6–17
Sport skills	9.61	3.8	2–23
Professional issues	8.73	6.1	2–42

Note. Programs reporting <96 overall credit hours were removed from analyses.

programs continue to emphasize the disciplinary courses associated with PETE preparation advocated by Henry (1964). Interestingly, only the area of professional issues received less curricular emphasis than sport skills.

An examination of second teaching fields and minors revealed that 45.8% of institutions offer and 33.7% require candidates to complete health as well physical education licensure. Because health and physical education teaching are often performed by the same teacher in school settings, this is a logical way to increase candidate marketability. Relative to other second teaching areas, 29.8% of our participants require candidates to complete a second teaching field, and 54.8% offer second teaching areas as options. Although a second licensure area can increase the time and cost needed to complete undergraduate programs, as with health, being able to teach two subject areas can increase marketability.

Curricular Issues

Bahneman (1996) reported only a decade ago that 33% of programs provided undergraduate PETE candidates with pre-student teaching field experiences. In contrast, 98% of the present sample provide such experiences ($n = 113$; one indicated no early field experiences and two programs left this item blank). Of those providing early field experiences, 36.3% ($n = 41$) begin during the first year, 40.7% ($n = 46$) during the sophomore year, and 18.6% ($n = 21$) during the junior year. Overall, a majority (75.6%, $n = 87$) of PETE programs provide candidates with opportunities to engage in field-based experiences during either the first or second year of a program. Most early experiences involve observation and/or minimal support roles. Later experiences, typically linked to methods courses, involve developmentally progressive opportunities to provide individual, then small-group, and then whole-class instruction in K–12 settings.

Student Teaching: Structure and Content. The trends across programs relative to student teaching (ST) experiences were consistent; 98.3% offered ST placements at elementary schools, 96.5% at middle schools, and 100% at high schools. The individual ST experiences provided were more diverse, however. Data from 76 participants who completed the follow-up item about how they organize the ST experience indicated that 65.8% provide ST experiences at the elementary level

and either the middle or high school level. Candidates are allowed to choose one level for their ST experience at 18.4% of institutions. Student teaching experiences are provided at the high school and either elementary or middle school at 6.6% of institutions. A combination of elementary and high school sites are used by only 5.3% of programs. Candidates are allowed to choose any combination of levels at which to complete their ST experience at only 3.9% of institutions.

Our data on the time preservice candidates spend in student teaching were interesting and merit explanation (see Table 2). On average, candidates spend roughly 9 weeks each at elementary, middle, and high school placements. This finding may be due, in part, to outliers: Two institutions reported 18-week ST placements at the middle and high school levels and one institution reported 18-week placements at the elementary school level. However, the most frequently reported length of ST experience by respondents was 8 weeks (elementary = 35.7%, middle = 32.4%, high = 31.5%) and the next most common length reported was 7 weeks (16–17% across levels), which is consistent with the 15- or 16-week length of most academic semesters. Another explanation for the odd time reports is that some student teachers split time at two levels for 8 weeks and then spend an 8-week session at the third level: for example, 8 weeks at the elementary level then half a day split between middle and high school for 8 weeks.

The number of university supervisor visits at each placement merit contextualization. Most programs (65.0% middle school, 69% elementary) require two to four observations at each placement. As shown in Table 2, the proportion of observation frequencies is spread evenly across levels. The most frequently conducted number

Table 2 PETE Student Teaching: Mean Number of Weeks and Supervisor Observations and Proportion of Supervisor Observations

Student teaching placement	Number of weeks, <i>M</i> (<i>SD</i>) range	Number of supervisor observations, <i>M</i> (<i>SD</i>) range
Elementary	8.96 (3.50)	3.90 (2.35)
	2.5–18	3× (25.7%)
		4× (22.9%) 2× (20.2%)
Middle	9.10 (3.74)	3.96 (2.41)
	2–18	3× (25.0%)
		4× (22.0%) 2× (18.0%)
High	8.96 (3.62)	3.91 (2.35)
	2–18	3× (27.1%)
		4× (20.6%) 2× (17.8%)

of observations, at all three levels, was three (25–27%), then four (21–23%), and then two (18–20%).

Of the 76 respondents, 76.3% reported that all university supervision was completed by PETE faculty members, 15.8% indicated that PETE student teachers were supervised in combination by PETE faculty and education college faculty, and only 5.3% reported that education college personnel performed all supervisory duties for PETE student teachers. Few respondents indicated retired PETE or K–12 faculty and/or graduate students serve as supervision resources (2.6%).

Curricular Models. A focus of the study was to learn whether PETE programs were employing curricular frameworks in the development of teacher candidates. Of the 96 programs responding to this item, 50% cited the use of specific curricular models. Among those 48 programs identifying curricular models, 73% reported using two or more models, often one or more at both elementary and secondary levels. The most predominantly identified curricular models that programs emphasized were sport education (52%), skill themes (33%), and fitness education (25%).

Technology Emphasis. Considering the recent trend to implement technology in K–12 programs, participants were asked about the experiences they provide candidates to develop technology skills. Of those responding ($n = 109$), 97.2% reported the inclusion of technology experiences during the undergraduate curriculum. The most commonly cited experiences included portfolio development (45.3%), specific technology coursework required at either the department or college level (38.0%), and technology embedded throughout all coursework (23.6%). In addition, many respondents specified the software (e.g., Excel, PowerPoint, Fitnessgram) and hardware (e.g., pedometers, heart rate monitors, PDAs) candidates use in their program. The specific ways that technology is used in teaching physical education, applications of technology in K–12 settings, how technology is integrated into the PETE curriculum, and how faculty use and model technology was beyond the scope of this study, but is an important area in need of investigation.

Multicultural and Diversity Opportunities. Given the changing composition of society and the increasing diversity of school populations, it is logical to assume that PETE programs provide future teachers with opportunities to foster cultural awareness and diversity. A large majority of institutions ($n = 104$, 84.6%) indicated an emphasis on multiculturalism and diversity in their programs. Of these respondents, 66% identified coursework as the primary strategy for addressing multiculturalism. Names of the example courses identified were Diversity in Education; Multicultural Education; Education in a Multicultural Society; Sport, Culture, and Society; Intercultural Communication; and Literacy in a Multicultural School. Other experiences included an adapted physical education program or course(s) (19.3%), addressing multiculturalism/diversity in methods classes (15.9%), and offering workshops or seminars (4.5%).

Two unique ways to provide multiculturalism and diversity experiences were a study-abroad program and a requirement that candidates live with a family from another culture for 3 weeks. Practicum experiences were also identified as a way of providing candidates with diverse experiences in educational settings. The exact type of experiences (e.g., urban, rural settings) was beyond the scope of this study but is another important area that warrants attention in future research.

Discussion

Standards-based teacher education has been a driving force in contemporary PETE programs. Four thematic areas related to NASPE standards were identified at the beginning of this article (physical education content, curricular issues, technology, and diversity) and will be used to frame the discussion of findings.

Physical Education Content

In a profession where teaching sport and physical activities is a primary objective, it is perplexing that this area continues to be underemphasized in PETE programs (Siedentop, 2002). On average, only 9.61 credits are allocated to what teachers will be expected to teach in K–12 programs in a 130-credit-hour program (55 credit hours in the major). Siedentop addressed this concern in a recent JTPE monograph:

This then is the root problem—the direct study of sport skill and strategy through experiential learning is not considered to be of sufficient academic quality to form the core of an undergraduate degree program. Learning basketball, volleyball, and gymnastics—and all the associated issues of training, technique, performance, and strategy—are not worthy of formal academic credit as the central foci of a preprofessional program. If we cannot confront that core problem, and somehow resolve it, then physical education in schools is doomed. (p. 372)

Although we do not have a Siedentopian solution to this issue, it is important to direct national attention to the focus of existing PETE programs. Of equal importance is the alignment of current PETE programs with the changing demands facing K–12 practitioners. As new areas of sport and physical activity, such as wall and rock climbing; spinning; roller blading; dance, dance, revolution—to name a few—become available and popular with students, how do PETE programs respond? These and similar issues should be part of an ongoing professional discussion at the NASPE PETE conference held every 3 years.

Given the critical importance of health-related fitness in K–12 physical education programs, the fact that first aid and CPR were the only widely required health-related certifications is cause for concern. And in light of the importance of providing fitness experiences that motivate students to pursue a lifetime of physical activity, one would expect that other certifications would be included in PETE programs. Only 1–2% of this sample indicated that their programs offered certification in physical best, strength and conditioning, personal training, or aerobics. PETE faculty need to consider the new role of physical educators in contemporary K–12 programs when selecting health-related and lifetime activity components for their curricula. Some states have begun adding physical best certification as a preferred criteria for new hires (Gayle Claman, personal communication, June 17, 2006), and like teaching experience is an advantage in the employment process. Embedding physical best materials into existing pedagogy courses or providing university-sponsored workshops for candidates to earn certification as Health-Fitness Specialists does not require curricular revisions and is one practical way to address the needs of contemporary K–12 programs.

Curricular Issues

When addressing the changing needs of K–12 programs in the areas of sport and physical activity or health-related fitness, the issue of curricular space in PETE programs is significant. Typically, content courses are offered as 1-credit experiences. Candidates take courses in soccer, basketball, soccer, lacrosse, tennis, badminton, and the like. Although this seems to be a reasonable approach, it does require curricular space that can limit the possibility of adding new sports or health-related activities. One approach that can be useful in conserving curricular space is referred to as *teaching games for understanding* (TGfU; Griffin et al., 1997). Classifying sport skills into categories (e.g., invasion, net/wall, target, fielding/run scoring) to teach conceptual game similarities instead of providing single-sport courses is one way to manage the volume of sport skill-related courses typically provided in PETE programs. The TGfU approach has the added benefit of providing prospective teachers with a conceptual understanding of how skills and strategies are similar and can transfer within categories (e.g., invasion). Providing PETE content in this manner can demonstrate to teachers how to organize K–12 content into conceptual categories to take advantage of the time available in their programs.

Although there are now a number of curricular models available for PETE programs (e.g., fitness education, movement education, integrated, tactical games, adventure/outdoor education), only 50% of the programs reported emphasizing one or more curricular model. Of those, 73% emphasized two or more models at the elementary and secondary levels. The model most emphasized at the elementary level was the skill themes approach (Graham, et. al., 1980) and the most emphasized secondary model was the sport education curricular model (Siedentop, 1994). There is still great concern over the quality of school-based K–12 physical education programs, and it is important that PETE programs equip prospective teachers with the ability to design, implement, and evaluate the curricular models available in PETE. This is particularly important when one considers that 68 of 116 of PETE programs indicated no emphasis or did not respond at all to the curricular emphasis question.

Siedentop and Locke (1997) have encouraged PETE programs to work collaboratively with school-based colleagues in professional development schools. They argued that professional development schools are places, “where preservice teachers are prepared, where practicing teachers can continue their development, and most importantly, where physical education programs are designed, tested, and replicated through dissemination to other sites” (p. 28). They also argued that PETE programs should have a focus and that including too many approaches can dilute the quality of the program. These are important questions that were not addressed directly in the present analysis, but need to be the focus of future research.

Field experiences are not limited to ST and it is important to note the dramatic shift that has occurred in the last two decades relative to this area. Bahneman (1996) noted that only one-third of the undergraduate PETE programs he examined provided pre-ST field experiences in K–12 settings. Our findings indicated that 98% of our sample provided field experiences, with 77% taking place as early as the first or second year of the program. Although early experiences are often observational, such exposure to instructional settings lays the groundwork for candidates to understand the teaching–learning process. These experiences are typically designed

to enable candidates to progressively assume greater responsibility in supervised settings prior to student teaching. Availing candidates of repeated and progressively complex clinical experiences in schools represents a significant advancement over the past 20 years.

Related to improved practice is the issue of when, where, and how ST experiences are provided. The majority of our respondents provide candidates with early-career elementary and either middle or high school student teaching placements. Because nearly 85% of our sample prepare teachers to become licensed for either P-12 or K-12, the value of providing both elementary and secondary student teaching experiences is clear. In addition, it is important to note that field experiences are required to achieve nearly all of the current PETE standards (NASPE, 2003). Given the historical role of field experiences, as described by Bahneman (1996), the move toward early and frequent use of field-based learning experiences should be considered a significant professional improvement in PETE programs.

Even though grade level and length of placements are important, the quality of university-based supervision is also important. Most supervisors reported seeing student teachers two to four times during each placement and that the great majority of supervision was conducted by PETE faculty members. The importance of this cannot be overstated, particularly in light of the unique characteristics of teaching physical education. It has been our experience that faculty/staff outside the PETE program have a very different outlook on what constitutes quality physical education instruction. The long-standing “busy, happy, good” approach to supervision is not uncommon among non-PETE supervisors. After 4 years of preparing candidates to provide quality physical education instruction, it is essential for PETE faculty to supervise candidates’ culminating field experience. Although very few PETE programs reported using retired PETE or K-12 teachers as supervisors, this may be an untapped resource that could be used to reduce the teaching loads of full-time faculty. This might enable PETE programs to respond to programmatic needs by allocating faculty expertise to changing K-12 needs.

Technology

The vast majority of participants in this study reported the integration of technology into their PETE programs. The purpose of technology according to NASPE standards is to enhance candidate learning and professional productivity. Most PETE programs documented their graduates’ technology skills through the development of a professional portfolio. Typically, these portfolios provide a location for candidates to document their competence across all NASPE standards.

In addition to portfolios, many programs require PETE candidates to successfully complete either department-provided or general education–required technology coursework. These courses varied widely but often included the use of specific hardware and software. Often, the technology that K-12 teachers will need were emphasized in these programs (software programs, grading software, heart rate monitors, pedometers, palm pilots, etc.). The integration of technology indicates that PETE programs have begun to respond to the need for candidates with technological skills. However, the results of the Liang et al. (2006) study suggest that PETE programs need to not only provide learning opportunities, but also assess PETE students to ensure that needed outcomes are achieved and that

candidates can apply technology in school settings. PETE faculty will also need to continually update their technological skills and model these as part of PETE programs. Analysis of the strategies employed by various PETE programs to integrate and assess pedagogical applications of technology is an important area for future research.

Diversity

The demographics of our profession relate directly to providing candidates with culturally and ethnically diverse experiences. As required by NCATE, teacher education programs should include experiences working with diverse higher education faculty members. The fact that over one-third of respondents reported that their PETE faculty member roster was 40–50% female is good news, given the lesser proportion of females currently in higher education (37%; National Coalition for Women and Girls in Education, 2002). Although gender equity in PETE has surpassed that of the overall academy, both the candidates and faculty members of our profession continue to be almost exclusively Caucasian. Given the increasing diversity in society and schools, this is cause for serious concern. We suggest the development and/or implementation of procedures to increase diversity among PETE faculties and prospective teachers.

There are several steps that can be taken to increase the diversity of the profession. It has been suggested that faculty members of color are rare in education because of a shallow applicant pool (King, 1994; Quezada & Louque, 2004). PETE programs need to become more proactive in recruiting minority students and faculty into the profession at all levels. Active recruitment of minority students in other disciplines would be an appropriate place to start. Minority athletes are underrepresented in physical education and should also be actively recruited. PETE programs could host career days to explain why teaching can be a rewarding career option. Establishing stronger relationships with historically black institutions or those with large Hispanic student populations through exchanges, colloquia, and other professional interactions could facilitate the recruitment of minority students to PETE licensure programs, graduate school, and ultimately increase the availability of minority candidates for PETE positions. West Virginia University (WVU) has hosted a minority colloquium for prospective doctoral students for the last 7 years. Housing and meals are provided for all attendees for the 2-day event. Participants meet university administrators and faculty and receive assistance in applying for admission and financial support. More than 70 doctoral students have enrolled in graduate programs at WVU as a direct result of the program. Mentoring programs in which minority students are paired with an upper-level student or a faculty member can ease the transition to higher education and increase the retention of minority students. The point is that PETE faculty need to begin the process of recruiting and retaining minority students into their programs.

Cultural diversity has become an important issue in American society and schools, and calls for increased emphasis on diversity-based teacher education have been prominent (Gallavan, 2000). It appears that these calls have not generated significant curricular change in PETE programs. Although a majority of programs indicated that they include multicultural experiences, 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). To be effective, PETE programs need to integrate multicultural concepts throughout the curriculum in a systematic way, through which planned, sequential experiences are provided in and outside the classroom. Only two respondents identified specific experiences (one study-abroad program and one live-in experience) that required candidates to become embedded in another culture. Addressing the rapidly changing racial and cultural composition of our students through comprehensive strategies for integrating multiculturalism throughout and beyond the curriculum must become a priority of PETE programs.

The dominance of PETE programs by Caucasian faculty members relates to this issue. It is important that students have an opportunity to interact with PETE faculty from diverse backgrounds who model the interpersonal skills necessary to understand and respect cultural differences. As mentioned above, PETE programs need to become proactive in recruiting and retaining a more diverse faculty and student body. The ultimate goal is to embed diversity and multiculturalism into PETE programs in order to improve candidates' ability to provide inclusive instruction that is sensitive to students' needs regardless of racial or ethnic identity, socioeconomic background, political affiliation, physical ability, sexual orientation, or gender identity.

Summary

This study attempted to describe the content of PETE programs from a standards-based perspective. 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. Some key findings were that (a) small, primarily Caucasian faculties 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 providing data for this article 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 this study.

Overall, the findings from this project provided an overview of many key elements of PETE programs. However, many findings created more questions than answers. Possible areas of future research include more detailed analyses of programs; how PETE faculty develop and update existing curricula in response to K-12 needs; how curricular models translate into practice; how the integration of technology experiences affects candidates' and faculty members' knowledge and pedagogical skill; and, finally, how PETE programs address multicultural issues through minority faculty and student recruitment, programming within and beyond

the PETE curriculum, and the ultimate effect that these experiences have on the social and cultural perceptions of faculty and prospective future teachers.

It would be advised that future studies on PETE programs include means for triangulating data collection and analysis by adding methods such as observations and interviews to questionnaire techniques.

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