

## PROFESSIONAL DEVELOPMENT

# Professional Development Activities and Support Among Physical Education Teachers in the United States

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### Abstract

**Purpose:** *This study described professional development (PD) among public school physical education (PE) teachers and compared PE teachers to teachers of other subjects. **Method:** Data were collected from a nationally representative sample of public school teachers in the United States. Descriptive statistics were used to describe teachers' support for PD and the types of PD activities in which they participated. Also, types of professional support received among newly hired teachers and their perceptions of professional preparation were described. **Results:** PE teachers reported fewer PD activities compared to teachers of other subjects. They were also less likely to receive release time from teaching and to be financially compensated for PD activities. Newly hired PE teachers, compared to other newly hired teachers, reported higher levels of professional support. **Discussion:** Based on the results of this study, recommendations are provided concerning support for PD among PE teachers and newly hired PE teachers.*

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The Centers for Disease Control and Prevention (CDC, 2015a) recommends coordinated school health as a strategy for improving students' health and learning in U.S. schools. In 2014, the CDC and ASCD (formerly the Association for Supervision and Curriculum Development), in collaboration with key leaders from the fields of health, public health, education, and school health, expanded the coordinated school health strategy to the Whole School, Whole Community, Whole Child (WSCC) model (CDC, n.d.). This new model contains 10 interrelated components: physical education (PE) and physical activity (PA), nutrition environment and services, health education, health services, counseling, psychological and social services, social and emotional climate, physical environment, employee wellness, and family engagement and community involvement. The WSCC model was adopted after the recognition of the interdependent nature of health and learning. The WSCC model maintains an ecological approach directed at the whole school, and in turn, the school draws its resources and influences from the community, which addresses the needs of the whole child. The CDC and ASCD suggest the WSCC model be used as a framework for improving students' learning and health in schools (CDC, n.d.).

Another initiative that encourages collaboration across communities to promote quality of life, healthy development, and healthy behaviors through all life stages is Healthy People 2020 (Office of Disease Prevention and Health Promotion, n.d.-a). Led by the U.S. Department of Health and Human Services, and other key federal agencies, Healthy People 2020 includes a science-based, 10-year interval set of objectives for improving the health of all Americans (Office of Disease Prevention and Health Promotion, n.d.-b).

The WSCC model and Healthy People 2020 provide guidance specific to improving PA levels of youth. For example, the WSCC recommends school PE schedules, curricula, and instruction support and reinforce health and well-being of students by focusing on lifetime fitness knowledge, attitudes, behaviors, and skills that they need to establish and maintain physically active lifestyles throughout their school years and into adulthood (ASCD, n.d.-b). Congruently, Healthy People 2020 has PA goals to improve health, fitness, and quality of life through daily PA, such as PA-3, "increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening

activity”; PA-4, “increase the proportion of the Nation’s public and private schools that require daily physical education for all students”; and, PA-5, “increase the proportion of the Nation’s public and private schools that require daily physical education for all students” (Office of Disease Prevention and Health Promotion, n.d.-c, Objectives tab).

Healthy People 2020 physical activity goals were based on the Physical Activity Guidelines for Americans (Office of Disease Prevention and Health Promotion, n.d.-b). These science-based guidelines were designed to help Americans (aged 6+ years) maintain or improve their health through regular activity (U.S. Department of Health and Human Services, 2008). PA guidelines for youth include 60 min or more of PA daily. The majority of the 60 min or more per day should be either moderate- or vigorous-intensity aerobic activity 3 days/week; in addition, youth should participate in muscle- and bone-strengthening activity (e.g., push-ups, jumping rope, running) as part of the daily 60 min. According to the CDC, more than 80% of adolescents do not participate in the recommended amount of PA (Office of Disease Prevention and Health Promotion, n.d.-c).

To meet Healthy People 2020 PA goals and to achieve recommendations related to school PE within the WSCC model, the CDC periodically conducts the School Health Policies and Practices Study (SHPPS) to assess school health policies and practices related to coordinated school health and the WSCC model. In 2012, the survey assessed school health policies and practices at state and district levels and in 2014 at school and classroom levels (CDC, 2015b). The SHPPS assessment of PE and PA component of the WSCC model was guided by the Comprehensive School Physical Activity Program (CSPAP), which includes PA before and after school, staff involvement, and family and community engagement (CDC, 2015a). The CSPAP, developed by the CDC, in collaboration with the Society of Health and Physical Educators (SHAPE America), is a comprehensive guide for schools and school districts to develop, implement, and evaluate school PE programs (CDC, 2015a). One of the goals of the CSPAP is “to provide coordination among the CSPAP components to maximize understanding, application, and practice of the knowledge and skills learned in physical education so that all students will be fully physically educated and well equipped for a lifetime of PA” (CDC, 2015a, p. 12). The CSPAP PE Profiles summarizes the state of PA and PE policies and practices of secondary

schools (CDC, 2014). The report notes that PE teachers' qualifications are important for them to deliver quality PE to students. For example, certified PE teachers have been shown to instruct longer lessons, spend more time developing motor and movement skills, impart more knowledge to students, and provide more of the recommended moderate to vigorous PA to students than do teachers with little or no specialized training in PE (CDC, 2011; Davis, Burgeson, Brener, McManus, & Wechsler, 2005).

Given that instructing students in PE requires a specific set of skills and knowledge (CDC, 2014; Institute of Medicine, Food and Nutrition Board, Committee on Physical Activity and Physical Education in the School Environment, 2013), professional development (PD) through continuing education and training is essential for PE teachers to implement quality PE (CDC, 2014). In the SHPPS 2012 report, PD was defined as workshops, conferences, continuing education, graduate courses, or any other kind of in-service for those who teach PE in the school system (CDC, 2013). Specific to PE, the CDC (2014) noted that PD programs should be designed to assist PE teachers in providing instruction directed to the interests and skill level of all students and should focus on concepts of quality PE instruction such as improving teaching methods and incorporating national and state standards into the curriculum.

Because of the importance of ongoing PD among PE teachers to ensure implementation of high quality PE programs, the PE Profiles monitors the status of PD related to PE. Two years prior to the SHPPS 2012 survey, states provided funding for PD or offered PD programs on a variety of PE and physical activities (26 such topics) included in the questionnaire, to those teaching PE. Ninety percent of states provided funding for or offered PD on at least one of the 26 topics, 61% provided funding for or offered PD on at least 13 of the 26 topics, and 2% of states provided funding for or offered PD in all 26 topic areas. More than 70% of districts provided funding or offered PD on administering fitness testing; aligning PE standards to curriculum, instruction, or student assessment; preventing, recognizing, or responding to concussions among students; and preventing injury and providing first aid (CDC, 2013). There were also noted increases between 2000 and 2012 in the percentage of districts that provided funding for PD or offered PD in areas such as engage-

ment of students in moderate to vigorous PA and other critical topics including administering or using fitness tests, helping student develop individualized PA plans, and assessing or evaluating student performance in PE. In general, the SHPPS 2012 reported a significant increase between 2000 and 2012 in the percentage of states that provided funding for PD or offered PD related to PE (CDC, 2013). In addition, results from the SHPPS 2014 indicated that more than half of schools required PE teachers to earn continuing education credits on PE topics or instructional strategies (CDC, 2015b). Overall, these data provide an assessment of funding for PD activities related to PE, the physical activity topics addressed during PD, and requirements related to continuing education in PE.

However, questions remain about the extent to which PE teachers participate in PD, the types of PD activities in which they participate, and the types of instructional support they received. As noted by Napper-Owen, Marston, Van Volkinburg, Afeman, and Brewer (2008), PD is one of the foundational categories of a highly qualified PE teacher, in addition to preservice preparation and designing and delivering a PE program. Therefore, this study sought to assess various elements of the three foundational categories of a highly qualified PE teacher by describing PD among K–12 public school PE teachers in the United States. Research questions included the following:

- What types of PD activities did K–12 public school PE teachers participate in compared to teachers of all other subjects?
- What types of support for PD did K–12 public school PE teachers received compared to teachers of all other subjects?
- What types of PD activities did newly hired K–12 public school PE teachers participate in compared to teachers of all other subjects?
- What were the perceptions of professional preparation in teaching among newly hired K–12 public school PE teachers?
- What percentage of K–12 public school PE teachers reported they were National Board Certified Teachers (NBCTs) or pursuing Board certification?

Finally, this study describes 2011–2012, K–12 public school PE teachers, in general, in terms of gender and race or ethnicity compared to teachers of all other subjects.

## Method

Data reported for this study were from the 2011–2012 Schools and Staffing Survey (SASS), a comprehensive national survey conducted by the National Center for Education Statistics (NCES, n.d.). Beginning in the 1980s, the survey has been administered nearly every 3 years to a nationally representative sample of public, private, and charter school personnel, including teachers, administrators, and library media specialists.

### Participants

Data used in this study were collected from a representative sample of public school teachers teaching in K–12 buildings during the 2011–2012 school year, in the United States. Teachers were defined as staff members ( $N = 37,497$ ) who teach regularly scheduled classes to students in U.S. public schools. PE teachers were defined as teachers who indicated their main teaching assignment field at their school was PE ( $n = 1,764$ ), and their responses were compared to the responses of teachers of all other subjects ( $n = 35,733$ ). Newly hired teachers were participants who indicated their first year of teaching occurred anytime from the 2008–2009 to the 2010–2011 school year ( $n = 8,645$ ). Responses from newly hired PE teachers ( $n = 334$ ) were compared to responses of newly hired teachers of all other subjects ( $n = 8,311$ ). Human subject approval for this study was provided by the university IRB Office.

### Sampling Procedures

The SASS *NCES Handbook of Survey Methods* (Burns, Wang, & Henning, 2014) defines schools as institutions employing one or more teachers serving grades K–12 and where instruction is conducted in a building that is not a private home. School building characteristics were retrieved from the NCES Common Core of Data for the same academic year as the survey and used as the sample frame. Schools from all 50 states were included in the sample frame, whereas overseas and Department of Defense schools were not. Additional public schools from alternative and juvenile justice system schools in California, Pennsylvania, and New York were added for a frame of 90,530 public schools. Of the public schools, 11,000 from 5,798 districts were included in the sample, from which 37,497 teachers of all subjects were surveyed. For this study, the separate charter

school sample was not included. The teacher sample was stratified by experience, which ensured a representative sample of beginning and early career teachers. Early career teachers answered additional questionnaire items related to their induction experiences, beliefs, and attitudes.

A stratified complex design weighting individual sampling units (teachers) was used, which corrected for bias due to deliberate oversampling of certain members of the population. The first stage involved schools as the frame. Teachers in schools selected for the study were subsampled with a complex cluster sampling methodology, which produced a nationally representative sample of public school teachers (NCES, 2014). Weights developed by NCES were applied to the SASS data set, which approximated the population of public school teachers. Because of the great variations in district sizes across the country, NCES employed a multistage stratified sampling design whereby districts in Maryland, Florida, Nevada, and West Virginia were aggregated at the state level for sampling because of the large size of the districts within these states. The final weighted sample of the public school teachers was 3,385,171. This weighted sample was nationally representative of public school teachers and therefore generalizable to the national population of public school teachers in the United States. The weighted unit response rate for public school teachers was 77.7%.

### **Instrumentation**

Data for this study were extracted from specific questions from the Teacher Questionnaire from the SASS 2011–2012 (NCES, 2011). General information and background questions gathered information on teaching assignments, gender, and race or ethnicity. In the Certification section of the questionnaire, teachers indicated if they were NBCTs or working toward Board certification. The Education and Training section of the questionnaire identified newly hired teachers' perceptions of their professional preparation and types of professional support they received. Questions regarding types of and support for PD activities were located in the Professional Development section of the survey.

### **Data Analysis**

The researchers used descriptive statistics to analyze data and answer research questions.

## Results

Overall, public school PE teachers in the United States during the 2011–2012 academic year ( $n = 157,155$ ) were 43.8% female and 56.2% male. Of teachers of other subjects ( $n = 3,228,017$ ), 77.9% were female and 22.1% were male. The most common race or ethnicity reported among public school PE teachers was non-Hispanic, White (82.0%), followed by non-Hispanic, Black (8.5%); Hispanic, White (6.1%); and non-Hispanic, Asian (1.1%), and for all other teachers, 81.9%, 6.7%, 6.9%, and 1.8%, respectively. Both sample populations had responses that reported other race or ethnic groups, but at less than 1%. Less than half of the PE teachers were female, and over three quarters of teachers of other subjects were female. For PE teachers and teachers of other subjects, approximately 20% reported a race or ethnicity other than non-Hispanic, White.

As Table 1 notes, the most reported types of professional activities during the previous 12 months for PE teachers and teachers of other subjects were attending workshops, conferences, or training sessions; participating in PD related to the subjects they taught; use of computers for instruction; and student discipline and classroom management. However, PE teachers, compared to teachers of other subjects, reported less participation in six of the nine types of PD activities listed in Table 1. For example, they were less likely than other teachers to report having PD specific to or with a concentration on the subjects they taught. In addition, they reported less attendance at workshops, conferences, or training sessions in which they were not presenting; were less likely to attend university courses related to teaching; and were less likely to attend PD related to use of computer for instruction. Furthermore, they reported less participation in PD related to teaching students with disabilities and, notably, almost 10% less participation related to teaching limited-English proficient students or English-language learners. Compared to teachers of other subjects, PE teachers more often presented at workshops, conferences, and training sessions and went on observation visits to other schools. They were also more likely than teachers of other subjects to have had PD that focused on student discipline and classroom management.

**Table 1**

*Professional Development During the Past 12 Months Among K–12 Public School Teachers as a Percentage of the Population (N = 3,385,171)*

Survey item	Physical education teachers (n = 157,155) Yes %	All other teachers (n = 3,228,016) Yes %
Participated in professional activity, such as:		
University course(s) related to teaching	21.0	27.2
Observation visits to other schools	25.0	21.7
Presenter at workshops, conferences, or training sessions	24.1	23.1
Attended workshops, conferences, or training sessions, but not presenter	87.5	92.0
Concentrated on and specific to subject(s) taught	79.3	85.1
Focused on use of computers for instruction	62.2	67.4
Focused on student discipline and classroom management	53.4	42.0
How to teach students with disabilities	34.5	37.6
How to teach limited-English proficient students or English-language learners	18.0	27.2
Received support for professional development, such as:		
Release time from teaching (someone else assigned to teach)	44.5	51.0
Scheduled time in the contract year	79.1	78.5
Stipend for activities outside of work hours	17.7	27.6
Full or partial reimbursement of college tuition	8.6	9.3
Reimbursement for conference or workshop fees	26.0	28.5
Reimbursement for travel and/or daily expenses	18.8	20.8

Table 1 also describes support teachers received for PD activities during the past 12 month. For example, approximately 79% of all teachers reported that they had scheduled time in the contract year for PD activities. Over half (51.0%) of teachers of other subjects reported receiving release time from teaching (i.e., their regular teaching responsibilities were temporarily assigned to someone else). Conversely, less support was provided to physical educators, with only 44.5% reporting release time for PD. Moreover, compared to teachers of other subjects, PE teachers were less likely to report a stipend for PD activities outside of work hours or reimbursement for college tuition, conference or workshop fees, and travel expenses. Table 1 shows that, overall, PE teachers had lower participation rates in six of 10 types of PD, in addition to lower levels of support for PD, with the exception of opportunities that occurred during the contract year.

Higher levels of professional support in seven of eight categories were reported by newly hired PE teachers compared to newly hired teachers of other subjects (see Table 2). Most notably, over 85% of newly hired PE teachers indicated they received regular supportive communication with administrators, principal, or department chair, compared to three quarters of newly hired teachers of other subjects. For all newly hired teachers, over 80% participated in a teacher induction program. Nearly 75% reported that they worked closely with a master or mentor teacher who was assigned by their school or district. Next, the most common professional support was seminars or classes for beginning teachers, followed by a common planning time with teachers in their subject. Only about one quarter of teachers received extra classroom assistance (i.e., teacher aides), and even fewer (about 10%) had a reduced teaching schedule or a number of preparations. Overall, the three main types of professional support for newly hired K–12 public school teachers were participating in teacher induction programs; receiving supportive communication with administrators, principal, or department chair; and working closely with a master or mentor teacher who was assigned by their school or district.

**Table 2**

*Types of Professional Support Received Among Newly Hired K–12 Public School Teachers as a Percentage of the Population (N = 628,447)*

Survey item	Physical education teachers (n = 22,909) Yes %	All other teachers (n = 605,538) Yes %
During your first year of teaching, did you:		
Participate in teacher induction program?	84.5	83.9
Have reduced teaching schedule or number of preparations?	11.5	8.4
Have common planning time with teachers in your subject?	55.0	55.3
Have seminars or classes for beginning teachers?	69.7	64.9
Receive extra classroom assistance (e.g., teacher aides)?	27.4	25.7
Receive regular supportive communication with principal, other administrators, or department chair?	85.4	75.0
Work closely with a master or mentor teacher who was assigned by your school or district?	74.6	74.4

Newly hired PE teachers also reported their perceptions of how well prepared they were to perform specific professional skills (see Table 3). Study participants reported that they were very well prepared to teach their subject matter, and about half (49.5%) felt very well prepared to meet state content standards. They felt less prepared to use a variety of instructional methods and differentiate instruction. Newly hired physical educators felt least prepared to handle a range of classroom management and discipline situations, use computers for instruction, assess students, and use data from student assessment to enhance data-driven decision making and inform instruction.

**Table 3**

*Perceptions of Professional Preparation Among Newly Hired K–12 Public School Physical Education Teachers as a Percentage of the Population (n = 22,909)*

Survey item	Prepared				Total %
	Not at all %	Some-what %	Well %	Very well %	
In your first year of teaching, how prepared were you to:					
Handle a range of classroom management or discipline situations?	1.1	25.7	47.9	25.3	100.0
Use a variety of instructional methods?	1.5	15.8	45.9	36.7	100.0
Teach your subject matter?	0.7	5.1	30.2	64.0	100.0
Use computers in classroom instruction?	8.9	28.1	38.0	25.0	100.0
Assess students?	1.9	19.0	46.0	33.1	100.0
Differentiate instruction in the classroom?	3.5	14.7	49.7	32.1	100.0
Use data from student assessment to inform instruction?	7.0	26.4	42.0	24.6	100.0
Meet state content standards?	1.2	11.8	37.4	49.5	100.0

Concerning NBCTs among participants, 22.9% ( $n = 35,919$ ) of public school PE teachers reported having Board certification. Among PE teachers who reported being NBCTs, 71.4% ( $n = 25,638$ ) earned Board certification in PE; 12.3% ( $n = 4,423$ ) in elementary grades, general; and 4.8% ( $n = 1,742$ ) in health education. Of the remaining PE teachers that were not certified, 2.4% ( $n = 2,881$ ) reported that they were in the process of earning certification. Among teachers of other subjects, 16.3% ( $n = 525,215$ ) reported they were NBCTs and 3.4% ( $n = 4,423$ ) reported they were pursuing certification. Overall, nearly one quarter of PE teachers were NBCTs, which was more than teachers of other subjects.

## Discussion

As noted by Napper-Owen et al. (2008), a highly qualified PE teacher includes three foundational categories: PD, preservice/professional preparation, and designing and delivering PE programs. With regard to PD, newly hired PE teachers reported higher rates of professional support compared to newly hired teachers of other subjects; however, the results from all K–12 PE teachers regarding support for PD during the past 12 months were not as favorable. PE teachers more often reported that their PD opportunities occurred during scheduled time in the contract year than did teachers of other subjects. They were also less likely than teachers of other subjects to receive release time from teaching for PD and to be financially compensated for their PD activities. For example, they were less likely to receive a stipend for activities outside of work hours and to be reimbursed for conferences or workshops, including related travel and daily expenses. Furthermore, they were less likely to report receiving full or partial reimbursement for college tuition.

These data may provide some insight into why physical educators less often reported rates of participation in professional activities such as colleges courses related to teaching, PE-specific activities, and attending workshops, conferences, or training sessions in which they were not presenting than did teachers of other subjects. Lack of PD support for PE teachers may have been due to the previous emphasis on PD under the No Child Left Behind (NCLB) Act, which was for core subjects, thus excluding PE. As noted by ASCD (2015), the Every Student Succeeds Act (ESSA) eliminates the NCLB definition of core subjects and expands access to PD to include teachers of all subjects.

Although support for PD activities was lower for PE teachers compared to teachers of other subjects, PE teachers were more likely to be NBCTs, which provides evidence of their professional commitment to advancing student learning and achievement. As noted by Napper-Owen et al. (2008), PE teachers can enhance their PD by achieving recognition as an NBCT.

As the results of this study indicate, newly hired PE teachers did not feel as well prepared to use computers in the classroom, use data from student assessment to enhance data-driven decision making and inform instruction, and handle classroom management or dis-

cipline situations. These areas may be emphasized for future PD in schools, as data from this study suggest that during the 12 months prior to data collection, just over half of PE teachers attended PD activities regarding classroom management or discipline situations. Moreover, almost 40% of PE teachers did not have professional activities that focused on computers for instruction. PD that enhances PE teachers' knowledge and application of technology may also improve their ability to collect and analyze assessment data to inform and affect instruction. As recommended by the Whole Child Initiative, which supports implementation of the WSCC model, teachers should be able to use a range of diagnostic, formative, and summative assessments to monitor student progress, provide timely feedback, and adjust teaching-learning activities to maximize student progress (ASCD, n.d.-b; CDC, 2014).

In addition, findings from this study provide insight about newly hired teachers' perceptions of their preservice/professional preparation related to some of the attributes described in the National Association for Sport and Physical Education (NASPE, 2007) position paper concerning what constitutes a highly qualified teacher and the National Initial Physical Education Teacher Education (NIPETE) Standards (NASPE, 2008). For example, PE teacher education programs should provide teacher candidates (also referred to as preservice teachers) with substantial pedagogical and content knowledge. With regard to substantial content knowledge, findings from this study show that over 90% of newly hired PE teachers felt they were well or very well prepared to teach their subject matter, and over 85% indicated they were well or very well prepared to meet state content standards. Results related to substantial pedagogical knowledge showed areas in which newly hired PE teachers felt more prepared. Over 80% of participants felt well or very well prepared to differentiate instruction and use a variety of instructional methods. Although most newly hired PE teachers were positive about their level of preparation related to assessing students, about 20% indicated they were only somewhat prepared. Moreover, one third indicated they were somewhat or not at all prepared to use data from student assessment to inform instruction. As noted by NASPE (2007), assessment is an integral component of the teaching-learning process, provides valuable information about student achievement,

and can positively affect curricular changes. In addition, NIPETE Standard 5: Impact on Student Learning emphasizes the need for educators to use assessments and reflection to foster student learning and inform instructional decisions (NASPE, 2008). Moreover, the Whole Child Initiative recommends schools integrate health and well-being into their PD, curriculum, and assessment (ASCD, n.d.-b). Findings from this study suggest that schools need to continue to emphasize professional preparation and continuing education related to assessment among PE teachers.

Of all questions concerning professional preparation posed to newly hired PE teachers in the 2011–2012 SASS, use of computers for instruction was the area for which they felt least prepared. Their responses provide insight into NIPETE Standard 3: Planning and Implementation; specifically, Standard 3.7 states that teacher candidates “demonstrate knowledge of current technology” and “require students to appropriately use technology to meet lesson objectives” (NASPE, 2008). Of newly hired PE teachers, 37.0% indicated they were somewhat or not at all prepared to use computers in classroom instruction. These data suggest that further PD is needed for PE teachers to meet target behaviors noted in Standard 3.7, such as having mastery of current technologies to enhance student learning. Examples of current technology include pedometers, fitness trackers, and video that teachers can use to measure students’ activity levels, design and adjust individualized fitness plans, and motivate students to participate in daily activity. In addition, it is suggested that teachers be provided with PD for using assessments, such as Fitnessgram, to create student and parent reports. In 2012, the President’s Council on Fitness, Sports, and Nutrition released the Presidential Youth Fitness Program that includes assessment, PD, and awards recognition. As noted in the 2012 SHPPS report, support to implement the Presidential Youth Fitness Program may include PD on how teachers can integrate fitness education into the PE curriculum, use Fitnessgram test batteries, assess student fitness, generate student and parent reports, and provide recognition and awards (CDC, 2013). Use of current technology provides PE teachers with the ability to meet the PA needs of each student and therefore should be a priority for school districts when considering PD activities.

Finally, among newly hired PE teachers, one quarter felt somewhat prepared to handle a range of classroom management or discipline situations. As noted by the National Education Association, classroom management is an ongoing concern for teachers (Zauber, 2003). The Whole Child Initiative recommends staff have the ability to establish and maintain classroom behavior expectations and rules and establish routines that teach students to manage their behavior and help students to improve problem behavior (ASCD, n.d.-b). Data from this study suggest PD related to classroom management and discipline situations would benefit newly hired PE teachers.

In nearly every category, newly hired PE teachers more often indicated receiving professional support than did teachers of other subjects (see Table 2). Notably, they were 10% more likely to report regular supportive communication with their principal, other administrators, or department chair. As noted by Moir (2009), principals and mentors of newly hired teachers create a culture where teacher learning is supported, which benefits student learning and achievement.

Regarding the final research question, data from this study concur with the U.S. Department of Education (2016), which indicated that nearly one fifth (18%) of teachers in the United States are individuals of color. The U.S. Department of Education notes that teachers of color can be positive role models for public elementary and secondary school students, of which nearly half are individuals of color. Benefits of greater diversity in the teacher workforce include reversing negative stereotypes and preparing students to live and work in a multiracial society. The U.S. Department of Education emphasizes the need for stakeholders such as postsecondary institutions, K–12 schools and districts, and others to do more to support recruitment and professional preparation of teachers of color so that students in U.S. public schools can experience the benefits of a diverse teaching force.

## **Limitations**

Subjects self-reported the data and missing responses were imputed. To compensate for individual item nonresponse bias, NCES used a multistage imputation process to derive values that would have a high likelihood of matching the probable response pattern. Item nonresponse rates between PE teachers and the rest of the

population were similar on the reported items at between 1% and 1.5% (Goldring, Taie, Rizzo, Colby, & Fraser, 2013).

When referring to teaching skills, the researchers used the term *classrooms*. They assumed that PE teachers would consider their teaching spaces as their classrooms.

### **Implications for Physical Education Teachers**

The WSCC model seeks to strengthen the link between learning and health using a collaborative approach among 10 school health components (ASCD, n.d.-a). This study provided insights with regard to the PE and PA component of the WSCC model, which encourages youth to be physically active throughout the day. Specifically, this study assessed PD activities among PE teachers who have the responsibility of providing students with the knowledge and skills to maintain lifelong PA. One indicator of the Whole Child Initiative is that school staff are well qualified (ASCD, n.d.-a). Napper-Owen et al. (2008) listed the three general categories of highly qualified PE teachers as PD, preservice/professional preparation, and designing and delivering PE programs. This study provided information related to various elements within these three categories as reported by PE teachers in the United States. Based on results from this study and the corresponding discussion, suggestions for supporting PE and PA within the WSCC model include

- providing PE teachers with opportunities and financial support for PD that is similar to PD support offered to teachers of other subjects;
- encouraging and financially supporting PE teachers who work toward National Board Certification as a means of enhancing their PD;
- designing PD opportunities to meet the specific needs of PE teachers, such as the use of technology to collect and analyze student assessment data to inform and affect instruction and student learning; and
- supporting recruitment and professional preparation of PE teacher candidates from diverse populations so that all students may benefit from a culturally diverse population of teachers.

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