Health Optimizing Physical Education (HOPE)

A New Curriculum for School Programs
Part 2: Teacher Knowledge and Collaboration

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Part 1 of this article, which appeared in the April 2013 issue of *JOPERD*, presented the theoretical foundation for a main-theme curriculum model called Health Optimizing Physical Education (HOPE) for schools. It also described eight strands that could be used to plan, implement, and assess this version of a comprehensive school physical activity program (CSPAP). Teachers in HOPE programs will need a greater knowledge base than what is now typically provided to preservice teachers and available for practicing (inservice) teachers. Meanwhile, HOPE programs cannot be effective without the support and collaboration of parents, teachers, administrators, and other professionals and organizations in the local community. This article presents some strategies for the initial preparation of HOPE teachers, the continued professional development of inservice HOPE teachers, and suggestions for establishing strong working relationships both in and outside of schools in order to make HOPE an effective CSPAP model.

Teacher Knowledge for HOPE

Shulman (1987) presents seven categories of essential knowledge needed by all teachers, regardless of the subject and grade(s) they teach. While all those knowledge types are important, two are critical to a teacher's ability to effectively plan, implement, and assess school physical education programs. Content knowledge (CK) is what a teacher knows about the subject matter of physical education, including scientific foundations, movement and sport forms, and principles of personal/social, psychological, and cognitive development for school-age learners. Pedagogical content knowledge (PCK) combines content knowledge with the pedagogical knowledge, skills, and decision-making needed to effectively teach movement content and concepts to an identified group of students. Those students can be identified generally (e.g., fifth graders learning soccer) or specifically (e.g., a diverse group of 35 low-skilled fifth graders in an urban school learning soccer on a small field).

Content knowledge and PCK are strongly embedded in all six standards for initial teacher preparation (National Association for

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Sport and Physical Education [NASPE], 2008b). Two of the three NASPE standards for advanced certification use different labels that effectively describe CK (Standard 1: Professional Knowledge) and PCK (Standard 2: Professional Practice). There is little debate that CK and PCK are essential components of the knowledge base needed for best practice in physical education today—what is up for debate are the specific kinds and amounts of knowledge needed in each category (NASPE, 2008b). Traditionally, teachers have been provided with the CK and PCK needed to promote the wide variety of learning outcomes represented in the national standards for P–12 programs (NASPE, 2004), in units that cover a broad spectrum of sport, dance, movement, games, outdoor/adventure, and fitness-related content. As a main-theme curriculum model (Lund & Tannehill, 2010), HOPE calls for specific CK and PCK components needed by teachers for best practice. Some components are similar to those required for multi-activity and other main-theme program models, but in composite the knowledge base needed for HOPE is more focused and unique. As stated in Part 1, the overall purpose of the HOPE model is to help P–12 learners acquire knowledge and skills for lifelong participation in physical activity for optimal health benefits. All the CK and PCK needed for HOPE must be in alignment with that overarching outcome.

Table 1 shows the eight strands in the HOPE model and the CK and PCK needed by teachers within each strand. HOPE teachers must possess much of the traditional knowledge needed for best practice, but in addition they must have some new and different kinds of knowledge to be effective in programs like HOPE (NASPE, 2011b). Beighle, Erwin, Castelli, and Ernst (2009) proposed that teachers be prepared to implement a CSPAP, with more and different content knowledge and pedagogical content knowledge expertise, and NASPE has created resources to provide some CK and PCK for HOPE. Although such resources are a positive step, it cannot suffice as the entire knowledge base needed by teachers for HOPE and other programs. That expanded knowledge base

Table 1.
Teacher Knowledge and Collaborators for HOPE Program Strands

Strand	Learning Outcomes	Content Knowledge	Pedagogical Content Knowledge	Possible Collaborators
Before- and after-school physical activity programming	Promote high rates of PA, MVPA, and health-related knowledge to supplement the scheduled PE program	• SPARK-After School • PA program design • Diverse learners • Technology for PA • Facility management • Psychology of PA • Social marketing • CPR and first aid	• SPARK-After School • PA instructor • PA counseling • Adapted/inclusive PE/PA	• Physical education teacher education (PETE) faculty • Adapted PE experts • Disability sport organizations • Other subject teachers • Sport/PA psychologists • School health experts • Exercise scientists • SPARK consultants • School athletic coaches
Sport, games, dance, and other movement forms	To learn sports, games, dance, and other movement forms as a source of lifelong participation in PA	• Skill themes • SPARK • Skill and knowledge for lifelong PA • Motor development and learning • Diverse learners • Culturally relevant PA • Technology • Curriculum and instruction for high MVPA • Strategies for 50%+ MVPA • Movement and skill analysis	• Effective teaching for skill themes, games, dance, sport, etc. • Lesson planning • Unit planning • Instructional models • Adapted/inclusive PE/PA • Teaching ESOL • Assessment of learning • Planning and implementing instruction for high MVPA • Individual and group motivation strategies	• PETE faculty • Adapted PE experts • Motor learning/development experts • Community organizations (e.g., dance schools, "Kids' Gyms," ethnic organizations) • Disability sport organizations • Local recreation and sport clubs
Family/home education	To teach parents, guardians, and other family members to promote PA, better diet, etc., at home and in the community	• Adult education programs • Knowledge of local cultures • Web searching • Effective home-based intervention programs • Consumer knowledge for PA • Built environment	• Teaching adult learners • Family counseling and team building • Designing, implementing, and assessing family-based interventions	• Parents and guardians • School/parent organizations • Community/family counselors • Community health agencies, dieticians

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Table 1.

Teacher Knowledge and Collaborators for HOPE Program Strands (Continued)

Strand	Learning Outcomes	Content Knowledge	Pedagogical Content Knowledge	Possible Collaborators
Community-based physical activity	To promote PA opportunities for children in community settings	• Youth sports with high MVPA • Local programs and resources • Grant writing for PA programs	None (PE teachers will not instruct in this strand)	• Youth sport leaders and coaches • Community recreation professionals • Grant writing consultants
Health-related fitness	• To promote weekly MVPA according to national standards • To promote individual achievement of "Healthy Fitness Zone" on standardized measures	• Psychology of PA • Parameters of HRF • Monitoring MVPA and diet • MVPA curriculums (e.g., SPARK) • Fitnessgram and Activitygram	• Fitness instructor • Fitness testing management • HRF resource management • HRF counseling • Use of technology to promote high MVPA	• SPARK consultants • Fitnessgram trainers • Local fitness clubs and rec centers • Exercise science and nutrition faculty • Local/state health agencies and PA advocates (including PA for disabled)
Diet and nutrition for physical activity	To learn and demonstrate knowledge of diet and nutrition that enhances PA	• Metabolism and PA • Social/economic determinants of diet and nutrition • Genetic factors related to diet and PA	• Learning activities for analyzing children's PA and diet • Learning activities for PA and diet goal setting • Effective interventions to improve diet and nutrition for PA	• School, university, and community health educators • School food services staff • Local and state health agencies
Physical activity literacy • Consumerism • Technology • Advocacy	To acquire knowledge and appreciation that can increase and enhance participation and enjoyment of PA	• Consumerism • Technology • Advocacy • Reading re: PA • Psycho/social correlates of PA literacy • Devices and apps for PA	• Analysis and explanation of PA trends and fads • Cost/value analysis of equipment, memberships, clothing for PA • Planning and running educational programs for parents and teachers	• PETE faculty • University and community consumer experts • Local fitness club staff • School and local media • Event organizers (e.g., "Health and PA Fair")
Integration of HOPE with other school subjects and recess	To increase (non-PE) teachers', administrators', and school staff's knowledge of and support for children's PA and improved dietary habits	• Benefits of PA for academic performance • Determining content integration • Classroom activity breaks (CAB)	• Planning and implementing educational programs for parents and teachers • Team planning and teaching • Coaching classroom teachers to instruct for PA in recess and CABs	• PETE faculty • University and community consumer experts • Local fitness clubs • School and local media (for promotions)

must come with newly conceptualized preservice physical education teacher education (PETE) programs and through focused and extensive professional development programs for inservice teachers. The next two sections of this article will begin to describe the CK and PCK needed for preservice and inservice HOPE teachers.

Preparing Preservice Teachers for HOPE

The National Association for Sport and Physical Education's (NASPE, 2008a; NASPE 2011b) unveiling of the CSPAP model signifies an ambitious effort to improve school physical education programs. It represents the key features of HOPE and reflects a fundamentally different and more expansive position description for school physical educators. Logically, this has important implications for how preservice PETE programs are structured and delivered, as well as for continuing professional development (CPD) efforts aimed at already certified physical educators. This article offers suggestions for the preparation of preservice teachers. However, the overlap with how CPD might be refocused should become clear.

How different would a PETE program need to be to effectively prepare future professionals to implement HOPE or any similar comprehensive program? From the outset, preservice teachers must

receive the message that physical education, as they have likely experienced it, is only one part of a HOPE curriculum. That is, throughout all CK- and PCK-specific courses, majors must come to see the link between the content of each course and how it applies to implementing HOPE. For example, instructors of courses such as "Teaching Group Exercise Activities" or "Teaching Net/Court Games" would need to include strategies for PETE majors to learn to design activities that are not only appropriate during physical education lessons, but also effective in attracting students to participate in physical activity before school, during school (e.g., lunch, recess), and/or in after-school programs.

Second, delivering a full-fledged HOPE curriculum requires numerous new skill sets for prospective physical educators. Examples include (a) being able to plan physical activity programs for adults targeting both the school staff (e.g., classroom teachers, office staff, and food service personnel) and adults from the surrounding neighborhoods; (b) making use of the school's built environment; (c) providing diet and nutrition counseling for physical activity across the lifespan (since the target audience now potentially includes [older] adults); (d) designing behavior change interventions aimed at improving eating and physical activity behaviors; (e) employing instructional strategies aligned with adult education; and (f) employing ongoing advocacy efforts aimed at making HOPE a central part of a school's mission.

For example, there is good evidence that, currently, physical educators rarely (if ever) encourage their students to seek out physical activity beyond the regular lessons (e.g., McKenzie et al., 2006). Beyond offering verbal prompts during lesson closures, majors need to learn how to employ all other types of prompting and promotion strategies. Within HOPE, this would become a core teaching skill. Another example would be that of learning to work with adults within some strands of HOPE. Physical educators have to be comfortable presenting to and working with classroom colleagues, school administrators and staff, parents, and other adult members from the surrounding community. For example, they need to learn to work effectively with classroom colleagues to help them build in physical activity breaks during classroom instruction—a key HOPE component.

Third, in most cases PETE curricula will not allow for many (if any) new courses to be added. Therefore, given that the reach of a HOPE program goes well beyond teaching the regularly scheduled physical education lessons, the core PETE courses (e.g., methods courses, majors-only activity courses) will likely require significant redesign. PETE majors (who bring with them well-entrenched conceptions of what physical education is or what it should be like) need to learn how to increase physical activity levels throughout the entire school day (i.e., in the classrooms via periodic brain/physical activity breaks and before, during, and after school). In addition, they must learn how HOPE is part of a much broader effort to optimize children's and young people's health, as outlined in the education sector of the National Physical Activity Plan (www.physicalactivityplan.org; Siedentop, 2009). They also must recognize and make a difference in all the various settings where HOPE programming is delivered (see the social ecological model in Part 1 of this article). Building time and attention into existing coursework on why and how school campuses are splendid venues for expanded informal physical activity opportunities can start to break down existing conceptions of the job of physical educators. An example of this is presented below.

Fourth, the centerpiece practicum/internship experiences in PETE programs will require redesign and refocusing as well. Some the skills needed to increase physical activity levels beyond physical education mirror those needed to successfully deliver quality lessons. What is different is the context in which they are used. At a minimum, internships should provide preservice physical educators hands-on opportunities to practice the following skills: (a) managing out-of-class time physical activity opportunities for children and young people, (b) implementing social marketing strategies, and (c) engaging in proactive advocacy for the physical education program to the broader school campus. Introduction to such experiences should occur before the culminating student-teaching experience. Physical education teacher education programs with one or more preservice teaching practicum courses would be well positioned to build such experiences into them.

Managing Out-of-Class Time Physical Activity Opportunities. Beyond opportunities to teach regular physical education classes, interns would practice organizing, overseeing, and maintaining out-of-class time physical activity opportunities for P–12 students. This would include a range of new skills for readying the various activity venues (e.g., gyms, outdoor courts, weight rooms, dance studios, outdoor field spaces); providing a variety of equipment so students have activity choices; going around the campus promoting and reminding K–12 students that the gym and/or the outside areas are "open for business"; monitoring students who come and play before school, during recess, and/or after school, and periodically surveying students about the types of activities they would like to see available during such times.

Implementing Social Marketing Strategies. Anyone who has walked into a store contemplating the purchase of a new product expects that a salesperson will make every effort to ensure that "a deal is made." By analogy, the primary product of HOPE is physical activity. If physical educators are to be effective in implementing HOPE, they must come to see themselves as salespeople of physical activity. Fundamentally, HOPE seeks to increase all students' physical activity behavior. On school campuses, this is accomplished by creating access and opportunity, along with making the students feel welcome when they do join an activity. The latter refers to "actively supporting" students by welcoming those who come to play, periodically engaging with them in an activity, and frequently interacting with them—not unlike what one would look for in regular physical education lessons.

Over the past decade in the public health arena, social marketing has emerged as an effective approach to developing and tracking the effectiveness of programs aimed at bringing about behavior change

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(Bryant, 2009). Andreasen (1995) explained that social marketing consists of "the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence voluntary behavior of target audiences in order to improve their personal welfare and that of society" (p. 7). Social marketing can be applied to changing numerous health behaviors, such as preventing or reducing tobacco use, increasing immunizations, and—for HOPE—promoting physical activity.

Albeit on a smaller scale, social marketing may offer physical educators several key strategies to help them implement HOPE. The central focus in social marketing is on understanding consumers' interests and needs. The customers are the students, and if physical educators are serious about promoting physical activity, they need to be sensitive to how their program addresses the interests and needs of P–12 students. Key marketing principles pertinent for physical educators include *product*, *place*, and *promotion*.

The *product* is physical activity, in all its various forms, that can lead to improved health and well-being. To be sure, it need not (and should not!) include only health-related fitness content. Physical education's subject matter includes a myriad of physical activities ranging from lifetime activities such as tennis, biking, and rollerblading to various forms of dance, golf, and hiking that, when taught effectively, can turn young people on to physical activity well into adulthood. How teachers present their product will be key in terms of whether students are either drawn toward it or look to avoid it at all cost. A higher-quality physical activity product is more likely to attract students, plain and simple. Quality in this context refers to not only what content is offered, but also how the specific activities are designed for use in both physical education classes and during the out-of-class times. It also refers to appropriately modified activities that are authentic, provide choice, and carry with them the right levels of challenge for all children. That is, students' interest in playing flag football during out-of-class times will be higher if the program creates some structure that designates a specific area on the outdoor field space and sets up actual games that include modified rules, field space, and team size. Designing such activities requires strong PCK in teachers so that they can provide the right types of activities based on the student population at their school.

Place refers to creating time and space that makes appropriate physical activity venues on a school campus easy to find, use, and access throughout the entire school day. That is, students who arrive at school 30 minutes before the start of the first period would know where they can go to play and be active. Any needed equipment should be out and ready for use. Activity venues would be sectioned off by having designated areas dedicated to specific activities. In high school settings, the large number of boys may intimidate many girls when they come to "check things out." To encourage more girls to join in, and to ensure that they view it as a safe environment, certain areas in the gym can be designated as "girls only." With few exceptions, the boys respect these spaces.

Promotion refers to spreading the word about the availability of the product. The key is to make the targeted messaging memorable and persuasive. This can be accomplished by employing "branding." In commercial product marketing, companies develop names and logos that are branded on every product and in all advertising—all to create recognizability. (Consider how the "Golden Arches" are all that people need to see to know where they can find a restaurant.) When making physical activity a central part of the school culture, teachers need to consider the type of messaging, how it might best appeal to most students, and who might be the best spokesperson(s). As shown in Figure 1, visual prompts are more likely to catch students' eyes (and thus maximize product recognizability) if they are placed strategically in high-traffic areas (e.g., student drop-off areas, near locker rooms, cafeterias, school entrances). In addition to visual prompts, students could learn about physical activity opportunities by way of announcements (e.g., daily school-wide announcements, the school's and/or the physical education program's web site, assemblies).

Employ Proactive Advocacy. Preservice (and in many cases, inservice) physical educators need to be equipped with the know-how to regularly and effectively advocate for their program to constituents such as site councils, school wellness committees, school–parent organizations, and school-district policy makers (e.g., school boards). Many physical educators tend to be more reactive than proactive in their advocacy efforts. That is, they generally attend

Figure 1.
Strategic placement of prompts encourages physical activity.

school board meetings only when reductions in physical education programs and/or staff are considered. A more proactive approach to advocacy is needed, in which new, unique, and positive dimensions of the physical education program and its outcomes are shared regularly with the public, placing it in a much more positive light.

Implications for PETE Programs

A key issue for PETE programs is that the current national standards for beginning teachers do not include any reference specific to the skills, knowledge, and dispositions needed for successful implementation of programs such as HOPE (NASPE, 2008a). The current beginning teacher standards focus on the delivery of a quality physical education program. And many of these skills clearly do transfer to planning and implementing before-school, recess, and after-school physical activity opportunities (e.g., sound management and organization skills, planning, selecting appropriate content). However, within HOPE-type programs, teachers would also need to be skilled in the promotion and marketing of the various program features, advocating for expanded physical activity opportunities, planning and delivering appropriate fitness and wellness content to adults, and working closely with community agencies and organizations. As is, the current standards have no expectations for beginning physical educators. No doubt the next generation of standards for beginning teachers will reflect a much closer alignment with programs like HOPE.

In the meantime, faculty in PETE programs are the lead experts for ensuring that PETE programs prepare future professionals who can effectively deliver HOPE-based programs. A key question for preservice PETE programs will be how well current and future PETE professors are prepared (and willing) to deliver teacher preparation experiences that support widespread implementation of HOPE and other comprehensive models as they are developed. Just like many K–12 physical educators, PETE professors have their own biases, preferences, and ideologies that shape their views and practice. If the recent exploratory analysis of Doctoral PETE (D-PETE) programs in the United States by Ward, Parker, Sutherland, and Sinclair (2011) is any indication, the structure, content, and delivery of those programs is very much left up to the individual D-PETE professor(s). Physical education teacher education professors have the responsibility of preparing quality physical educators for today's challenges. That is, whether future generations of physical educators can and will deliver HOPE is, at least in part, contingent on whether and how PETE professors build their PETE program around HOPE as the main theme and accompanying knowledge base.

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As noted in Part 1, HOPE is not just about getting students physically active during physical education classes. HOPE also seeks to develop their psychomotor skills and their behavioral self-management skills, to support their physical fitness, to create physical activity opportunities for them throughout the day, and, ultimately, to teach them to enjoy physical activity enough to seek it out voluntarily. A major concern is that in spite of teachers' best intentions and efforts, by the time the messages and essence of HOPE reach preservice teachers, they might hear: "I just have to get my students to be physically active." Such interpretations have at least two dangerous consequences: First, it plays right into the hands of teachers who prefer to "roll out the ball." Second, in the absence of state mandates, if district policy makers come to view HOPE in the same way, it will not take long before they question why schools need licensed specialists at all. There is some evidence that school administrators lack familiarity with what quality physical education programs might look like (Lounsbery, McKenzie, Trost, & Smith, 2011). Thus, it is essential that future preservice teachers become well informed about HOPE and put in place good HOPE programs that leave no room for misinterpretation. There are now several quality resources that teachers can use as they move toward developing HOPE programs: SPARK (www.SPARK.org), SPARK-After School (www.sparkpe.org/after-school), the Active and Healthy Schools program (www.activeandhealthyschools.com), the new *Let's Move!* Active Schools (www.letsmoveschools.org), and "Schoolwide Physical Activity: A Comprehensive Guide to Developing and Conducting Programs" (Rink, Hall, & Williams, 2010). These and other resources should become a part of the CK and PCK developed in initial certification PETE programs.

Current Efforts at Arizona State University

In the initial certification PETE program at Arizona State University (ASU), faculty (with significant input from PETE doctoral students) are piloting new experiences for majors aimed at developing some basic skills as well as their understanding and acceptance of this more expansive role of school physical education. For example, preservice teaching interns are assigned to a single high school in groups of three or four. In addition to a weekly on-campus seminar, the interns conduct two sessions per week at a high school during which they practice the very skills that help to increase physical activity opportunities for all students during before-school and/or lunchtime periods by preparing the activity venues, providing equipment, periodically participating with students, and monitoring the various activity areas. In addition, they develop a promotional campaign that incorporates some of the strategies noted earlier.

The interns visit with students around other parts of campus (e.g., cafeterias, courtyards), encouraging them to come and play using various verbal prompts and encouragements. Each semester, interns survey the school's students on their activity preferences and adjust the menu of activities according to students' requests. Interns are also involved in building and maintaining a webpage that is embedded in the school's web site, aimed at promoting physical activity for all students (and their parents) while on campus and providing information about the importance of physical activity and opportunities for physical activity beyond the school environment. The ASU interns are also exploring ways in which social media (e.g., Instagram, Facebook) can be used to effectively promote and encourage physical activity among adolescent students.

A second project has been the development of a course specifically targeting the use of physical activity breaks in classrooms by classroom teachers (which is also addressed in the Elementary Physical Education Methods course and several graduate-level courses for teachers already certified). There is evidence that such physical activity breaks not only contribute to students' total daily physical activity but also help them be less distracted, increase their on-task behavior, be less disruptive, and be more able to concentrate on academic work (e.g., USDHHS, 2010; Mahar, 2011). Arizona State University's PETE program has also instituted a course titled "Health Literacy," which is required for all preservice elementary education, early childhood education, and special education majors in the college. This course is aimed at helping future classroom teachers to infuse physical activity and nutrition content into their lessons. Other areas yet to be addressed are to equip the interns with the skills needed to track the short-term outcomes of their efforts.

A third component being developed is to institute an after-school staff wellness program for all teaching and support staff at each of the three high schools. Preliminary surveys showed that both faculty and staff have moderate to strong interest in such opportunities.

The interns are assessed using the following indicators: (a) the percentage of the total school's student body that attends the before-school and lunchtime programs, (b) the percentage of attending students who engage in moderate-to-vigorous physical activity (MVPA), (c) the interns' frequency of interactions and participation with the school's students, and (d) their use of various promotional messaging tactics (i.e., audio, visual, verbal, and virtual).

Of course, one of the keys is to find the appropriate internship sites. During the piloting of the new internship course, secondary school colleagues have been quite receptive to increasing their program's presence on their school campus. We are starting to get inquiries from both school administrators and teachers in other schools about being part of this expanding effort. As this process evolves, there are exciting new possibilities for developing professional learning communities that include PETE faculty, preservice teachers, and P–12 teachers (Bechtel & O'Sullivan, 2006) for establishing HOPE-type programs.

Professional Development for Inservice HOPE Teachers

As shown in Table 1, the CK and PCK needed by inservice HOPE teachers is similar to that needed for preservice teachers to promote the overarching goal for HOPE and the specific learning outcomes of each strand. The difference is that preservice HOPE teachers must be prepared in all the strands, whereas inservice teachers will likely already have some well-developed CK and PCK in some strands from their initial training, years of experience, and other expertise they have acquired. So rather than the comprehensive training needed for preservice teachers, inservice teachers will need targeted professional development in those HOPE strands that call for CK and PCK they do not have at present. Therefore, each inservice teacher must assess his or her CK and PCK for each HOPE strand and then determine a personal professional development plan to acquire the knowledge and skill needed to become an effective HOPE teacher.

Professional development is an essential component of HOPE. However, very little of the knowledge base for HOPE can be provided by others to inservice teachers. The National Association for Sport and Physical Education and many other leading organizations develop and distribute new materials and resources on a regular basis, but those organizations cannot give HOPE teachers the complete range of CK and PCK needed to be effective. For aspiring HOPE inservice teachers, this will largely be professional self-development: recognizing the knowledge and skills they need, taking the initiative to find them, and then learning how best to use them in their program.

The National Association for Sport and Physical Education has developed a series of "toolkits" that can help teachers establish programs like HOPE in their own schools (NASPE, 2011a). Teachers, however, will need many more resources in their professional development as HOPE teachers.

To be effective, professional development for inservice teachers must be provided in a variety of ways, preferably on a school site, and must be predominantly teacher-initiated (Armour & Yelling, 2007). It must also involve extended time and focused engagement, not the typical brief, one-time exposure teachers too often receive in the name of professional development. Aspiring HOPE teachers must realize it is unlikely that their state, district, or school administrators will be able to identify and provide the professional development needed for HOPE; they must take it upon themselves to assess the CK and PCK for each strand and take the initiative to seek out opportunities to acquire that knowledge and skill. The following are examples of what aspiring HOPE teachers might consider for their professional development in each strand.

Strand: Before- and After-School Physical Activity Programming. There are a variety of curricula available commercially that schools can use to develop a before/after school physical activity program. If a school chooses the SPARK-After School curriculum, at least one teacher would need to receive formal training to assume the lead role. Once trained, that teacher could train other after-school staff on the components of the SPARK-AS curriculum. This model supports the current professional-development research findings that teachers typically prefer to attend professional development programs presented by other teachers. This approach can begin to establish a professional learning community (Vascio, Ross, & Adams, 2008) that can be sustained in all strands of the HOPE model. In this scenario, the lead teacher would coordinate the before- and after-school physical activity programming but would not necessarily provide the instruction and supervision.

Instructors in the after-school program would need CK in the areas of learning styles, diverse students, student motivation for physical activity, and facility management. Professional development for this CK could be provided in regular meetings with the DPA and the after-school instructional staff. Additionally, the *Let's Move!* Active Schools web site (www.letsmoveschools.org/resources-and-grants) offers resources on before- and after-school physical activity programming. Other useful resources for promoting physical activity during recess and before- and after-school times include Rink et al.'s

(2010) guide and the Active and Healthy Schools program. This would be a great way for instructors to learn needed knowledge and skills.

Strand: Sport, Games, Dance, and Other Movement Forms. Although essential knowledge of the sport, games, dance, and other movement forms that make up the bulk of the content in physical education is acquired in an initial certification program, that is often the last time teachers have formal learning opportunities on the CK and the PCK needed to instruct that content. The movement content offered in HOPE programs should provide students with high rates of physical activity and MVPA. Teachers will need to know how to select content that meets this objective as well as how to restructure low-PA content into high-PA content (i.e., by modifying rules, team/group size, and playing area). That knowledge can be acquired by being trained to implement high-PA curriculum models such as SPARK. More practically, teachers could attend workshops and conference sessions that focus on the CK and PCK needed for this HOPE strand.

There are various sport-specific programs that may be available in the community or have a professional development component that inservice HOPE teachers may benefit from. A few of these include First Tee (www.thefirsttee.org) for golf, the U.S. Tennis Association's Tennis in Physical Education and Extracurricular School Tennis programs (www.usta.com/Youth-Tennis/Schools/SchoolsHome), and Project Adventure's (www.pa.org) workshops for teachers. Although these are community-based programs, they provide an ideal situation for HOPE teachers to acquire the CK and PCK needed to implement these sports and activities.

As teachers acquire or expand the knowledge needed for this strand, it is important to note that the purpose is not for them to become a more proficient player, dancer, or mover themselves. Rather, the purpose is to be able to plan, implement, and assess high-PA instruction that can ultimately motivate students to sustain independent participation in these kinds of movement forms for increased health and wellness (Siedentop, 2009).

Strand: Family/Home Education. For HOPE to be effective, it is essential for teachers to know how to provide educational opportunities to adults who can influence patterns of physical activity and health-enhancing behaviors in students' home environments. Increasingly, parent/family connections are becoming a part of school reform plans across the United States, and some parents are members of School Wellness Councils (Alliance for a Healthier Generation, 2011) required in some states. Although it is often difficult to get and keep parents involved in the education of their children, it is critical to the success of this strand in HOPE.

Few physical education teachers likely have the breadth and depth of knowledge needed for this strand, but there are many new resources available that can increase their outreach efforts to parents and the community. As such, it will be important for HOPE teachers to identify those resources and to find other professionals who can help them "reach and teach" parents of children in their school. For example, a teacher could make appointments with local agencies that offer family health services to inform them of the goals of this strand in HOPE and to find out what those agencies can do to assist with those efforts. The national, state, and local PTA often have an officer dedicated to wellness, nutrition, and/or physical activity. There is useful information on the web sites that may assist HOPE teachers in making inroads to family and community involvement. The National Association for Sport and Physical Education (2011a) has developed toolkits that are designed to help school boards, superintendents, and parents assess each school's ability to provide the recommended amount of daily physical activity and to set goals for meeting those recommendations when called for.

For HOPE to be effective, it is essential for teachers to know how to provide educational opportunities to adults who can influence patterns of physical activity and health-enhancing behaviors in students' home environments.

Strand: Community-based Physical Activity. HOPE teachers will need to be on the lookout for opportunities for children to be physically active in games, sports, and dance in the local community. Physical education teachers are not expected to instruct or coach in those programs; their role is to find programs that provide physical activity for children and to make connections with the leaders of those programs to promote higher rates of participation for children outside the school physical education program. This includes such things as social marketing, Internet searching to find programs, communicating with local leaders and agencies, and strategies for encouraging children to participate in these programs in the local community.

Strand: Health-Related Fitness. Although many physical education programs now include health-related fitness (HRF) in their curriculum, it is necessary that HOPE teachers know and are able to teach students the concepts behind HRF and how to use that information in positive ways. Increasingly, teacher knowledge for this strand is being acquired in initial certification programs, but inservice teachers will have to seek out their own opportunities to learn CK and PCK for this strand.

Tests that measure HRF can be used as valuable teaching tools in this strand. HOPE teachers can learn how to use assessments such as Fitnessgram to provide students and parents with the current level of each child's HRF and Healthy Fitness Zone status. This information can then be used as the basis of HRF programming in the school and the making of individual plans for each child. HOPE teachers can become trained online to use FITNESSGRAM® and ACTIVITYGRAM as diagnostic tools and valuable resources for school- and home-based programming (also as a part of the Home/Family Education strand).

Teachers will need to know various ways to monitor students' physical activity in this strand, as well as how to teach some of those strategies to students. With practice, teachers can learn how to use observation systems such as SOFIT (McKenzie, Sallis,

& Nader, 1991) reliably. Teachers can go to various web sites or attend conference sessions to learn how to use technology such as heart rate monitors, step counters, and accelerometers—and then teach their own students how to use those devices. Teachers could also ask local experts (e.g., fitness trainers, university professors) to present this information to them and their students at school.

Strand: Diet and Nutrition for Physical Activity. Many teachers likely had a course on the fundamentals of nutrition during their initial certification program. It is also likely that the content of that course did not specifically focus on diet and nutrition for physical activity. HOPE teachers need to know the most current information on diet and its impact on physical activity—and they need to know ways to effectively teach that content to students. Numerous print, video, software, and online resources now exist to provide teachers with the knowledge needed for this strand; many of these resources also include ready-made learning activities for students of all ages and abilities, such as Play 60 (www.fueluptoplay60.com), sponsored by the National Dairy Council and the National Football League, and the Eat Right program (www.eatright.org), sponsored by the American Dietetic Association. Other sources can include local diet and nutrition professionals, community organizations, and where available, university professors. HOPE teachers should have little difficulty in increasing the CK and PCK needed for this strand—but in most cases they must take the initiative to seek out this knowledge.

Strand: Physical Activity Literacy. This strand is designed to increase knowledge that can empower P–12 students to make better-informed decisions about physical activity in their daily lives—both in and outside of school. HOPE teachers must have deep CK for this strand and also know many developmentally appropriate strategies for teaching it to their students. And for today's "digital generation," those strategies must include the latest in technology—to better capture students' attention. Professional development for teachers working with this strand would likely be more informal than for some of the previous strands. Teachers should be aware of resources such as Bonnie's Fitware (www.pesoftware.com) and others that are designed specifically for high-tech physical activity instruction. Teachers could participate in learning events such as webinars to better equip themselves with the knowledge needed to help students make better-informed decisions. Teachers could attend workshops, conference sessions, and continuing education courses to learn the technology needed for this strand.

This strand also includes knowledge about making well-informed choices when choosing products and services for physical activity participation—both for students and for their parents. Teachers could seek out the expertise of local physical activity professionals and clothing and equipment vendors to acquire the CK needed for this strand and/or invite those experts to be guest speakers in classes and parent/school organization events.

Better-informed people make better advocates. Therefore, it would enhance the program if students and parents knew the latest benefits of physical activity, how the school's program is working toward those outcomes, and how they can carry that message to others. Physical educators could learn how to create electronic newsletters, web sites, Facebook pages, and Tweets (or provide the content to someone who can do this for them) to get the message out in a timely and inexpensive way.

Strand: Integration of HOPE with Other School Subjects and Recess. HOPE cannot fully succeed if it is delivered by one physical educator, or even by an entire physical education department. The range of knowledge that P–12 students need for increasing and enjoying physical activity in their lives goes well beyond what can be taught and learned in one subject. HOPE teachers must learn how to infuse physical activity content and learning opportunities into other school subjects. Getting classroom teachers to integrate physical activity into core academic subjects is often challenging, but HOPE teachers must be willing to take the first step toward this integration.

One way is to learn classroom activity break (CAB) programs such as TAKE 10! (www.take10.net; Stewart, Dennison, Kohl, & Doyle, 2004) and Energizers (www.eatsmartmovemorenc.com/Energizers/Elementary.html; Mahar, Kenny, Shields, Scales, & Collins, 2006), and then teach classroom teachers how to use these learning activities themselves. In recent years, a number of research studies have reported positive relationships between student engagement, academic performance, and increased physical activity in the school day—including CABs (Castelli, Hillman, Buck, & Erwin, 2007). Although physical educators are increasingly aware of this relationship, it is necessary for them to know how to communicate these results in ways that can be easily understood by other teachers, administrators, and parents.

HOPE teachers must become advocates for physical activity throughout the school day, including recess. Just as with CABs, HOPE teachers can find and share high-activity play ideas that can be used by classroom teachers during recess. Many subjects in middle and high school offer numerous opportunities for integration with physical education. With the expanded scientific focus on physical activity, instruction could easily be infused into basic science, mathematics, physics, and biology lessons. Other opportunities for integration can be found in social studies, dance/music,

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literature, and history. HOPE teachers will need to recognize these possibilities and then form partnerships with teachers of other subjects to develop this strand of HOPE.

Collaboration for HOPE

Teachers must be able to recognize which components of HOPE they have the CK and PCK in to deliver effectively, and they must know when and how to seek the assistance of other professionals who can collaborate with them in selected strands. Some of those professionals will be teachers of other subjects, school staff, and administrators in their own school. Still others will be professionals based in the local community or in distant locations reached through the Internet. Each HOPE teacher and school will have a different possible list of potential collaborators in their school and surrounding community. It is likely that many of these professionals will be equally eager to contribute to the goals of a HOPE-based program—all they are waiting for is an invitation.

Getting a HOPE Program Started

It might be easy for a single teacher or a school physical education teacher to be intimidated when reading about HOPE in these two articles—to the point that they would not even attempt to implement HOPE in their school. Here are three suggestions to get an incremental start on HOPE. First, conduct an inventory at your school to determine current opportunities for children to be physically active. Use what you learn from that inventory to identify current HOPE strands in your program and set goals for the future. Second, build on existing strengths—slowly! Keep doing what you now do well, and then add one new strand at a time. Add new strands that have a high possibility of success, given your available resources. Eventually, your "HOPE portfolio" will be complete. Third, look for outside support and assistance in establishing or expanding your HOPE program. For instance, teachers can partner with PETE faculty and others to write grants (such as PEP) based on the HOPE model. Partnerships could also be established with PETE faculty to form professional learning communities (Bechtel & O'Sullivan, 2006; Armour & Yelling, 2007) around HOPE, so that preservice teachers, inservice teachers, and PETE faculty can all work together to design and implement a HOPE program in your school—as suggested earlier in this article. In closing this two-part article, physical education teachers who would like to establish a HOPE program are invited to contact the lead author by email at mmetzler@gsu.edu to discuss how we might assist you with your efforts.

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