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Educating Students for a Lifetime of Physical Activity: Enhancing Mindfulness, Motivation, and Meaning

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ABSTRACT

For many years, pedagogical scholars and physical education (PE) teachers have worked to enhance effective teaching and learning environments. Yet for some children, youth, and young adults, many of the benefits associated with a physically active lifestyle remain elusive. Enhancing programming and performance to meet physical activity goals may require moving programs *beyond* "effective." It will require teachers and program leaders to focus programmatic attention on strategies to actually increase students' out-of-class physical activity behavior. Transformative PE provides physical activity content within a nurturing and motivating environment that can change students' lives. It focuses on PE students' role in cognitive decision making, self-motivation, and their search for personal meaning that can add connection and relevance to physical activities. In this SHAPE America – Society of Health and Physical Educators *Research Quarterly for Exercise and Sport* Lecture, I have synthesized the research on these topics to emphasize useful findings applicable to teachers' everyday planning and teaching. Using sport, physical activity, dance, and adventure activities as the means to an end for personal and social growth, we can meet our commitment to effective standards-based education while preparing students for a lifetime of physical activity.

KEYWORDS

Cognition; personal meaning; physical education; self-determination theory

Researchers, scholars, and teachers have spent the last four decades describing and nurturing effective teaching with generally good results (e.g., Lee & Solmon, 2005). Researchers have identified characteristics of effective physical education (PE) teachers, and textbook and journal authors have communicated these characteristics to a broad readership of teacher educators and preservice teachers. The greatest changes in PE quality, however, have come when teachers work directly to understand and incorporate best practices in their teaching (e.g., Rink, 2014). Yet, as we move courageously into the 21st century, it is becoming clear that *more* than effective teachers/teaching may be needed to create *transformative* PE programs that change student lives and lead to physically activity lifestyles. Transformative planning and teaching focus on opportunities to provide life-changing experiences (Mezirow & Taylor, 2009). In this article, I will remind readers of the three different types of PE programming that are practiced in schools today and review critical features of effective teaching that should be in place in all PE programs. I will then examine research findings that have the potential to be transformative through an emphasis on teacher and student mindfulness, motivation, and meaning.

Three types of physical education programs

There is absolutely no doubt that teachers are the driving force in every gymnasium. Effective teachers plan carefully, create an engaging environment, provide clear instruction, and support students with learning cues and formative assessments. Within a *recreational approach* to PE, effective teachers manage classes effectively and provide a steady stream of enjoyable activities that engage students in games and other activities. In recreational approaches to PE, the teachers' primary goals are to assist students in having fun, letting off steam, and working cooperatively with others to make the experience enjoyable for all. Recreationally focused PE teachers feel constant pressure to find the next new game or fun activity to keep students participating. Games that students deem not enjoyable are quickly discarded and replaced with new activities (Ennis, 2011).

In the second type of PE program currently found in the United States today, the *public health approach* embodies the goals of a physically active lifestyle. PE teachers and activity leaders work to assist participants and students to develop habits associated with an active lifestyle in and out of school (see, e.g., Sport, Play, and Active

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Recreation for Kids [SPARK]). At times, this type of PE program may involve student skill development, but more frequently, it focuses on participation at a target heart rate in a range of physical activities. Additionally, goals of public health-oriented programs include an understanding of the physical activity guidelines and safe, regular use of weight-training and conditioning protocols. Public health-oriented PE teachers work conscientiously to manage the classroom for maximum physical activity. The most effective public health programs are those that have adequate facility space and instructional time to meet physical activity guidelines and criteria. Although PE is viewed as one of many sources of physical activity during the day, public health-oriented physical educators have the opportunity and responsibility to provide an essential dose of regular moderate-to-vigorous physical activity (MVPA) to students in their classes (Ennis, 2011).

In the third type of PE programing, the primary goal is education of the learner to understand, perform, and value physical activity. In the *educational approach*, PE teachers place a balanced emphasis on skill performance and fitness goals while participating in a range of sport and fitness-based activities. Within the SHAPE America – Society of Health and Physical Educators Standards (2014), PE teachers assist students to learn and understand cognitive concepts that facilitate efficient movement and encourage them to apply concepts to solve sport and fitness-related problems. Teachers identify learning cues and reinforce and guide performance using feedback and formative assessments. The explicit curricular goal of these programs is enhancing student learning of skills and fitness to prepare students for a physically active lifestyle (Solmon & Garn, 2014). Because learning requires contact time with students, educational-approach teachers are severely constrained by limited instructional time allocated to PE and often have to narrow their program goals to focus on the most essential skills within time constraints (Ennis, 2011). It is important to distinguish among these three types of PE programs because the program goals directly impact the expectations for teaching effectiveness in each program.

Teaching effectiveness: A necessary but incomplete component of quality physical education

During the last four decades, scholars, supervisors, and teachers have spent countless hours studying teaching. Research on teaching has consisted of both large and small studies (Lee & Solmon, 2005). The focus of teaching research during this period has been on understanding "best practices." Researchers and scholars, for example, have measured student learning in large multisite/multi-school research (pretest, instruction, posttest) and in smaller, more in-depth qualitative analyses of one or a few teachers. In each case, one of the primary goals has been to better understand both what master teachers do to be considered "expert" and how novice or "struggling" teachers might improve their practice (Lee & Solmon, 2005).

Studies conducted during the last three decades of the 20th century have revealed a fairly standard list of basic "effective teacher" characteristics accepted across subject areas and schools (Muijs & Reynolds, 2011, pp. 1–2). These characteristics include:

- clarity in teaching and administrative routines;
- high opportunity to learn through curriculum coverage (e.g., task-oriented, structured learning and effective use of instructional time);
- class management that maximizes pupil attention;
- active teaching that "takes" curriculum content to children;
- high levels and quality of questioning;
- effective time management; and
- frequent feedback.

These seven characteristics are relevant when teaching a range of different content topics to diverse children and are universally taught in both preservice teacher instruction for novices and continuous professional development for experienced teachers. I will briefly discuss the last two characteristics—the effective use of instructional time and assisting learners to receive and apply feedback.

Instructional time

Many variables impact student performance and learning in physical activity settings. Of these, one of the most influential—if not THE most influential—is the amount of instructional time available for instruction and practice AND how instructors and learners *use* the instructional time available. As Rink (2013) and others have pointed out, instructional time is a "*proxy*" variable for achievement. One would expect that if instructional time is available for teaching and learning, then teachers (leaders, coaches, counselors) have the opportunity to teach for learning and learners have an opportunity to learn the content. Thus, to some extent, the more instructional time available, the greater the likelihood that learners will demonstrate achievement. Conversely, when instructional time is not available or valued, is not used strategically, or is not protected from disruptions, teachers'

opportunities to teach and students' opportunities to learn are compromised (McCullick, Gaudreault, & Ramos, 2017).

Additionally, there are also hundreds of distractors and disrupters that can impact the amount of instructional time available for learning and how PE teachers and learners use that time. The now classic article by van der Mars (2006) outlined a number of the issues relevant to securing, using, and protecting instructional time in physical activity settings. Although much of the research on instructional time was initiated in the classroom and later reproduced in PE settings, we are able to say with great confidence that instructional time is a critical variable in any physical activity setting in which increasing learning (performance, tactics, achievement, cognition, etc.) and enhancing physical activity are the *primary* goals.

It is important to note, however, that in school-based PE once other competing goals are permitted to take priority over learning (e.g., fun, recreation, MVPA, stress reduction, etc.) in a PE program, then instructional time becomes less relevant or necessary to achieve these goals. Students can have fun and engage in MVPA during a long or short instructional period. In a recreational or public health/physical activity program where there is no explicit need for learning-oriented instructional time, time can be reallocated to other school academic subjects or activities in which "learning" is sustained as the primary goal. In schools, instructional time is a "zero-sum" commodity. Because there is a limited amount of time in a school day and in a school year, efforts to increase time for highly valued subject areas (i.e., mathematics, literacy, high-stakes tested subjects) must result in a reduction in instructional time for other, less valued subject areas such as "physical education" for recreation or raising one's heart rate where no explicit learning goals can be defined. Thus, instructional time is a precious, hard-won commodity that administrators, parents, teachers, coaches, and learners must preserve and protect because once it is lost, it is extremely difficult to recover (Lounsbery, 2017; Penney, 2017).

Received feedback

A number of other teaching variables impact instructional quality. Hattie, Gan, and Brooks (2017) argued that research continues to support the powerful influence of "received" feedback, although there is wide variability when evaluating the effectiveness of specific types of feedback. Simply providing lots of feedback to students may not be effective; instead, the teacher must consider to what extent learners actually *receive* feedback. Research has suggested that feedback is most effective when received by an individual student regarding his or her specific performance. In other words, in large PE classes, do students acknowledge that the teacher is talking to them? Can they apply the feedback to their recent and future performances? Received feedback recognizes the differential effects of context and learner characteristics on feedback effectiveness. Many PE classrooms in the United States consist of large numbers of students performing simultaneously, therefore making it challenging for them to receive feedback in an effective context (Hattie et al., 2017). Likewise, feedback is most effective when both the task and the feedback are calibrated to challenge the learner slightly, again making it difficult to use effectively in large, heterogeneous PE classes typically found in the United States.

Feedback is particularly powerful when tied directly to instruction and implemented as learning cues or reminders of effective performance within a specific context (Hattie et al., 2017). By emphasizing the instruction–feedback connection, PE teachers can add the third component, formative assessment, to the feedback equation. In other words, the content is taught, corrected, and reinforced through feedback and is then tested to provide learners with outcome-related information to encourage them to further assess and correct their performance (Kulhavy & Stock, 1989). This alignment alerts the performer (and the teacher) to focus on the task, task processes, and task strategies leading to successful performances. PE teachers can use feedback to motivate learners to give effort and to engage in learning tasks. Using feedback is especially effective in learning environments where students have choices and are encouraged to try new things without penalty, while engaging in peer discussions associated with increased ownership of their own learning. To create and sustain such a learning environment requires creative ways to keep appropriate class size in PE, which requires a strong justification that "learning" is the primary goal of the content. However, as PE teachers have become more effective in the recreational and public health approaches, it becomes more likely that the school administrators will add more students to each PE class to preserve resources to keep classes small in other academic areas. It can be observed in many schools when student enrollment increases, the number of teachers in the academic areas increases, but the number of PE teachers either remains the same or even decreases, making it extremely difficult to facilitate effective feedback/teaching in PE.

It has become clear that emphasizing effectiveness without taking into account the three curricular

approaches may help administrative management efficiency of the school. It perhaps does so at the expense of student learning knowledge and skill necessary for developing physically active lives. Emphasizing the effectiveness alone may help PE teachers and students get through the school day but may not enhance students' interest and willingness to engage in physical activity outside of school and throughout their lives. Thus, I will use the developing research on mindfulness, motivation, and meaning to propose another dimension beyond effectiveness to which I will refer as transformative curricula.

Transformative curricula: Focusing on the 3 Ms —mindfulness, motivation, and meaning

Transformative curricula build on effective teaching to create a uniquely engaging student experience. A transformative curriculum seeks to transform or change the student from a passive to a cognitively and physically engaged participant (Shindler, 2010). Transformative programs enhance students' value for physical activity as well as their ability and desire to perform. Some pedagogy scholars (e.g., Tinning, 2017) have focused on the socially critical elements in transformative curricula as they have taught students to question the status quo and critique current practices. In the rest of this article, I will articulate transformative psychological and physical experiences through mindfulness, motivation, and meaning to enhance student engagement and value for the physically active content.

Transformative curricula add a cognitive, reflective purpose to PE that encourages flexibility, reflection, thoughtfulness, and purposeful decision making in physically active lessons (Ennis, 2017). The research literature based on social-cognitive theory and needs- or goals-based self-determination theory provides best practices to enhance student and teacher motivation. This body of research is expanding rapidly to emphasize the central role of autonomy, competence, and relatedness in PE lessons. These three goals dramatically enhance students' motivation to participate and be physically active. Further, key elements of this theory enhance our understanding of how to guide and nurture less motivated students to become more extrinsically motivated, while working progressively toward the intrinsic motivation necessary to embrace a physically active lifestyle. None of this occurs in PE or any subject area without students (and teachers) having a sense of meaning and purpose about what they are doing and why it is important (Solmon, 2003). These three Ms place a heavy transformative-oriented burden on our planning and teaching and importantly our ability to communicate to students the purpose of our PE programs in a way that is mindful, motivating, and meaningful.

Mindfulness

While some argue that physical activity is a behavioral habit that we acquire through repetition, I have argued for many years (e.g., Ennis, 2014, 2015) that decisions to become physically active also are cognitive as they require thoughtfulness, reflection, and decision making. Cognitive decisions require individuals to be mindful as they take advantage of opportunities and overcome a number of barriers to physical activity (e.g., Dishman, Heath, & Lee, 2013). They initially must make a commitment and find opportunities to be physically active as part of their lives. As we know from many studies tracking physical activity adherence (see Dishman et al., 2013), even the most committed, regular participants must alter their physical activity schedules frequently to overcome barriers and maintain an active lifestyle. These adjustments require individuals to focus cognitively on their personal commitment to be physically active, while shuffling other responsibilities to adhere to the goal of regular physical activity. Prinz, Beisert, and Herwig (2013) argued that all human activity is guided and controlled by goals; thus, the importance of cognitive mindfulness to assist learners in setting and reaching realistic goals becomes a critical factor in transformative approaches to PE curricula (Solmon, 2017). A reliance on mindfulness is a relevant and important part of transformative curricula. Recent research focusing on cognitive processes has provided additional evidence to support the role of mindfulness in skill and fitness acquisition and motivational transformative approaches to PE. Research supports the emphasis on perceptions of competence and self-efficacy.

Conceptions of competence

Certainly, teachers have long understood the role of effort in improving performance (Ennis & Chen, 2017). The challenge has been to design physically active environments that enhance students' willingness to give effort, to persevere, and to work toward greater competence. Researchers such as Dweck (1999) pointed out that children hold one of two perspectives regarding competence. They may believe that individuals are born with the ability to naturally perform a skill, and because of their talent, they are very successful in PE and sport (i.e., the entity perspective). Others believe that all students can improve by working hard and getting better and are willing to persist in giving effort

(i.e., the incremental perspective; Li & Lee, 2004). Needless to say, children and adolescents who believe in an entity perspective deny the value of practice, effort, and hard work, while those who hold an incremental perspective are more willing to accept instruction and often develop higher levels of skill and fitness because of their willingness to give effort over longer time periods.

This concept was supported in research conducted by Li, Lee, and Solmon (2008). The researchers taught a novel gross motor skill (flipping and catching a baton) and divided university students into two groups. They manipulated the learning environment so that individuals selected to be in Group 1 believed that they were *born* with the baton-flipping ability. Conversely, individuals in Group 2 believed they were selected for the study because of their unique ability to *learn* baton flipping. Li et al. reported that the variables measured were individuals' perceptions of competence (i.e., entity or incremental), intrinsic motivation, perceptions of skill difficulty, persistence, and skill performance. Findings suggested that learners in the incremental condition (Group 2) were more intrinsically motivated and willing to give effort. They persisted longer in practice, although their baton-flipping performance did not exceed that of the participants in the entity group (Group 1; Li et al., 2008). Evidence suggests that an individual's perceptions of competence can be mediated by intrinsic motivation. Likewise, the impact of perceptions of competence on persistence—a key factor leading to effort and improvement—can be significant and thus enhance learning. Providing opportunities for all students to work mindfully in an incremental environment in which effort and persistence are encouraged as central to intrinsic motivation is a transformative notion for PE and a crucial step in preparing students for a lifetime of physical activity.

Motivation

Schunk, Pintrich, and Meece (2008, p. 4) defined motivation as "the process whereby goal-directed activity is instigated and sustained." Motivation in schools is a complex process influenced both by contextual factors and learners' thoughts. Although research findings on learner motivation are complex, they can be readily applied to educational practices in the gymnasium (Chen, 2017). Teachers who develop motivational classrooms and make motivation a learning strategy (Sun, 2017) make their jobs much easier and foster students' interest in physical activity in transformative ways. Most contemporary perspectives on motivation focus on social-cognitive theories. These theories emphasize that individuals' motivation is determined by their beliefs about themselves, thoughts, and the social context in which they are learning (Alderman, 2008). Further, they focus on both the social and cognitive nature of motivation and how social interactions influence learning (Solomon & Anderman, 2017).

Self-efficacy

Interactions between the learner, the environment, and other individuals play a key role in learner motivation. One of the major tenets of social-cognitive theories is the role of self-efficacy in facilitating educational outcomes (Pajares, 1996). Bandura (1997) defined self-efficacy as individuals' beliefs about their ability to complete a task. These beliefs are related to the types of choices that students make. In other words, if a student believes he/she is capable of completing a task successfully or performing well in a situation, he/she is more likely to choose to attempt and persist in the task. Although individuals can acquire efficacy from several sources, the most impactful is the mastery experience, or seeing through their eyes that they actually completed the task successfully. Conversely, the experience of failing to master a task causes efficacy to diminish (Lent, Lopez, Brown, & Gore, 1996). Self-efficacy has been shown to relate positively to effort, persistence, and achievement. However, self-efficacy is task-related. Individuals are more likely to report high or low self-efficacious beliefs about a particular task, such as shooting layups, than a more general efficacy toward playing (all) sports (Pajares, 1996).

Achievement goal theory

Achievement goal theory suggests that individuals' reasons for engaging in a task can be as important as their beliefs (Ames, 1992). Although early theories posited two types of reasons, mastery and performance, more recent theories have added approach and avoidance as key dimensions to the framework. Learners who engage in tasks for mastery reasons (also described as task or learning goals) are invested in the task for the sake of completing the task. They are more likely to compare their current performances to past performances instead of comparing their performances to performances of others. Conversely, learners who engage in tasks for performance-related reasons are most concerned about *appearing* competent through comparing their performances to others' performances. Thus, mastery-oriented students seek to achieve competence, while performance-oriented students seek to demonstrate competence (Kaplan & Maehr, 2007). Students can simultaneously hold either or both goals with their

particular goal profile being known as their personal goal orientation.

Of some concern to teachers are those students who hold the performance orientation. Research by Ryan, Hicks, and Midgely (1997) was related to maladaptive education goals and the avoidance of challenge. Of particular concern are students who have performance-avoidance goals. The more difficult goals appeared to be to attain, the less likely students were to pursue them (Senko & Hulleman, 2013). Students who perceived themselves to be low-performing were more likely to adopt both performance-approach goals and performance-avoidance goals, while students who perceived themselves to be mastery-minded were likely to adopt approach goals exclusively. Research has suggested that performance-avoidance goals are maladaptive (Pekrun, Cusack, Murayama, Elliot, & Thomas, 2014). When students avoid sport or fitness tasks with the goal of avoiding the appearance of incompetence, it places them in a situation in which learning is difficult if not impossible, because they refuse to participate. Efforts to encourage students to assume a mastery goal perspective can greatly influence both their willingness to give effort and their success at the task.

Self-determination theory

Students who become physically active on a regular basis demonstrate a range of motivational concepts. Students who are not interested in participating or becoming involved are described as being "amotivated," while those who become involved to accomplish some instrumental goal, such as getting in shape for a varsity sport or weight control, are described as extrinsically motivated. Intrinsically motivated individuals engage fully and freely in a task without the expectation for material or external rewards. Physical educators strive to assist students to become more intrinsically motivated to participate in physical activity after school and for a lifetime (Bryan & Solmon, 2012). Self-determination theory provides a pathway to intrinsic motivation.

Self-determination theory is defined as "experiencing a sense of choice in initiating and regulating one's own actions" (Deci, Connell, & Ryan, 1989, p. 580). Self-determination theory revolves around three basic human needs: the need for competence (experiencing success and mastery), the need for relatedness (experiencing a sense of social belonging), and the need for autonomy (experiencing control over outcomes in one's life), also described as self-determination (Deci & Ryan, 2000). To become intrinsically motivated, it is particularly important to satisfy the needs for competence and autonomy.

PE teachers whose goal is to enhance students' desire and participation in an active lifestyle focus on increasing students' competence and autonomy. Competence within skillfulness is based on mastering essential skills such as throwing, catching, dribbling, and shooting, which are central to most PE curricula. In fitness-focused programs, understanding and being able to perform conditioning and weight-training protocols safely and regularly enhance students' perceptions of competence (Cale, 2017). Effective teaching that uses instructional time strategically to enhance skillfulness and fitness and provides feedback focused on explicitly taught learning cues builds students' feelings of competence.

Taylor, Ntoumanis, Standage, and Spray (2010) found that self-efficacy and perceived competence were consistent indicators of effort and future intentions to participate in leisure-time physical activity. The authors noted implications for the PE classroom and suggested that interventions that target change in PE students' activity behavior and cognition should concentrate primarily on competence. According to this research, if students perceive themselves to be competent, they will be more motivated to participate in activity outside of PE. This finding also was supported in Sas-Nowosielski's (2008) research in which perceived competence served as the strongest predictor of motivation (high levels of perceived competence) and amotivation (low levels of perceived competence).

Deci and Ryan (1985) described autonomy as feelings of self-control and emphasized that one's actions emanate from oneself. Autonomous individuals think of themselves as initiators of their own behavior. They set goals and decide how they will progress to meet them (Zhang, Solmon, & Gu, 2012). Individuals without a strong sense of autonomy perceive they are controlled by others and have to do what they are told regardless of the extent to which they agree with the intended outcome. The context in which the individual is functioning is central to feelings of autonomy. Autonomy-supportive contexts include opportunities to make choices and to receive positive individual feedback, while autonomy-controlled environments include rewards, threats, deadlines, evaluation, and surveillance. Researchers (Chatzisarantis & Hagger, 2009) defined the autonomy-supportive condition as one in which teachers provided rationale for participating, provided individual feedback related to performance, and empathized with students' perceived difficulties related to PE. Conversely, they described an autonomy-controlling condition as one in which the teachers made all decisions, provided group or class feedback with little rationale for why students should participate, and did not empathize with students' perceived challenges.

Ntoumanis and Standage (2009) emphasized that when teachers provide rationale behind tasks, acknowledge student perspectives/feelings about activities, and use choice language as opposed to controlling language (e.g., "You may want to …" or "You can chose from …" vs. "You have to …"), students report higher levels of enjoyment and motivation. There are many times when teachers can provide alternatives or choices during a lesson to provide students with opportunities to make decisions and control aspects of their in-class lives. Allowing students to consider consequences of their decisions including wrong decisions within a supportive environment can contribute to student satisfaction of the autonomy need. Niemiec and Ryan (2009) expressed overwhelming concern about teachers' use of external controls and pressure to *force* students to learn instead of cultivating students' internal desire to learn and provided an overview of teaching methodologies to enhance autonomy support.

Autonomy support is critical in developing a self-regulated physical activity participant. Autonomy-supportive teaching can lead to dramatic improvements in student motivation and enjoyment. For example, Perlman (2013) compared the effects of a highly autonomous learning environment to those of a highly controlling learning environment on the affect and motivation of ninth-grade students. Perlman randomly assigned two intact PE classes to either of the two environments where they participated in a 16-lesson basketball unit. The researcher assessed autonomy support, motivational regulations, affect, and overall enjoyment using pretest–posttest questionnaires. Perlman found that student scores on enjoyment and motivation questionnaires significantly improved from pretest to posttest in the autonomy-supportive group while the controlling group's scores decreased.

Providing autonomy support for K–12 students can at times run contrary to teachers' pressure to control their learning environment. Autonomy does not preclude effective class management that provides structure, rules, and routines (Rink, 2014) to guide students to effective learning. Findings from the research in which teachers provided strong autonomy support have indicated that students' intrinsic motivation to participate increases dramatically, and thus, the need for teacher control diminishes. Highly autonomy-supportive learning environments can positively alter students' motivation, enjoyment, and need for competence in the PE context.

Meaning

From a psychological perspective, personal meaning appears closest to Eccles and Wigfield's (1995) expectancy-value theory. Expectancy value is the product of one's expectation of attaining a given outcome and the value one places on that outcome. Expectancies and values are cognitive and appear to have the greatest influence on student performance, persistence, and task choice. The value component of this theory focuses on three core achievement values: attainment (the importance of doing well), utility (how closely the task relates to future life), and intrinsic value (the enjoyment derived from the task). A fourth negative value is described as cost (all the possible negatives of engaging in the task). Solomon and Anderman (2017) pointed out that teachers communicate the values to students by the way they present academic tasks. Often, PE students do not understand the relevance of the task they are being asked to perform. For example, some students who do not feel competent in a team sport might resist when asked (or told) to play a sport without receiving a rationale or instruction (Gu, Solmon, & Zhang, 2012). Teachers need to answer the question, "Why do I have to do this?" with a rationale that addresses the value of team play and cooperation, specifically in team sport units such as basketball. Clearly, it is the responsibility of physical educators to choose tasks they and their students perceive as being relevant, interesting, useful, and worthy of one's time.

Personal meaning has a long history in education and PE. Dewey (1916) articulated curricula that were integrated and meaningful to students within their life settings, while Eisner (2002) provided a rationale for the centrality of personal meaning as inextricably connected to innovative educational processes. In PE scholarship, Eleanor Metheny (1961) and Ann Jewett (1983) introduced the concept of personal meaning as a core concept of curriculum decision making. For Jewett, if an experience is to be educational, the learner must first find it meaningful. Educators at all levels must, therefore, work to create and enhance the personal meaning that students find in cognitive and physical activities. She pointed out that all individuals and especially students are constantly searching for meaning as they select tasks, set goals, and persist in developing autonomy, relationships, and competence. Jewett argued that meaningful curricula are most likely to be created by teachers and students working together to identify and set meaningful goals and structure and sequence activities students find meaningful. Likewise, Jewett believed that meaningful content and tasks were best identified at the local level as close to the learners as possible. Therefore, she argued against a national curriculum because it is difficult if not impossible for a national-level governing body to select

curriculum goals and activities that children and youth will find meaningful.

Jewett and her colleagues (Jewett, Bain, & Ennis, 1995; Jewett & Ennis, 1990; Jewett & Mullan, 1977) conceptualized a balanced approach to curriculum that provided opportunities and the possibility of meaningful experiences within a balanced PE emphasis on the individual, society, and the kinesiological knowledge base. She rejected the notion that individuals can find meaning working alone and was more likely to agree with a social constructivist focus on the role of the social environment as an avenue to find personal meaning when participating in physical activities. Jewett (1983) also was keenly aware that education is for the future. The future focus encourages individuals to set and progress toward goals and to make conscious decisions consistent with a futuristic goal-oriented focus. In fact, she emphasized the teachers' role in assisting students to search for meaningful physical activities as part of their search for purpose in their lives and as part of the decision-making process that they encounter each day.

More recently, Kretchmar (2000b) agreed that "activity must be meaningful if students are to adopt an active lifestyle" (p. 260). He has been critical of physical educators who have not focused on the importance of meaning to PE learners. He has been concerned that some teachers have not acknowledged differences in their students' levels or depths of meaning ranging from casual interest to "poignantly moving" meaningful experiences. Thus, students in these programs are asked to participate in rote or disconnected physical activities and find only weak or disconnected meaning. He pointed to the importance of increasing opportunities for students to engage in PE throughout their time in schools and argued that PE instructional time should be extended for longer time periods with a focus on tasks that increase competence for participating in sport and physical fitness and activity (movement) and allow experience in the sport and physical activity subcultures (Kretchmar, 2000a). Kretchmar (2000a) emphasized that only extended and extensive physical activity experiences can enhance students' levels of affiliation to physical activity, thereby creating greater meaning. By elevating more depth-enhancing physical activities, such as sport and dance, to the level of custom or ritual, teachers can point out and teach for meaning within physical activities (Chen, 1998). Currently, little research-based evidence has shown that typical PE programs enhance students' willingness and ability to be physically active by choice. Clearly, effective teaching is an important step in providing well-structured and clearly explained tasks leading to student learning in educational PE.

Moving forward, the next steps to enhance and transform the PE experience should involve designing and testing transformative PE curricula that infuse student experiences with a focus on mindfulness, motivation, and meaning. Providing opportunities for students to think critically and reflectively and apply knowledge to solve physical activity problems provides an interesting and challenging cognitive as well as physical experience to develop the mindful mover. Further, student motivation can be enhanced and student engagement can be increased with a focus on providing a mastery environment that promotes self-regulated engagement to satisfy competence and autonomy needs. Finally, teachers can assist mindful, motivated students in their search to find meaningful experiences in which they seek to engage and affiliate with others in an enjoyable physical activity environment.

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