Helen Keller is quoted as saying, “Alone we can do so little, together we can do so much.” Who is more familiar with this truth than sport coaches? Regardless of the final outcome of a contest, teaching athletes to know and execute their roles while unselfishly working toward a common and collective purpose may be the pinnacle of coaching success. Because of overlapping content, many physical educators also have experience coaching (Richards & Templin, 2012). Therefore, the purpose of this article is twofold: (1) to encourage physical educators to embrace professional learning communities (PLCs) in the same way they would embrace collaboration with a team of competent athletic coaches; and (2) to articulate the congruent nature of coaching and working in PLC teams.

In our previous work (Beddoes, Prusak, & Barney, 2019; Beddoes, Prusak, & Hall, 2014), we described that PLCs hold the potential for physical educators to shape their own destiny and overcome barriers. Given the likelihood that physical educators have experience coaching, this article builds and draws on the analogy of sport coaching and potential outcomes of working as a PLC. It is our hope to demystify the PLC process and present the notion that if anyone in the school can work within a PLC, who is more prepared to do so than a physical education teacher?

A Brief Review of Professional Learning Communities

A PLC can be operationalized as educators working collaboratively and interdependently through ongoing collective inquiry and action research with an intense focus on student learning (Mattos, DuFour, DuFour, Eaker, & Many, 2016). These PLCs are built on: (1) three big ideas; (2) six specific characteristics; and (3) four essential questions and will be discussed later. Establishing PLCs in schools can be an evolving and sometimes uncomfortable learning process. Nevertheless, the growing body of extant literature over the past 30 years suggests the potential benefits of implementing school-
wide PLCs include: (1) improved teaching practice; (2) increased faculty efficacy; and (3) enhanced student learning (Bryk, Camburn, & Louis, 1999; Lee, Dedrick, & Smith, 1991; Phillips, 2003).

As educational trends continue to shift toward standards-based teaching with a heavy emphasis on data-driven instruction and learning (Kibler, Valdes, & Walqui, 2014), it is imperative that physical educators become increasingly fluent in the PLC vernacular and are equipped to actively engage in the PLC process. A physical education team cannot function in subject isolation within a PLC. Within an operative PLC, physical educators are not marginalized or secluded in the gym, nor can they, of their own accord, hide out there! Instead, they are empowered with the opportunity and responsibility to exchange resources, engage in meaningful dialogue, and make collective decisions that enhance and document (1) professional practice and (2) student achievement and improvement (Mattos et al., 2016).

School PLCs are Analogous to Sport Coaching

To more aptly illustrate the operations of a PLC, we will draw on a sport coaching analogy that will likely be familiar to physical educators. Those acquainted with athletics could not dream of a day where their coaching staff would work in isolation from one another. Rather, members of the staff meet, discuss goals, devise benchmarks to assess, adjust instruction to enhance or remediate performance, and so on. In other words, a coaching staff functions very much like a PLC. Yet, off the field, physical educators may ignore this strength-in-numbers approach and instead retreat to their gymnasiums to labor in isolation (Prusak et al., 2011). However, it is important to note, we are not minimizing the influence of organizational factors such as the institutional press, role conflict, and or traditional versus innovative practices (Richards, Templin, & Graber, 2014). Rather, we are suggesting that working to form and operate as collaborative teams has the potential to move physical education out of marginalized obscurity to take a more valued role in academic achievement of all students (Beddoes et al., 2014).

A teams-within-a-team approach may help to explain what a PLC-driven environment could look like. A school PLC can develop impressive momentum when working interdependently by collaborating, planning, inquiring, teaching, problem solving, analyzing and reteaching, because the “collaborative team is the fundamental building block of the organization” (Dufour, DuFour, & Eaker, 2008, p. 15). Dysfunctional, uninterested or unprepared collaborative teams jeopardize the effectiveness of the PLC. The success of collaborative teams may well depend on each team member’s fidelity to the big ideas that drive PLCs.

Three Big Ideas

Idea 1: An Intense Focus on Learning. Evidence of learning is anchored in data. The coaching metaphor is used to illustrate how the decisions of a collaborative physical education team are made
versus left-handed pitchers, quarterback completion percentage, to turnover ratio, shooting percentage, a hitter’s batting average pre-identified as critical knowledge and essential skills (e.g., assist on the most important learning outcomes, which are collectively individual/team skill-set. Every coach on the staff is crystal clear to (1) remediate player/team deficiencies; and (2) extend the guides further decisions including instruction and practice plan- ing within individual subjects or grade levels. A physical education team is equipped with a specific skill set and unique experiences that can contribute to the school PLC. On a macro level, a school PLC not only welcomes diversity of thought and expertise — it requires it. It would not be beneficial to have an entire faculty of content or grade-specific collaborative teaming is enhanced with a variety of perspectives. As individual teams run (the engine), so moves the school PLC. Physical educators can offer services to the school that other faculty members are not trained to do and can potentially be an indispensable part of a school PLC because they interact with each of the students in the school in a unique, dy- namic setting. A physical educator may be particularly expert on behavior management and motivational techniques.

Idea 3: Effectiveness Is Defined by Results Rather Than Inten- sions or Effort. A wise coaching staff never defines success with a single outcome (e.g., winning). Coaches understand that “the process is [the] product” (Prusak & Vincent, 2005). In the pursuit of winning the contest a team will, of necessity, attend to several smaller goals. A coaching staff understands that the outcome of winning will ultimately take care of itself if other smaller, measurable goals are accomplished. Coaches reflect on data (past results) to inform decision making and goal setting. For example, a bas- by the numbers. Coaches conduct ongoing and systematic evaluation, routinely gathering and analyzing statistical data. The data guides further decisions including instruction and practice planning to (1) remediate player/team deficiencies; and (2) extend the individual/team skill-set. Every coach on the staff is crystal clear on the most important learning outcomes, which are collectively pre-identified as critical knowledge and essential skills (e.g., assist to turnover ratio, shooting percentage, a hitter’s batting average versus left-handed pitchers, quarterback completion percentage, yards per carry for running backs). With these tangible, measurable outcomes in mind, the coaching staff designs interventions (e.g., game-like drills, redesigning offensive sets, position play drills, late-game situations, footwork drills, one-on-one skill work, additional film study).

Data-based interventions are created and deployed for all players who have not yet demonstrated sufficient competency while also crafting progressive activities to further challenge those who have. The learning of essential skills follows a pattern in which they are taught, practiced and assessed repeatedly, and, based on the data (evidence of competency), teaching is adjusted to individual learner needs until all members reach proficiency. Though the measurable outcomes and interventions may differ, a physical education collaborative team can apply similar principles to maximize the learning of each student. For example, students may be required to demonstrate competency in performing the critical ele- ments of a defensive slide in a lead-up game based on performance criteria detailed on a three-point rubric. Those who have not demonstrated learning will do so in modified activity or individually until they are able to perform the skills in a game. Students who have reached competency may be introduced to more complex defensive skills such as communication with other defenders or defending a pick and roll.

Idea 2: Working Together toward a Collective Purpose. Like a team of teachers, a coaching staff consists of individuals with varying backgrounds, philosophies, and methodological preferences. These differences are welcomed and coalesce to give strength to the staff rather than divide it. Eaker and Keating (2009) appealed to sport coaching in describing the selection process of collabora- tive team leaders in school PLCs:

For example, think about how the head football coach at the high school selects his coaching staff. He would give considerable thought to who should fill each role. He wouldn’t just rotate his offensive coor- dinators each year or simply search for volunteers! He would select the best person to fill the position, and the position of offensive coordinator would be well defined and the role expectations clearly communicated.

(retrieved from http://allthingsplc.info)

A head coach may purposely and wisely select assistant coaches with wide-ranging philosophies, experience and skill sets to pro- vide additional perspective. For example, a coaching staff may include a coach with a certain proclivity for recruiting, another proficient in teaching tactical concepts and strategies, and yet an- other who is adept at designing defensive schemes. It is likewise beneficial to have coaches with particular expertise in position play (e.g., post players, lineman, receivers, pitchers). Given the nuances of position play in sports, athletes on the same team may work collectively toward a common goal but engage in different practice drills, off-season workout regimens, and dietary practices (e.g., it is not effective to have a bigger and slower receiver or a slim and fast lineman in football). The specialities of the staff function as position teams-within-a-team.

By definition, the entire school comprises the PLC (Dufour et al., 2008). The engine that drives the PLC is collaborative teaming within individual subjects or grade levels. A physical education team is equipped with a specific skill set and unique experiences that can contribute to the school PLC. On a macro level, a school PLC not only welcomes diversity of thought and expertise — it requires it. It would not be beneficial to have an entire faculty of math teachers, for example. On a micro level, the effectiveness of subject- or grade-specific collaborative teaming is enhanced with a variety of perspectives. As individual teams run (the engine), so moves the school PLC. Physical educators can offer services to the school that other faculty members are not trained to do and can potentially be an indispensable part of a school PLC because they interact with each of the students in the school in a unique, dy- namic setting. A physical educator may be particularly expert on behavior management and motivational techniques.
Physical educators who work in a PLC likewise understand that the process of engaging children in healthy and active lifestyles is composed of the consistent and unrelenting aim at accomplishing smaller, bite-sized products. In terms of PA, for example, children can be more active today than they were yesterday. Measured daily or weekly activity levels within physical education is a process divided into manageable products. In principle, this concept may be applied to motor-skill acquisition, fitness, or targeted behavior in the affective domain. In the next section we provide examples of coaches acting as a PLC to frame our discussion in promotion of physical education teachers doing the same. See Table 1 for a comparison of coaching and teaching within the three big ideas of a PLC.

Alignment of PLC Characteristics and National Standards for Sport Coaches

In the following section we continue to make the case for physical education teachers to work as a PLC by providing similarities of knowledge and skills between PLC characteristics and the National Standards for Sport Coaches. In each paragraph below, we discuss the six PLC characteristics in close alignment with many of the National Standards for Sport Coaches (SHAPE America – Society of Health and Physical Educators, 2019). As you will see, there is congruence among four of the Coaching Standards with the PLC characteristics; however, the other standards, Engage in and Support Ethical Practices, Develop a Safe Sport Environment, and Create a Positive and Inclusive Sport Environment, are also effective practices teachers apply daily.

PLC Characteristic 1: Collective shared mission, visions, and goals and National Standards for Sport Coaches: Set Vision, Goals and Standards for Sport Program. It is not uncommon for coaches to advance a mission statement, explicitly identify a collective vision, and set reasonable but challenging goals. Moreover, these goals are so explicit that every member of the coaching staff and team can articulate them with clarity at a moments’ notice. Teachers can similarly establish clarity of vision and mission — their purpose for existing with the intent of developing students who are lifelong movers. Similarly, every practice activity, every team discussion, every analysis of data is aligned with the end in mind to encourage long-term athlete development so as to increase athletic potential and physical literacy. If an existing activity during practice cannot justifiably be aligned with the overall goals and mission, it is modified or omitted regardless of its popularity through strategic planning and goal-setting principles. An example in physical education would be when a team of physical educators commit to ensuring that every student in every class engages in moderate-to-
vigorous PA (MVPA) at least 50% of class time (SHAPE America, 2015) during physical education, they will modify or omit existing lesson activities that do not align with the goal. A PLC environment provides guidance and direction to each activity, lesson and unit to maximize time spent toward curriculum outcomes.

PLC Characteristic 2: A PLC works interdependently in collaborative teams and National Standards for Sport Coaches: Build Relationships. Just as a coaching staff consists of personnel with varying roles and strengths, so does a team of physical educators. The whole is greater than the sum of its parts. While an effective team of teachers will always demonstrate respect, there must also be mutual accountability. To this end, mutual accountability is found in both teachers’ and coaches’ ability to develop competencies to effectively collaborate, communicate and educate while supporting all personnel involved. If one team member does not follow through with an assignment, the entire team suffers. It is also important to note that collaboration does not justify “coblaboration” (MacDougall, 2009), where contracted school hours designed for collaborative teaming are spent merely as social time. Though a coaching staff will likely allot time for socializing and bonding, formal collaboration time is sacred, and each minute is accounted for and accompanied by an organized agenda detailing time allotment to the most important discussion items. Experienced coaches do not make meetings optional. Further, leadership and management strategies help all stakeholders to adopt their programs vision, core values, and mission to meet program goals. Items discussed at the meetings are revisited with attendant accountability. Each coach has a role, and each role is important to the overall success of the team just as each teacher has a role in their PLC to help students meet their program mission and work toward their vision.

Characteristic 3: Ongoing collective inquiry and National Standards for Sport Coaches: Strive for Continuous Improvement. Ongoing collective inquiry may include a team who continuously learns together through self-reflection, mentorship and professional development. Often, coaches will attend conferences, workshops, study sessions and group discussions in order to advance their craft. Successful sport teams are not led by stagnant coaches who are fixated on inflexible methodologies. As the game evolves, so do the knowledge and skills of the coaches; therefore, developing strategies for evaluation and monitoring toward improvement of the staff and team is necessary! A coaching staff cannot be competitive unless there is an unrelenting desire for continuous learning and seeking out the latest information coupled with an honest understanding of what they know and do not know. Likewise, a team of teachers must keep abreast of the latest methods and best teaching practices, national initiatives, research clarifications, and resources and truly believe learning is for a lifetime. Beyond professional development (PD), a successful team of teachers must also examine the “brutal facts” (Collins & Collins, 2001). In other words, teachers have to be willing to make honest programmatic assessments and then adjust accordingly. There will always be a gap between current realities and the vision of the team such as maintaining work-life harmony and managing stress and burnout. However, it is in the striving, learning and implementation of new ideas that teams grow through continued mentorship and experiencing and learning by doing.

Characteristic 4: A PLC involves action-orientation and experimentation and National Standards for Sport Coaches: Conduct Practices and Prepare for Competition. To be successful, a coaching staff must advance beyond dialogue and take action. This may mean experimenting with new technology in film study, embracing social media for recruitment efforts, or implementing a new defensive wrinkle to expose an opponent’s weakness. To this end, coaches need to identify, develop, and then apply tactics and strategies that are developmentally appropriate to best prepare their athletes for future competition. Therefore, coaches must plan, teach, assess and adapt to help athletes grow and develop. Teachers likewise must take action, learn from and reflect on those actions, and then modify and make frequent adjustments. Perhaps the most dif-
ficult aspect of any effort to form PLC-driven teams is to advance from discussion to action and then to reflection. Establishing and adhering to team norms may be especially helpful in this process.

Characteristic 5: A PLC-centered team engages in systematic processes to promote continuous improvement and National Standards for Sport Coaches: Conduct Practices and Prepare for Competition. A coaching staff is not unorganized, unfocused, or without direction. Examine a successful coaching staff on any level, and you are likely to observe like-minded individuals working within a detailed and focused system. Collaboration is not an option. Improvement is by design and purposeful rather than left to chance and accidental. As in the aforementioned ongoing collective inquiry, data is gathered to inform current levels of learning and ability to adjust training and plans based on the needs of the athlete. Strategic decision-making skills are then utilized to make these improvements designed to ensure and extend learning. Once the strategies have been implemented, they are respectfully scrutinized and then improved. Although this is often thought of as tactics in a sport or scouting an opponent, this also may include monitoring coaches’ stress levels with the intent to always implement the most appropriate decisions.

Teachers can also create a culture of governance, establish norms and non-negotiables, and provide a structure that systematically ensures all students meet the essential learning outcomes. This takes discipline, coordination, continuous collaboration, and mutual respect (Hallam et al., 2015). It also suggests a willingness by each teacher to openly and respectfully examine current practices or “craft” by identifying those that have the greatest impact on student learning toward sound teaching and learning principles.

Characteristic 6: An unrelenting focus on results and National Standards for Sport Coaches: Strive for Continuous Improvement. Not only are successful coaching staffs focused on accumulating wins, but they religiously and meticulously measure performance. Sport coaches regularly monitor and improve their team and staff outcomes through evaluation. Often, statistical data is used to measure rebounds per game, assists, rushing yards, and runners left on base. These data are not recorded and then forgotten but are utilized to progressively improve results. The data inform decisions related to instruction and activities that more effectively advance each player’s skills and knowledge and ultimate application in competition. In addition, coaches tend to take time to examine and evaluate by talking with coaches and players as well as using systematic observational tools to improve performances. Consistent with the fifth characteristic of PLCs, data collection and analysis is a fundamental component for improving results. Teachers exist in data-driven environments. It is unreasonable to assume that improved results are taking place when there is no examination of assessments or the absence of an unrelenting focus by every team member to improve instruction and learning. With this in mind, teachers and coaches alike should work to create a culture of learning among students, athletes, coaches and teachers to perpetuate lifelong continuous improvement. Regular assessment and monitoring of student learning changes the focus of assessment to promote learning instead of only being recognized as an evaluation tool.

In his influential book examining organizations in the business sector, Collins (2001) asserted that the most successful companies not only have a “to do” list but also a “stop doing” list. Likewise, physical educators may well follow this counsel. A PLC-centered team thrives on simplicity rather than collapsing under the weight of ever-increasing demands and to do lists. Care should be taken to ensure that the desired results are appropriate. For example, some scholars have pointed out the injustice of holding physical educators accountable for producing high levels of motor-skill proficiency and fitness in children — given the limited opportunities teachers have for instruction as well as the inherent genetic variability of students (Pangrazi, 2010). A physical education team can make contextually responsive and realistic decisions for student learning based on local resources, student interests and dispositions, and programmatic time allotment. Standards and resources provide structure and guidance, but a team should not feel compelled to incorporate every conceivable appropriate practice (Wiggins, 1989).

A collaborative team of teachers has identified, implemented, assessed and re-identified the knowledge and skills every student must obtain. Such focus simplifies decision-making, defines desired results, and increases instructional focus to obtain the results. Some activities may even be “good” activities and formerly successful, but no longer contribute to the broader goals in their present form. Just as coaches need to create annual and seasonal plans and developmentally appropriate practices to prepare their athletes, the physical education team should identify a “to do” and a “stop doing” list, or at least a “stop doing it this way” list. See Table 2 for a comparison of coaching and teaching concepts that reflect PLC characteristics.

Example of PLC Collaborative Teaming from a Public Health Perspective

Professional learning communities are being concurrently implemented in schools alongside contemporary PA initiatives such as Whole School, Whole Child, Whole Community (WSCC; Lewallen, Hunt, Potts-Datema, Zaza, & Giles, 2015) and comprehensive school physical activity programs (Carson, 2012). These initiatives place strong emphasis on using a multicomponent approach designed to align and integrate academics and health (Lewallen, 2015). It is conceivable that a school-wide PLC would produce a culture of teamwork and collaboration among the entire school faculty that would facilitate the implementation of whole-of-school approaches to PA and wellness. Physical educators may be ideally positioned to shape the PA culture of schools and therefore be indispensable in contributing to the larger school culture (Carson, Castelli, Beighle, & Erwin, 2014).

As scholars continue to advocate for a health-optimizing (Metzler, McKenzie, van der Mars, Barrett-Williams, & Ellis, 2013) approach to physical education, there is an increasing emphasis toward creation of opportunities for PA engagement across the school day, especially within formal physical education (Chen & Gu, 2018). A school PLC may create or widen channels necessary through cross-curricular collaboration and relationship development among faculty members, which is integral to comprehensive PA programming. Though it will take an entire school PLC to shape the PA habits of children, the moving force (engine) will likely come from the physical education collaborative team. Attempting to change a school culture (i.e., from obesogenic to physically active) will involve laboring alongside the entire staff and operating within the school PLC framework. However, in terms of substantive and systemic change (Siedentop & Locke, 1997), it may not be logical to influence and manage a change of culture by focusing only on a subsystem (physical education) while simultaneously ignoring the whole system (school; Beddoes et al., 2019).
It is important to remember that comprehensive school physical activity programs (CSPAPs) — by which PA is infused across the entire school day — are an outgrowth of a quality physical education program (SHAPE America, 2015). Perhaps school faculty and administrators would be more likely to support whole-school PA programming when physical educators demonstrate full investment in the school PLC. Given the marginality that physical education often faces, advocating with data-driven outcomes may help to increase visibility in the school so as to gain the needed support (Richards, Gaudreault, Starck, & Woods, 2018). This investment might be reflected in consistent demonstrations of time and support for school programs and functions that support students but not directly connected to physical education or PA promotion (e.g., reasonable sharing of space and resources, assisting classroom teachers with behavior management concerns, attending drama plays, and advertising for science projects and band performances). However, as many physical education teachers often dedicate much of their time and support to coaching in a school, an emphasis may be placed on delegation to other stakeholders such as parents and administration.

Perhaps most importantly, a PLC-centered physical education team would attend and carefully utilize collaboration time, craft

<table>
<thead>
<tr>
<th>Characteristics of PLC</th>
<th>Coaching</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 – Shared mission, vision and goals</td>
<td>Does the entire coaching staff and team know what their goal is for the upcoming season?</td>
<td>Does the entire physical education staff and students know what their goal is for the lesson or unit?</td>
</tr>
<tr>
<td></td>
<td>In practice, are ALL drills and conversations working to achieving the goal? If not, do you change it or remove the drill?</td>
<td>When teaching, do ALL of your activities lead to helping students meet the lesson or unit goal? If not, do you change it or remove the activity?</td>
</tr>
<tr>
<td>#2 – Working independently in collaborative teams</td>
<td>Coaching staffs consist of individuals with different roles, strengths and responsibilities.</td>
<td>Teaching teams consist of individuals with different roles, strengths and responsibilities.</td>
</tr>
<tr>
<td></td>
<td>If the defense is allowing 45 points each football game, will the defensive coordinator be held accountable or will the scoring be allowed to continue?</td>
<td>If the physical education teaching team has decided that each class is going to engage in 50% MVPA and one teacher chooses not to, will they be held accountable or can their teaching practice continue?</td>
</tr>
<tr>
<td></td>
<td>Will the staff come together and reflect on what is happening, discuss options and revise the plan? If so, is the meeting optional for the defensive coordinator?</td>
<td>Will the teaching team come together, discuss what is happening, and together find a way to increase MVPA in classes? If so, is the meeting optional for the teachers?</td>
</tr>
<tr>
<td></td>
<td>If one coach chooses not to follow through with their “assignment” will the defense continue to struggle? Will the entire team suffer?</td>
<td>If one teacher chooses not to follow through with their “assignment” will individual student learning be in jeopardy. Could this affect learning for the entire class?</td>
</tr>
<tr>
<td>#3 – Ongoing collective inquiry</td>
<td>Has the game you coach evolved over time?</td>
<td>Has physical education evolved over time?</td>
</tr>
<tr>
<td></td>
<td>Does your staff attend conferences, workshops, view others’ practices as a staff in an effort to increase your knowledge and “keep up” with the game?</td>
<td>Does your teaching team attend conferences, workshops or other professional development opportunities as a staff to increase knowledge and continue to use best practices in the classroom?</td>
</tr>
<tr>
<td>#4 – Action-orientation and experimentation</td>
<td>Has your staff implemented a new offense or defense in an effort to take advantage of another team’s weakness?</td>
<td>As a teaching team have you integrated a new unit?</td>
</tr>
<tr>
<td></td>
<td>Following the implementation, did you reflect on how it worked, modify and make adjustments? Maybe even in game?</td>
<td>As a teaching team did you come together during and/or after the unit and reflect on how it is working(ed), what is being, was or wasn’t learned and then make modifications and adjustments during the unit and for the next time it is taught?</td>
</tr>
</tbody>
</table>

(continued)
team norms and related documents, create meeting agendas, collect data, and use the data to advocate for programmatic needs and set measurable goals. Physical educators may prioritize 50% MVPA engagement during class time as an essential outcome for students. Physical activity engagement can be simultaneously a process (which may facilitate motor competence) and also a product because it represents a behavior with a multitude of health benefits (McKenzie, 2007). Therefore, as part of the essential outcomes, a team of physical educators might choose to operationalize “learning” as enhancement of MVPA engagement during physical education and participation in PA minutes outside of class. The team may establish the criteria and timeframe for a given unit of instruction (e.g., student must average 15 minutes of MVPA engagement for a 45-minute class across a three-week basketball unit, student demonstrates PA involvement outside of class for at least 30 minutes for six days per week). In this example the team would plan and implement activities that facilitate MVPA, identifying methods of data (assessment) collection for in class (e.g., pedometer, heart-rate monitors,) and outside of class (e.g., PA logs, calendars, pedometers, online reporting, Fitbit) PA. Assignments and ongoing formative assessments might be designed to help all students meet the objectives of PA engagement. The data are examined and compared regularly, and timely interventions or adaptations to teaching are designed for early identification of students who need additional help or resources. Likewise, students who are regularly accumulating sufficient amounts of PA may be given additional autonomy in selecting certain activities as a reward. This process is programmatic and consistent and designed to help all students develop lifetime habits of PA.

The example described above may be replicated with other outcomes identified by the team to be essential (e.g., motor-skill acquisition, health-related fitness knowledge, fitness testing, personal and social responsibility, tactical skills). However, given differences in the genetic propensities of students (Pangrazi, 2010), motor-skill acquisition and fitness assessments must be used with caution when focusing only on the product instead of the process. Overemphasizing student progress (growth over a period of time) in motor-skill development and fitness as indicators of programmatic success or failure may lead to frustration because these elements may be beyond direct control of the teacher (Pangrazi, 2010). However, it is important that summative assessment measurements are aligned with program outcomes and also include evaluation of the affective and cognitive domains, moving beyond just a product or progress focus in the psychomotor domain.

Table 2. (Continued)

<table>
<thead>
<tr>
<th>Characteristics of PLC</th>
<th>Coaching</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>#5 – Systematic process to promote continuous improvement</td>
<td>At the high school level is there communication with the reserve and freshman coaches? How about the middle school and/or youth coaches?</td>
<td>Is there communication between the high, middle, and elementary school physical educators?</td>
</tr>
<tr>
<td></td>
<td>Are strengths recognized at each level and weakness identified? Is a plan designed for improvement at each level?</td>
<td>Are strengths recognized at each level and weakness identified? Is a plan designed for improvement at each level?</td>
</tr>
<tr>
<td></td>
<td>Does your staff look at video and statistics and create practice plans to address them?</td>
<td>Does the teaching team gather informal data during the lesson and unit and identify who isn’t learning the information and then create interventions to help them improve?</td>
</tr>
<tr>
<td>#6 – Unrelenting focus on results</td>
<td>Is there a goal established for the season? Game? Practice? As a coaching staff, do you keep statics (objective information) or review video to evaluate if you have reached the goal? Do you review statics after each game and see if goals were met and where improvement is needed? Is a new goal set to continue to increase performance? If the goal is not met, do you continue to work on improving performance?</td>
<td>Is there an objective established for the unit? Lesson? Do you evaluate student performance with data that indicates level of learning? Does the data indicate if ALL students have reached the objective and are learning? Do you review your data after each lesson to determine if the objective was met and where improvement is needed? If the objective is met, do you change the objective to advance learning? Are you reviewing your students “statics” from class? What information are you gathering that indicates their level of learning? Is your teaching team focused on all students learning?</td>
</tr>
<tr>
<td></td>
<td>What skills, knowledge and dispositions are essential for the players to acquire to perform and achieve the highest results (Win)? What are they on offense? Defense [DS5]? [DS6]</td>
<td>We can’t teach it all! What skills, knowledge and dispositions are essential for the students to acquire to live a healthy active lifestyle?</td>
</tr>
</tbody>
</table>
Discussion and Conclusion: Four Guiding Questions

This article suggests that physical education teachers may be an optimal group of teachers in a school to effectively work as a PLC. Given the teacher-coach roles that many physical educators take on, they often already obtain the knowledge and skills to work as a PLC and understand how to plan, teach, assess and adapt plans for competition. Therefore, in the following discussion, we attempt to ground our conversation of the similarities between coaches and physical educators through the four guiding questions of a PLC.

What Do We Want Our Students to Learn? Coaches are precise. They have identified precisely what their players need to know to be successful in the game. While there may be variability in autonomy among coaches for what practice drills are implemented (method), there is no equivocation concerning the skills that each player must acquire to fulfill the roles of a particular position. Ultimately, the head coach sets the tone and has the final decision on the nature of the learning activities designed to facilitate learning.

Though differing philosophies may make addressing this question an initial challenge for educators, a strong team leader can facilitate discussion and a final agreement on what knowledge and skills are essential for students to learn. Teachers are not overly concerned about trying to teach all available content, but collectively identify the knowledge and skills that are essential. While teams of teachers may have latitude in pedagogy preferences and activities, the collectively determined desired learning results are consistent.

In coaching, formative assessments are fundamental and ongoing. These assessments guide daily activities and practices throughout the year as well as guiding in-game adjustments and identifying what is and is not working. Similarly, when a team of educators have identified essential outcomes of student learning, they will then turn their collective attention toward the assessment of those outcomes. Sub-questions are inherent and embedded in this general question: (1) What constitutes learning in this unit? and (2) What is an acceptable passing score? Next, the team selects or crafts common formative assessments and identifies when and how they will be administered. Formative assessments are designed for learning and guide teaching practice, while summative assessments are designed to evaluate learning at the end of a program, unit or lesson.

How Will We Assist Students Who Have Not Learned? Coaches are not likely to assume all players will learn and perform at the same rate. Coaching athletes requires instructional differentiation. Some athletes require more repetitions and allotted time to accomplish the essential skills. A team of teachers must equally identify what the students should learn and then how the learning is measured. Once student learning is identified, systematic interventions are created to help students who are struggling with the essential learning outcomes. Because students do not all learn at the same rate, it is unreasonable to move students through units and concepts at the same speed. Perhaps teachers could administer selected assessments when the students feel comfortable completing them.

How Will We Do to Enhance Learning for Those Who Have Already Learned? When the team or players are successful, a coaching staff does not stop coaching or assisting players in their progression. Athletes are continually challenged to obtain new and refined knowledge and skill sets. While some students need increased opportunities to learn specific skills and demonstrate particular competencies, others need additional challenges to advance their learning and competencies. It is intuitive that students do not all learn the same way or at the same rate, but it may be difficult for some PLC-centered teams to arrange differentiated learning opportunities if the desired essential skills are vague and unspeci-

<table>
<thead>
<tr>
<th>Question</th>
<th>Coaching</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 – What do we want students to learn?</td>
<td>What do the players need to know and be able to perform for us to win the game?</td>
<td>What do our students need to know and be able to perform to live a healthy active lifestyle?</td>
</tr>
<tr>
<td>#2 – How will we know if the students have learned it?</td>
<td>Have you identified what is or is not an acceptable performance? Are you observing during practice and providing feedback based on your observation during drills? Are you taking statics during practice and games?</td>
<td>Have you identified what is or is not an acceptable performance? Are you observing during your lesson and providing feedback based on your observation throughout the activities? Are you gathering data (exit slip) that can be reviewed?</td>
</tr>
<tr>
<td>#3 – How will we assist students who have not learned it?</td>
<td>If a player does not understand the formation or play – how do you help them? If a players’ skill is not proficient – what do you do?</td>
<td>If a student does not understand the strategy, tactic, concept you are teaching, how do you help them? How are you modifying the task, equipment or environment to create a situation where the student can be successful?</td>
</tr>
<tr>
<td>#4 – What do we do to enhance learning for those that have already learned it?</td>
<td>Do you allow the “star player” to not practice or do you challenge them?</td>
<td>Do you allow the student that is already proficient to not engage in the activity or do you challenge them?</td>
</tr>
</tbody>
</table>
fied. Just as great coaches never stop challenging players, successful teachers know how to challenged their students in extending knowledge and skills. See Table 3 for a comparison of coaching and teaching concepts within the four guiding questions of a PLC.

As PLCs becoming increasingly commonplace in schools, physical educators may be uniquely positioned and trained to lead the charge. The PLC structure with its potential accompanying empowerment of teachers is constructed to enhance teamwork toward student learning and development. Of all school personnel, who is more qualified for this undertaking than a unified physical education team guided by firm principles and standards?

**ORCID**

Deb Sazama [https://orcid.org/0000-0003-4197-0081](https://orcid.org/0000-0003-4197-0081)

**References**


