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Motivating Students Through Content and Curriculum Models:

Building a Sport Education Tactical Games Model (SETGM) Unit on Spikeball

ASHLEY S. THREATT, KELLY L. SIMONTON
AND TODD E. LAYNE
Physical educators can often take on a “one-size-fits-all” approach to teaching students within physical education (PE), steering the teaching–learning process to become teacher oriented (Gil-Arias et al., 2017). Though this direct instructional approach can feel more comfortable for teachers and sufficient for producing psychomotor outcomes (Gil-Arias et al., 2017), it is inadequate for providing students with a holistic learning experience. Instead, teachers should consider pedagogical models prioritizing student-centered learning, which better incorporates all three learning domains (i.e., psychomotor, cognitive and affective; Dyson et al., 2004). Several instructional models have been suggested to give students a holistic experience that encompasses student-centered learning practices and that prioritizes learning domains equally (Metzler, 2011). In particular, the Sport Education Model (SEM) and the Tactical Games Model (TGM) have received a lot of attention in research and practice to teach students to understand and participate in authentic learning experiences in PE (Pritchard & Mc-Collum, 2009). Both models have shown significant improvements for student motivation and learning at the middle and high school levels (Gil-Arias et al., 2020) where the greatest declines in physical activity behavior and PE enjoyment are often seen (Ruiz-Montero et al., 2018).

In addition to utilizing student-centered approaches that improve learning and motivation, PE quality is impacted by the content being delivered (Webster et al., 2011). Traditional team sports (i.e., basketball, soccer, volleyball) have been found to marginalize many students, including less-skilled, female and minority students; thus, a call for more innovative practices has been suggested (Bryan & Solmon, 2012; Gil-Arias et al., 2020). For example, more lifetime-focused and novel activities (i.e., yoga, biking, hiking, racket activities) that promote health, challenge, teamwork and “leveling of the playing field” have been suggested by practitioners and researchers (Hastie et al., 2017). Therefore, considerations for both (a) improved practices and (b) innovative curriculum choices are needed. The purpose of this article is to provide an example that encompasses both. Specifically, we provide an overview of the hybrid Sport Education Tactical Games Model (SETGM) to teach content that is fun and innovative and considered a lifetime net/wall game known as Spikeball.

Key Aspects of the Sport Education Model

Before discussing the hybrid approach, it is important to provide an overview of these two evidence-based curriculum models. First, the SEM aims to develop competent, literate and enthusiastic sportspersons (Siedentop et al., 2020) through the structure and organization of a student-led learning environment. Specific distinct features of designing the curriculum using this instructional model are (a) length of seasons (i.e., units), (b) team affiliation, (c) formal competition, (d) student roles (other than player), (e) record keeping/statistics and (f) festivity (i.e., culminating event; see Siedentop et al., 2020). Those offering SEM units refer to them as seasons; seasons are the length of time spent learning in the content unit and are often longer than a traditional unit and encompass several learning phases. Team affiliation is meant to develop students’ skills, knowledge and abilities that prioritize team comradery and leadership. By allowing students to take leadership opportunities, learning is more student centered, promoting a higher sense of student responsibility and reinforcing interpersonal behaviors (Pritchard & Mc-Collum, 2009). This has led to increased learning, motivation and skill development compared to traditional PE instruction (Gil-Arias et al., 2017). The SEM model prioritizes all learning domains; students learning in the SEM feel more autonomy, increased challenge and a sense of purpose, particularly among those who are traditionally marginalized (Dyson et al., 2004; Gil-Arias et al., 2020).

Key Aspects of the Tactical Games Model

The TGM is another model that challenges the traditional views, delivery and teacher–student roles in PE while placing an emphasis on higher-order thinking and accountability (Gubacs-Collins & Olsen, 2010). The model prioritizes game tactics, game flow experiences and modified game execution using skills students currently have while also allowing them to try and build new skills in more meaningful ways (Mitchell et al., 2013). By breaking the skill development down this way, students can practice skills in a game context versus in isolation (i.e., drills). Developing and practicing skills in isolation or decontextualized from the game often leads to difficulty transferring the learned skills to gameplay (Mitchell et al., 2013). When done correctly, student learning happens within modified/smaller versions of the game called small-sided games (Gubacs-Collins & Olsen, 2010). Teachers design modified/small-sided games with student cognitive development in equal importance to their physical development. Similar to SEM, TGM is considered to be student centered because students are accountable for cooperative play, working at their own pace, peer teaching, functioning safely and responsibly in small-sided games in close proximity to one another, and meeting learning goals (Mitchell et al., 2013). The high demand for decision making by students means this model is focused primarily in the cognitive learning domain (Ruiz-Montero et al., 2018). For more information on content development examples using either the SEM or TGM, see Table 1.

Hybridizing Models to Maximize Student Experiences

Overall, implementing these models on their own has proven to be successful (Harvey & Jarrett, 2014); however, Hastie and Curtner-Smith (2006) pointed out potential strengths for a hybridized model. They suggested that the macrolevel pedagogy structure of SEM (i.e., structure and organization) and microlevel pedagogy of TGM (i.e., teaching strategies and lesson goals) provide an experience that emphasizes both the democratic sporting experience alongside depth in understanding and playing more effectively. In other words, the SEM sets the framework needed to maintain classroom structure and management and the TGM provides developmentally appropriate and challenging ways to implement learning goals (Gubacs-Collins & Olsen, 2010). Due to the complementary nature of both models, clear

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overlap exists, and students can experience a holistic learning experience that is authentic to lifelong game/activity choices.

The SETGM commonly utilizes small-sided games, where there are fewer players sharing equipment and practice attempts, therefore increasing student participation and movement (Konukman et al., 2010). Because there is more student involvement in small-sided games versus full-sided games, there is more on the ball and off the ball skill practice, which leads to an increase in decision-making abilities and skill execution. Though there are a number of sports/games/activities that would work well with the SETGM, one innovative game that has become widely popular in the United States that needs investigation is Spikeball (formally known as Roundnet; Ludwa & Lieberman, 2019). The characteristics of Spikeball and the potential learning opportunities it provides students for learning a lifelong activity makes the game a good choice for challenging play regardless of one’s skill ability and a great candidate for implementing the SETGM using a lifetime activity.

What Is Spikeball?

Spikeball is classified as a net/wall game (i.e., tactics) and was designed to be a mixture of volleyball and four-square (Ludwa & Lieberman, 2019). According to the official Spikeball website (www.spikeball.com, “How to Play,” 2018), Spikeball is typically played with a 12-in. ball that can be hit similar to a volleyball and with a net that resembles a small trampoline or pitchback device placed slightly off the floor. Spikeball is ideal for PE content because it can be played with little equipment, is gender and disability inclusive, and can be broken down into modified games in order to establish and master important skills needed for full gameplay.

Spikeball resembles volleyball when it comes to scoring points, serving and returning the ball. Teams are typically made up of one or two players. They begin gameplay circled around the net on the floor in the center of the playing area. In order to start play, the serving team must serve the ball downwards toward the net. As opposed to striking or hitting a ball over the net, the ball is struck into the circular bouncy net, which then signals a change of possession, and it is the other team’s ball to strike back. The other team, now in possession of the ball, has a total of three hits between each other to control the ball, set up an attack, and return it back toward the net (Ludwa & Lieberman, 2019). Teams can score on an unreturned ball, too many hits or hitting more than three times before striking back into the net.

Building a Spikeball Unit Using the SETGM

The initial step to designing a SETGM Spikeball season is to determine a specified set of outcomes/goals that students will

<table>
<thead>
<tr>
<th>Sport Education Model</th>
<th>Tactical Games Model/Teaching Games for Understanding</th>
</tr>
</thead>
</table>

See each article for more details on specific content and model.
learn in the unit. To reduce cognitive overload, it is important to first determine the specific number of skills and tactics students can achieve in the number of lessons planned for the season (as opposed to making the unit goal: “Students will learn Spikeball,” which is far too ambiguous and not realistic). The next step is planning progressions to reach desired outcomes beginning with backwards design (Lund & Tannehill, 2015). Start by identifying key state/national standards and then visualizing and articulating what level of performance students need to exhibit to meet those standards. Teachers should work backwards lesson by lesson, starting with the culminating event to map out the progressions of content. This process ensures that teachers can create more authentic lessons that helps students progress from one skill and tactic to the next with improvement.

In the process of designing the season, it is essential to allocate time for the multiple aspects of SETGM being implemented. The SETGM development prioritizes depth versus breadth of content. This means that as opposed to only giving students exposure to skills, learners will instead spend a good amount of time with the content and in their roles to become highly competent and knowledgeable and get the “sporting experience,” as opposed to a one-off activity exposure in isolated/unrelated lessons (poor examples include passing day 1, hitting day 2, defense day 3, and tournament play for days 4–8). Therefore, the season is likely to be between 15 and 20 lessons (i.e., minimum of 45 min) in length and consist of three stages: pre-season, regular season, and post-season (see Table 2; Siedentop et al., 2020). The next important step is creating teams where students will take on leadership roles to contribute to the day-to-day functioning of the class. Teams should be evenly selected based on pre-existing skills and knowledge to create equitable competition in the future.

A common approach to selecting teams is having students participate in a pretest; the pretest consists of basic skills and tactics that mimic desired outcomes the teacher has outlined for the unit. Students will then be scored and placed onto teams with varying skill levels which aides in “leveling the playing field.” Teams will likely be made up of three to four students each but should be determined based on class size, equipment and other contextual factors like space. In our example, we target teams of four. Before placing students in teams or even before starting the unit, it is important to define the team roles needed for Spikeball season. The roles play a critical part in day-to-day routines and functions. In addition to being a player, potential roles include coach, trainer, equipment manager and referee (see Table 3; Siedentop et al., 2020). Teams are rewarded points throughout the unit for a variety of categories, but teachers should place priority on giving “team points” for completing their roles to a high degree of proficiency. In addition, teams can be awarded points for completing roles without being prompted. (i.e., assisting other teams, completing tasks early and showing high degrees of sportspersonship during gameplay; Siedentop et al., 2020). Uniquely, “team” aspects in a game like Spikeball, using SETGM, will look similar to other individual or dual sports
because students will be contributing to both individual and team success. In other words, individual efforts in their roles during practices, cooperative activities and competitive games can be tallied toward the team goals as opposed to simply their individual accomplishments.

The SETGM also prioritizes game flow knowledge and execution via tactical decision making (Gubacs-Collins & Olsen, 2010; Pritchard & McCollum, 2009). In alignment with TGM, the importance of tactical decision making reflects successful gameplay and game flow as opposed to decontextualized and isolated skill practice (Mitchell et al., 2013). Students are taught key game category (i.e., net/wall) tactical decisions and then are taught skills used to execute the tactics successfully. For Spikeball (net/wall), essential level 1 (beginner) tactics include maintaining a rally, moving the defender, and setting up for the attack (Mitchell et al., 2013). Skills pertinent to Spikeball and for execution of these tactics are hitting, passing and defensive stance and positioning. These tactical decisions will be mastered by practicing decision making and skill execution in exaggerated and modified game forms and student led practices.

The idea here is that students are not prepared for “full” game rules and requirements and, instead, small-sided versions of the game with reduced rules and decisions allow them to target and master tactical awareness progressively throughout a unit (Mitchell et al., 2013). This cannot be emphasized enough, because students want to play the game. However, only practicing skills in isolation does not translate to successful gameplay; instead, skill development happens for game-like purposes. Thus, day-to-day lessons encourage skill development predominately within authentic versions of modified gameplay. This prevents students from getting turned off by skill-for-drill practices that do not improve game performance. Also, motivation is maintained in game-like challenges that are developmentally appropriate for students (Gil-Arias et al., 2020).

Example of SETGM Unit Progressions

The daily routines in the SETGM are consistent during the learning phases of the season. Each lesson will have a tactical focus in the objective, derived from the TGM recommendations (Mitchell et al., 2013). The format for each lesson is as follows: (a) game 1; (b) questions/answers; (c) practice; (d) game 2 sequence. The pedagogy behind the game/questions/practice/game format is to introduce the tactical focus of the day with a modified game (game 1) that requires tactical focus and promotes necessary decision making. Next, the teacher asks students questions specific to what decisions are to be made, when and how to do them in the game. Following student answers to the tactical

### Table 3.

**Sample Criteria for the Spikeball Team Roles Within the SETGM Model**

<table>
<thead>
<tr>
<th>Player</th>
<th>Coach</th>
<th>Equipment Manager</th>
<th>Trainer</th>
<th>Referee</th>
<th>Scorekeeper</th>
</tr>
</thead>
<tbody>
<tr>
<td>games and practices</td>
<td>2. Provides efficient feedback</td>
<td>2. Ensures all equipment is accounted for and alerts</td>
<td>warm-up prior to starting Game 1</td>
<td>2. Determines rule decisions in gameplay</td>
<td>2. Maintains a running account on all</td>
</tr>
<tr>
<td>2. Gives best effort when</td>
<td>3. Communicates well with players</td>
<td>teacher if they do not have something</td>
<td>2. Demonstrates warmup techniques to</td>
<td>3. Regulates sportsmanlike conduct from</td>
<td>scores during the season</td>
</tr>
<tr>
<td>practicing a new skill/tactic</td>
<td>regarding skill development</td>
<td>3. Collects and returns equipment</td>
<td>teammates</td>
<td>players</td>
<td>3. Compiles scores toward end of season</td>
</tr>
<tr>
<td>with teammates</td>
<td></td>
<td></td>
<td>appropriate</td>
<td></td>
<td>the teacher at the end of the season</td>
</tr>
<tr>
<td>4. Respects opponents and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>referees</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Duty roles are learned by all students, even if they do not fulfill that role in the season.
questions is the skill/tactics practice, which is designed to exaggerate situations that are pertinent to the tactical focus. After creating awareness in practice, students then shift back into game play. In game 2, rules are modified and situations are exaggerated to elicit the skills and tactics that were just practiced. This sequence is ideal for students to practice the tactics with their team and then transfer the skills into gameplay (see Table 4 for example). Students will gain greater appreciation for practice time with their team and will see how their performance improves in real time.

An integral part of teaching students tactical awareness in the SETGM is designing questions for students to answer during the practice phase (after the initial game). Quality questions that bring the tactic to life for the student is part of inquiry-based learning. These questions are designed to have students critically think about their movement in gameplay and to magnify their cognitive development. Often these questions will be teacher led for practices. Using tools like the coaching sheets (Figures 1a and 1b) can allow students to read aloud to their teams and lead the group in learning sessions. Once students hear the questions, they are then aware of the tactical focus of the practice, and they can identify technique aspects need to play. These questions are also useful for the teacher to utilize for the closure phase of the lesson.

Modifications to Consider in Spikeball. Spikeball can be modified, depending on the students’ needs and ability level or the school’s resources. First, Spikeball can be played inside or outside (Ludwa & Lieberman, 2019) and requires little space to do so. The SETGM is embedded with gameplay modifications as well. For example, when using the exaggerated game, teachers place students in specific game situations (i.e., set up the attack on opponent) to see the decisions/skills that need to be made and then allow them to execute it with no negative repercussions. This forces the students to see what is happening, read the situation and practice potential outcomes to improve preparedness.

As mentioned previously, typical Spikeball teams consist of two players with groups of four at each net with a ball. Typical Spikeball equipment sets come with one net and two to three balls ranging from $29 to $99 per set (depending on the brand;
see Spikeball.com and other retailers for information and school-based discounts). However, to offset costs and provide further modifications in Spikeball, teachers should consider modifying the equipment. For example, a hula hoop can be substituted for a net where the ball is bounced on the ground as opposed to into a net and/or a playground ball (or any ball that bounces) can replace the traditional Spikeball ball (see Ludwa & Lieberman, 2019). The equipment can also be modified for lower skilled students or those with disabilities. For example, if a student has a vision impairment, the teacher can increase the size/color of the ball/hoop or attach bright flags or tape around the net. If the student has a hearing impairment, the teacher could add sound to the ball by attaching a beeper onto the ball or to the net by fixing bells around the perimeter.

Modifying and progressively adding rules throughout a season is an effective way to build students’ cognitive knowledge and physical ability to play and is a staple of SETGM. Student success rates can be increased by focusing on development over the outcome. Spikeball is often played 2v2 but can be modified to 1v1 to make the game easier for beginning players. Reducing players can increase skill development and tactical awareness without the added cognitive stress that comes with coordinating with partners on the same team. Similar to modified volleyball, students can be allowed to first catch the serve and then throw the ball back into the net, as opposed to striking it, which extends the duration of the game and allows students to have more control (Mitchell et al., 2013). An additional rule change can be to have cooperative gameplay and scoring before competing by allowing students to count the number of times they rally, or keep the ball in play, versus keeping track of points (Ludwa & Lieberman, 2019). When students are first learning the game, it is important to reward them for executing the tactics correctly regardless of points scored. For example, if a teacher has taught how to move the opponent, allow the student to earn additional points in the game if they cause their opponent to move more than one step when returning the ball. Another example of manipulating the rules would be to give points to the offensive team if they use a double or triple hit to set up the attack (e.g., bump to smash, or bump, bump to smash). This guides students to elicit effective game decisions by rewarding and manipulating rules to force them to try it, as opposed to hitting the ball back and forth with no consideration for tactical advantage. Lastly, to reward defenders, consider giving additional points for returning to base quickly or for utilizing a lob hit to provide time to get into position.

In addition to these final points on modifying and teaching this unit using the SETGM, we offer some caution when interpreting/utilizing many of the resources that are now available as it relates to teaching Spikeball. Both Spikeball.com (“Curriculum and Resources,” 2020) and OPEN PhysEd (Hart et al., 2015) have worked in conjunction to create some wonderful materials that help teachers identify national standard benchmark outcomes that align with learning objectives at the middle and high levels, and they offer many “curriculum” lessons and tasks that can be used to offer a high-quality Spikeball unit. However, as iterated throughout this article, the benefits of offering SETGM for students in reaching optimal motivation,
enjoyment, developmental appropriateness and achievement are often a result of sticking to the critical elements of the SETGM model itself. Thus, simply offering Spikeball drills repeatedly, failing to offer quality in-depth progressions over time, or following a one-size-fits-all “canned” unit may not be ideal for your students and certainly would not be in line with the model. Therefore, like all resources, we implore teachers to use these materials as supplements to enhance their unit as a resource as opposed to the rule for teaching the unit. Most of these resources can be adapted and adopted into the SETGM unit the teacher builds based on the model elements discussed above.

Conclusion

The purpose of this article was to model how to use the SETGM model using a novel and enjoyable lifetime game like Spikeball and give teachers the proper resources needed to begin developing a unit. Using the SETGM to teach small-sided games is highly favored over following a one-size-fits-all “canned” unit may not be ideal for your students and certainly would not be in line with the model. Planning and following these assumptions will help students become more well-rounded sportspersons in the game of Spikeball.

References


