Getting open: games that teach spatial awareness

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Helping children and youth understand the importance of spatial awareness is an ongoing challenge for teachers and youth sport coaches. We continue to observe children who are uncertain of where and how to move within games, particularly when they are not in possession of the ball. In an effort to solve the problems associated with learning to play games it is necessary to understand concepts such as spacing, timing, and direction.

Problems with Maximizing Space

By their very nature, games are fun to play (Mitchell, Oslin, & Griffin, 2003); however, games are not fun for children who do not believe they are skillful enough or do not understand how to play. When we think about children playing at recess or in youth sport leagues, too often our recollection involves children in a cluster formation around a soccer ball or basketball while the rest of the court or field is empty. Coaches and teachers primarily focus instruction around on-the-ball skills and tend to overlook the importance of how to engage players in fun game-like practices, which emphasize the tactics of supporting the ball carrier or creating space.

Problems associated with spatial awareness tend to be most obvious during invasion games where children bunch together; however, it also occurs in less obvious ways in a variety of other games. In striking and fielding games, for example, a lack of spatial awareness sometimes occurs when children defend space by standing directly on the base or when batters fail to send the ball into play in order to reach base safely or advance the runner. Furthermore, as novice players learn to play net/wall games such as badminton or tennis, their tendency is to hit the shuttle or ball right to their opponent instead of sending it into open space.

Purpose

The Tactical Approach (Mitchell, Oslin, & Griffin, 2003) to teaching games promotes the philosophy that games can be used as a problem based learning experience. Mitchell, Griffin, and Oslin (2003) suggest using a game, question, practice, and game format whereby: (a) the initial game is used to set the problem; (b) the question/answer segment identifies solutions; and (c) the practice affords students opportunities to test and refine those solutions. The "Tactical Approach" to teaching and playing games promoted by Mitchell, Oslin, and Griffin (2003) informed the creation of the games we are highlighting in this paper. While all games have tactical similarities, the games we describe are the unique creation of the authors. We offer these as a means of experimenting with the Tactical Approach, with the understanding that all teachers will require a plan, reflect, and revision phase to use these games successfully in their own teaching situation.

Using Game Play to Enhance Spatial Awareness

To improve spatial awareness within game play, we offer strategies for using games to help players understand how to create space, move to open space and advance towards the goal. The intent is to provide fun, modified games that will help students to learn how to maximize space. We have selected three examples, one
from each of the following game categories: invasion, striking/fielding, and net/wall. Each game has a diagram, brief description of goals, conditions, and factors for modifying game complexity. These games offer alternatives for teachers and coaches so that students and players with different developmental capacities can be included.

These game examples highlight the need to use and/or create space so that players develop competence in off-the-ball movements. Our goal is to help players begin to understand where and when to move before the pressure of winning within a competitive setting overshadows the importance of creating space or moving to open space. Skillful games players often marginalize and exclude teammates who do not understand where and when to move within games. Enhancing players' spatial awareness can improve offensive off-the-ball movements and defensive positioning when trying to prevent opponents from scoring.

Ideally, these games would fit into the curriculum as a bridge between fundamental skill development in the primary grades and introduction of combination skills in the intermediate grades. Often children in the second and third grades have few opportunities to play in games that enable them to use combination skills before formal competition ensues. If games involve intense competition, defense tends to limit opportunities for developing competent spatial awareness. Next, we describe three conditioned games, N Zone, Netty Spot, and Bricketball, which highlight spatial awareness in a variety of ways. Most of the game forms introduce limited defense and some offer suggestions for a cooperative focus prior to competition.

**Invasion Game: N Zone**

N Zone is an invasion game which highlights the skill of moving to open space in an effort to advance the ball using lead passes. The goal is for players to advance the ball by passing the ball back and forth, eventually completing the last pass to a player in the end zone. Teams of four or five players collaboratively decide who will begin in the three stationary positions and who will be the initial mobile players. Stationary players must remain stationary inside the rings. Mobile players position themselves outside the rings and advance the ball by moving to open space towards the goal line. When mobile players are not in possession of the ball, they may move. Once they catch the ball they must stop and establish a pivot foot. Play initiates at the start line and players score a point when they make consecutive successful passes with the last catch occurring in the end zone. Mobile players restart play by jogging outside the perimeter of the court and begin their next possession at the start line. Teachers and coaches may elect to use a direct instruction approach where they show the most efficient method and then practice good lead passes or utilize a problem solving approach whereby students select the most efficient movement pattern from a variety of solutions. The game can be modified by changing the type of pass (one hand, chest, bounce, or overhead), the object passed (small or medium ball, football, flying disc, rugby ball), or using time limits to enhance the level of challenge (score as often as you can in one minute or may not hold the ball longer than three seconds). Initially the goal of the game can be to cooperate with a teammate to achieve a certain number of goals and eventually a more competitive atmosphere is possible by comparing scores of similarly skillful opponents. See Figure 1 for an example of how you might set up the players and court.

**Net Game: Netty Spot**

Netty Spot is a basic form of a net/wall game (see Figure 2). The goal of Netty Spot is similar to the goal of all net/wall games and that is to score points by sending the object over the net so that it is not returnable. There is a stationary and mobile player on each team. Before play begins, the stationary or spot player on each team must place a poly spot in a location of their choice and must keep at least one foot on the poly spot while the game is in active play. The mobile player is allowed to move anywhere within the boundaries to help the team score points. Netty Spot begins with an underhand serve/toss of a ball or ring. Players must make at least one successful catch...
before they can score (i.e., no ace serves). Rally scoring applies. A typical game goes to 8 points; however, players switch roles (mobile and spot) when one team scores 4 points. Initially, each player must make one toss per possession (i.e., a total of two tosses per side). All tosses must be underhand and clear the net without contact. Options for modifying the game conditions include tossing a different object, striking an object with a paddle, allowing more mobility of the spot player, allowing the object to bounce once, or changing the number of contacts per side. Simplifying the game is possible by having players begin with the goal of a cooperative rally. Teachers and coaches can also increase game complexity by expanding the number of players, contacts, and/or tosses per side.

Striking/Fielding: Bricketball

The last game example is Bricketball, which is a 2 vs. 2 striking/fielding game (see Figure 3). The goal of the game is to bat (off tee/kicking/rolling) the ball into open space to enable the base runner to touch as many bases as possible before getting tagged. The two offensive players include a base runner and a batter/kicker/roller. The batter is in a safety zone, an area where no fielders can enter. They work together to use space (i.e., creating and moving) to their advantage to score as many points as they can for their team. The base runner starts on any of the three bases and may run in any direction to an open base. Runners must advance at least one base or more if they choose. Each time a player reaches a base safely, the offensive team scores a run. The fielders work together to make good decisions about how to defend space by how they position themselves in the field. Defenders retrieve the batted ball in an effort to stop the runner by tagging them gently with the ball, above the waist and below the neck. Fielders may run and tag the base runner or throw to their teammate who then tags the runner. The only way to prevent scoring is to tag the runner. Play restarts with a new at-bat when a runner pauses on a base with no effort to advance or if a fielder tags the runner. Batters and runners switch places after an out or three at-bats. The offensive and defensive sides change after each batter has a turn (an out or three at-bats). A game progression similar to Bricketball is available within the striking and fielding chapter in Mitchell, Oslin, and Griffin (2003).

Modifications within Bricketball are limitless. A few common modifications include: changing the type of fundamental skill used to put the ball into play (kick, strike, roll) or fundamental skill used to move between bases (run, slide, walk, gallop), limiting or expanding the field dimensions, and increasing the number of players and bases. All of the modifications provide options for how to decrease or increase game complexity for a variety of skill levels. The game of Bricketball provides wonderful opportunities for problem solving situations that enable players to enhance their game intelligence around the concept of space, on both the offensive and defensive sides of the ball.
Creating New Game Forms

In addition to playing games that represent pre-defined conditions and goals, child designed games hold additional value for enhancing players' and students' tactical awareness about space and other movement concepts (Rovegno & Bandhauer, 1994). Modified game forms as a bridge to specialized skills within more traditional forms of competitive sport is not a new phenomenon (Mauldon & Redfern, 1969). In the United States, teachers and coaches tend to have a narrow view of how to implement games and often resort to the adult game form too early for the developing child. In some countries, games are a major category within the curriculum and a primary vehicle for teaching skills and tactics to young children (Leysen & Dehandschutter, 2008). We encourage you to play these game forms, develop your own variations of games, have your players or students create their own, and continue to seek professional development that will continue to expand your games making knowledge. We look forward to the day when children play youth sports in ways that represent sound spatial awareness and enable more children to learn to value games as fun physical activity options.

References

Drs. Connie Collier, Dana Perlman, and Jennifer Fisette are at Kent State University and work in the Teacher Education Physical Education majors program. They are interested in the preparation and professional development of physical education teachers. Contact Dr. Collier at ccolli2@kent.edu for further information.