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Spikeball for All: How to Universally Design Spikeball

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Lauren J. Lieberman

Roundnet, once an obscure 1980s lawn and beach game, was designed by toymaker and cartoonist Jeff Knurek. Knurek did not bother to patent his invention. The game became obsolete for most except for Chris Ruder, a young man who continued to cherish his toy-store purchase from 1989. A decade ago, Chris Ruder and six friends set out to revive roundnet. Due to the efforts of Mr. Ruder and his friends, who had no business, sales or marketing experience, the game of roundnet has morphed into a sport called Spikeball — though these names are often used interchangeably (Adams, 2017). Spikeball is often described as a combination of volleyball and four-square “on steroids,” due to its fast-paced movements (Mertzeswein, 2017). Gaining additional popularity after a feature on ABC’s hit show, *Shark Tank* (ABC, n.d.), Spikeball continues to gain fans (Adams, 2017). Today, physical education teachers, camp counselors, and church youth groups make up the primary purchasers of Spikeball sets (www.spikeball.com).

Physical Education and Students with Disabilities

Legislation requires barrier-free physical accessibility to in-school activities and sports for individuals with disabilities. After all, students with disabilities are more similar than different from their peers. They need the support of mentors such as teachers, coaches and parents to reach their full potential — just as their able-bodied

peers do. Unfortunately, based on the data reported by the U.S. Government Accountability Office (2010), it is not common for students with disabilities to be engaged in extracurricular sports, games or activities (Dieringer & Judge, 2015). This situation may be an indirect result of these students’ experiences in inclusive physical education and recess environments.

For example, students with autism spectrum disorder (ASD) are often placed in inclusive physical education settings, but their needs cannot always be met through traditional curriculum programs. Compared to their same-age

peers, individuals with ASD exhibit learning difficulties, limited social skills, and lower motor-skill performance. Due to these difficulties, many students with ASD are at risk for a poor inclusion experience during physical education classes and recess time. Engaging in structured sport is one of the therapies that has started to be introduced over the past few years as a sensorimotor treatment for the development of social skills in individuals with ASD (López, Moreno-Rodriguez, Alcover, Garrote, & Sanchez, 2017).

In a pilot study led by López et al. (2017), physical education teachers



Nicole Ludwa

Using a soft, bright ball, inside



Nicole Ludwa

Original Spikeball with bright flags to enhance view of the target

trained in ASD led a football training program with five participants with ASD. Results from participation in this sport program showed significant positive results, validating sports as an effective tool to promote the development of motor and social skills in individuals with ASD. One possible way to promote positive change in the inclusion of individuals with disabilities in physical activities is to incorporate modifications for popular sport and game activities, such as Spikeball for all!

How to Play

According to the official Spikeball website, roundnet is played 2 vs. 2, with a bright yellow orange-sized ball and a hula hoop-sized Spikeball net (sometimes called a trampoline) placed between the players. A player begins a point by serving the ball down on the net so it bounces up at the opponents. The opponents have up to three hits between each other, as in volleyball, to control the ball and bounce it back off the net. If the opponents cannot return it to the net, the serving team scores. There are no boundaries and players can move anywhere and hit the ball anywhere, as long as it hits the Spikeball

net. Table 1 shows the basic Spikeball rules.

Spikeball and Sports Skills

Specific Spikeball sports skills include coordination, body and spatial awareness, cooperative learning, balance, effort concepts, cardiovascular fitness, locomotor skills, motor skills, and striking. These sports skills are acquired in a progressive learning sequence that consists of a complex interaction between

movement, sight and thought. Without the interaction of all three, sports skill development is hindered. Performance of sports skills requires the right visual processing to elicit the correct movement response. These skills also require proper brain processing and thought patterns, so the response will be meaningful and effective (Knudson & Kluka, 2013).

Although Spikeball does not specifically provide sport modifications, the value statements coincide nicely with the idea to modify the game to include all individuals. For example, students with visual impairments may not be able to obtain the correct visual processing information to elicit the correct movement response to play the game as intended.

Children with social developmental disabilities, such as ASD, may have difficulty in working side by side with a teammate.

Universally Designing Spikeball

Universal design for learning (UDL) is an educational framework based on research that guides the creation of flexible learning environments to address individual learning differences. This concept began in the era of the Ameri-

Table 1.
Basic Spikeball Rules

2 vs. 2 teams (1 vs. 1 modification)
Teams are 2 vs. 2 with a serve bouncing cleanly off the net to begin play.
3 touches
The defensive team gets up to 3 touches to return the ball.
Scoring
The server continues to serve until his or her team loses a point.
Switch positions
After each point is scored, the serving team switches positions; the defensive team stays in the same position.
21 Points
Games are won when the winning team reaches a score of 21 points. The team must win by 2 points.

**Table 2.
Universally Designing Spikeball**

Spikeball Modifications		
Adapting Equipment	Adapting Rules	Varying Instructional Strategies
Brightly-colored tape wrapped around the outside perimeter of the Spikeball net	More or fewer players	Using video recording to give feedback on skills
Bigger ball Beach ball Playground ball	Allowing more or unlimited hits	Challenging students with mini-goals throughout the lesson/activity
Ball with sound (bells) Hula hoop on the gym floor Taping a circle on the gym floor	Counting hits or amount of time that the ball is kept in play instead of keeping score	Providing breaks for students who get overwhelmed
Adding a sound source that can be placed under the Spikeball net	Allowing the ball to be caught and then thrown at the Spikeball net or into the hula hoop	Allowing students to explore their abilities on their own

cans with Disabilities Act (ADA) of 1990 with ramps and closed-captioned television, and expanded to include educational concepts initially through special education. According to Lieberman and Houston-Wilson (2018), when UDL is applied well, it can also ensure the inclusion of most children into any unit of instruction in physical education.

Universal design for learning principles can be applied to Spikeball. Spikeball is a game that requires little set up, the rules are easy to learn, and the game can be played inside or outside and does not require a large space. Lieberman and Houston-Wilson (2018) described the fundamentals for universally designing an activity by adapting the equipment, rules and instructional strategies. Table 2 lists possible modifications for Spikeball to fit the unique needs of all individuals.

Physical education teachers can also design instruction specifically for a student with a disability. According to Winnick and Porretta (2017), students with learning disabilities, attention/deficit hyperactivity disorder, and developmental

coordination disorder require effective behavior-management techniques to increase appropriate behavior. These students benefit from a supportive, structured, consistent and proactive approach to behavior management. Being proactive means spending time

before class to create clear instructional expectations, routines, transitions and reinforcement methods (Winnick & Porretta, 2017). These educational approaches are good for all children, especially when implementing a unit of Spikeball.



Using bright flags and a bigger ball to create higher success rates



Nicole Ludwa

Students using a bigger ball with bright colors, outside

Variations may also include asking students to play cooperatively, so that they hit the ball easily to their peer or peers to continue the play and see how many hits they can get without stopping. Perhaps they can see how long they can keep the ball in play and play for time rather than keeping score. The game can also be played 1 vs. 1 so students get more hits than in 2 vs. 2. Another popular variation to Spikeball, aligned with a UDL approach, is to encourage the students to catch the ball instead of hitting it each play, so they have more control and the points are longer. This is similar to the game of newcomb, a variation in volleyball where the players catch the ball instead

of hitting the ball, which makes points last much longer and may be more exciting for many students.

Wrap-Up

For those who try a game of Spikeball and enjoy it as much as Mr. Ruder and so many others, the Spikeball National Championships may be an interesting option. In fact, Spikeball Elite consists of the top eight teams by the total accumulated points from their top five tournament finishes throughout the season (Spikeball Roundnet Association, n.d.). If players are not ready for the Nationals yet, they can always join the Roundnet World online community. Roundnet World is a community-based site based

on the love of roundnet. Their mission is to make Spikeball a legitimate sport on a professional and Olympic level. More information can be found at www.roundnetworld.com.

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