

ADAPTING BOWLING INSTRUCTION: INCLUDING STUDENTS WITH DISABILITIES IN PHYSICAL EDUCATION



Bowling is a popular recreational activity enjoyed by many people. This is a reason for promoting the sport among students with disabilities. After receiving instruction, practice, and acquiring the skills of bowling, they can take part in one more physical activity with family and friends.

The activity can be adapted for individuals with various skill levels. With instructional emphasis on personal skill development and a classroom environment that encourages everyBODY to participate to the best of their abilities, each student can benefit and inclusion can be accomplished.

It is in physical education at the junior high/middle school level that the foundation of sport skills are established and then applied during intramural and community recreation programs. Whether students with disabilities go on to join a disability sports program in the community or recreate with family and friends, they need the same instructional opportunities as their classmates without disabilities.

Assessment

Evaluate each student's present level of bowling skill for probability of success. Assess previous experience, fitness level, motor functioning, attitude toward his/her disability, and willingness to participate.

Safety Considerations

1. Present activities according to the student's physical characteristics and capabilities as well as his/her mental age.
2. Deafness and hearing impairment: In cases where hearing loss is present, it is advisable to avoid participation when there is excessive loud noise (music) and/or the child should wear ear plugs.
3. Orthopedic impairment: Be sure the bowling lane is wiped down to prevent falls due to slippage.
4. Asthma: Activity should occur in areas that are minimal in dust and allergic substances.
5. Know the difference between insulin shock and diabetic coma and how to administer first aid. Coordinate activity with food intake and insulin injections.
6. Visual impairment: Use bright colored equipment and foul line when students are partially sighted.

Instructional Adaptations

The following ideas are designed to facilitate the inclusion of students with disabilities into general physical education during instruction in bowling. Successful participation for some students requires equipment which has been adapted to their particular needs. Requests for purchases or construction of equipment can be facilitated through the Individualized Education Program (IEP). If special equipment is

necessary to help a student progress in physical education, then it should be identified at the Case Conference and included in the IEP form.

General adaptations may include:

1. Use kinesthetic teaching.
2. Employ the buddy system.
3. Provide successful experiences with lighter ball, bigger ball, bigger pins, etc.
4. Use polyethylene pins and balls to practice in the gym; shorten distance to pins.
5. Use bumpers in the gutters of the alley.

Specific adaptations for associated disabling conditions are listed below. The adaptations are provided in categories by disability in order to facilitate easy access to the information. However, each student with a disability is unique and capable and should not be limited within a category.

Cognitive and Sensory Disabilities

Deaf/Hearing Impairment

1. Have a general outline of what will be covered in class written out in advance.
2. Utilize light to begin turn or if in a bowling alley the student can watch the screen.
3. Place the student in a lane near the teacher.
4. Speak at a normal amplitude, even speed, and always facing the student.

Mental Retardation

1. Present instruction slowly and clearly.
2. Use demonstrations and emphasize imitation.
 - a. Use of footprints to remind them of foot placements.
3. Give brief directions and repeat them often.
4. Provide motivating pins or scores and change them frequently.
5. Enhance successful experiences (short distance, lighter ball, bigger ball, bigger pins, etc).

Visual Impairment

1. Orient the student to the pins and which pins still need to be knocked down (partner).
2. Path to the lane should be made of a unique texture surface.
3. Place an audible goal locator behind the target (pins).
4. Metal Ramp to provide a track for the ball to travel.
5. Rails/Bumpers on both sides of the alley.
6. Use of bright colored balls and pins.

Psychomotor Disabilities

Orthopedic Impairment

1. Minimal modifications are needed for students who use wheelchairs with adequate upper body strength and coordination.
2. Students may need to use a lighter ball.
3. Consider using a bowling ball with retractable handle.
4. Use a bowling ramp to provide a track for the ball to travel.
5. If student experiences difficulty, bumpers could be added.
6. Adapter-Pusher device to aid in pushing the ball down the lane.

Other Health Impairment

Asthma

1. Be aware of the season and allergies.
2. Make sure they have their inhaler at all times.
3. Avoid or reduce exposure to cold.

Cardiovascular Condition

1. Have the student rest between rolls.
2. Student may need to use a lighter ball.
3. Have the student reduce his/her step approach.

Diabetes

1. Bowling is not a very strenuous sport and should not present any problems for the student with diabetes.
2. Just in case make sure they have a piece of candy or insulin with them if you are away from school at a bowling alley.

Barriers to participation in bowling and other sports by individuals with disabilities are decreasing. More than ever, physical education teachers must endeavor to read professional journals, attend conferences and workshops, and join professional organizations to avail themselves of information on how to teach specific sports to their students of varying skill levels. Being an informed professional is half the battle in allowing students with disabilities to gain access to lifetime sports like bowling.

Resources

Department of Disability and Human Development. (2006). *National center on physical activity and disability*. Chicago, IL: University of Illinois at Chicago.

Dunn, J. M., & Leitschuh, C. A. (2008). *Special physical education* (8th ed.). Dubuque, IA: Kendall/Hunt.

Kennedy, Jr., J. P. (2008). *Coaching guides: Modifications and adaptation* [On-line]. Retrieved April 21, 2008 from <http://specialolympics.org>

Young, M. (2008). *USABA sport adaptations* [On-line]. Retrieved April 21, 2008 from <http://www.usaba.org>

This information was developed by Jennifer Robinson,
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The adaptations and teaching strategies contained in this document are only
suggestions. Each student must be considered individually, and in many cases,
a physician's written consent must be obtained.