

# Promoting Success in Physical Education: Cooperatively Structured Learning

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For students with impairments, least restrictive environments for physical education should be based upon placement that promotes appropriate and successful learning. According to Loovis (1987), two problems in placement occur that minimize successful learning in physical education for students with impairments: exclusion from regular physical education when student needs would best be met in this setting, and placing students with impairments in regular physical education when student needs dictate a more restricted setting. When either of these inappropriate placements occur, students may experience decreased opportunities for successful learning. This article examines successful learning in physical education and suggests a strategy for promoting successful learning in integrated as well as segregated physical education settings for students with impairments.



*Collective Score Push-Ups promote arm and shoulder strength and positive interaction for participants.*

## Successful Learning in Physical Education

For students with impairments to develop their psychomotor, cognitive, and affective skills fully in physical education they must experience successful learning, like their non-impaired peers. Research findings have suggested that teachers can promote successful learning by providing ample and appropriate opportunities for psychomotor, cognitive, and affective skill practice in environments specifically designed for learning (Gage, 1984; Rink, 1985; Sidentop, 1983). When practicing and learning new skills, it has been suggested by Rosenshine (1983) that students should experience an 80 percent success rate. Sherrill (1986) also has suggested that teachers who exhibit humanistic

viewpoints (i.e., belief in equity) toward students with impairments also promote successful learning in physical education. This viewpoint is expressed by teacher behaviors such as advocacy and respect of intra-individual differences. Two major goals that provide a conceptual framework for planning successful learning experiences in physical education are *zero reject* and *zero fail* (Eichstaedt, 1976). These goals suggest that all students will, in whatever way possible and appropriate, participate in physical education and experience some degree of successful learning.

Given the importance of success in developing a positive self-concept, the challenge for teachers to plan, teach, and evaluate so all students can experience success in physical education is critical. It has been reported that an important variable affecting opportunities for students with impairments to experience successful learning in physical education is attitude of the teacher (Martinez, 1982; Rizzo, 1984). A teacher's ability to teach students with impairments and the teacher's attitude towards these students are two problems that have been identified as limiting opportunities for successful learning in physical education for students with impairments (Jansma & Schulz,

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1982; Miller & Sabatino, 1978; Rizzo & Wright, 1988). Unless attitudes of teachers change and become more favorable towards students with impairments, opportunities for successful learning will not be actualized.



*Sportball Juggle is a challenging game requiring cooperation, concentration, and skill.*

Developing successful physical education programs in least restrictive environments is a difficult yet challenging task for teachers. In developing successful programs teachers need to be willing to take risks and imagine a variety of possible solutions intended to remedy challenges presented by their students (Sherrill, 1986). Emphasis needs to be placed on abilities the learner brings to the setting, rather than disabilities. Emphasis on disabilities can promote negative attitudes and expectations for teachers and

students and minimizes rather than promotes successful learning. *Making ability count* is a philosophical basis for teachers who plan and teach physical education activities designed to promote successful learning in psychomotor, cognitive, and affective domains of learning (Eichstaedt & Kalakian, 1987).

## Cooperative Goal Structures

A factor associated with successful learning is how the teacher structures opportunities for goal achievement (i.e., how the student will achieve the goal). It has been reported that goal structures may exert influence on successes students experience in learning (Johnson & Johnson, 1975). Teachers can employ three different goal structures to facilitate learning:

- **Competitive.** Students work in opposition to other students attempting to achieve a goal that can only be achieved by one student or group of students. Examples of competitive goal structuring in physical education include team sport ladder-type tournaments, whole class rope skipping contests, and elimination dodge ball games.
- **Individualistic.** Students work in isolation to achieve a personal goal. Individualized contract programs for gymnastics, physical fitness, and country line dances are physical education activities employing individualistic goal structures.
- **Cooperative.** Students work collectively to achieve a goal. Two examples of physical education practices utilizing cooperative goal structures are collectively scored games

and small group pyramid play.

A significant amount of research has reported affects of goal structures on learning by students with and without impairments in a variety of subject areas (e.g., physical education, mathematics, social studies) (Johnson, Maruyama, Johnson, Nelson & Skon, 1981). These findings indicated that learning was most positively impacted when teachers structured goal achievement cooperatively. Specifically, they reported higher levels of achievement, more favorable attitudes toward school, and more effective social skills among students with and without impairments when cooperative goal structured learning was used (Johnson & Johnson, 1983). Four criteria necessary for developing cooperatively structured learning experiences have been noted (Johnson & Johnson, 1986):

- **Positive Interdependence.** Students are aware that their contributions to achieving the learning goal are directly connected to peer contributions to achieving the learning goal.
- **Individual Accountability.** Students are individually assessed so other group members know who requires additional help. This criterion reinforces the notion that each student contribution is necessary for group achievement of the learning goal.
- **Collaborative Skills.** Students must learn and use collaborative skills to function successfully in a group. Some of these skills include decision-making, trust-building, and communication.
- **Group Processing.** Students working together in groups need time for planning, decision-making, and evaluating. Clear and direct communication is important if group interactions are to be productive.

An example of an activity which addresses the previous four criteria is the game *Fish Gobler* (Orlick, 1978). *Fish Gobler* requires a group of students to collectively respond to various commands made by the *Fish Gobler*. Examples of such commands are *fishnet* (all join hands), *sardines* (all lie squeezed together), and *submarines* (all lie touching with one leg held up, periscope, and nose pinched). For successful participation, players must perform the desired commands correctly (i.e., individual accountability), work together (i.e., collaborative skills and group processing), and encourage/reinforce one another for personal contributions (i.e., positive interdependence).

Evidence suggests that simply placing students with and without impairments in the same classroom without concern for type of learning structures that exist may not promote the type of interactions desired (Goodman, Gottlieb & Harrison, 1972; Iano, Ayers, Heller, McGettigan & Walker, 1974). Johnson & Johnson (1986) reinforced this idea by stating:

There is growing awareness that constructive interaction between nonhandicapped students and handicapped students is very important to the general development and socialization of both groups of students. Unfortunately, simply arranging for handicapped and nonhandicapped students to be in physical proximity with one another does not ensure that positive interaction and interpersonal attraction will result (p. 26).

Some benefits of using cooperatively structured learning for students with and without impairments have been reported by

Johnson & Johnson (1986):

- Work together in same groups.
- Interact in positive ways
- Feel support and encouragement.
- Understand another's perspective.
- Develop realistic views of others.
- Accept self in the same manner as others accept themselves.
- Feel academically successful.
- Develop positive peer relationships.

Orlick has applied the concept of cooperative goal structuring to games and reported similar findings with young children. In studies conducted with children 2 1/2 to 5 years, Orlick (1981a; Orlick & Foley, 1979) has reported increases in prosocial behavior as a result of participation in cooperative games. In one study, Orlick (1981b) noted that, following a cooperative games program, preschool children were more willing to share candy with their peers instead of keeping it for themselves.

## Cooperative Structured Learning Experiences in Physical Education

Use of competitive (e.g., fastest runner wins, most points wins) and individualistic (e.g., individual drill work) goal structures is very popular in physical education and has been associated with unsuccessful learning (Eichstaedt & Kalakian, 1987). As noted by research completed by Johnson and Johnson (1986) in cooperatively structured learning, when specific criteria are met, specific benefits are available to the learner.

When these ideas have been applied to the teaching/learning of physical education for students with impairments during the Department of HPERD/APE Internship Program at Moorhead State University, potential for successful learning has been increased. The following learning opportunities and outcomes, as part of the HPERD/APE Internship Program, are examples of how cooperative goal structures can be incorporated into physical education for elementary age students, utilizing a small group teaching/learning focus. Students were placed into groups to achieve a heterogeneous blend which allowed positive peer interaction. To accomplish this outcome, teacher-directed assignments were made. Peer and cross-age tutors were used to promote learning and interacting when deemed necessary by the teacher.

### Under the Rope

This activity is designed to promote positive social interaction skills, static balance, and spatial awareness. In groups of three to five students, each student, without using his/her hands, must pass under a rope that is being held by fellow players who also cannot use hands. Students participating in this activity need to decide collaboratively on a plan for lifting and passing under the rope, and each student's skill contribution is required for successful goal achievement. The same interactions and skills may be promoted by participation in a similar game, *Electric Fence*, as described by Rohnke (1977, pp. 70-71).

### Collective Score Push-Ups

Students in groups do as many push-ups as possible to develop arm/shoulder muscular endurance and collectively add numbers of push-ups for a group total. All groups then add their scores together in an attempt to achieve a predetermined collective class score. Positive verbal encouragement increases a group's

score during this activity, resulting in opportunities for positive social interaction. The collective nature of this activity promotes strong feelings of ownership and contribution for players.

### Locomotor Movement

Positive interactions and locomotor skill development are outcomes associated with this activity. Groups of students receive cards with a number (e.g., 21), list of movement concepts (e.g., space, direction, force), and list of locomotor skills (e.g., jump, hop, leap, gallop). Group members must decide on how to use specified movement concepts while performing locomotor skills so they cumulatively add to the number on the card



Above, students working together to move under a rope without use of hands is the goal of the *Cross Under the Rope* activity.

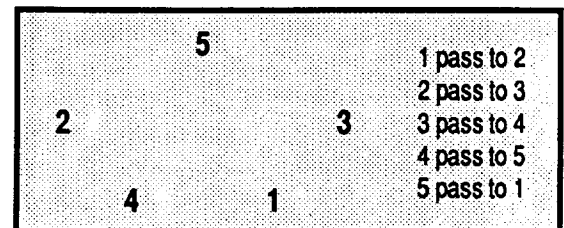


Figure 1. Sportball Juggle Diagram

(e.g., 21; space, direction, force = 6 low jumps, 5 big hops, 4 hard jumps, 3 forward gallops, 2 low level jumps, and 1 long leap).

Required collaboration, negotiation, and evaluation leading to successful group decisions during this game provide opportunities for players to understand another's perspective, develop realistic views of others, and develop positive peer relations. These factors may contribute significantly to successful learning by increasing acceptance and interactions for involved players.

### Sportball Juggle

Remembering, attending, and ball skills can be improved with this activity. Five students placed in a star pattern attempt to move sportballs around the star simultaneously. Students decide on type of skill and corresponding pathway for each ball (e.g., bounce — basketball; set — volleyball; pass straight — football; roll — bowling ball; low underhand toss — softball). They begin with one ball and add another after the group can successfully move preceding balls two times around the star. Support and encouragement are benefits available to players through participating collaboratively and trustingly during this game.

### Advertisement Dance

Locomotor, non-locomotor, collaborating and divergent

thinking skills are outcomes associated with dance. Groups of five students decide on a product (e.g., car tire, chewing gum, peanut butter) and define its properties (e.g., chewing gum — changing shape, chewy, sticky, blown up, popped). For each property, students mutually agree upon a dance step (i.e., expressive movement) depicting that property (e.g., for chewy, students form a circle and move around a space, making the circle change shapes, levels, speeds). Following a pre-determined sequence of dance steps for all properties, groups perform their advertisement dance while other groups attempt to guess their products. Not only is each student's contribution valued, important, and required for goal achievement, but also, clear communication regarding planning and decision-making is necessary if group interactions are to lead to a completed product (i.e., Advertisement Dance).

## Conclusion

Successful learning in physical education is increased by



Locomotor skills can be practiced effectively when playing the Locomotor Moving game.

learning experiences such as those noted because all students receive maximal practice opportunities and all contributions are important and required for goal achievement (e.g., Collective Score Push-Ups). Cooperatively structured learning experiences can promote positive social interactions and attractions among fellow students (e.g., Under the Rope) which in turn enhance feelings of success. In support of the latter idea, Rynder, Johnson, and Johnson (1980) reported in a study examining rejection and acceptance of junior high students with handicapping conditions participating in a cooperatively structured bowling activity (i.e., collective pin total scoring) with non-handicapped peers that, although bowling scores for handicapped students were lower, interpersonal interactions and attractions were not negatively affected.

Teachers are largely responsible for successes students experience in the gymnasium. Through use of cooperatively structured learning, more students can leave the gym with feelings of success rather than failure.

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