

The Benefits of Pullout Adapted Physical Education class for Students Identified for
Special Education Services

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Abstract

Three high school students, identified with special needs in a high school physical education in a rural area of southeastern Ohio, participated in an observation research project. This research addressed whether students identified with disabilities are better served in an adapted physical education class or included in a regular physical education class; and did improving a students knowledge and skill level in games played during physical education classes increase the student's participation and social interaction with other students in the class? Each student was observed in a regular physical education class, and a pullout adapted physical education class where five different sports were played. The participants were given five days of skills instruction during an adapted physical education pullout class. Improvements were measured using skill level pre- and post-tests. Results indicate that knowledge of the rules and knowing the skills needed to play the game did not increase their desire to socialize with typically developing peers. Skill level did increase as a result of practicing the skill.

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Introduction

Working on the individual skills needed to successfully perform in a game is critical. Practice is the only way an individual can get better at a skill, and all students can benefit from individualized instruction. Many schools are overwhelmed by the number of students enrolled and the school's ability to meet the needs of all students. With the advent of full inclusion in most physical education classes, students identified for special education services are placed into a general education physical education class.

Most of the time, students with disabilities are placed into physical education classes without the support of a special education teacher present in the class. These students with disabilities are on their own in physical education classes. Many school districts' budgets are stretched or taking a hit. Even though there are students who may need adapted physical education services that accommodation may not be available. "However, some are on Individual Education Programs (IEPs) that require a pull-out APE (adapted physical education) session that supplements (regular physical education) RPE so that the students can work on unique goals and objectives. Unfortunately, the school district does not have an APE specialist who can provide such services." (Block & Conatser, 1999, p. 14). In many schools, physical education classes have a large number of students enrolled, that can make it challenging for the physical education teacher as well as the student who is not familiar with the activities being played in class.

Social interaction can also be a challenge in physical education classes. Some students with exceptionalities do not spend any time with their typically developing peers. They are educated in a separate classroom with the same students every day. This

separation can go on for years, or for as long as that student is identified as needing special education services or enrolls in another school district. “Perhaps the biggest disappointment in the literature on inclusion in GPE is limited social interaction with peers without disabilities (e.g., Ellis, Wright, & Cronis, 1996; Lisboa, 1997; Place & Hodge, 2001), which can lead to limited social learning opportunities for the students with disabilities (Odom, McConnell, & McEvoy, 1992).

Adapted physical education classes may help to address these challenges. An adapted physical education class is an excellent way to meet the needs of students identified as needing special education services. Adapted physical education classes are usually smaller in size. This provides each student with a chance to have some one-on-one time with the physical education teacher. During this time the teacher can break down the skills needed to perform a given task. For example, if a student cannot serve the volleyball over the volleyball net, the teacher can break down the task of serving the volleyball.

Along with breaking down the task, the teacher can observe the student’s performance and make any changes needed for the student to be successful. Some identified students may have poor motor skills. By adapting the traditional method of serving from the traditional method the student may be able to perform the skill. It may not be the textbook method but it works, allowing the student full participation in the game. The bottom line is that the student is able to serve the volleyball over the net with some measure of success. This one-on-one attention is not likely to have been possible in the general education physical education class. The teacher has to control on average

thirty or more students in each class making it virtually impossible for any student to receive the individual attention needed to successfully learn how to serve the volleyball.

Learning and understanding the rules to different games and activities can be very difficult for some students with exceptionalities, requiring the physical education teacher to take the time to fully explain the rules to the game. The teacher must review the rules each day in order for the students who are unfamiliar with the game to catch on. This is hard enough for a student who does not have a learning disability let alone for a student who does.

The performance of students with disabilities in physical education (PE) class can be impacted by many factors. This study will first look at issues addressed in the literature that answer the following questions; What is mainstreaming? What is inclusion? How have the laws regarding least restricted environment impacted physical education today? Is this social order present all of the time? Does social interaction change in competitive situations? Will improving a student's skill level at organized games give the student more confidence and a greater desire to participate? Will improvement in skill level be enough to make the student enthusiastic enough to want to participate? Will the student's confidence level increase as a result of one-on-one skill instruction? This paper will shed some light on these questions.

Review of Literature

If not properly run, a classroom or gymnasium can be an environment where students feel intimidated. The teacher must control the activities which involve direct social interaction. By letting the students who feel they are superior, due to their involvement in varsity sports or their popularity, control the tempo of the class, the

student with low self-esteem will be left out. Running a classroom in this manner can lead to bigger problems. Griffiths (2007) identifies it as another form of segregation within the walls of a single room.

From the very start, the student who is not involved in sports may feel inadequate. It could be that the student has an incredible amount of hidden athletic ability, but feels inferior because he/she may not be involved in sports. Sometimes students may be in poor physical condition. This can include students identified for special education services. Kodish, Kulinna, Martin, Angrazi and Darst (2006) have stated that sometimes students with physical, mental, and developmental disabilities may be in very poor physical condition. One of the reasons could be that the student has not been given the chance to participate in physical activities. Physical education class can help to change this by improving the students' fitness level and their attitude toward physical fitness.

Usually physical education classes eventually require all students to participate in an organized game. The sports being played in PE class does not always interest all students. A student's desire to participate in sports can be influenced by what they see on television, on the internet, in magazines, and newspapers. The family's involvement in physical activities also plays a role in the student's desire to participate (Hassandra, Goudas & Chroni, 2002).

"Teacher education no longer tolerates prejudiced treatment of children from various ethnic or racial backgrounds" (Hardin, 2005, p. 44). This principle has expanded and grown to include students with mental and physical disabilities. In 1975, Public Law 94-142: The Education for all Handicapped Children Act was signed into law. This new

law required public schools to provide an equal opportunity for children with disabilities to attend their school system (Hassandra, Goudas, & Chroni, 2002).

When Public Law 94-142 (The Education for All Handicapped Children Act) was passed in 1975, the state of special education was vastly different from what it is today... The original four purposes of P.L.-142 included

- to assure that all children with disabilities have available to them...a free and appropriate public education which emphasizes special education related services designed to meet their unique needs
- to assure that the rights of children with disabilities and their parents...are protected.
- to assist States and localities to provide for the education of all children with disabilities
- to assess and assure the effectiveness of efforts to educate all children with disabilities. (Smith, 2005, p. 314).

To implement these new requirements schools began mainstreaming students into the regular classroom. The identified student was placed into the general education classroom without much support from the special education teacher, and usually separated from their friends, who they were used to spending the entire day with in a self-contained class room. Mainstreaming students with special needs into regular education classrooms is not easy.

With the implementation of Public Law 94-142, Least Restrictive Environment (LRE) is provided

to assure that, to the maximum extent possible, handicapped children in public or private institutions or other care facilities are educated with children who are not handicapped , and that special classes, separate schooling, or other removal of handicapped children from the regular educational environment occurs only when the nature of severity or the handicap is such that the education in the regular classes with the use of supplementary aids and services cannot be achieved satisfactorily

(Bloom, & Garfunkel, 1981, p. 383).

Mainstreaming can be defined as “dumping vulnerable children in already over crowded classes without any of the support services necessary to make such a policy work” (Zigler & Muenchow, 1979, p. 993). It was finally decided that mainstreamed students could be better served if an intervention specialist was available to help the student with daily tasks. This keeps the mainstreamed student in the regular education classroom. Mainstreaming has evolved into inclusion, the new trend in education. Students at all academic levels can benefit from the social interaction available in a public school. Interpretation of inclusion is broad. The entire school must be on board for inclusion of students with disabilities to work effectively.

Inclusion means everyone belongs in a school that is a “community” of learners. A positive learning environment invites all students to participate in meaningful learning that offers a variety of opportunities for personal successes. Attention to the social environment is important to the success of inclusion. Teachers must closely monitor the

social environment to protect all students from ridicule, exclusion or discrimination.

(Tripp, Piletic, & Babcock, 2004, p. 7).

When practicing inclusion, the most important thing a teacher can do is keep an eye on what is going on in his/her class. An effective teacher must be able to manage student interactions and behaviors in his/her class room, especially in an environment such as a gymnasium. The teacher must make sure that no student is singled out for any form of abuse or maltreatment. Abuse can range from physical confrontations to verbal comments made directly or indirectly to the student.

Inclusive education helps us work toward creating a society where all people are valued... Students with disabilities are afforded an appropriate education in the least restrictive environment, the general education class. In the true sense of inclusive education it needs to be clear that all students are welcomed, appreciated, and valued members of the classroom no matter what their differences may be. A sense of community must become an integral component of a classroom if all students are to learn the value of each individual and achieve their highest potential
(Bond & Castagnera, 2003, p. 228).

Students must feel comfortable in their daily school setting. Sometimes the school environment is better than their home environment. Students may need help with several tasks throughout the day that most people take for granted.

When students graduate from high school, and become an independent individual in today's society, he/she may still need help. Many different programs are available for

people who need help to survive. These programs can involve local communities, such as church organizations and food pantries or state and federal financial assistance.

Many students with disabilities may need help and support throughout their entire lives, as is true of any individual. One of the ways educators can create a cooperative environment is to establish classroom norms that are based on the assumption that all people need help, not just students with disabilities.”(Bond & Castagnera, 2003, p. 228)

The atmosphere in a class implementing inclusion is an open environment. Many times the intervention specialist, (special education teacher) will take the identified students out of the classroom to take tests or complete work. Intervention specialist is the most recent title used to identify special education teacher’s roles and for state licensing titles. The rest of the students in the class have become accustomed to the fact that some students need help that can not be provided in the classroom.

In some situations the intervention specialist is in the classroom with the regular education teacher. For assignments that require the use of academic skills which may be identified on the student’s IEP, the intervention specialist may take the student or students out of the classroom to provide one-on-one instruction. “Young people consider it right and natural for students with learning and behavioral difficulties, although they are sometimes curious about the comings and goings of those children who leave the classroom during the day to attend resource rooms.” (Miller, 2008, p. 3)

Identified students are placed into general education classes with an Individualized Education Program (IEP). “An IEP is defined in the legislation as a written statement for each child with a disability” (20 U.S.C. & 614(d) (1) (A) (i)). The IEP must be developed, reviewed, and revised according to Section 614 of the legislation (Council of Parent Attorneys and Advocates, 2004)” (Gartin & Murdick, 2005, p., 327).

Teachers who are not involved with the IEP process have no control over goals written into the IEP that are required to be covered in their class. If regular education teachers are not made aware they have a student with special needs in their class they may not even know they are responsible for implementing the IEP goals. Welch (1996) argues “that because teachers have been historically exempt from teaching students with disabilities, teacher preparation has been woefully inadequate in training teachers for inclusion. Welch described teacher training programs as “immoral and inefficient” ... Many programs perpetuate a separate system, training special educators to focus on students with disabilities and general educators on whole class instruction. (As cited in Hardin, 2005, p. 44).

The success of teaching students with disabilities has a lot to do with the personality of the general education teacher in the classroom. It helps if the teacher is a positive, upbeat person. Fejgin, Talmor, and Erlich (2005) report that successful inclusion depends on teachers’ positive attitudes (Guralnick, 1982; Hanline, 1985; Odom & McEvoy, 1990; Samuel et al., 1991), and professional support by the school principal and special education experts (Margalit, 2000; Snyder, 1999). “Most PE teachers and experts support inclusion (Block, 1994; Block & Vogler; 1994; Craft, 1994; Kozub et al.,

1999) and express positive attitudes toward inclusion (Heikinaro-Johanson & Sherrill, 1994; Rizzo & Vispoel, 1991).

When physical education teachers enter the school building in the morning they know they will spend the day at the end of the building, separated from the rest of the school. With the exception of going to the main office to pick up their mail, the PE teachers usually do not interact with the rest of the staff. It is therefore critical that PE teachers take the time to learn about their students.

PE teachers need to determine who the students that are identified for special education services. They need to locate each student's IEP and take the time to read it that will provide the teachers with information they can use to help relate to the student, and become aware of any goals related to physical education. "It is through the IEP that a school district ensures that students with disabilities are provided the free, appropriate public education in the least restrictive environment that federal law requires" (Armenta & Beckers, 2006, p. 22).

Physical education teachers especially need to be aware of the changes in the special education field. Physical education teachers can benefit from attending workshops, and conferences available to them. Workshops can provide the teacher with the most current ideas in their field (Hodge & Akuffo, 2007).

Many students receiving special education services are diagnosed with a specific type of learning disability (LD). Although the learning disability may only cover academic classes as written the IEP, students may also need extra attention in physical education class, because oftentimes, they do not want to participate. They associate themselves with their peers with disabilities and may still feel as though they must stay

inside their buffer zone, separated from the rest of the class. This lack of social interaction at a young age can limit their relationships with the rest of the student body. Wiener and colleagues (2002; 2005) found that children in their studies “had fewer corroborated/reciprocated friends. Lower quality of friendship, lower social acceptance, lower academic self-concept, poorer social skills, and higher levels of loneliness, depression, and problem behaviors than children without LD” (p. 27).

A student identified with a learning disability or a behavior problem is likely to drop out of school. Blackorby and Wagner suggest that “the likelihood of high school dropout is significantly greater if a student is labeled as learning disabled (36%) or as having emotional and behavioral disorders (59%)” (as cited in Connor & Lagares, 2007, p. 18).

Attention Deficit Hyperactive Disorder (ADHD) is another common disorder in school-aged children. ADHD interferes with a person’s ability to focus and stay on task. The main treatment is medication. Medications are used to calm the person down. Drugs such as Ritalin are used in an attempt to give the person time to make the correct decision involving their behavior. These are the students who can benefit the most from PE. “Tantillo and colleagues have shown that exercise has potential efficacy as an alternative to medication in treating ADHD style behaviours” (Medcalf, Marshall, & Rhoden, 2006, p. 170).

Physical exercise is known rejuvenate the body. Exercise can help students release excess energy. One strategy would be to have a student perform some type of physical activity before a test or hard assignment. Medcalf, Marshall and Rhoden (2006) report in their study that “in each individual participant’s case, an increase in time spent

‘on task’ was evident in the lesson post PE compared to that before. Each participant was shown to increase their ‘on task’ behaviour in the lesson succeeding PE by varying amounts, with the greatest improvement showing an increase in time equivalent to over 23% longer spent ‘on task’ in the lesson post PE” (p. 171).

The Individuals with Disabilities Education Act (IDEA) became law in 1997. IDEA requires that each child with a disability be educated with nondisabled children to the maximum extent appropriate. Each child with a disability shall be removed from the general education environment only when the nature or severity of the child’s disability is such that education in general classes with the use of supplementary aids and services cannot be achieved satisfactorily.

(Ratcliffe & Willard, 2006, p. 5).

Since Public Law 108-446, Individuals with Disabilities Education Improvement Act of 2004 (the most recent reauthorization of Public Law 94-142: the Education for the Handicapped Children Act), continues to emphasize placing students with disabilities into general education settings (Block & Obrusnikova, 2007, p. 103).

Recently the area of Least Restrictive Environment was addressed. Least Restrictive Environment means that the identified student is placed in as many classes as possible. This placement is made with full support from qualified special education faculty members “Qualified personnel’ means personnel who have means SEA-approved or SEA-recognized certification, licensing, or other comparable requirements that apply to the area in which the individuals are providing special education or related services” (Ohio Department of Education, <http://www.ode.state.oh.us>).

The student's placement and needs are written into the student's IEP. "With the implementation of the mainstreaming or LRE concept, the greatest percentage of students with disabilities first began this exodus into ancillary subjects such as physical education, music, and art. It is assumed that in a full inclusion environment all students are provided physical education with the appropriate support within a regular environment."(Greenwood & French, 2000).

According to Gallahue and Ozmun, as reported in Etzel-Wise and Mears (2004), "The goal of physical education is to prepare individuals for a lifetime of physical activity. Achievement of this goal begins before birth with reflexive movements that both were survival purposes and prepare us for controlled movement" (p. 225). In an environment such as a PE class, where movement is a requirement, it can be very difficult for the regular physical education teacher to meet the needs of all of the students. Goodwin, LaMaster, Gall, Kinchen, and Siedentop state "when inclusion is haphazardly run, students are "dumped into GPE without appropriate support services. And when GPE teachers are not adequately prepared, inclusion can become a negative experience for students with and without disabilities" (as cited in Obrusnikova, Valkova, & Block, 2003, p. 231).

Along with the placement of the students with disabilities in his/her class, the student may have an IEP which legally requires the teacher to fulfill the requirements of the IEP. "Federal law stipulates that each student with a disability requiring adaptations in physical education must have an IEP with specific goals for physical education (PE-IEP)." (Cantu & Buswell, 2003, p. 60). According to Etzel-Wise, and Mears, physical activity and working on gross and fine motor skills are both a major emphasis in physical

education. An adapted physical education class can give the instructor the time and opportunity to implement IEP goals written for individual students.

All students need to be actively involved in what the class is doing. Just having a student enrolled in the class is not enough. Students know whether or not they are contributing to the class, and each student must feel a sense of accomplishment. When the needs of the students are not met, it can cause the student to have a bad day. “A bad day in physical education was characterized as one in which the participants were rejected, neglected, or seen as objects of curiosity by their classmates.” (Goodwin & Watkinson, 2000, p. 151)

According to Nolan, Ellery, and Maguire, (1998), “inclusion is not just placing the child in the gym as a manager or scorekeeper. The purpose of inclusion is to place the child in the regular education environment with all needed supports (as cited in Block, 1994, p. 125). The physical education teacher must also design and adapt activities making it possible for the student to become involved. The game may have a different modification for each identified student in the class. When modifying a game four standards should be addressed: Is it challenging? Is it safe? Does it have integrity? Meaning, is there any value in playing the game, or is it just designed to take up time. How will the modifications be implemented? If a modification to a game is unrealistic, then why set the student up for failure? (Ohtake, 2004).

If a team sport is being played on a given day, the teacher should make the teams as inclusive as possible. Placing a student with special needs on a team with cooperative students is a must. This is an attempt to control who the students are interacting with. According to Hall and McGregor, (2000), physical proximity alone does not ensure that

students with mental retardation will be included socially in peer interactions and activities that occur in their general education settings.

“When students with mental retardation are present in the same settings as their general education peers, social interaction among these students is not likely to occur unless programming for interaction is provided by teachers or other staff (Fisher et al., 1998; Hughes et al., 1999; Mu et al., 2000), as cited in Hughes, Copeland, Wehmeyer, Agran, & Hwang, 2002, p. 388.)

Students with disabilities may have a hard time being accepted in PE class. In some cases, students may have limited athletic ability, or may have had limited opportunity to play sports or games. This may make the student reluctant to actively participate in any type of game or activity, especially in activities where he/she is going to be singled out to perform a task. For example, in a softball game all students are required to take a turn at bat. If a student has never swung a bat and hit a ball his/her chance of success is low. The student may give a half hearted effort to swing at the ball, not swing at all, or refuse to even try. “Exclusion from class activities led some students to feel like outsiders in their class and unwelcome by the class without disabilities” (Butler & Hodge, 2004, p.1).

In organized games, students’ social standing or acceptance may be changed or impacted by their athletic ability. It has already been discussed that the sports athletes in the class might essentially control the tempo of the game being played. The athletes are often driven to win and may develop some respect for a fellow classmate who is either a good athlete or works hard at playing the game in a team effort to win. Competitive sports can be a way for young people to meet. Some friendships that have lasted a

lifetime began as teammates on a high school or middle school sports team. “We need to give students with severe multiple disabilities new opportunities to participate in an essential part of team sport games. We can thus improve the students’ targeted skills, enhance their sense of belonging, and ultimately build friendships with their peers”(Ohtake, 2004, p. 27). Being a hard worker when it comes to playing sports in physical education can be enough to be picked for a team, even if a student is not a good athlete. If that student can help the team win, other competitive students will likely want that person on their team.

The acceptance of students with special needs in the physical education class is often directly related to their athletic ability or willingness to work hard to help the team win. Students with special needs have been placed in physical education classes for since the implementation of PL 94-142, when the practice was called mainstreaming. As mentioned earlier, in the practice of mainstreaming, physical education class was the only time during the day, with the exception of lunch, that the student with special needs spent time outside the self contained room. With the implementation of least restrictive environment, many schools are required to adapt to full inclusion policies. “Inclusion, in principle at least, has been the process involved in making mainstream schools accessible to young disabled people in terms of curriculum and teaching, organization, management, the physical environment, ethos and culture” (Swain & Cook, 2001, p. 186).

The current practice in Special Education is inclusion in almost all subject areas. Block and Vogler define it best, “By and large, inclusion practice in general physical education (GPE) means educating students with disabilities (mild to severe) using special resources as needed in safe, successful, and satisfying learning experiences with

classmates without disabilities” (as cited Butler & Hodge, 2004, p.1). Inclusion, done properly, helps the student with special needs, who is not necessarily a top athlete. As long as the student has average skill and a strong desire to win, the top athletes will often want that student on their team.

Not knowing or fully understanding the rules to a game can make a child appear slow and clumsy. For example, if during a softball game a student is on base and does not understand the tag up rules, he or she does not understand why he/she is out at the next base when a pop fly is caught in the outfield. The student did not understand that he/she had to go back to the base he came from, touch it with his foot, and then run to the next base, which is the tag up rule. If he fully understands this rule he would run as fast as he could to the next base, instead of running at three quarter speed wondering the whole time if he made the right decision to run to the next base.

In many cases a student with a disability has had no control as to whether or not he/she has been exposed to team sports. The child has had no control whether he/she knows and understands the rules to the game being played, and has no control over his/her athletic ability or physical abilities.

The social pecking order that develops in the physical education class has usually already been established through prior interaction. By the time the student has entered the gymnasium awaiting the start of physical education class in his or her mind he/she has already started thinking about his/her place in the physical education class. If the child had grown up in the school system, and spent his/her entire life around the same group of people, his/her spot in the social order of the class has already been established.

Students with special needs are often enrolled in general physical education classes. Many times he/she does not possess the athletic skill required to actively participate in a game or activity. Increasing his/her skill level may increase his/her confidence, resulting in active participation in physical education class.

Through participating in the activities in physical education he/she will have many opportunities to interact with other students. For the most part social interaction is not related to physical ability.

This study was conducted to see if a pullout adapted physical education was beneficial for students with special needs. It was designed to answer the question will increasing a students' skill level encourage his/her to actively participate, and increase socialization in a regular physical education class?

Method

This study took place in a high school in a rural school district in the southeastern part of a Midwestern state considered part of the Appalachian region of the United States.

Participants

Three high school students from a high school physical education class participated in this study, two male students, and one female student. All students will be identified using pseudonyms to protect their identity and to ensure confidentiality. All three students had been identified with multiple disabilities. Multiple disabilities are defined as

concomitant impairments (such as mental retardation-blindness, mental retardation-orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in special education

programs solely for one of the impairments. The term does not include deaf-blindness.” (Ohio Department of Education, <http://www.ode.state.oh.us>).

Participant one. Mick is a 15-year-old sophomore identified with multiple disabilities. His disabilities result in difficulties with balance and using his hands. When given an instrument to hold he tends to grasp it and is unable to easily let go. Correcting his grip on an instrument with a handle in which he has to grasp and use as a tool can be challenging. In general his balance is not a problem when he is mobile; it is only when he has to concentrate on a task being performed with his legs that he experiences difficulty.

Participant two. Matt is a 15-year-old sophomore. He is identified with multiple disabilities, and is small for his age. He lacks coordination at times but is quite mobile. When given the chance, he does exhibit excellent athletic ability. He has the ability to ignore what is going on around him and focus on the physical skills required of any athlete. He works hard in the weight room, and if he knows how to play a game, he will try his very best.

Participant three. Kate is a 16-year-old sophomore. She is identified with multiple disabilities. Physically, Kate is overweight but not obese. She has no conditions or disorders that affect her ability to be mobile or use her arms or legs. She does not enjoy structured physical activity. Getting Kate to participate in an activity is not an easy task with motivation being a primary concern.

All three students were observed in a regular physical education class for five days, playing five different sports. The students were then given ten days of skill instruction in a pullout adapted physical education class. The students were also

observed for five days playing the same sports, with adaptations, that were used in the general physical education class. The students were then observed in the same physical education class, participating in the five sports.

Data Collection

Pre-test and post-test data collection. Prior to the intervention a pre test was given assessing one or two skills used to play specific sports (see Appendix A). Following the two week intervention, the same data collection strategy was used for a post-test. The following sports and skills were used.

1. Basketball – foul shot and dribbling
2. Football – passing at a target
3. Volleyball – serve and bump
4. Badminton – serve and racket performance
5. Soccer – dribbling and kick at a goal
6. Baseball – hitting a plastic baseball, gripping and swinging a plastic baseball bat,

The following expectations were established for each sport:

Basketball:

- Attempting 10 shots from the foul line on an official basketball court.
- Dribbling a basketball the length of the basketball court down and back 10 times. The student was not allowed to take more than two steps between each bounce of the ball, making it a legal dribble.

Football:

- A 3- foot square was outlined on the wall of the gymnasium. Each student was given 10 chances to hit the square with the football standing at the top of the basketball key.

Volleyball:

- Serving a volleyball, on an official high school volleyball court 10 times, using an overhead or underhand serve.
- Bumping a volleyball 10 times using the correct grip (arms fully extended, hands gripped together). The student is given 10 chances to make contact with a volleyball setup by the instructor.

Badminton

- Serving a badminton shuttlecock 10 times from a distance of no less than 15 away from the badminton net using an overhead or underhand serve.
- Gripping the racket effectively in order to return a shuttlecock 10 times from a setup by the instructor.

Soccer

- Attempting to kick a soccer ball into a soccer goal from a distance of no less than 20 feet 10 times.
- Dribbling a soccer ball using their feet through an obstacle course 10 times. The obstacle course consisted of five cones placed five feet apart in a straight line.

Baseball

- Grip and swing a plastic baseball bat keeping the bat level, and placing the dominant hand on top.

- Hitting a plastic baseball 10 times from a pitch thrown by the instructor. Any grip on the bat is accepted.

Intervention

The pretest was followed with two weeks of instruction in a pullout physical education class. The class consisted of a total of seven students identified for special education services, including the three participants in this study. During the pullout class each student was taught the correct method of performing the skills assessed in the pretest. The students then practiced these skills. The students met as a group for ten days, one hour per day, for two weeks.

Each day a different skill was introduced. Along with the introduction of a new skill, time was spent practicing the skills previously learned. The rules of the games were also taught and reinforced each day. After practicing the skill, the game using that skill was introduced. The rules to the games were given and reinforced with different scenarios that might come up where a rule needs to be applied. For example, in a volleyball game, the ball can only be hit three times by each team before the volleyball must go over the net. Each player can only hit the volleyball two times per possession and can not hit the ball three times in a row. When a player makes contact with the volleyball two times in a row, stop the game, and explain that another player must make contact with the volleyball before he/she can make contact with the volleyball a second time.

Adaptations to the games being played were made needed to be made based on the abilities of the students participating and the number of students in the class. For example, when playing soccer, a goalie was not used. An adaptation used for one student

was for him to score a goal by kicking the soccer ball into the large pads, wider than a soccer goal, mounted on the walls of the gymnasium.

These same three participants were also included in a regular physical education class with 25 students, some of whom were typically developing and others with learning disabilities during the same semester. Some of the students identified with learning disabilities exhibit similar issues with participation, but were not included in this study. The three participants were observed competing in five games on five different days.

The regular physical education class began with a stretching routine and a workout in the weight room four out of five days a week. Matt and Mick seemed to enjoy lifting weights, but Kate refused to participate. Mick was monitored closely and was able to perform the lifts. Correcting his grip on the bar required the instructor to physically remove his fingers from the bar and place them in the proper position. This could have been due to Mick knowing that the bar was heavy, weighing 45 pounds. When correcting his grip on the plastic baseball bat he did not grip the bat as tightly.

After lifting weights a game was played. All games were played inside a high school gymnasium. Five different games were chosen for this study. The five games were chosen for the high probability that almost all of the students had participated in the game many times in their years of prior physical education training. Therefore, the skills used in these games were familiar. Due to the large number of students in the class, several small teams were created. Two teams played at a time, while the remaining teams waited for their turn to play. For example during volleyball, four courts were used. Depending on the number of students present that day, five or six teams were made and

rotated in. During football and soccer four teams were made. Two teams played for ten minutes at a time while the other two teams waited for their turn, then rotated in.

A different game was introduced each day. Skills for each game were demonstrated by the instructor. Whenever possible, a student was used to demonstrate a skill. The rules were introduced and explained prior to playing each game. Whenever a rule was broken, the instructor stopped the activity to explain the rule so all students understood the outcome.

Data Collection

A tally sheet (See Appendix B) was used to track each student's effort, performance and social interaction. When a student completed a category at least one time during each game, a check mark was made. The following categories were scored:

- actively participates: the student is at least willing to play the game and putting forth the effort required to attempt a skill used in the activity.
- stays separated from students: separates self from those around him/her to stop interaction
- attempts a skill: attempts a skill when given the opportunity during a game
- successful at a skill: A maximum of five attempts are scored. Beyond five attempts indicates the student is fully engaged in the activity
- frustrated when attempting a skill: attempts a skill, but is either unsuccessful or the outcome was not what the student had intended. For example, kicking a soccer ball at the goal, and missing, or during baseball, a strike out at bat.
- is enthusiastic: demonstrated in positive attitude and effort

- does not want to participate: participant told the instructor he/she did not want to become actively engaged.
- interacts with students on their own team: communicates verbally or with gestures with student on own team, scored to a maximum of five. After five indicates that the student is engaging in social interaction. Observed during the game, at breaks, or after the game.
- interacts with students on the other team: communicates verbally or with gestures with students on the opposing team, scored to a maximum of five. After five indicates the student is fully engaged.
- does not interact with other students: does not interact with the other students
- confident in his/her abilities: knows exactly what is being asked of him/her and attempts a skill with best efforts. Scored to a maximum of five. Beyond five indicates the student is fully engaged.
- lacks confidence in his/her abilities: appears to be unsure of his/her ability to play the game or attempt a skill. Unsure of the rules or his/her ability to complete the required skill. Scored to a maximum of five. Beyond five indicates the student is unsure of the rules or knows he/she cannot perform the skill. For example, football has many rules. A student may not understand what his/her role is after the ball is hiked, resulting in confusion.

The activity check list was a useful tool for assessing a student's attitude and behavior when participating in an activity. The checklist was completed while observing the participants.

Matt, Mick, and Kate completed all three parts of this project. The students were observed in a regular physical education for five days, participating in five different sports. The three students then participated in a pullout adapted physical education class for ten days. Prior to any intervention a skills pre-test was administered assessing the student's current ability level. After ten days, a post-test was administered. During the ten days, the skills required in the different sports were taught, practiced, and used in a game situation during this time. The participants were again observed for five days in the same regular physical education class, competing in the same five sports.

Results

The results of this research project support other research in this area as reported in the literature. The pullout adapted physical education class improved the students' skills, however, the improvement was not drastic.

Skill Development

The students improved or remained the same in all skills with the exception of Mick, who demonstrated a decrease in his score for shooting basketball.

TABLE 1 Student performance on Skills Test

Skills Pre-Test/Post-Test	10 attempts at each skill (as a percentage of 10 attempts)					
	Mick		Matt		Kate	
	Pre	Post	Pre	Post	Pre	Post
<u>Skill</u>	%	%	%	%	%	%
Basketball Shooting	20	10	30	40	0	20
Basketball Dribbling	0	0	100	100	40	50
Football Passing	0	10	90	100	20	30

Volleyball Serving	30	40	80	90	30	40
Volleyball Bumping	30	50	80	100	60	70
Badminton Serving	0	0	20	50	60	60
Badminton Racket Perf.	0	0	100	100	100	100
Soccer Kick	20	50	60	80	60	80
Soccer Dribbling	0	0	100	100	70	100
Baseball Swing	30	90	100	100	50	80
Baseball Hitting	20	30	90	90	50	60

Active

Active participation did not change much. Before the pullout class, Kate did not actively participate during any of the five days. During the pullout class, she actively participated four of the five days and would not actively participate in football during the pullout class. Kate would not actively participate during the initial observation in the regular physical education class, or the final observation in the regular physical education class. Kate does not like to perform in front of a large group of people.

Matt actively participated two of five days during the initial observation, five of five days during the pullout class, and five of five days after the pullout class. Matt would not actively participate in badminton and football in the regular physical education class before the pullout class. Matt does not enjoy playing badminton, and did not understand the rules to football.

Social interaction improved drastically during the pullout class. Kate did not interact at all during the five days before the pullout class or the five days the after the

pullout class. She did interact with the students every day in the pullout class. The same was true for Matt.

Mick did not interact at all during the five days before the pullout class, or the five days after the after pullout class. He did interact two of the five days during the pullout class, and did not interact at all in the football or the soccer games.

Specifically, drastic changes were noted during the pullout class in the category 'Stays Separated From Students.' Before and after the pullout class, Kate, Mick, and Matt stayed separate from the other students, on all five days. During the pullout class, Kate stayed separate from the rest of the students two of the five days, specifically during the football and soccer game.

The teaching and practicing of skills used in the sports observed did help each student to improve his/her skill level. The improvement in skill level did not have an effect on the participants' desire to socially interact with the rest of their peers in the regular physical education class.

Discussions, Recommendations and Conclusions

The results of this study indicate that an adapted physical education class was beneficial for the three participants in this study.

Active

During the regular physical education class, Mick actively participated every day. Mick enjoys being active and is not afraid to perform in front of an audience. Matt actively participated sparingly two of the five days during the regular physical education class before the pullout class. After the pullout class Matt actively participated all five days. Learning how to play the individual sports helped Matt to want to participate. Kate

would not actively participate in either of the regular physical education observations. She did participate four of the five days during the pullout adapted physical education class. Kate would not play football.

Skill Development

Overall, the results of the skills tests are the most promising. Matt and Kate improved or remained the same in all of the skills assessed on the pre-test and the post-test. Mick's skill level improved or remained the same in all areas with the exception of the basketball shooting skill.

One possible reason for the more positive results during the adapted physical education class (APE) class may be due to the small number of students enrolled in the class. Fewer students provide the opportunity for one-on-one instruction. For example when playing indoor baseball in the regular physical education class students are only given two or three opportunities to stand at the plate and hit the ball. This can be discouraging. In the adapted physical education class, all the students were given at least five or more times at bat.

Social Interaction

The results indicate that social interaction greatly increased during the adapted physical education (APE) class. All of the students in the class were sociable, and demonstrates the students will interact with each other if given the opportunity. After asking Matt why he thinks he was more sociable during the (APE) class he replied "I know everybody here. I don't know a lot of the kids in the rest in the school." The participants also appeared to be less intimidated in the APE class. It is possible that the absence of a large number of students provided an atmosphere of social acceptance.

However, social interaction during the general PE class did not improve. This may be due to the students not feeling comfortable enough in class to venture out and meet new friends.

Limitations of the Study

The study demonstrated that additional instruction and practice did benefit students with multiple disabilities. For the most part, all three students improved their skill levels. However, some of the skills proved to be hard to measure. Specifically, badminton racket performance was difficult to judge. The rule used to indicate success was simple. If the student held the racket in a manner that made it possible to hit the shuttlecock, they were given credit.

Baseball swing was another skill that was difficult to measure. A proper swing required the participant to hold the bat with the dominant hand on top, keeping the bat level throughout the swing. Even with adaptations, this was not always possible. In the end, the student was given credit for swinging the bat.

Volleyball bumping was also a difficult skill to judge. The correct method requires the hands to be locked together with the arms full extended. The student bumps the volleyball using the wrist area of the arms. The students were not always able to lock their hands, so they were given credit for making contact with the ball.

Recommendations

Regular physical education teachers must take the time to get to know the students identified for special services enrolled in his/her class, this includes reviewing the IEP. The more the regular physical education knows about his/her students the better he/she will be able to implement any needed adaptations.

The adapted physical education teacher is a valuable resource. Students who are not able to be served in the regular physical education class can have his/her needs met in a pullout adapted physical education class. The goal is to prepare the student for enrollment in the regular physical education class.

For the most part, students identified with special needs are enrolled in the regular physical education class. Many times he/she does not have support from the special education staff during PE. The student is on his/her own to complete the requirements of the class. Unless the school system offers an adapted physical education program, the only way he/she can meet the physical education requirements to graduate is in the regular physical education class.

Finding ways to promote active participation in physical education should be researched. Different activities need to be explored. Activities that can be adapted to meet the needs of all students in the class are a step forward in promoting activity.

Another method for completing this project could be to use the buddy approach. The student identified for special needs services would be assigned a peer in the regular physical education class. The peer buddy could help to promote active participation and social interaction in the regular physical education class. This same peer could help out in the pullout adapted physical education class.

Conclusion

The observations indicate that the participants involved in this study would not interact with the peers in the regular physical education class. During the pullout adapted physical education class, two of the three participants interacted with the other students

each day. Mick did not interact during games that are highly active such as football and soccer.

Active participation increased for two out of three participants during the pullout adapted physical education class. The participants seemed to be at ease and enjoying themselves. Mick actively participated in all activities in each observation category. He always gives his best effort no matter the sport being played.

The three participants' skill levels increased as a result of the one-on-one instruction they received. Mick's score went down by one basket during the foul shooting skills test. Skill instruction does increase an individual's ability to perform skill related to the five sports used in this study.

Increasing a student's skill level allows the individual to participate in organized games and activities. An area of interest should be in finding different methods to increase the participation of students identified for special needs services desire to want to participate. By actively participating, the student may find a hidden talent or skill. Finding this hidden talent may lead to more opportunities for social interaction.

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Appendices

Appendix A

Skills Pre-Test 10 attempts at each skill

	Correct	Incorrect	%
Basketball Shooting			
Basketball Dribbling			
Football Passing			
Volleyball Serving			
Volleyball Bumping			
Badminton Serving			
Badminton Racket Performance			
Soccer Kick			
Soccer Dribbling			
Baseball Swing			
Baseball Hitting			

Appendix B

Skills Post-Test 10 attempts at each skill

	Correct	Incorrect	%	Improvement
Basketball Shooting				
Basketball Dribbling				
Football Passing				
Volleyball Serving				
Volleyball Bumping				
Badminton Serving				
Badminton Racket Performance				
Soccer Kick				
Soccer Dribbling				
Baseball Swing				
Baseball Hitting				

Appendix C

Activity Checklist

	BAD	BSB	FTB	VLB	SCR
Actively Participates					
Stays Separated From students					
Attempts a Skill					
Successful at A skill					
Frustrated a After attempting A skill					
Enthusiastic					
Does not want To participate					
Interacts with Teammates					
Interacts with Opposing team					
Does not Interact					
Confident					
Lacks Confidence					