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The construction and validation of two profiles to predict success in the Special Olympics Unified Sports Softball Program

Johnson-Freeman, Gina Lee, Ph.D.
The Ohio State University, 1991
THE CONSTRUCTION AND VALIDATION OF TWO PROFILES
TO PREDICT SUCCESS IN THE SPECIAL OLYMPICS
UNIFIED SPORTS SOFTBALL PROGRAM

DISSERTATION
Presented in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in the Graduate
School of The Ohio State University

By
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1991

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Advisor
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Dedicated To Eunice Kennedy Shriver
For Her Vision and Dedication
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Fitness for all - including special populations. The National Intramural, Recreation and Sport Journal.

The rights of individuals with disabilities to participate in recreational sports. The National Intramural, Recreation and Sport Journal.

FIELDS OF STUDY

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CHAPTER I
INTRODUCTION

Introduction

The United States' constitution states that all people are created equal and that freedom in many aspects of our lives is protected by law. In this context, it therefore seems only appropriate that legal concepts such as least restrictive environment (LRE), normalization, deinstitutionalization, mainstreaming and integration become operationalized in the lives of over 35 million Americans who possess disabilities.

The concept of LRE addresses idealistic yet pragmatic solutions to enhancing the potential of individuals' lives who have disabilities. More specific to this study, PL 94-142 (The Education for All Handicapped Children Act of 1975) uses the term "least restrictive environment" to denote the cascade of educational placements that should be available for students who have disabilities within a school system (Sherrill, 1986). The least restrictive placement must be determined individually and settings from totally segregated to totally integrated should be available. The LRE concept attempts to ensure that each student who has a disability be educated in a setting which enhances the potential to learn to the fullest extent possible. The LRE concept derives ideas from the concepts of normalization,
originated back in the 1960's as a result of the desire to provide more humane treatment and living situations for individuals outside of the confines of the clinical atmosphere of a hospital. Deinstitutionalization was introduced in an effort to place institutionalized adults back into the community who were not necessarily appropriately placed in institutions in the first place. Group homes, common today, are one alternative in the "deinstitutionalization movement".

Mainstreaming generally refers to the movement of a student with a disability in an educational setting from a segregated setting to an integrated setting within an educational environment. On the other hand, many people consider mainstreaming simply to be education in the regular classroom. The concepts of LRE and normalization are, however, meant to be included in the mainstreaming concept (French & Jansma, 1982).

The term "integration" is utilized at the societal level as well as in education. Integration refers to placement in a more socially normal setting while also recognizing that adaptations may be necessary for successful participation. The term "integration" is often used to describe therapeutic recreation programs in the community setting which offer adaptations and nonsegregated environments so that individuals with disabilities can participate to the fullest extent possible with his/her able-bodied peers. The concept of integration is part of the normalization process and is an outcome of deinstitutionalization. The terms "mainstreaming" and "integration" are often used synonymously; the major difference lies in the setting being addressed.

Overall, and not surprisingly, there seems to be confusion in the literature and among experts with regard to the most appropriate term to utilize and the definition of this term. In fact, some think that perhaps all of these semantic issues should be disregarded and services for students with disabilities should be the sole focus.
For the purpose of this study the term "least restrictive environment" will be utilized to denote the cascade of services needed to provide each individual the opportunity to participate to reach his/her fullest potential whether in school or in community environments. Also, the concept of LRE will encompass the principles which derive from normalization, deinstitutionalization, mainstreaming and integration. With reference to this study, LRE usage in adapted physical activity will be discussed in relation to four areas: 1) physical education, 2) recreation, 3) sport, and 4) Special Olympics Programs. The actual research questions posited in this study will address the specific area of sport.

Physical Education

According to PL 94-142, each student who is labeled handicapped should be provided with an individualized educational plan (IEP) which is carried out in the least restrictive educational environment. The fact that physical education is mandated as an instructional area in this law adds some assurance to compliance with this mandate for physical educators.

The physical education LRE involves a cascade of services. It could range from full integration, to regular physical education with adaptations, to separate adapted physical education in a residential or day school exclusively for students with a disability (Sherrill, 1986). It also could be viewed as a continuum of activities ranging from individual activities such as weight training and swimming, to large group activities such as regular or modified competitive games or sports (Decker, 1988).

Recreation

Although the literature relating to the least restrictive environment for individuals with disabilities in recreation is very
limited, there is recognition by the National Therapeutic Recreation Society (NTRS), a branch of the National Recreation and Parks Association, about the importance of the least restrictive environment concept. In its philosophical position statement, adopted May 1982, NTRS identifies three service areas in the Leisure Ability Model: 1) therapy, 2) leisure education, and 3) recreation participation (Shivers & Fait, 1985). The later two services, leisure education and recreation participation, when provided in the community or clinical setting should be conducted in the least restrictive environment (Peterson & Gunn, 1984). As with adapted physical education, some adapted recreation and therapeutic recreation programs also utilize a cascade of services.

Howe-Murphy and Charboneau (1979) describe four phases that clients move through in the "Humanistic Mainstreaming Continuum".

Phase I = therapeutic or specialized services in a clinical setting,
Phase II = specialized services in community settings,
Phase III = partially integrated services in community settings, and
Phase IV = fully integrated services in community settings along with full participation in settings of one's choice regardless of presence or absence of disability.

Sport

According to the Committee on the Rehabilitation and Resettlement of the Disabled of the Council of Europe, sport could be an important social integrator of people with disabilities (Nixon, 1989). His conclusion also suggests that integration in leisure and recreational sport would be more easily achieved when compared to integration in competitive sport. Related to that concept, Labanowich (1988) suggests that the "institutionalization" of sport has perpetuated the segregation
of sport for athletes who are disabled. He recommends that implementing
a noncategorical approach to the sport movement for individuals with
disabilities is necessary if we expect to integrate sport. Labanowich
(1988) goes further to suggest that the integration of sport could take
place in two ways. The first is within the governing body of the able-
bodied sport, with both disabled and nondisabled athletes participating
without rule modifications and no distinctions made regarding whether
the eligible participant is disabled. The second is to integrate sport
for the disabled into a sport federation in which a distinction is made
between athletes who are nondisabled and disabled. In his second
suggestion, rule modifications are made to allow the individual who is
disabled to participate separately and this modification is endorsed by
the governing body.

Also, Jansma & Gayle (1984) offer a cascade of least restrictive
sport involvement which describes areas of athletics which are
progressively less restrictive. The continuum they discuss ranges from
most restrictive Intramural Athletics (segregated), to least restrictive
Special Athletics (mainstreamed). This cascade of services categorizes
the various opportunities in the area of sport and athletic
describe a similar version within a continuum of least restrictive
extracurricular settings; ten levels of participation ranging from most
restrictive noncompetitive leisure time (segregated) to special
athletics (integrated).

Special Olympics

In 1968, Eunice Kennedy Shriver, founder of Special Olympics Inc.
(SOI), spearheaded the first International Special Olympics Games at
Soldier Field in Chicago. Prior to Mrs. Shriver's influence, community
recreation and sport competition for individuals labeled mentally
retarded was literally nonexistent (Natalini, 1988). Today SOI is the
largest worldwide provider of sport opportunities for individuals labeled mentally retarded (Gibbons & Bushakra, 1989). Approximately one million individuals in the United States participate at some level in Special Olympics. With the formal partnership that has been established by SOI and the National Parks and Recreation Association, it is hoped that in a four-year active outreach campaign called "Join the World of Winners" there will be two million Special Olympians (Natalini, 1988).

SOI has not existed the past twenty years without some criticism and controversy. Brickey (1984) mentions a few of those criticisms:

1) He notes that there has been little research validating the claims that SOI makes.
2) He claims that publicity tends to be patronizing and portrays the athletes in the "eternal child role".
3) SOI teams tend to be transported and often congregate in large groups which reduces their ability to interact with society, and
4) Many Special Olympians who are labeled mildly mentally retarded could be mainstreamed given proper training.

In argument for the efforts of Special Olympics Inc., French and Jansma (1982) mention that the structure of Special Olympics is such that graduated participation divisions exemplify the mainstreaming philosophy. Unlimited skill level divisions make up the competition from Division I (lowest skill level performers) to Level V (highest skill level performers). There can be up to eight age groupings for each of the Divisions.

To further address such criticisms, the Special Olympics Unified Sports Program (SOUSP) appears to be a step in the right direction toward providing sport and recreation in the least restrictive environment. Teams in the SOUSP are made up of 50% individuals who are mentally retarded and 50% individuals who are nondisabled athletes and
few rule modifications are made in an effort to keep the sport as close as possible to the able-bodied version. The Unified Sport Softball Team is made up of 7-8 athletes who are mentally retarded and 7-8 athletes who are nonmentally retarded. At any one time there must be at least 5 athletes who are mentally retarded on the playing field.

In 1986, Massachusetts Special Olympics was the first state to initiate the Unified Sports Program concept. According to Tom Songster, Director of Recreation and Sports of SOI, as of 1988-1989, 39 states have developed Unified Sport Programs in sports ranging from basketball to bowling to softball (personal communication, February 14, 1989).

Purpose of the Study

Special Olympics Inc. (SOI) has provided sport and recreational experiences since 1968 for literally thousands of individuals labeled mentally retarded. As part of this, since 1986, there has been tremendous growth and interest in the Unified Sports Program within SOI. SOI's effort to provide sport and recreation experiences in the least restrictive environment has led to the popularity of this program. However, along with this growth comes the need and desire for justification and appropriate participation. To date, the SOI is lacking empirical data to support their participation assignments for athletes in the Unified Sport Program.

In light of this need and desire to appropriately match athletes with programs that meet their needs, this study attempts to develop and validate two assessment profile tools which will examine the characteristics needed by athletes who are mentally retarded to assure least restrictive participation in softball and to assist their coaches in determining the most appropriate team placement based on specific criteria. The sport of softball was selected as the focus of this study as a result of the researcher's expertise in the sport and due to the fact that the pilot study subjects were easily accessed in the Columbus,
Ohio area. It was also judged, according to the researcher and Special Olympics Inc., that the three Unified Sport Softball Programs (USSP) which participated in the Principal Study were representative of the USSP around the country. The challenge to be addressed in this research study in addition to the need for an instrument to assess skills is the disparity among professionals as to which traits should and can be used to differentiate between successful and unsuccessful athletic performance (Evans & Johnson, 1981).

Research Questions

The results of this study will be examined to answer the following primary research questions:

1. What are the specific physical-sport skills, sportsmanship/etiquette, adaptive behavior skills, and knowledge of rules that the athlete should possess to ENTER and EXIT (if athlete desires to do so) the Unified Sports Softball Program?

2. Is there a positive correlation between data from the Softball Participation Profile (Profile) and data from the Coaches' Opinion of Athlete Success Questionnaire (Questionnaire)?

3. Were valid and reliable instruments actually developed?

4. Can the data collected from both the Softball Participation Profile and the Coaches' Opinion of Athlete Success Questionnaire be interpreted to indicate predictive assumptions about the athlete's success in the Unified Sport Softball Program?

Assumptions of the Study

1. Athletes in the Unified Sports Softball Program are competing at their present Level as a result of exemplary performance at the Special Olympics Level.

2. The Unified Sports Program coaches collect data such as batting average, RBI's, and percentage of time in game.

3. The assessment tools, once validated, will measure pertinent characteristics relative to achieving success in the Unified Sports Softball Program.
Limitations of the Study

1. This study is limited to 100 males ages 20-45 who are labeled mentally retarded and will be participating in the 1990 Unified Sports Softball Program.

2. This study is limited to specific sport skills of softball, sportsmanship/etiquette, adaptive behavior skills, and knowledge of rules.

3. This study is limited to athletes participating in the Special Olympics Unified Sports Softball Program in three cities: Boston, Massachusetts; Indianapolis, Indiana; and New Iberia, Louisiana.

4. The bias that might effect the coaches rating of an athlete due to emotional attachments between the athlete and coach.

5. The bias that a coach might have regarding the underestimation of a mentally retarded athlete's skill level, especially if compared to his/her nonmentally retarded athletes.

6. The time frame that subjects were tested on Subsection I varied; before the game, after the game or during practice, this change in testing time may have influenced the results.

Major Definitions

Coaches' Opinion of Athlete Success Questionnaire (Questionnaire) - An assessment tool developed to indicate the coaches' opinions regarding the skills and behaviors of their softball athletes who are mentally retarded and playing in the Unified Sport Softball Program.

Least Restrictive Environment - Section 612 of Public Law 94-142 states that to the maximum extent appropriate, children with disabilities should be educated with children who are not disabled and that special classes, separate schooling, or other removal of the child with a disability from the regular education environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (Appenzeller, 1983).

Mental Retardation - Significant subaverage general intellectual functioning which exists concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects educational performance (Grossman, 1983).

Softball Participation Profile (Profile) - An assessment tool developed to measure characteristics needed to be successful in the Unified Sport Softball Program.

Special Olympics Unified Sports Program - A sports program that combines athletes labeled mentally retarded (Special Olympic Athletes) and those nondisabled (Special Partners) on teams that compete against other Unified Sport Teams.

Special Olympics Unified Sports Team - A team comprised of a proportionate number of Special Athletes and Partners.
CHAPTER II
REVIEW OF RELATED LITERATURE

In this chapter, a review of literature relevant to this study is discussed. The review is divided into three sections. The first section summarizes selected research in physical education related to individuals who are mentally retarded, mainstreaming in physical education as well as the regular classroom, and other issues related to mainstreaming in physical education. Section two addresses the area of recreation. This section stresses integration in recreation especially for the individual who is mentally retarded. Section three begins with a discussion of sport, including current issues and research in the area of competition for individuals with disabilities. Section three then highlights the Special Olympics Program with a focus on related research studies, the international scene and the Unified Sport Program.

Physical Education
Research in the psychomotor performance of individuals who are mentally retarded

Since the 1950's, studies have indicated that individuals who are mentally retarded fall behind when comparing their physical fitness to that of nondisabled peers and that individuals who are moderately to profoundly mentally retarded are significantly less fit than those individuals who are mildly mentally retarded (Campbell, 1973; Decker, 1986; Fernhall & Tymeson 1988; Francis & Rarick, 1959; Howe, 1959; Rarick, Widdop, & Broadhead, 1970; Sherrill, 1986). However, studies also indicate that significant gains can be achieved in physical fitness
even for individuals who are severely to profoundly mentally retarded (Combs, 1986; Jansma, Ersing, McCubbin, 1986). This is the case even though there is some discrepancy regarding the most appropriate tests to administer to determine the physical fitness of individuals who are mentally retarded. In a study by Cressler, Lavay, and Giese (1988), the researchers found that the tests which were most reliable were the Balke Ware Treadmill Test ($R=.93$) and the Canadian Step Test ($R=.95$). The results were based on a group of seventeen adults who were 35 years old and ranged from mildly to moderately mentally retarded. Fernhall and Tymeson (1988) measured cardiovascular endurance of adults who were mildly mentally retarded by administering the 1.5-mile run and the 300-yard run. Results of this study indicate that these adults demonstrated 25-35% lower VO$_2$ max compared to nondisabled adults and that the 300-yard run was not a valid indicator of cardiovascular fitness for this population. Pitetti, Fernandez, Pizarro, and Stubbs (1988) conducted a study to assess the aerobic capacity, forearm strength and percent body fat in individuals who are mentally retarded. The Schwinn Air-Dyne ergometer was utilized to indicate a submaximal cardiovascular fitness level. The hand dynamometer was used to predict forearm strength, and the skinfold caliper was the tool which was utilized to measure body fat composition. Their results indicated that the three testing methods were accurate indicators of the three components of physical fitness.

In a study by Pizarro (1990) the reliability and the suitability of the Health Related Fitness Test for Mainstreamed Educable and Handicapped Adolescents was tested (Pizarro, 1990). It was found that three of the four sub-tests were reliable and suitable: modified sit-up test, sit and reach, and tricep skinfold. The 9 minute distance run and the 880 yard run were both found to be inappropriate tests of aerobic fitness for this group. It is apparent that further research on cardiovascular fitness tests for individuals who are mentally retarded needs to be conducted toward the end of more reliable, valid and suitable methods of
Some studies also indicate that motor performance may be delayed when comparing individuals who are mentally retarded to those who are nondisabled (Dobbins & Rarick, 1976; Holland, 1987; Rarick & Beuter, 1985; Robertson & Di Rocco, 1981). However, as Dobbins and Rarick (1976) and Holland (1987) indicate, a substantial portion (about 32%) of the individuals who are educable mentally retarded have motor performance ability comparable to their nondisabled peers. Thus, they suggest caution when generalizing with regard to delays of motor skill performance with individuals who are mildly mentally retarded. In support of this, studies comparing motor skills of individuals who are mildly mentally retarded and nondisabled (matched on mental age) indicate that the groups performed similarly on tests of motor skills (Porretta, 1985; Rarick, Widdop, & Broadhead, 1970). Yet, in contrast, others agree that even individuals who are considered to be educable mentally retarded lag well behind in motor development when compared to their nondisabled peers (Bouffard, 1990; Frith & Frith, 1974; Rarick, 1973). However, even given these mixed research results, it is recognized that individuals who are mentally retarded can make substantial gains in motor proficiency in short periods of time if they obtain appropriate and adequate instruction (Rarick, 1973).

A related question of whether cognitive level dictates the degree of motor development delay also has been the topic of interest in the literature. Some researchers report that lower intellectual functioning correlates highly with lower motor development functioning (Dobbins & Rarick, 1976; Liese, & Lerch, 1970; Londeree & Johnson, 1974; Rarick, 1973; Sherrill, 1986). But the question remains: Is such a delay due to lower intellectual functioning or due to some other factor or factors? Further, according to Rarick (1973), research findings indicate that both nature and nurture play a role in the motor development delays of individuals who are mentally retarded. Bouffard (1990), alternately,
argues that problems in movement skill development are related to five specific sources deriving from cognitive science which include: 1) deficiencies in the knowledge base or lack of access to it, 2) lack of spontaneous use of strategies, 3) inadequate metacognitive knowledge and understanding, 4) lack of executive control, and 5) inadequate motivation and practice. Bouffard recommends that instruction in any of these five areas should lead to better problem resolution abilities and increased facilitation of integration for the individual who is educable mentally retarded.

Research related to mainstreaming in physical education

In this section research related to mainstreaming in physical education is addressed. The areas discussed include social and emotional skills of the individual who is mentally retarded, motor skills, Academic Learning Time, least restrictive environment and placement issues, and problems related to research in this overall topical area.

Studies which measure the socialization of individuals who are mentally retarded in a mainstreamed physical education setting yield mixed results. Some research suggests that mainstreaming can be a deterrent to social interaction (Bak & Sipertstein, 1987; Beuter, 1984; Knapczyk, 1989; Titus & Watkinson, 1987), while other research supports the claim that mainstreaming can enhance social interaction of mainstreamed students (Karper & Martinek, 1985; Ray, 1985). Beuter (1984) evaluated the social behaviors and interactions of 25 individuals who were classified as trainable mentally retarded and who were integrated with intellectually normal students in a motor instruction program. Her findings indicate that while the motor performance of this group increased, the social interaction decreased. Similarly, Titus and Watkinson (1987) found that the activity participation and social interaction did not increase in the mainstreamed setting compared to a segregated setting. However, they did discover that as a result of the
interaction with nondisabled peers in the mainstreamed setting, the students' teachers did notice that the students who were mentally retarded displayed new play behaviors which were not previously demonstrated. This discovery supports the peer modeling concept associated with mainstreaming.

Ray (1985) discusses the problem of previous sociometric research which focuses on the social acceptance of students who are mentally retarded in a mainstreamed physical education setting. She states that these ratings rely on stated perceptions of peers and they may not be reflective of actual behavioral interactions. Ray's study utilized three forms of measurement: a teacher rating instrument, a sociometric instrument and direct observation. The first two methods of measuring social interaction supported the literature which claims that students who are mentally retarded are less likely to be accepted by their nondisabled peers. However, the third method of measurement, direct observation, revealed that students who were mentally retarded were not observed to be different in actual social interactions when compared to their nondisabled peers. Ray indicates that more emphasis should be placed on the perceptions of teachers and nondisabled students rather than changing the social skills of the student who is mentally retarded.

The socio-emotional effect of mainstreaming in physical education was studied to demonstrate that mainstreaming, in and of itself, may have a positive effect on the self-concept of the student who is mentally retarded. As a result of their study, Karper and Martinek (1985) suggest that teachers should be aware that their expectations related to both the student who is mentally retarded and the nondisabled student have a tremendous impact on the social environment of the class. They also suggest that this environment may contribute to how students judge their own worth which may affect their learning and performance.

Aside from the social-emotional enhancement of students who are mentally retarded, researchers have uncovered other instructional
related aspects which warrant continuation of research related to the mainstreaming concept in physical education. According to Dunn (1987), those aspects should also include such areas as level of performance and Academic Learning Time.

Karper and Martinek (1985) conducted a study which indicated that there were no significant differences in motor performance between students who range from mildly to moderately mentally retarded in an integrated setting and nondisabled peers. Further, Rarick and Beuter (1989) identified comparisons between intelligence test scores and motor performance score differences between individuals who are trainable mentally retarded and their nondisabled peers in a mainstream setting. They suggest that the difference in the fundamental motor skill level versus the intelligence level is much less. The standard deviation for motor skill difference from the norm was .91 for males and 1.55 for females while the standard deviation of 2.0 is the minimum regarding intelligence level when comparing individuals who are mentally retarded to nondisabled peers. An additional outcome of this study revealed that the gain in motor performance of the integrated group exceeded that of the nonintegrated group without adversely affecting the motor performance of nondisabled peers. In addition, Beuter (1983) studied the effects of mainstreaming on motor performance of individuals who were mentally retarded and intellectually normal peers. The results of her study indicate that those individuals classified as trainable mentally retarded and integrated, showed significantly greater gains than those participating in segregated programs. Along similar lines, Rarick and McQuillan (1981) studied three motor skills (standing long jump, softball throw, and 20 yard dash) of individuals who were trainable mentally retarded and compared groups of integrated with nonintegrated individuals to determine differences or likenesses. This study disclosed that there was no significant difference when the setting was isolated as a factor, however, there were significant
differences in gain scores in favor of the integrated setting on two skills (standing long jump and softball throw). These studies lend support to the mainstreaming concept in physical education when an individualized approach to instruction is adopted (Rarick & McQuillan 1981).

The Academic Learning Time–Physical Education (ALT–PE) Model also was studied in the mainstream setting in an effort to determine whether this setting differed from the segregated setting with regard to individualized instruction, teacher behavior and classroom processes (Aufderheide, Knowles, & McKenzie, 1981; Miller, 1985; Vogler, Mars, Darst, & Cusimano, 1990). Aufderheide, Knowles and McKenzie (1981) compared 60 nondisabled students and 60 students who were mentally retarded with the purpose of determining "how" to mainstream effectively. Half of the students were selected from classes where teachers were proponents of individualized instruction and the other half from teachers who were not proponents of individualized instruction. The ALT–PE Model was utilized to assess the teacher-student relationship. This Model involves three main components: allocated time, engaged time and difficulty of the task in which the student is engaged (Seidentop, Birdwell, & Metzler, 1979). The data collected suggest that both groups of students had an equal opportunity to learn, therefore, the concept for mainstreaming was supported. The results also suggest that those students who were provided individualized instruction had a greater amount of ALT than the other group of students. Thus, support was established for utilizing individualized instruction in the mainstreamed setting. Miller (1985) analyzed teacher behaviors using the ALT–PE Model in three settings: regular physical education, mainstreamed physical education, and adapted physical education. Her results indicated that students in regular (18.8%) and mainstreamed (15.5%) physical education were engaged in motor appropriate or ALT–PE more often than students in the adapted
physical education (11.6%) setting. However, no overall statistical significance on student behaviors was demonstrated with regard to level of motor proficiency or with respect to type of disability. Vogler, Mars, Darst, & Cusimano (1990) also utilized ALT-PE observation practices to study 30 individuals who were mentally retarded in the mainstreamed setting. Their results indicated that on the basis of "academic content" and emotional "climate of the class", the mainstreamed environment was a good context for "effective teaching".

On another front, adapted physical education standards and factors related to student placements in least restrictive environment (LRE) continua were explored in a national study entitled "Project LRE-PE" conducted by Jansma and Decker (1990). In this study, the least restrictive environment was considered to be a totally mainstreamed environment. Surveys were administered to selected personnel in local education agencies (LEAs) at the building level, state education agencies (SEAs) and professors of adapted physical education in institutions of higher education (IHEs) throughout the country. Among the most important findings, only 48.8% of the LEAs surveyed provided any form of adapted physical education. In addition, the most widely used least restrictive environment continuum (50.7%) was not a continuum at all, but rather just placement of a student with a disability into a full-time regular physical education class in a regular school. In terms of specific placement options used, 85.5% of the schools used full-time regular class placement of students with disabilities in a regular school. On the next placement level of highest use, only 27.9% of the LEAs surveyed used a part-time adapted physical education fixed schedule placement in a regular school. With reference to placement standards for a student's entry into or exit out of such physical education placement levels, Public Law 94-142 does not mandate such standards. The Project's personnel, therefore, without too much surprise, found that most SEAs and LEAs have not developed such
standards. On the other hand, the LEA (building level) and IHE respondents gave considerable input in the area of placement factors. Based on their data, Project LRE-PE personnel recommended the following placement factors for priority initial consideration when school personnel place a student with a disability into a physical education class: motor ability test scores, developmental scale scores, reaching IEP objectives, special education teacher recommendation, regular physical educator recommendation, activity offering, classroom physical accessibility, safety considerations, and availability of qualified regular physical education personnel. These were derived from 37 total factors studied in this major research thrust.

Jansma and Decker (1990) suggest that the question of LRE-PE placement needs further study to provide information and alternatives for our Nation's schools. The LRE/PE Placement Schema (see Figure 1) was, therefore, introduced as an alternate approach and as a potentially researchable model related to the placement of students with disabilities into the most advantageous LRE/PE classes. The schema is based on four basic components of physical education LRE placement: class orientation, school setting, type of primary instructor, and assistive personnel. These four components are viewed in light of multiple relevant placement factors. By selecting the best option(s) in each component, when the individual student's needs are kept in mind, physical education LRE placement may be addressed more appropriately.

To compliment the results of Project LRE-PE, Melagrano and Loovis (1991) report that not much has changed in terms of adapted physical education for students with disabilities as a result of survey research conducted in Ohio in 1980 and followed up in 1988. Problems include lack of understanding of the laws by teachers; teachers not being involved in the IEP process; the lack of information regarding assessment of students with disabilities; relatively rare adapted physical education programming in the schools; and students being "left
### Figure 1
Project LRE/PE Placement Schema (Jansma & Decker, 1990)

#### LRE Placement Factors
- PT/OT Availability
- Physician's Recommendation
- Scheduling Convenience
- Safety Considerations
- Equipment Availability
- Parent's Wishes
- Student's Wishes
- Administrator's Opinion
- IQ Score
- Student's Grade Level
- IEP Goals
- Skills Test Score
- Adaptive Behavior Score
- APE's Recommendation
- Availability of Qualified APE Personnel
- Physical Educator's Recommendation
- Special Educator's Recommendation
- Regular PE Availability
- Effect on Non-disabled Class Duration
- Classroom Accessibility
- Chronological Age
- Class Size
- Type of Disability
- Activity Offerings
- Class Location
- Budget
- Fitness Test Score
- Severity of Disability
- PT/OT's Recommendation
- Developmental Scale Score
- Disabled/Non-disabled Ratio
- Psychologist's Recommendation
- Socialization Level of Student
- Motor Ability Test Score

#### LRE Placement Components
- Class Orientation
  - Full-time Regular PE
  - Part-time APE
  - Full-time APE
- School Setting
  - Regular
  - Special
  - Institution
  - Hospital
  - Home
- Instructor
  - Regular PE
  - Regular Classroom
  - Special Education
  - Adapted PE
- Assistance
  - APE Consultant
  - Teacher Aide
  - Student Aide
  - Parent Aide
  - College Intern

#### Physical Education Placement
- Regular PE
- Part-time APE
- Full-time APE
- Institution
- Hospital
- Home

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[Image of the placement factors and components with a schematic representation]
out" of physical education because of the nature of their disability or functional ability or the activity chosen itself.

These studies, (Jansma & Decker, 1990; Melagrano & Loovis, 1991) paint a less than positive picture for students who have disabilities in our schools' physical education programs. Both studies indicate that, in actuality, many students are mainstreamed without consideration of many potential least restrictive environment factors and issues. Many students, in fact, are placed on the basis of limited testing and administered by an individual who has little or no background in adapted physical education. Further, when the student attends a regular physical education class, the teacher usually is lacking the knowledge and resources to teach this student in the most appropriate way. Therefore, the student remains at a disadvantage. Counterfeit mainstreaming or mainstreaming malfeasance is the result.

From a different perspective, Karper and Martinek (1985) discuss physical education mainstreaming research and summarize associated problems based on their observations and review. Their perceptions are that: 1) placement in physical education is seldom based on a child's motor ability or motor skill, 2) there is too much variance from one school to the next with regard to the number of students with disabilities in the classroom, 3) many schools and teachers have different content and context to their curriculum, 4) instrumentation that can be administered to both students with disabilities and nondisabled students is not readily available, and 5) data analysis considerations should be questioned when comparisons are made on populations where two groups have unequal numbers (disabled to nondisabled).

**Other issues related to mainstreaming in physical education**

This section includes a discussion of other critical issues and suggested solutions with regard to mainstreaming within a physical education setting. Probably the most prevalent issue in recent
literature is the dichotomy between the interpretation of the concepts "mainstreaming" and "least restrictive environment" (LRE). Lavay (1987) purports that due to the misinterpretation of LRE, the regular classroom has become a "dumping ground" for students who have disabilities. Jansma and Decker (1990) support this claim by reporting that 50.7% of the Nation’s schools provide only one option for placement into physical education for students with disabilities. That one option is placement in the full-time regular physical education classroom. To counter this, Depauw (1990) states that the future holds a place for adapted physical education consultants to assist regular physical education teachers who are attempting to practice practicing successful integration in physical education. But, the question still remains: When will our educational systems realize the importance of adapted physical education within the context of LRE and mainstreaming? In this regard, in his ten year overview on the impact of The Education for All Handicapped Children Act (PL 94-142) on adapted physical education, Churton (1987) reports that adapted physical education has not grown to the same degree as special education. He claims that when comparing the two areas proportionately, the number of teachers trained and the number of students served in adapted physical education is much lower. Melagrano and Loovis (1991) have data to support this contention.

A few remedial approaches have been suggested in adapted physical education to confront such problems. For example, Broadhead (1985) discusses two approaches when placing students with disabilities into physical education. One approach is the Paradigm to Achieve Mainstreaming (PAM) which includes multiple provisions for regular and specially designed physical education for the student with a disability in the LRE. The PAM approach takes into account the variance from one local school district to another and attempts to match the unique individualized needs of the student with the appropriate placement. The second approach is Mainstreaming by Administrative Device (MAD); this
occurs when administrators, generally out of frustration for lack of a better placement method, turn theory into practice and produce statewide mainstreaming standards. Unfortunately, the individualized approach to assessment and programming takes a "back seat" to meeting quotas for mainstreaming. Nevertheless, the MAO method of mainstreaming does offer consistency across the state which can be monitored more effectively.

The affective domain is another aspect of the student that should be addressed, but is often overlooked when mainstreaming is a consideration (Craft, 1985). Craft states that affective goals are usually taken for granted. Frith (1981) suggests that the students who are nondisabled can impact the self-concept of the student who is disabled a great deal by their attitudes. Therefore, consideration of the attitudes of nondisabled students and teachers is of paramount importance when mainstreaming students who are mentally retarded (Frith & Mitchell, 1981; Davis, Woolley, & French, 1986; Altman & Lewis, 1990; Budoff & Gottlieb, 1976). Altman and Lewis (1990) conducted a study to compare the social judgments of individuals who are mentally retarded in an integrated and segregated classroom setting. Their results indicated that the mainstreamed students held more positive attitudes toward their peers who were mentally retarded and peers who were nondisabled than the students who were mentally retarded in a segregated setting. This study also compared students who are mentally retarded at various age groups. Results indicated that elementary aged students who were mentally retarded showed more negative attitudes toward their peers who were mentally retarded than did the group of junior high school students who were mentally retarded. Another interesting factor related to the results of this study is the fact that junior high students who were mentally retarded showed a social preference for nondisabled peers, but the same preference was not true with the elementary aged group who were mentally retarded.
A study conducted by Budoff and Gottlieb (1976), compared the academic, personal and social growth of students (Educable Mentally Retarded-EMR) in a special classroom to students who were EMR in a regular classroom. After one school year, the students who were integrated were said to be more internally controlled, displayed more positive attitudes toward school and were more reflective in their behavior compared to the students in the specialized setting. In a study by Bak and Siperstein (1987), children who were mentally retarded and nondisabled were introduced to a bean bag toss game. After a couple of games, students were allowed to select their partners. The purpose of this study was to determine the attitudes of children (nondisabled) toward their peers who were mentally retarded. The study revealed that competence is a factor with regard to social behaviors. Nondisabled peers chose the students who were mentally retarded and the best player (most competent). But, this competence did not change the nondisabled students' attitudes toward individuals who were mentally retarded. This result suggests that competence of the student who is mentally retarded in and of itself will not be enough to allow the student who is mentally retarded to be viewed as positively in an overall sense by a nondisabled peer. This has very negative social ramifications for students who are mentally retarded because it is unlikely that they will be more competent than their peers who are nondisabled in most activities (Bak & Siperstein, 1987). The theory of reasoned action was examined in a study that looked at the relationship between attitudes toward becoming a peer tutor for a student with disabilities and actually volunteering to become a peer tutor (Fortini, 1987). The results have implications for intervention directed at peer tutoring by nondisabled students as an effective way of developing social and academic skills for students with disabilities.

Teacher's attitudes toward students with disabilities were studied by McVoy, Nordquist and Cunningham (1984). Three components of
mainstreaming were examined by 15 regular and 15 special education teachers from the primary grade level: characteristics of the student, characteristics of the teacher, and characteristics of the setting. The regular classroom teachers' judgments of the child who was mentally retarded depended both on characteristics of the child and the integration ratio in the free play activity. The special education teachers' judgments were influenced by the characteristics of the child but not by the integration ratio. This study suggests that students who are mentally retarded are perceived more favorably by teachers when they are placed in an integrated setting.

As a solution to enhancing attitudinal awareness of nondisabled students and teachers, Davis, Wooley, and French (1986) discuss the concept of reverse mainstreaming prior to mainstreaming in an effort to prepare teachers and nondisabled students for mainstreaming which will hopefully influence a positive attitude toward individuals who are disabled. Some ideas cited in the literature for activities include discussion of sport for individuals who are disabled, showing videos, and allowing voluntary participation in a unit of sport for disabled individuals by the nondisabled students (Davis, Wooley, & French, 1986; French & Henderson, 1984).

To conclude, an important philosophical issue related to the integration of individuals with disabilities is addressed by Sherrill (1985). She discusses an alternate rationale, beyond compliance with federal legislation, for mainstreaming. She states that college graduates should be functioning at Level 6 of Kohlberg's Theory (Kohlberg, 1984); this is the highest logical and moral level. At this level, reasoning for mainstreaming should be based on personal conscience rather than the mandates of law (Sherrill, 1985). She discusses this concept from three perspectives: pragmatism, idealism and realism. A pragmatist views the educational setting as an extension of society and emphasis is placed on socialization and democracy as
important elements of the educational process. The idealist views the physical education curriculum as a means of providing for the full development of the individual and the realization of an ideal society (Davis, 1963). Sherrill states that in the minds of the idealist, students with disabilities do not exist or they are taught by others. The idealist does view mainstreaming as good and as a move to upgrade the quality of life. The realist is mostly concerned with facts, legislation, litigation and research findings. In the view of the realist, mainstreaming is required by law, so that is why it should occur. The student is expected to do the adapting, not the teacher. To summarize, Sherrill (1985) suggests that integration can find root in each of these major philosophical schools of thought in differing degrees.

Recreation

Least restrictive environment programming in recreation

This section addresses research studies and issues which focus on the least restrictive environment in community recreation programs for individuals who are mentally retarded. The philosophical basis of adapted recreation, which is the preferred term when speaking about recreation offerings in the community for individuals who have disabilities (Shivers & Fait, 1985), proposes that services be offered in the least restrictive environment (Peterson & Gunn, 1984). Stein (1985) discusses recreation in the mainstream. He points out that the key consideration when placing individuals with disabilities into regular programs and community activities are the needs and interests of the individual, abilities and disabilities, and strengths and weaknesses of each participant. He emphasizes that the individual "must reign supreme", not the curriculum. According to Stein (1985), the goal is to enable each individual who has a disability to participate to a maximum degree possible at the lowest-highest effective care level; as
independently as abilities and disabilities permit.

Stanley (1979) warns that as a result of the influx of mainstreaming into community recreation, without thorough consideration there could be a "dumping" effect of individuals with disabilities into community recreation. The same concern has been addressed in the previous section relating to the physical education setting for individuals with disabilities. Stanley (1979) offers suggestions to prevent inappropriate placement of individuals with disabilities into community recreation. He suggests that an individualized approach to LRE programming which is based on assessment, goal setting and evaluation procedures be employed to adequately place and meet the needs of these citizens. Toward that end, Stanley (1979) offers a continuum of services offered by a public recreation department:

- **Level 1**: Specialized (segregated) programs which may utilize homebound programs
- **Level 2**: Combination of specialized and integrated programs
- **Level 3**: Integrated programs with supplementary leadership as well as independent participation

Leisure Assessment and Counseling are offered at each Level of service. This continuum is in place to offer the professional a guide to better address each individual's needs. Richardson, Wilson, Wetherald and Peters (1987) address other concerns when addressing the needs of individuals with disabilities in community recreation. They suggest that important components to consider include: qualified full-time staff, transportation, "mainstreaming companions", interpreters, financial assistance for the resident, minor equipment adaptations, and adequate training of regular staff and volunteers.

Research in the area of mainstreaming in the recreation setting for individuals who are mentally retarded is very sparse, but a few studies have been reported. Hamilton and Anderson (1983) studied effects of leisure activities on attitudes toward individuals with disabilities. Their findings indicate that joint participation by nondisabled and individuals with disabilities was an effective means of changing
attitudes toward people with disabilities. They also state that leisure service programmers can have a tremendous impact on the acceptance of individuals with disabilities into society by providing programs and facilities that are integrated. Edwards and Smith (1989) studied eight subjects (CA=6-8) in an integrated day camp setting. Ninety-six observations were made on each subject within a week. Their results indicated that during a two week integrated day camp experience, there was an increase of positive social interactions, even though inappropriate interactions did not decrease significantly.

Sparrow and Mayne (1990) studied the recreation patterns of persons who were labelled mildly to moderately mentally retarded (CA 18-35). Through personal interviews, the researchers inquired about the nature and location of the subjects' recreation activities. Results of their study indicate that subjects participated in home-based recreation activities only 10% more frequently than they participated in community based recreation. Negative factors that the subjects mentioned regarding lack of participation in community based recreation included: negative attitudes by society, transportation-availability problems, skill deficiencies, financial constraints, and lack of opportunity.

Aveno (1987) surveyed adults (64% of the target population in the community) who were labelled severely mentally retarded and living in different residence and community type settings. Leisure pursuits were compared between individuals from group homes and foster home residents. Their results indicated that of the 13 activities subjects were questioned about, group home residents engaged in 60% of the leisure activities significantly more often than foster home residents. This study provides information to the adapted recreation programmer regarding priority of interests in the area of leisure pursuits for the adult in the community who is labelled severely mentally retarded.

Issues were discussed in this section regarding least restrictive environment usage in community-based recreation. It is concluded that
similar trends appear in the recreation literature that appeared in the physical education literature regarding the least restrictive environment for individuals who are disabled. Some of those similarities cross over the areas of the "dumping ground effect", the need for an individualized approach to planning, qualified staff, placement standards and factors, placement continua, enhancement of independence, assessment, and the social effects of mainstreaming or integration.

Sport

Sport and competition for individuals with disabilities

Thus far, participation in physical activity for individuals who have disabilities has been discussed with regard to the schools and in community recreation. This section discusses issues and research relating to sport for individuals with disabilities. Again, similarities to the professions of adapted physical education and adapted recreation are present in the area of sport participation for individuals who are disabled.

Since 1959, more than 20 sport organizations for individuals with disabilities have evolved at the national level (DePauw, 1990). Related to this, since 1978 the United States Olympic Committee (USOC) has been mandated under the Amateur Sports Act (Public Law 95-606) to encourage athletic competition by athletes who are disabled in separate and integrated settings, when it is feasible (DePauw, 1990). The USOC's Committee on Sport for the Disabled (COSD) has specifically served as a "catalyst" for coordinating and supporting sport participation for individuals who have various disabilities.

Such changes in the sport movement for people who have disabilities have been influenced by many factors other than legislation. The Olympic, women's and youth movements have all influenced sport for athletes who have disabilities (DePauw, 1988). Research results have
also been an influential variable. DePauw (1988) describes factors based on research to consider related to sport participation for individuals with disabilities. First, she states that responses to exercise are similar when studies have compared nondisabled athletes to athletes who are disabled. Differences, when present, are related to functional muscle mass and the severity of physical impairment. Second, more similarities than differences have been found when comparing able-bodied athletes to those with disabilities with regard to psychological factors. Third, injuries to athletes with disabilities are similar to those found in able-bodied athletes (DePauw, 1988). DePauw (1990) also summarizes research findings relating to attitudes in the area of sport participation for individuals who are disabled as follows: attitudes are critical to the acceptance and inclusion of athletes with disabilities, attitudes can affect the programming, attitudes can be changed through training and experience, and integrated participation can benefit the nondisabled as well as the athlete who is disabled. In this connection, Appenzeller (1983) suggests that society's negative attitudes are as much of a deterrent for athletes who are disabled as the still existing architectural barriers remaining in our society. Brasile (1990) supports inclusion of nondisabled persons into wheelchair sports to allow appreciation for skills, encouragement of socialization during the activity, and in order to better focus on ability rather than disability. He also stresses the need for new ideas and techniques for the enhancement of attitudes and awareness of individuals in sport who possess disabilities.

As another potential remedy, Brasile (1990) presents a continuum approach to involvement in wheelchair sports. During the rehabilitation phase an individual might be more suited for participation in segregated sports such as those provided by the National Wheelchair Athletic Association. But, following the rehabilitation phase, participation should move to a more integrated setting. As examples, sports such as
tennis, racquetball or archery may be performed alongside able-bodied athletes. Jansma and Gayle (1984) offer a more elaborate continuum which illustrates a longitudinal education and training model for the athlete who possesses a disability. The formal sport participation stages are listed as most restrictive (#1) to least restrictive (#8):

1. intramural athletics (segregated)
2. intramural athletics (mainstreamed)
3. extramural athletics (segregated)
4. extramural athletics (mainstreamed)
5. interscholastic athletics (segregated)
6. special athletics (segregated)
7. interscholastic athletics (mainstreamed)
8. special athletics (mainstreamed)

Winnick (1987) proposes another continuum of sport participation for individuals with disabilities:

1. regular sport
2. regular sport with accommodations
3. regular and adapted sport
4. adapted sport integrated
5. adapted sport segregated

The conceptual framework of this model is based upon the degree of integration and sport type. Regular sport (stage #1) can be illustrated by using an example such as an athlete who is mentally retarded competing on the high school track team. The most restrictive stage (#5) could be illustrated with the example of an athlete who is mentally retarded participating in Special Olympic sports (excluding Unified Sports Programs).

The prospect of integrated sport for individuals with disabilities in the future is supported in the literature (Clarke, 1986; Labanowich, 1988; Nixon, 1989). Labanowich (1988) recommends implementing a noncategorical approach to the sport movement for individuals with disabilities rather than the present "institutionalized" approach which only segregates and isolates athletes. He suggests implementing this approach in two ways. First, sport could be integrated within the national governing bodies (NGB) for the various able-bodied sports where both able-bodied and athletes who are disabled perform without rule modification and no distinctions are made regarding whether the eligible
participant is disabled. Second, rule modification could be made to allow for the individual who is disabled to participate separately and this modification is endorsed by the NGB. Labanowich believes that athletes who possess disabilities are as intent upon attaining the same benefits from sport as their peers who are nondisabled. Nixon (1989), however, cautions that "genuine" integration of sport for individuals with disabilities is not merely placing individuals with disabilities into sport. Genuine integration in sport implies that integration is unaffected by disability stigma. Athletes with disabilities should not feel pitied, scorned, inferior or even specially favored because they are disabled. Appropriate integration is a necessary component of genuine integration and appropriate integration implies that the abilities and backgrounds of participants with or without disabilities match the structural parameters of the sport situation (Nixon, 1989).

Nixon also cites three major problems related to appropriate integration in sport. First, when an impairment is less visible, an individual may try to fake normalcy. Trying to fake normalcy creates a strain when persons who are disabled are asked to perform roles that are beyond their capabilities. Second, lack of accommodation and empathy in society for individuals with disabilities is feared during integrated sport participation offerings. Third, the challenge of integrating sport calls for opportunities that match persons' performances and social abilities with the performance and interaction expectations of a situation (Nixon, 1989). Inappropriate settings may amplify differences of individuals who are able-bodied and disabled, which could detract from social integration and possibly enhance inferiority among athletes who are disabled.

Clarke (1986) discusses an even broader perspective related to the future of sport for individuals who are disabled based on a number of foundations. According to Clarke, there are five major concerns. First, at the local level, he suggests increased use of single-community
organizations for sport and recreation programs for all individuals with disabilities. This would involve those local agencies earmarking funds for that component of their program, employing program directors and utilizing a pool of qualified volunteers. Second, improved interaction is required between the national disability sport organizations and the sport NGB’s to ensure quality attention to the needs of the athletes who possess disabilities. Third, improved coordination is needed at the national level to promote equitable competition for the gifted athlete. Fourth, improved influence at the international level is needed to enhance stability in program opportunities and to promote progress toward international participation. And fifth, improved coordination is important at the national level integrating the recruitment of sport programs at the local level with the achievements of athletes with disabilities at the international level.

To summarize, this section has addressed research and issues related to the integration of sport for individuals who are disabled. As indicated, there are similarities with regard to problems and issues when comparing the fields of physical education, recreation and sport for the individual who is disabled. This includes the person who is mentally retarded.

Special Olympics International

In the 1960's Eunice Kennedy Shriver started a day camp for people who were mentally retarded in her backyard. Though many predicted that physical activity would not make a difference in the lives of individuals who were mentally retarded, Mrs. Shriver thought differently. Her vision and her insight were truly the needed ingredients to spearhead the most influential sport movement for individuals who are mentally retarded and their quest for physical activity. Following this successful endeavor, Mrs. Shriver, founder of Special Olympics Inc. (SOI), planned and implemented the first International Special Olympics Games at Soldier Field, Chicago, 1968.
Prior to her involvement, community recreation and sport competition for
individuals who were labelled mentally retarded was virtually
nonexistent (Natalini, 1988). Today, SOI in the largest worldwide
provider of sport opportunities for individuals labeled mentally
retarded (Gibbons & Bushakra, 1989). Approximately one million
individuals in the United States alone have participated in some level
of Special Olympics (Shriver, 1990). The goal of SOI is as follows:

"To help bring all persons with mental retardation into the larger
society under conditions whereby they are accepted, respected and
given the chance to become useful and productive citizens".¹

Internationally, there are over 80 countries with accredited programs
and 20 countries in the development stage (Shriver, 1990). In February,
1990, the Soviet Union joined the Special Olympic movement by
establishing Chapters in all 15 Republics and in Leningrad and Moscow
(Handicapped Sport Report, 1990). The United States offers programs in
25,000 communities within the framework of 50 Chapters, the District of
Columbia and three territories (Shriver, 1990). Special Olympics Inc.
offers year round training programs and competition in 22 Olympic
Sports. Individuals eight years or older who have cognitive delays
(I.Q. of 80 or below), significant learning or vocational problems, or
have been identified by an agency or professional as having mental
retardation can participate in Special Olympics (Shriver, 1990). The
average age of Special Olympic participants in 1979 was 19-20 years, in
1989 the average age was 27 years of age (Songster, 1989). The increase
in average age over the past 10 years can be attributed to the fact that
SOI is interested in the adult who is mentally retarded beyond the
school age years.

Divisions within Special Olympics competition are based on ability
levels. These ability levels are established based on previous
performance or preliminary heats. All of the ability level divisions
have the capability of advancing to chapter, national and international
competition.
With over 500,000 volunteers, Special Olympics Inc. conducts approximately 15,000 competitions each year in both summer and winter sports worldwide (Shriver, 1990). There are over 100,000 qualified coaches who train Special Olympians year round (Shriver, 1990). With the number of volunteers required to conduct Special Olympic activities, consideration for these voluntary contributions is essential. Therefore, recognition and appreciation are a must for all volunteers in SOP.

Special Olympics organizations are supported by funds raised from individuals, organizations, corporations, foundations, and other sources. SOI is supported by the National Governing Bodies (NGB’s) and/or International Sports Federations of each sport, represented by major sport organizations and a host of world leaders.

Research also has been conducted, with some mixed results, on the impact of participation in Special Olympics on the athletes regarding such factors as physical ability, physiological parameters, attitude, socialization and psychological makeup. Bell, Kozar and Martin (1987) compared Special Olympic participants to peers who were not involved in Special Olympics on two variables: physical skills and psychological factors. Their results indicated that both male and female Special Olympic participants showed significant gains in the softball throw and that participants in the year round program showed significant overall gains when compared to participants in the half year program. Those who participated in Special Olympics also improved significantly on psychological test scores and ratings when compared to peers who did not participate in Special Olympics (Bell, Kozar, Martin, 1987). Gibbons and Bushakra (1989) conducted a study to determine the effect of perceived competence and social acceptance by Special Olympic participants at a one and a half day Special Olympics track and field meet. This study attempted to address the nature of the psychological change in the individual who is mentally retarded as a result of Special
Olympics participation. Perceived competence was found to be associated with successful mastery attempts when the activity was challenging for the individual. In a study by Pitetti, Jackson, Stubbs, Campbell, and Battar (1988) comparisons were analyzed between Special Olympic trained individuals, individuals who were not trained by Special Olympics and untrained nondisabled adults on three physical fitness related components. The three components included cardiovascular fitness, percent body fat and blood lipid profiles. Results indicated that the intensity of the SO program was not sufficient to affect the fitness levels of the SO athletes. The study also looked at pre and post scores of athletes who participated in SO activities for 4-18 months. Results indicated that there were no significant changes in body weight, percent body fat, or cardiovascular fitness during that time period (average was 13 months). Johnson, Sundheim, and Santos (1989) conducted a study which compared coached versus uncoached athletes training for Special Olympics track and field events. They found that those athletes who were coached showed an increase in performance of about 5% improvement each week (8 weeks). The uncoached athletes showed very little improvement throughout the eight weeks. Wright and Cowden (1987) studied the cardiovascular and self-concept changes in youth who participated in a Special Olympics swim training program. Their study revealed that after a 10 week training program, the Special Olympic participants showed a significant increase in cardiovascular fitness as well as self-concept, when compared to peers who were mentally retarded and not involved in SOPs. Before and after the 10 week training, the 9 minute run/walk was utilized to measure cardiovascular fitness and the Piers and Harris Children’s Self-Concept Scale was administered to determine self-concept changes.

A major factor leading to the involvement of individuals who are mentally retarded in the Special Olympic Programs (SOP) appears to be parental support and interest (Barnes, 1987). In this regard, the
The impact that SOP has on parents has been shown to be positive (Songster, 1989). For instance, parents are able to share and communicate with other parents who have children with similar disabilities. Such research also supports the fact that families need to be informed and this, in turn, raises self-consciousness and self-concept (Songster, 1989). Special Olympic involvement by the parents also enhances their knowledge and understanding of mental retardation. Additionally, Songster (1989) indicates that parents of Special Olympians want to see their sons and daughters "win". Since skill acquisition and performance is essential to winning, importance is placed on sport training for each sport. In response to this, in 1979-80, a series of sport skill training guides were pilot tested across the country and have been implemented to assist coaches in improving skill training. Relatedly, the Motor Activities Training Program is designed to provide comprehensive motor activity and recreation for those individuals labelled severely mentally retarded (Shriver, 1990).

The effects of Special Olympics Programs on the community also has been studied to determine impact and benefits. As a result of their study, Bell, Kozar, and Martin (1987) determined that community attitudes were more positive toward individuals who are mentally retarded following implementation of a Special Olympics Program. Further, individuals in the community studied, believed that individuals who are mentally retarded can learn to live normal lives and feel that most would make good citizens. In a related study (1978-1979), there was an increase in media coverage regarding individuals who were mentally retarded when compared to communities where no Special Olympics Programs existed (Songster, 1989). Increase in media coverage can enhance the opportunity for community members to become more knowledgeable and more aware of the needs of individuals who are mentally retarded.
There have, however, been criticisms directed toward Special Olympics Inc. As one primary example of such criticism, Orelove (1982) mentions that SOPs are segregated and counter the normalization movement. He suggests that the SOI could improve their overall program by including individuals who are nondisabled and emphasize comprehensive community programs. The Unified Sport Program, developed in 1988, addresses this need.

Special Olympics Unified Sports

One of the commitments that SOI had back in 1988, was to increase opportunities for individuals who are mentally retarded and to enhance integration with their nondisabled peers (Shriver, 1990). The Unified Sports Program is a result of this commitment.

The Unified Sport Program (USP) combines peers in the community who are approximately the same age and ability level of the athletes who are mentally retarded. USP is designed to provide a new alternative for athletes who are mentally retarded, promote equality and teamwork, and serve as a transition to community sport programs. Further, 1) it challenges athletes to improve their skill, and at the same time teaches partners to understand, know and respect peers who are mentally retarded, 2) it provides a sport opportunity for individuals who are mildly mentally retarded and living in areas where there are not enough athletes to make up a Special Olympic League, 3) it increases public awareness about individuals who are mentally retarded, and, 4) it gives family members an opportunity to participate as members of Unified Sport Teams (Palaestra Staff, 1990). Presently, there are five sports which are in full implementation in USP; they are basketball, bowling, soccer, softball, and volleyball.

The secondary schools provide examples where the USP is "coming of age". In Milwaukee, Wisconsin and Harrisburg Pennsylvania, USP model programs have evolved within the schools, along with related sport partnership and partner club programs. Sport partnerships involve
athletes who are mentally retarded pairing up with athletes in the same sport who are nondisabled. USP athletes train and sometimes compete side by side with junior varsity and varsity sport teams. Partners Clubs provide an outlet for the partners to compete, recreate, and socialize. The Partners Clubs are made up of student athletes who are mentally retarded matching up with student athletes who are nondisabled. The nondisabled athlete serves as a role model, friend and confidant to the athlete who is mentally retarded. Eunice Kennedy Shriver (1990) sums up the goal of USP within the secondary schools in the following quote:

"Through the universal language of sports, America’s young people can gain the education and active integration which are the keys to accepting people with disabilities on the basis of their individuality and their substantial gifts. Together, school and Special Olympics can bring that acceptance closer to a reality."

In the 1989 Special Olympics Unified Sports Handbook, major factors are listed which are considerations for an athlete’s involvement in USP. These factors include age grouping and ability grouping. It was suggested that members of the same team and opponents should be evenly matched in both areas to accomplish the goals of Unified Sports. This handbook also mentions that an understanding of teamwork, strategy, and rules should be required to participate in Unified Sports. This dissertation focuses on the Unified Sport Softball Program. In regard to this dissertation’s stress on softball, a list of rule modifications for Unified Sport Softball are illustrated from the Special Olympics Unified Sports Handbook, as follows:

1) A team roster should have a minimum of 15 players, at least 50% of whom shall be athletes with mental retardation.

2) There shall be a minimum of five athletes with mental retardation on the field and in the batting order at all times. Any player may be substituted for so long as there are at least five athletes with mental retardation on the field and in the batting order.

3) If the extra hitter (EH) rule is used, two extra hitters, one with mental retardation and one without, shall be added to the line-up.
4) Coaches shall take appropriate measures to prevent any player from dominating the game.

5) Umpires shall warn any athlete whose play is deemed dangerous. Subsequent dangerous play by that athlete shall result in disqualification from the game. This is to ensure that a player does not create a health and safety risk for other players.

6) Coaches may be on the team roster and may play. It is recommended that coaches not play unless unusual circumstances exist. Coaches should not play if their age or team skills differ significantly from the ages and team skills of other members of the team."

Goals for Unified Sports by mid year 1991 include the following:

1- to implement Unified Sports in 40 Chapters,
2- to implement Unified Sports in 5 countries,
3- to heighten the awareness in all Special Olympic organizations of the concept of Unified Sports,
4- to include Unified Sport competition in two sports in the 1991 International Summer Special Olympics,
5- to fully implement at the International Headquarters Level the organization for Special Olympics Unified Sports, and
6- to examine other possible sports for inclusion into the list of Unified Sports offerings: team hockey, team cross-country running, doubles tennis, team cycling, relays in athletics and aquatics, and other appropriate sports.

In Tom Songster's presentation at the Ohio Special Olympics State Workshop (September, 1989) some facts were highlighted regarding these six Unified Sport Program goals. He mentioned that as of 1988 there were 35 states which had implemented USPs. At the International Special Olympics Games in Minneapolis, Minnesota in 1991, there will be, for the first time, Unified Sport competitions. He also mentioned that the other sports such as tennis (doubles) and team cross country running were being evaluated to determine whether or not they will be acceptable Unified Sport Program activities. Last, he mentioned that New Jersey Special Olympics reported great success in their bowling program; they had four Unified Sport Teams finish in four of the top five places within an able-bodied league. Results of a related survey that was conducted there indicated that some nondisabled bowlers were not aware that some of the other bowlers were, in fact, mentally retarded.
During September 1987 through April 1989, Milton Budoff conducted research on the Unified Sports Program. Dr. Budoff is the Director of the Research Institute for Education Problems, Inc. located in Cambridge, Massachusetts. During these two years, he observed Unified Sport Programs around the United States and administered surveys to participants, coaches, partners, and parents to gather information related to this program. A summary of his findings are as follows:

1) Sport skills improved substantially within the athlete who was mentally retarded but greater improvement was observed by the less skilled athletes.

2) Team sport skills of the athletes who were mentally retarded improved markedly.

3) Frequency of social contacts increased in the sport setting and there was some evidence that there was an increase in social contacts in other settings.

4) According to a pre and post season interview, an increase was reported in the positive self-esteem of athletes who were mentally retarded.

5) According to pre and post season interviews, there was a general increase in knowledge about mental retardation and a marked increase in positive attitudes toward individuals who were mentally retarded by the nondisabled players.

6) Interviews of family members of the athletes who were mentally retarded revealed strong support for the Unified Sports concept. However, there was some concern expressed by some parents regarding nondisabled athletes who were much more highly skilled and the problem with these athletes dominating play or "poaching" and safety of athletes who were mentally retarded as a result of the nondisabled player's higher skill level.

7) There was unanimous support expressed by school administrators and other school personnel in all pilot study settings.

8) There were strong reactions by local school systems, who did not have Special Olympic Programs prior to the pilot study, to the concept of recruiting athletes for the Unified Sports Program.

9) Results of the study indicated that the "star" nondisabled player had more difficulty accepting the athlete who was mentally retarded. This lends support to the importance of age and ability grouping on the Unified Sport Team.

10) The player/coach nondisabled athletes did not relate as well to athletes who were nondisabled as the coaches who were not players, too.

11) The coach needs to serve as both a coach and human relations moderator between athletes who are mentally retarded and nondisabled athletes.
12) The studies indicated that coaches affect the extent of social interaction among team members.

13) Evaluations indicated that nondisabled athletes should be encouraged to attend an educational session on mental retardation.

14) A number of nondisabled athletes indicated that they did not comprehend the number of hours that would be required to participate in the Unified Sport Program.

15) There were indications that an 8 week season was probably too short and that a 12-16 week season would allow for sufficient time for accomplishment of goals (Special Olympics International, Inc. 1989).

A meeting at Special Olympics headquarters in Washington, D.C. was held to review Budoff’s research and the results of other pilot studies. As an outcome, the group came to some conclusions which they felt were important to the future success of the USP (Auxter, 1989). First, the consensus of the group was that the athlete who is mentally retarded should be able to choose to participate in either SOP or USP. The group also agreed that there must be minimum criteria established for an individual to participate in USP so that both partners and other individuals who are mentally retarded could maximally benefit from the team sport activity. The group discussed areas of consideration with regard to criteria that should be established. First, they felt that observation of the skill of the player was important. Second, they felt that the athlete’s behavioral characteristics should be observed and at least one component of that area should be measured. Third, they concluded that actual knowledge of the rules was important to the athlete’s success in USP. And last, skill testing was discussed as a possible option to consider when developing criteria for involvement in USPs. These considerations became the basis for the dissertation herein presented.
CHAPTER III
METHODOLOGY

The purpose of this study was to construct and validate two assessment tools, 1) a Softball Participation Profile (Profile) and 2) a Coaches' Opinion of Athlete Success Questionnaire (Questionnaire). The future use of these instruments will be to assist the Special Olympic coach to more adequately assess skills of the softball athlete and also to establish the most appropriate and least restrictive setting. The first tool examined the characteristics (physical, behavioral and cognitive skills) needed by athletes who are mentally retarded to assure least restrictive participation in softball. The second tool provided information about the coach's opinion of the athlete's success and their opinion regarding the athlete's placement. Methodology information applicable to this study is presented under the following main sections: a) Research Sites, b) Subject Selection, c) Assessment Instruments, d) Research Design/Data Analysis, and e) Data Collection.

Research Sites

Three research sites were selected in the following cities: Boston, Massachusetts; New Iberia, Louisiana; and Indianapolis, Indiana. The actual location where sport skill testing took place was coordinated with the Coordinator of the respective State Unified Sport Sections of the Special Olympic Inc. Organizations. The nonmentally retarded teammates were individuals from local businesses or agencies. In most cases, the team name coincided with the business name.
Subject Selection

A total of 100 male subjects were selected from the research sites. The subjects were between the ages of 20-45 years, classified as mentally retarded and they all participated in the Unified Sport Softball Program during the 1990 season. The researcher did not have access to athlete records and therefore level of mental retardation was unknown for subjects. The athletes who were mentally retarded seemed to be evenly matched from one team to the next. Athlete consent was obtained, prior to testing, from each subject by obtaining signatures on the informed consent form located in Appendix A. Subject selection was based on availability of the athlete prior to the game or during practice on the data collection dates. Transportation for the athletes was a major factor which affected an athlete's availability for testing. Therefore, available transportation was a confounding variable related to randomness of the sample population.

Assessment Instruments

The Softball Participation Profile (Appendix B) is categorized into four areas including: 1) softball sport skills, 2) sportsmanship/etiquette, 3) adaptive behavior, and 4) knowledge of rules. The entire Profile consisted of 21 questions. The initial areas of assessment were chosen based on items similar to the Special Olympic Softball Skills Test (Special Olympics Inc., 1981) and the AAMD Adaptive Behavior Scale (Fogleman, 1975). Questions from each of these sources were modified and combined in an effort to represent the six areas initially deemed important, Softball Sport Skills, Sportsmanship/ Etiquette, Adaptive Behavior, Socialization, Activity Interests, and Knowledge of Rules. After the first expert panel review, 33 questions from the six areas were streamlined and modified down to 30 questions and five areas. The final expert panel review narrowed the tool down to four areas and 21 questions. It was judged by both
quantitative and qualitative responses that their was replication of questions and irrelevant questions that could be deleted from the first two drafts. Even though the Socialization Questions and the Activity Interest Subsections were deleted, questions from the Socialization Subsection were included in the Adaptive Behavior Subsection.

Two trained persons rated subjects on Subsection #1 (softball sport skills) as specified in the protocol at the beginning of the Profile (see Appendix B). The researcher, Gina Johnson-Freeman, was one of the two raters for Subsection #1. Her background includes experience playing competitive softball for ten years and working in the areas of recreation and adapted physical education with individuals who are mentally retarded for twelve years. Results obtained by the raters of Subsection #1 did not matter in terms of the results of the study, since she was unaware of how the coaches would rate the athletes on the Questionnaire. Therefore this study would not be researcher biased. The second rater on Subsection #1 was Nancy Swain. She possesses Certification in Therapeutic Recreation and has worked with individuals who are mentally retarded for over twelve years. She also played softball competitively for eight years. The league director or the athlete's coach rated the subject on Subsections #2-#4 of the Profile to include: sportsmanship/etiquette, adaptive behavior, and knowledge of rules. Coaches and assistant coaches, in general, lacked experience working with and/or socializing with individuals who are mentally retarded beyond their USSP experience. However, most had played softball prior to their participation in the USSP.

The Coaches' Opinion of Athlete Success Questionnaire (Appendix C), consisted of 12 questions all related to the areas of the Profile but summarized and written differently to determine the coaches' opinion of success of the athlete at the Unified Sport Softball Program level. This tool was rated by a different individual from the rater of the Profile (Subsections 2 - 4) such as the coach or assistant coach. It
also included statistical information on both the athlete's performance who is mentally retarded as well as the nonmentally retarded athlete's performance. At the end of the Questionnaire, a response listing was offered to the coach to indicate his/her opinion in regard to the most appropriate setting for the athlete (Appendix C). The questions were chosen based on their representativeness of the questions asked on the Profile.

Ratings above or below a certain established point based on the scores from both tools, will have direct implications for softball team placement (i.e., Special Olympic Softball, Unified Sport Softball or regular community softball). A criterion level for Entry into the Unified Sport Softball Program will be established once the data has been collected and analyzed. This will be further justified if both tools show a predictive validity relationship when matched.

Reliability of Tools

Reliability data was gathered during both Pilot and Principal Studies. These data were of two types: intra rater reliability and inter rater reliability. Such measures provided support for the tools themselves and for the raters who actually used the two tools.

Pilot Study - A Pilot study was conducted utilizing both instruments, the Profile and the Questionnaire, to determine, in part, the reliability of the measures. The instruments were administered to athletes who were not included in the Principal Study.

All sections of the Profile were administered on eight Columbus athletes who played in the Unified Sport Softball Program during the 1988 season. For Subsection #1, both raters viewed the Pilot Study tape and rated the eight athletes on five sport skills. The raters' results were compared to establish inter rater reliability. Subsection #1 of the Profile was rated by two trained raters through the use of video taping and their scores were compared to determine the inter rater
and intra rater reliability of Subsection #1 (see Table 1). Intra rater reliability for both raters was 95%. Inter rater reliability for the two raters was also 95%.

One coach rated six athletes on Subsections #2-#4. His assistant coach also rated the six athletes to determine inter rater reliability. All inter rater reliability measures were established by utilizing the scored - trial method (Tawney & Gast, 1984). The formula for the scored - trial method is as follows:

\[
\frac{\text{agreements}}{\text{agreements & disagreements}} \times 100 = \text{percentage of agreements}
\]

An 80% or above reliability was demonstrated on the pilot study before the raters for Subsection #1 were considered trained for the Principal Study. The reliability coefficient was 40% or above to accept the questions in the Profile for Subsections #2-#4. According to Nunnally (1978), coefficients of .4 or higher are considered acceptable when the assessment tool is "opinion based" using a Likert Scale. Two weeks after the initial rating was completed for inter rater reliability, the video tape for Subsection #1 was viewed and rated the second time by the two raters to determine intra rater reliability. To gain intra rater reliability for Subsections #2-#4, two weeks after the coach filled out the first group of Profiles on Subsections #2-#4, he filled out another set of Profiles on the same six athletes. Results were compared to analyze intra rater reliability for the tool. The acceptable reliability coefficient of at least .40 was required for all reliability measures for the tool to be accepted. Subsections #2-#4 were administered to a coach and his assistant from the 1988 season on six athletes for intra rater reliability and five athletes for inter rater reliability (refer to Table 1). Reliability coefficients are provided in Table 1 for Subsections #2-#4 of the Profile for the tool with all questions utilized, omitting Question 3.2, and omitting Question 3.2 & 2.4. This is provided because these two Questions (3.2 & 2.4) when
deleted, enhanced the validity of the tool without sacrificing its integrity. Further discussion will address the rationale for the deletion of Questions 3.2 & 2.4 in the Instrument Validity Section. As Table 1 illustrates, with all of the Questions utilized, intra rater reliability for rater #1 was 80% for six subjects. Intra rater reliability for the two raters was 51% for five subjects. When Question 3.2 was omitted, intra rater reliability remained the same, 80% for intra rater reliability increased to 56%. And, when both Question 3.2 & 2.4 were omitted, intra rater reliability increased to 88% for six subjects and inter rater reliability increased to 61% for five subjects. According to Nunnally (1978) reliability coefficients of .4 or higher are considered acceptable for Likert scale data since they are "opinion-based" data. All of the questions on Subsections #2-#4 of the Profile and all of the questions on the Questionnaire were Likert scale-scored and, therefore, "opinion-based" data.

Table 1.

Pilot Study Inter and Intra Rater Reliability for the Profile

<table>
<thead>
<tr>
<th>Subsection 1</th>
<th>Inter</th>
<th>Intra</th>
<th># of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rater #1</td>
<td>95%</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Rater #2</td>
<td>95%</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Raters #1 &amp; #2</td>
<td>95%</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Subsection 2-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rater #1</td>
<td>80%</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Raters #1 &amp; #2</td>
<td>51%</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Subsection 2-4 without Question 3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rater #1</td>
<td>80%</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Raters #1 &amp; #2</td>
<td>56%</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Subsection 2-4 without Questions 3.2 &amp; 2.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rater #1</td>
<td>88%</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Raters #1 &amp; #2</td>
<td>61%</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

Pilot Study - Questionnaire

The Questionnaire was administered to the coach of six athletes from the USSP (1988). Two weeks later the coach filled out Questionnaires on
the same six athletes to determine intra rater reliability (refer to Table 2). The overall intra rater reliability coefficient was (49%). Again, this tool was "opinion-based" using a Likert Scale, and according to Nunnally (1978) reliability coefficients of .4 or higher are considered acceptable. The assistant coach also filled out Questionnaires on five of the six athletes to provide information regarding inter rater reliability between the two coaches on five subjects; the inter rater reliability coefficient was (67%).

Table 2.

<table>
<thead>
<tr>
<th>Raters</th>
<th>Inter Rater</th>
<th>Intra Rater</th>
<th># of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 &amp; #2</td>
<td>49%</td>
<td>67%</td>
<td>6</td>
</tr>
<tr>
<td>#1</td>
<td>6%</td>
<td>67%</td>
<td>5</td>
</tr>
</tbody>
</table>

Principal Study - Five months following collection of Principal Study data, Profiles on eight subjects were completed by the league director from New Iberia and Profiles on four subjects were completed by a coach from Indianapolis to gather intra rater reliability data. Inter rater reliability data was gathered on eight athletes from New Iberia. The league director and one coach rated subjects on Subsections #2-#4.

The Questionnaire was completed by two coaches on thirteen athletes, eight from New Iberia and five from Indianapolis, who participated in the Unified Sport Softball Program three months following the Principal Study data collection of the Questionnaire. Again, the scored - trial method was utilized to establish the percent of inter rater reliability between the coaches.

Validation of Tools

Content validity was established in conjunction with the pilot study after a panel of experts responded to both instruments' adequacy of content (Kerlinger, 1986). The expert panel rated each question
according to its acceptability utilizing a quantitative rating scale
(1 - 10), see Appendix D. They also were given the opportunity to
provide comments along with advice regarding the deletion or rewording
of any question. The panel of experts (N = 14) included USSP coaches,
adapted physical educators, therapeutic recreation specialists, SOI
staff and consultants, and sport management professionals. After the
panel of experts reviewed the two instruments, feedback was analyzed and
utilized to refine the content of the instrument. At least a 70% degree of agreement was required for any Profile or Questionnaire
question to be accepted.

Construct validity was obtained by conducting a factor analysis
among the four testing areas in conjunction with the Principal Study
data collection. The statistical technique of factor analysis was
applied to the test scores, then the factors obtained were compared to the proposed components of the phenomenon (Kirkendall, Gruber, and
Johnson, 1987). This analysis identified or confirmed constructs that
had moderate to low interrelationships (Kirkendall, Gruber & Johnson,
1987). Therefore, it was possible to eliminate duplicate measurement of
the same phenomenon and to determine if one area, a cluster of areas, or
all of the areas together were best at predicting success of the athlete
(when matched to the coaches’ questionnaire responses). The correlation
between an athlete’s Profile score and the Questionnaire score was used
as a measure with which to indicate the Profile’s predictive validity in
the Principal Study. The regression equation was developed to predict
performance on one variable (Y) from another (X).

Regression Equation =  \[ Y = a + bX \]

Where  

- \[ Y \] = the variable score to be predicted,  
  (score on Questionnaire)
- \[ X \] = the variable score used to predict \[ Y \],  
  (score on Profile)
- \[ b \] = the amount of change in \[ Y \] associated with
  each unit change in \[ X \],
and \( a = \) represents the constant adjustment that must be made in order to put \( X \) and \( Y \) on the same scale, it also represents the point where the regression line intersects the \( y \)-axis, thus called the \( y \)-intercept.

In other words in the equation, \( b \) is weight and indicates the amount that the predicted \( Y \) score will increase or decrease for each corresponding change in \( X \) (Kirkendall, Gruber & Johnson, 1987). Once predictive validity is determined, the regression equation can be used to predict success in the Unified Sport Softball Program from the Softball Participation Profile Score. In the 1991 season, if success is predicted according to the regression equation and then success is realized, it can be concluded that the tool’s predictive validity has been established (Kirkendall, Gruber, & Johnson, 1987).

**Research Design/Data Analysis**

This research study employed a correlation research design. It was concluded that there would be a positive correlation between a higher level of characteristics on the Profile and a higher rating from the Questionnaire. A Profile score and a Questionnaire score for each athlete were plotted on a graph by utilizing the Pearson Product Moment Correlation technique tool which indicates similarity of position on the normal curve for two variables (Kirkendall, Gruber & Johnson, 1987). The correlation coefficient (\( r \)) was computed to determine the degree and direction of the correlation. According to Kirkendall et al (1987), ninety percent of all correlation coefficients reported in research literature in the behavioral sciences are Pearson \( r \)'s. The total scores on the Profile were compared with the scores on the Questionnaire.

**Data Collection**

Data were collected through different methods. As mentioned previously, two trained raters collected the data on the Softball Sport Skills Subsection #1 of the Profile through a direct observation method
during the skills tests. The league director or coach was provided the rest of the Profile, Subsections #2-#4 following the Softball Sport Skills testing. That individual was given a stamped envelope to return the Profiles through the mail.

Data collection for the Questionnaire was conducted through the use of a mailed questionnaire. This Questionnaire was filled out by a coach or assistant who was different from the individual who filled out the Profile. In an effort to reduce nonresponse of the mailed questionnaire, the following steps were employed:

1) A letter preceded the Profile and Questionnaire which included an abstract and described the support of both the State's Special Olympics Inc. Office and the league director.

2) After seven days from the expected date of receipt, a thank you letter including description of the team's receipt of ten dollars per athlete for each questionnaire returned were sent to those who responded and a reminder was sent to those who had not responded.

3) After three weeks from the first mailing, a revised letter and replacement Questionnaire were sent to respondents (Dillman, 1978).

4) After seven weeks, a personal phone call was made to inquire about the Profile and to answer any questions.
CHAPTER IV
RESULTS AND DISCUSSION

This Chapter presents, interprets and discusses results of the data related to the research questions and purpose of this study. The research questions include: (1) What are the specific physical sport skills, sportsmanship/etiquette behaviors, adaptive behavior skills, and knowledge of rules that the athlete should possess to ENTER and EXIT the Unified Sports Softball Program? (2) Can the data collected from both the Softball Participation Profile (Profile) and the Coaches' Opinion of Athlete Success Questionnaire (Questionnaire) be interpreted to indicate predictive assumptions about the athlete's success in the Unified Sport Softball Program? (3) Were valid and reliable instruments actually developed? (4) Is there a positive correlation between data from the Profile and data from the Questionnaire? Preceding the discussion of these questions are sections dealing with: (a) Subjects and Raters, (b) Instrument Reliability, (c) Instrument Validity, and (d) Regression Equations and Cut-Off Scores.

Subjects and Raters

Subsection §1 of the Profile was completed by one of two trained raters. Subject selection was based on the availability of the athletes prior to or following their regularly scheduled league game or practice on the dates that the raters for Subsection §1 could conduct the assessment. Twenty-five athletes were rated from the Indianapolis, Indiana Unified Sport Program on June 25, and July 2, 1990, prior to and following their Monday night league play. On August 2, 1990 data were collected on 25 New Iberia, Louisiana athletes during the day prior to
their regularly scheduled league play at night. From August 1 - 31, 1990, data were collected on 50 athletes in the Boston area during the regularly scheduled practice times.

Subsections #2-#4 of the Profile was filled out by the league director in New Iberia and by one of the coaches or the league director in Indianapolis and in the Greater Boston area. The intent was to have the Profile (Subsections #2-#4) completed by the person who the researcher and the league director felt was most familiar with each individual athlete's overall skills. The Questionnaire was filled out by the head coach or the assistant coach, as long as it was a different rater from the Profile respondent on the same athlete. The correlation coefficient may have been greater if the coaches had more experience socializing and/or working with individuals who are mentally retarded.

The response rate of respondents for this project was 100% (100 athletes) on both instruments, the Softball Participation Profile and the Coaches' Opinion of Athlete Success Questionnaire. It is probable that the incentive of providing $10.00 per athlete for the team or league was an attractive incentive. In cases where data were incomplete, the researcher called the respondent to clarify the response. All of the final data base gathered was, therefore, useable.

Instrument Reliability

Reliability data were gathered both during a Pilot Study and during the Principal Study on both instruments. This section describes the reliability results of the Principal Study, first related to the Profile and secondly related to the Questionnaire.

Principal Study - Profile

Reliability coefficients were not collected on Subsection #1 of the Profile since the raters were collecting information from direct observation. Also, the inter and intra rater reliability coefficients were both 95% on the Pilot Study, it was judged that another reliability
measure would not be necessary. The time factor was an additional issue; there was usually just enough time to collect the Principal Study data on the desired number of subjects before games started or after the games were over.

Reliability coefficients were determined during the Principal Study for Subsections 2-4 by asking one league director and one coach to fill out the Profile for eight and four athletes respectively, approximately five months after the first tool was administered on the same athlete. The overall intra reliability coefficient was 54% for the first rater and 58% for the second rater. The overall inter rater reliability coefficient between the two league directors and the coaches on eight of the same athletes was 53% (see Table 3).

Table 3.
Principal Study - Profile (Subsections 2-4) Reliability Coefficients

<table>
<thead>
<tr>
<th># of raters</th>
<th>Inter rater</th>
<th>Intra rater</th>
<th># of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>54%</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>58%</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>53%</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

Principal Study - Questionnaire

Reliability coefficients were also determined on the Questionnaire. Two coaches completed the instrument three months following the initial administration; the overall intra rater reliability coefficients for two different coaches was 67% and 65% for five and eight athletes respectively. The overall inter rater reliability on five athletes was 53% (see Table 4). All Pilot and Principal study reliability measures were above .4 which is the suggested lowest acceptable coefficient for "opinion based" and Likert Scale response data (Nunnally, 1978). Due to the qualitative nature of "opinion based" and Likert Scale tools allowances for slight changes in responses are necessary, more so than in assessment tools which are more
quantitatively based.

Table 4.

**Principal Study - Questionnaire Reliability Coefficients**

<table>
<thead>
<tr>
<th># of raters</th>
<th>Inter rater</th>
<th>Intra rater</th>
<th># of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>67%</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>65%</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>53%</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

**Instrument Validity**

**Content Validity**

The pertinent skills which as needed to be assessed, according to the Special Olympics Unified Sports Committee and the experts who reviewed the two tools utilized in this study, were softball sport skills, sportsmanship/etiquette skills, adaptive behavior skills, and knowledge of rules.

The first panel review on both tools was sent out in August, 1989. The panel consisted of 14 individuals who possessed varying backgrounds. Five of the individuals were experienced professors in Adapted Physical Education. Two expert panel members had coached Special Olympians. Four panel members were administrators in Special Olympics and the Unified Sport Programs. One individual was a softball umpire and two individuals were administrators and teachers in Special Education in the public school system. Comments were received from all 14 members regarding changes, but four individuals chose not to rate the questions. The panel members were provided with an abstract of the study and were asked to rate each question then each Subsection, as a whole, on a scale from 1 - 10 (Appendix D provides instructions and the instruments that were mailed to panel members). These data were used to calculate a summary of percentage of agreement by Subsection for the Profile (Table 5) and a percentage of agreement by question for the Questionnaire (Table 6). The percentage of agreement by the expert panel for the Profile for the first draft indicated that the Sportsmanship/Etiquette
Subsection was rated lowest (77%) by the ten raters and the Softball Skills Subsection was ranked the highest (91%). The respective ratings for the other Subsections were as follows: Adaptive Behavior (83%), Socialization (81%), Activity Interests (84%) and Knowledge of Rules (88%), see Table 5. The percentage of agreement by the expert panel for the Questionnaire first draft ratings for each question indicated that Questions #1 & #2 had an 88% agreement, #4 had an 87% agreement, #10 had an 86% agreement, #5, #8, and #11 had an 85% agreement, #6 had an 84% agreement, #7 had an 83% agreement, #9 had an 82% agreement, #3 had a 77% agreement, and #12 had a 73% agreement, see Table 6.

Table 5.
Profile - Summary of overall ratings (first draft) (N=10)

<table>
<thead>
<tr>
<th>Subsection #</th>
<th>Overall Rating by % agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Softball Sport Skills</td>
<td>91%</td>
</tr>
<tr>
<td>#2 Sportsmanship/Etiquette</td>
<td>77%</td>
</tr>
<tr>
<td>#3 Adaptive Behavior</td>
<td>83%</td>
</tr>
<tr>
<td>#4 Socialization</td>
<td>81%</td>
</tr>
<tr>
<td>#5 Activity Interests</td>
<td>84%</td>
</tr>
<tr>
<td>#6 Knowledge of Rules</td>
<td>88%</td>
</tr>
</tbody>
</table>

Table 6.
Questionnaire - Summary of overall ratings for each question (first draft) (N=10)

<table>
<thead>
<tr>
<th>Question #</th>
<th>% agreement</th>
<th>Question #</th>
<th>% agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>88%</td>
<td>#7</td>
<td>83%</td>
</tr>
<tr>
<td>#2</td>
<td>88%</td>
<td>#8</td>
<td>85%</td>
</tr>
<tr>
<td>#3</td>
<td>77%</td>
<td>#9</td>
<td>82%</td>
</tr>
<tr>
<td>#4</td>
<td>87%</td>
<td>#10</td>
<td>86%</td>
</tr>
<tr>
<td>#5</td>
<td>85%</td>
<td>#11</td>
<td>85%</td>
</tr>
<tr>
<td>#6</td>
<td>84%</td>
<td>#12</td>
<td>73%</td>
</tr>
</tbody>
</table>

As a result of the qualitative feedback from the expert panel, the six Subsection areas were reduced to five and then four Subsection areas. Many of the experts mentioned that the Adaptive Behavior and Socialization Subsections were redundant, so the two sections were combined to make the Adaptive Behavior Subsection. The experts also
commented that the Activity Interest Subsection was not necessary and seemed "out of place", so this Subsection was omitted. In February 1990, the second draft of the instruments were rated by four expert panel members to finalize the measurement of content validity of the instruments. Table 7 indicates the results of the final draft of percentage of agreement by question of the Profile. Subsection #1 had an overall rating of 93% with a range from 78% to 98% for the five questions. Subsection #2 had an overall rating of 78% with a range from 70% to 93%. Subsection #3 had an overall rating of 82% with a range from 70% to 95%. And, Subsection #4 had an overall rating of 80% with a range from 75% to 95%.

Table 7.
Profile - Summary of ratings for each question (final draft) (N = 4)

<table>
<thead>
<tr>
<th>Subsection #1</th>
<th>% agreement</th>
<th>Subsection #3</th>
<th>% agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1.1</td>
<td>98%</td>
<td>Question 3.1</td>
<td>93%</td>
</tr>
<tr>
<td>Question 1.2</td>
<td>98%</td>
<td>Question 3.2</td>
<td>73%</td>
</tr>
<tr>
<td>Question 1.3</td>
<td>98%</td>
<td>Question 3.3</td>
<td>70%</td>
</tr>
<tr>
<td>Question 1.4</td>
<td>78%</td>
<td>Question 3.4</td>
<td>78%</td>
</tr>
<tr>
<td>Question 1.5</td>
<td>80%</td>
<td>Question 3.5</td>
<td>95%</td>
</tr>
<tr>
<td>Overall</td>
<td>93%</td>
<td>Overall</td>
<td>90%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsection #2</th>
<th>% agreement</th>
<th>Subsection #4</th>
<th>% agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 2.1</td>
<td>83%</td>
<td>Question 4.1</td>
<td>95%</td>
</tr>
<tr>
<td>Question 2.2</td>
<td>75%</td>
<td>Question 4.2</td>
<td>78%</td>
</tr>
<tr>
<td>Question 2.3</td>
<td>93%</td>
<td>Question 4.3</td>
<td>75%</td>
</tr>
<tr>
<td>Question 2.4</td>
<td>85%</td>
<td>Question 4.4</td>
<td>80%</td>
</tr>
<tr>
<td>Question 2.5</td>
<td>70%</td>
<td>Question 4.5</td>
<td>83%</td>
</tr>
<tr>
<td>Question 2.6</td>
<td>73%</td>
<td>Overall</td>
<td>80%</td>
</tr>
<tr>
<td>Overall</td>
<td>78%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 lists results relating to percentage of agreement of the final rated draft for the Questionnaire. Questions #6, #8, #10, and #12 were added to the Questionnaire following the final draft expert panel review. These questions pertain to the skills in the four domains of the athletes who are nondisabled team members of the subject in question. It was brought to the researcher's attention by the Unified Sports Director, George Smith, that some information regarding the subject's skills in comparison to the nonmentally retarded athlete's
skills and the overall skills of the nonmentally retarded athlete was imperative to this study. The percentage of agreement for the other eight questions were as follows: #1 = 85%, #2 = 93%, #3 = 75%, #4 = 80%, #5 = 88%, #7 = 78%, #9 = 85%, #11 = 80% and overall = 85%.

Table 8.

Questionnaire — Summary of ratings for each question (final draft) (N = 4)

<table>
<thead>
<tr>
<th>Question #</th>
<th>% agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85%</td>
</tr>
<tr>
<td>2</td>
<td>93%</td>
</tr>
<tr>
<td>3</td>
<td>75%</td>
</tr>
<tr>
<td>4</td>
<td>80%</td>
</tr>
<tr>
<td>5</td>
<td>88%</td>
</tr>
<tr>
<td>6</td>
<td>*</td>
</tr>
<tr>
<td>7</td>
<td>78%</td>
</tr>
<tr>
<td>8</td>
<td>*</td>
</tr>
<tr>
<td>9</td>
<td>85%</td>
</tr>
<tr>
<td>10</td>
<td>*</td>
</tr>
<tr>
<td>11</td>
<td>80%</td>
</tr>
<tr>
<td>12</td>
<td>*</td>
</tr>
<tr>
<td>Overall</td>
<td>85%</td>
</tr>
</tbody>
</table>

* Denotes questions which were added to the instrument after the panel review.

As mentioned in Chapter Three, all questions were required to have at least a 70% agreement by panel members in order to be utilized. The questions which did not meet this criterion were eliminated. Other questions also were deleted on the basis of the panel member's comments. The final draft of the Profile is located in Appendix B and in Appendix C the final draft of the Questionnaire can be reviewed.

Construct Validity

Profile - A factor analysis was conducted to analyze the four Profile sections (phys = Softball Sport Skills Subsection, adapt = Adaptive Behavior Subsection, sport = Sportsmanship/Etiquette Subsection, and rules = Knowledge of Rules Subsection) and individual questions of the Profile (Table 8). Most of the variables loaded on the one factor which gave the researcher confidence in saying that the overall assessment tool was, given the content validity results, measuring overall competence of skills in softball. Further, the fact that the data
related to three components of the tool were Likert Scale-derived, involving subjectivity based on the coaches' opinion of the athlete's skills, provides another possible rationale for this single loading. Another possible rationale for this single factor loading may have been related to the fact that there was some duplication in questioning from the sportsmanship/etiquette skills area and the adaptive behavior skill area. For example, questions 2.4 and 3.2 ask about controlling temper and controlling frustration. These are two different questions but involve similar emotional responses of the athlete. Yet even though there appeared to be some contamination, the Profile sections (phys, adapt, sport, and rules), did cluster best within factor 1 as seen in Table 9.

Table 9.
Factor Analysis for Profile

<table>
<thead>
<tr>
<th></th>
<th>FACTOR1</th>
<th>FACTOR2</th>
<th>FACTOR3</th>
<th>FACTOR4</th>
</tr>
</thead>
<tbody>
<tr>
<td>RULES3</td>
<td>0.90469</td>
<td>-0.01674</td>
<td>-0.19155</td>
<td>-0.09648</td>
</tr>
<tr>
<td>RULES4</td>
<td>0.89445</td>
<td>-0.04551</td>
<td>-0.22065</td>
<td>-0.19176</td>
</tr>
<tr>
<td>RULES5</td>
<td>0.87335</td>
<td>0.00315</td>
<td>-0.09023</td>
<td>-0.22234</td>
</tr>
<tr>
<td>RULES2</td>
<td>0.86366</td>
<td>0.09611</td>
<td>-0.09217</td>
<td>-0.05631</td>
</tr>
<tr>
<td>RULES3</td>
<td>0.85696</td>
<td>-0.01804</td>
<td>-0.11094</td>
<td>0.18832</td>
</tr>
<tr>
<td>ADAPT1</td>
<td>0.85579</td>
<td>0.12614</td>
<td>-0.18035</td>
<td>-0.05328</td>
</tr>
<tr>
<td>RULES1</td>
<td>0.84955</td>
<td>-0.04023</td>
<td>-0.13070</td>
<td>0.08600</td>
</tr>
<tr>
<td>ADAPT5</td>
<td>0.81840</td>
<td>0.04698</td>
<td>-0.19711</td>
<td>0.03868</td>
</tr>
<tr>
<td>SPORT3</td>
<td>0.81021</td>
<td>-0.04179</td>
<td>0.00164</td>
<td>0.43239</td>
</tr>
<tr>
<td>SPORT2</td>
<td>0.77845</td>
<td>0.09296</td>
<td>0.12565</td>
<td>0.41449</td>
</tr>
<tr>
<td>SPORT5</td>
<td>0.77784</td>
<td>-0.02948</td>
<td>-0.10183</td>
<td>-0.34831</td>
</tr>
<tr>
<td>PHYS4</td>
<td>0.75246</td>
<td>-0.14816</td>
<td>0.18341</td>
<td>-0.19104</td>
</tr>
<tr>
<td>ADAPT3</td>
<td>0.67402</td>
<td>0.40161</td>
<td>-0.09372</td>
<td>-0.11277</td>
</tr>
<tr>
<td>PHYS2</td>
<td>0.65836</td>
<td>-0.25299</td>
<td>0.45681</td>
<td>-0.04336</td>
</tr>
<tr>
<td>PHYS1</td>
<td>0.58265</td>
<td>-0.34341</td>
<td>0.20261</td>
<td>-0.25787</td>
</tr>
<tr>
<td>PHYS5</td>
<td>0.58027</td>
<td>-0.15595</td>
<td>0.52116</td>
<td>0.03142</td>
</tr>
<tr>
<td>ADAPT4</td>
<td>0.49368</td>
<td>0.33103</td>
<td>0.07513</td>
<td>-0.18899</td>
</tr>
<tr>
<td>ADAPT2</td>
<td>0.05744</td>
<td>0.90758</td>
<td>0.23021</td>
<td>-0.05418</td>
</tr>
<tr>
<td>SPORT4</td>
<td>0.06785</td>
<td>0.89240</td>
<td>0.27483</td>
<td>0.05392</td>
</tr>
<tr>
<td>PHYS3</td>
<td>0.48808</td>
<td>-0.25038</td>
<td>0.55875</td>
<td>0.15843</td>
</tr>
<tr>
<td>SPORT6</td>
<td>0.44134</td>
<td>0.00391</td>
<td>-0.22657</td>
<td>0.62276</td>
</tr>
</tbody>
</table>
The ranges for each Subsection area were as follows: "phys" (0.48808 - 0.75246), "sport" without question 2.4 (0.44134 - 0.81840), "adapt" without question 3.2 (0.49388 - 0.85579), and "rules" (0.84955 - 0.90469).

As indicated, there were two questions which appeared out of place as a result of the factor analysis and were deleted altogether. The first question (Adapt 2 or 3.2) was in the Adaptive Behavior Section. The question read as follow: "The athlete is able to follow instructions, requests or orders from coaches." The second question was in the Sportsmanship/Etiquette Section and was question (Sport 4 or 2.4). This question (Sport 4 or 2.4) read as follows: "The athlete controls his temper in game situations". As a result of these deletions, the Alpha for the Adaptive Behavior Subsection increased from (.72) to (.80) by deleting question (3.2), and, the Alpha for the Sportsmanship/Etiquette Subsection increased from (.77) to (.87) by deleting Question (2.4). Without reducing the construct validity by deleting these questions, the reliability of the Subsection was enhanced. And, since there are at least four other questions which address these constructs ("adapt" and "sport"), the construct validity is not threatened. The overall Alphas for the other Subsections include: Softball Sport Skills = .83 and Knowledge of Rules = .95. Table 10 contains the Alpha results for each Subsection.

Table 10.

<table>
<thead>
<tr>
<th>Overall Alpha</th>
<th>Overall Alpha After Deleting #2.4 &amp; #3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsection 1</td>
<td>Subsection 2</td>
</tr>
<tr>
<td>Softball Skills</td>
<td>Sportsmanship/Etiquette</td>
</tr>
<tr>
<td>.83</td>
<td>.77</td>
</tr>
<tr>
<td>Subsection 3</td>
<td>Subsection 4</td>
</tr>
<tr>
<td>Adaptive Behavior</td>
<td>Knowledge of Rules</td>
</tr>
<tr>
<td>.72</td>
<td>.95</td>
</tr>
<tr>
<td>.80</td>
<td></td>
</tr>
</tbody>
</table>
The 12 questions on the Questionnaire were factor analyzed to determine if the questions fit with the tool and with each other (Table 11). The questions which were directed at the subjects' skills (#1-#5, #7, #9, and #11) were all clustered on the first factor except Question #7. The scores for the questions related to the Softball Sport Skills Subsection Questions of the Profile (Coach #1-#5) ranged from 0.80602 - 0.86179 within Factor 1. Since the softball sport skill questions loaded on Factor 1 the researcher concluded that these questions were measuring the same construct. Question #7 (Sportsmanship/ Etiquette Question) loaded on Factor 3 (0.71989).

Questions #9 (Adaptive Behavior Question) (0.67302) and #11 (Knowledge of Rules Question) (0.81588) loaded on Factor 1. Questions #7, #9 and #11 were single questions regarding the three different areas sportsmanship/etiquette, adaptive behavior, and knowledge of rules on the Profile. Since these are three different constructs it was not surprising to find that Question #7 loaded on a different factor. The questions which were directed toward the subjects' nonmentally retarded teammates' skills in the four testing areas were Questions #6, #8, #10 and #12. Question #6 compares the nonmentally retarded teammates' softball sport skills to that of the subjects' softball sport skills. Question #6 loaded on Factor 1 (0.60471). The other questions (#8, #10 and #12) that were related to the nonmentally retarded teammates' skills asked about the nonmentally retarded teammates' abilities rather than a comparison to the subjects' skills in those areas. Question #8 (Sportsmanship/ Etiquette) 0.81939, #10 (Adaptive Behavior) 0.83989, and #12 (Knowledge of Rules) 0.67735, all loaded on Factor 2 (see Appendix C to view Questions).

Since the questions from the Questionnaire loaded with the group of questions related to the same area or differently for other groups, questions on the Questionnaire were retained. It was concluded by the researcher that this tool contained construct validity based on the
findings of the factor analysis.

Table 11.

Factor Analysis for Questionnaire

<table>
<thead>
<tr>
<th>COACH5</th>
<th>0.86179</th>
<th>-0.23563</th>
<th>-0.10023</th>
</tr>
</thead>
<tbody>
<tr>
<td>COACH4</td>
<td>0.85318</td>
<td>-0.15923</td>
<td>0.20912</td>
</tr>
<tr>
<td>COACH3</td>
<td>0.82260</td>
<td>-0.30827</td>
<td>-0.13417</td>
</tr>
<tr>
<td>COACH11</td>
<td>0.81588</td>
<td>0.15955</td>
<td>-0.08456</td>
</tr>
<tr>
<td>COACH2</td>
<td>0.81252</td>
<td>-0.37581</td>
<td>-0.07010</td>
</tr>
<tr>
<td>COACH1</td>
<td>0.80602</td>
<td>-0.42249</td>
<td>-0.03574</td>
</tr>
<tr>
<td>COACH9</td>
<td>0.67302</td>
<td>0.18991</td>
<td>0.51063</td>
</tr>
<tr>
<td>COACH6</td>
<td>0.60471</td>
<td>-0.10475</td>
<td>0.37659</td>
</tr>
<tr>
<td>COACH10</td>
<td>0.34630</td>
<td>0.83989</td>
<td>-0.29018</td>
</tr>
<tr>
<td>COACH8</td>
<td>0.33948</td>
<td>0.81939</td>
<td>-0.14838</td>
</tr>
<tr>
<td>COACH12</td>
<td>0.50091</td>
<td>0.67735</td>
<td>-0.29000</td>
</tr>
<tr>
<td>COACH7</td>
<td>0.31459</td>
<td>0.43849</td>
<td>0.71989</td>
</tr>
</tbody>
</table>

Predictive Validity

The correlation of the Profile when compared to the Questionnaire was .693 for all questions. Without question 3.2 from the Profile it was .701, and without questions 3.2 and 2.4 from the Profile it was .706. Plotted graphs showing the correlational relationship between the tools' scores are contained in Figures 2, 3, and 4. In the graphs, A = one observation on that point, B = two observations on that point and C = three observations on that point.

The Pearson Product Moment Correlation Technique was utilized for all correlations because the Profile addresses four constructs each with from four to six questions, and all data for each question are of the ordinal type. Further, the responses on the Profile were viewed as averages rather than single responses. A parametric statistical technique was, therefore, appropriate.
Figure 2.
Correlational Relationships between Profile and Questionnaire Scores
(all data)

Key:
A = 1 observation
B = 2 observations
C = 3 observations

Pearson r = .693
Figure 3. Correlational Relationships between Profile and Questionnaire Scores (Question 3.2 omitted)

Key:
A = 1 observation  
B = 2 observations  
C = 3 observations
Figure 4.
Correlational Relationships between Profile and Questionnaire Scores
(Questions 3.2 & 2.4 omitted)

Key:
A = 1 observation
B = 2 observations
C = 3 observations

Pearson r = .706
Regression Equations and Cut-Off Scores

The resultant correlation coefficients (.693, .701, and .706) became the basis on which regression equations were also developed to predict a coach's future opinion of athlete success from the initial score on the Profile. The regression equation was calculated as follows, depending on the version of the Profile utilized:

Regression Equation = \( Y' = a + bX, \)

where \( Y \) = score related to coaches' predicted opinion of athlete success and \( X \) = Score on the Profile; where \( a \) = the constant adjustment that must be made in order to put \( X \) and \( Y \) on the same scale, it also represents the point where the regression line intersects the y-axis; \( b \) = the amount of change in \( Y \) associated with each unit change in \( X \).

All questions included:

\( Y' = 13.40 + .35(X) \)

Deleting Adaptive Behavior Question #3.2 on the Profile:

\( Y' = 14.39 + .36(X) \)

Deleting Adaptive Behavior Question #3.2 & Sportsmanship Question #2.4 on the Profile:

\( Y' = 15.12 + .37(X) \)

For future use of these equations, an athlete would be administered the Profile during tryouts, if the coach or league director is familiar with his/her skills from the previous season, or at the beginning of the season, after three practices or league games. The resulting score ("X") would both determine the athlete's softball team placement for that season and could be plugged into the regression equation to determine a predicted score on the Questionnaire ("Y"). An athlete's successful placement would then be viewed as a direct function of the consistency of scores between the equation's X and Y variables and the accuracy of the established Profile placement cut-off score, both matched to the coach's actual opinion of success after the season. If consistency is high among these interrelated variables, the tool can
then be used subsequently with other athletes to predict success with increased confidence. Such consistency would also extend the predictive validity feature of the Profile and solidify the preliminary findings of this dissertation.

The researcher suggests a cut-off score (suggested minimum score on Profile) of 70 when all questions are used, a score of 67 when Question 3.2 is omitted, and a score of 64 when Questions #2.4 & #3.2 are omitted. Below such scores a Special Olympics Softball team placement would be indicated. At or above these scores, a USSF placement is indicated. The cut-off score of 70 should not be confused with and is in no way connected to the Pearson r of .706 of this study. These scores were empirically derived from the responses by 11 of 16 (lower 70%) coaches surveyed who suggested that the athletes below this score should have played in a regular Special Olympics League (see Figures 5, 6, & 7). These cut-off scores specifically represent those not reached by the eleven of the sixteen athletes whose coaches suggested they would have been better off in a regular Special Olympics Softball League. The "N" in Figures 5, 6 and 7 depicts the responses of "No" and the "Y" depicts the responses of "Yes" when coaches were asked whether or not the athlete should have played in the Unified Sport Softball Program. There was one subject (of the sixteen subjects rated as "No") who scored above the mean of (84) on the Profile, all data included, whose coaches suggested that the Special Olympics League would have been more appropriate. The same subject was the only athlete who scored above the mean of (80) on the Profile when Question 3.2 was omitted and he scored above the mean of (76) when both questions 3.2 and 2.4 were omitted. This same subject was the only athlete (of the "No" response group) who scored above the mean of (43) on the Questionnaire.
Figure 5.

Coaches' opinion of athlete success in Unified Sports Softball Programs as a function of Profile and Questionnaire Scores (scores for all data)

Key:
- Y = Yes
- N = No
- * = a "No" opinion hidden by a "Yes" opinion

Note - 6 ("Yes" and "No" observations hidden)
Figure 6.

Coaches' opinion of athlete success in Unified Sports Softball Programs as a function of Profile and Questionnaire Scores (Question 3.2 omitted)

Key:
Y = Yes
N = No
* = a "No" opinion hidden by a "Yes" opinion
Note - 5 ("Yes" and "No" observations hidden)
Figure 7.

Coaches' opinion of athlete success in Unified Sports Softball Programs as a function of Profile and Questionnaire Scores (Questions 3.2 & 2.4 omitted)

Key:
Y = Yes
N = No
* = a "No" opinion hidden by a "Yes" opinion
Note - 7 ("Yes" and "No" observations hidden)
It also is important to make note that there were seven athletes (all data), nine (without question 3.2) and, ten athletes (without question 3.2 and 2.4) who scored below this cut-off but were rated by their coaches as being successful (Y=Yes) in the USSP. Therefore, even though 45 athletes had matching high scores (above both means) on both tools and 15 athletes had matching low scores (below both means) in the study, there is some decision making that the coach and the league director need to engage in based on an individual athlete’s overall performance and unique characteristics in all aspects of the Unified Sport Program. Other factors should be considered related to any athlete’s overall experience in the league. For example, some coaches felt that there were athletes who posed a safety risk for themselves and, therefore, coaches were reluctant to place them in certain situations. On the other hand, there were coaches who felt that even though the athlete lacked physical skills and knowledge about the game, the “team spirit” and enthusiasm that certain subjects demonstrated was an essential element to the success of his/her team. There were a few comments during the data collection period for Subsection #1 by league directors regarding athletes whose physical skills appeared to be very low but other reasons for their inclusion were expressed. All of the examples mentioned support the need for other considerations to review beyond the score on the Profile when deciding whether or not to include an athlete in the Unified Sport Softball Program.

Finally one of the 100 athletes was ranked by the coach as having the potential to play in a community league. This response option and others can be seen on the last page of the Questionnaire in Appendix C. In fact, the coach felt that this particular athlete should play in the Unified Sports Program and a community league. Therefore, and importantly, there were not sufficient responses regarding this issue to develop cut-off scores for graduating from the Unified Sport Softball League.
CHAPTER V
SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This Chapter provides a summary of the study along with conclusions, implications, and recommendations relevant to the outcomes of this research. This study was conducted with the financial assistance of three national organizations. The organizations which assisted with the funding of this study are as follows: Special Olympics Inc.; The Adapted Physical Activity Council of The American Alliance for Health, Physical Education, Recreation and Dance; and the National Intramural, Recreation and Sport Association. The Special Olympics National Office also provided consultation which was imperative for this study.

Summary
Project Synopsis

The first year of this study (1989) involved developing, validating and obtaining pilot study reliability data on two assessment tools which included a Softball Participation Profile (Profile) and a Coaches' Opinion of Athlete Success Questionnaire (Questionnaire). The expert panel agreed that, overall, the Profile and Questionnaire were both very acceptable and that they measured what they intended to measure (percentage agreement = 85% on both tools). Construct validity was measured by conducting a factor analysis on the Principal Study data. The results of the factor analysis indicated that all but two questions were appropriate for their respective group of questions for the Profile. Therefore the two questions which appeared to measure a different construct, according to the factor analysis, were deleted.
Pilot Study reliability measures indicated a reliability coefficient of 95% (inter and intra rater reliability) for Subsection #1 of the Profile and 61% (inter rater) and 88% (intra rater) for Subsections #2-#4. According to Nunnally (1978), reliability coefficients of .4 or higher are considered acceptable for Likert scale data since they are "opinion-based". Subsections #2-#4 of the Profile and the Questionnaire utilize Likert scales and are "opinion-based". The overall inter rater reliability coefficient on the pilot study for the Questionnaire was (67%) and the intra rater reliability was (49%).

Prior to the Principal Study data collection, the Unified Sports Director of Special Olympics, George Smith, expressed his concern regarding the fact that neither tool recognized nor measured factors relating to the nonmentally retarded teammates of the subjects. He thought that it was essential to measure some factors regarding these individuals within the study. Therefore, questions #6, 8, 10, and 12 (see Appendix C) of the Questionnaire were included to address the subjects' nonmentally retarded teammates' skills in all domains (physical, sportsmanship/etiquette, behavioral, and cognitive).

Data collection for the Profile began between the third and fourth week of league play during the 1990 season for 50 subjects, 25 each from Indianapolis and 25 from New Iberia. Data were collected prior to the playoffs in the Greater Boston area on the other 50 athletes during the 1990 season; they did not play league games prior to the play-off like the teams in Indianapolis and New Iberia. After the Softball Sport Skills Subsection (#1) of the Profile was administered, the coach or league director rated Subsections #2-#4 of the Profile.

After the 1990 season was completed, following the State Tournaments, all coaches of the 100 athletes were mailed the Questionnaire. The 100% response rate by the coaches can be attributed to the interest in developing Unified Sports by each coach and the fact that each team or league received $10.00 per athlete for their
involvement with this study.

One month after all Questionnaires were returned, one league director and one coach were sent 16 Profiles to determine intra rater reliability coefficients on the Profile (Subsections #2-#4). The intra rater reliability on the Profile (Subsection #2-#4) for the two raters was 54% and 58%. Inter rater reliability was determined on eight athletes and the percentage agreement was 53%. Questionnaires were sent to two coaches (13 questionnaires) to rate again in order to determine reliability coefficients for the principal study. The reliability coefficients for intra rater reliability for two raters on the Questionnaire were 67% and 65%. Inter rater reliability on the Questionnaire was 53%.

Data from the Profile and the Questionnaire were correlated to determine a Pearson Product Moment Correlation of (.706) for the Principal Study data (without Questions 3.2 and 2.4). The factor analysis of the Profile data indicated that questions 3.2 and 2.4 did not cluster with the other questions in that Subsection. Therefore, it was suggested that these two questions be deleted from the tool in future use (see Appendix E for Suggested Tool - Softball Participation Profile).

The data analysis of this study has produced supportive quantitative information regarding the reliability and validity of the Profile and the Questionnaire. Also established was a moderately high correlation between the two tools. A cut-off score of 64 was established for entry into the Unified Sport Softball Program. It is intended for the Profile to be used within the Special Olympics Unified Sport Softball Program with the purpose of providing a criterion for appropriate and successful placement and participation for athletes who are mentally retarded.
Conclusions

Primary Research Questions - This study investigated four primary research questions, they are listed below.

1. What are the specific physical-sport skills, sportsmanship/etiquette, adaptive behavior skills, socialization, activity interests and knowledge of rules that the athlete should possess to ENTER and EXIT the Unified Sports Softball Program?

2. Can the data collected from both the Softball Participation Profile and the Coaches' Opinion of Athlete Success Questionnaire be interpreted to indicate predictive assumptions about the athlete's success in the Unified Sport Softball Program?

3. Were valid and reliable instruments actually developed?

4. Is there a positive correlation between data from the Softball Participation Profile and data from the Coaches' Opinion of Athlete Success Questionnaire?

Question #1, will be addressed first.

1. What are the specific physical-sport skills, sportsmanship/etiquette, adaptive behavior skills, socialization, activity interests and knowledge of rules that the athlete should possess to ENTER and EXIT the Unified Sports Softball Program?

The researcher narrowed down the Subsection areas as a result of feedback from the expert panel and information regarding the 1989 meeting of the Special Olympics Unified Sports Committee. Two areas, Socialization and Activity Interests, were deleted due to repetition of questions and expert panel advice.

With regard to the entry into and exit out of the Unified Sport Softball Program, an ENTRY score of 64 on the Profile to play in the Unified Sport Softball Program was indicated by the data (without questions 3.2 & 2.4). See Appendix E for the suggested tool in which questions 3.2 and 2.4 are deleted. Only one subject was recommended to play in a community league by his coach. Therefore, there were insufficient data to discuss an EXIT score into the community league.
Question #2 will be addressed at this point.

2. Can the data collected from both the Softball Participation Profile and the Coaches' Opinion of Athlete Success Questionnaire be interpreted to indicate predictive assumptions about the athlete's success in the Unified Sport Softball Program?

Since the correlation between the Profile and the Questionnaire was in a positive direction ($r = .706$ - without Questions 3.2 and 2.4), the findings can be interpreted to indicate that a preliminary measure of predictive validity was established. Predictive validity can further be established and confirmed by administering the Profile in the 1991 season (before the season or the third or fourth week into the season) and using the regression equation to predict success in the Unified Sport Softball Program. The regression equation for the Softball Profile (excluding Questions 3.2 & 2.4) is as follows:

$$Y' = 15.12 + .37 (X)$$

If the score indicates success (Profile = 64 or above) and the coach agrees that in fact the athlete was appropriately placed, predictive validity of the Profile can be assumed (Kirkendall, Gruber, & Johnson, 1987) and, relative to the dissertation, predictive validity can be confirmed. An athlete's successful placement would then be viewed as a direct function of the consistency of scores between the equation's X and Y variables and the accuracy of the established Profile placement cut-off scores, both matched to the coach's actual opinion of success after the season. If consistency is high among these interrelated variables, the tool can then be used subsequently with other athletes to predict success with increased confidence.

Question #3 will be addressed here.

3. Were valid and reliable instruments actually developed?

In terms of content and construct validity, both tools were judged to be valid. This judgement was based on both quantitative and qualitative information from the expert panels and the factor analysis.
The tools were also reliable. This assumption was based on data from Pilot Study and Principal Study reliability coefficients.

Finally, Question #4 will be addressed.

4. Is there a positive correlation between data from the Softball Profile and data from the Coaches' Opinion of Athlete Success Questionnaire?

In response to research question #4, there, in fact, was a moderately high positive correlation ($r = .706$ - without Questions 3.2 and 2.4) between the Profile score and the Questionnaire score. This correlation indicates that there is a reasonable chance that if a person scores high on the Softball Participation Profile they would also score high on the Coaches' Opinion of Athlete Success Questionnaire. This coefficient ($r$) may have been higher if there would have been a shorter time frame between the end of the season and the completion of Questionnaires. Questionnaires were completed from one month to two months following the season.

Implications

As discussed in Chapters One and Two, the trend to integrate the sport setting crosses all populations, sport activities, and settings. The challenge presented to professionals is one of appropriate placement into the least restrictive setting, be it in physical education, recreation or sport, based on the individual's skills (Stein, 1991).

The considerations regarding criteria needed to play in the Unified Sports Program (listed in Chapter II) that the Special Olympics Unified Sports Committee developed in 1989 were addressed in this study and specifically within the Profile. In this connection, data obtained in this research support the validity and reliability of the Profile tool as a means to obtain criterion based measures which could serve collectively as an indicator for inclusion or exclusion in the Unified Sports Softball Program. In a practical sense, this tool can, therefore, be utilized by the league director or the coach to determine
if the athlete who is mentally retarded has the needed skills to play in
the Unified Sport Softball League. More importantly, by administering
the Profile and utilizing this information, participation in the least
restrictive setting for the athlete can be enhanced. However, proper
monitoring and training by the Special Olympics is essential to avoid
misuse of the Profile.

As mentioned before, it is suggested that the Profile be utilized
excluding two questions (3.2 & 2.4) which appeared to be out of place
according to the factor analysis, without affecting the construct
validity of the tool (see Appendix E for the Suggested Tool - Softball
Participation Profile). By deleting these questions a score of 64 on
the Profile is a recommended cut-off for participation in the Unified
Sport Softball Program. But, factors beyond the scope of this tool
should be considered for each athlete prior to exclusion. For example,
during the study, there were athletes who demonstrated enthusiasm and
"team spirit" which was vital to the team, according to the coach, yet
they lacked physical skills and knowledge of rules. As long as their
participation is "safe" for all involved they should play in the USSP,
but it is suggested that they also play at the Special Olympic League
Level too, in order to allow physical participation which is comparable
to teammates.

In addition, since the Profile was administered into the season
for this study and questions address league play, it is suggested that
the Profile be utilized for placement purposes at the point of testing,
if deemed appropriate, or for the next season. In developing the tool,
it was apparent that "game play" skills were vital to the assessment of
the athlete for this league, therefore it was essential for the coaches
and league directors to observe the athletes in "game play" situations
prior to rating their skills. Along similar lines, it is suggested that
the individual who is most familiar with the athlete's skills rate
Subsections #2 - #4. Relatedly, anyone with sufficient softball
knowledge can administer and rate Subsection #1 (Softball Sport Skills) as long as the protocol is followed in Appendix B for the test administration of Subsection #1 of the Profile.

Implications for use of the Profile data can also assist the league director in determining a team placement based on a point system relating to the Profile score. This would allow the league director to scatter the highly skilled and lower skilled players on all of the teams and thus encourage competition that is more equitable. To extend this, since some states have divisions within their Unified Sport Softball Program, Profile data could assist them in determining level of play based on skill level (Profile score) rather than incidental placement. One league director in the study specifically asked for this information to assist him in developing divisions within the league for the future.

This tool could also assist the adapted physical education specialist in determining Individualized Education Plans by using this measurement tool to indicate present skill level for students who are mentally retarded and mainstreamed into regular physical education during a softball instructional unit. The score on the Profile also could serve as a quantitative indicator of progress or skill decline for students who are mentally retarded within the integrated softball setting or a specialized setting.

One last, very important point related to implications of this study, deserves reiteration. The coaches' informal and formal opinion of the athlete's abilities should be of paramount interest to the league director. The coach is the individual who serves as the role model and catalyst to instill appropriate interactions between all team members. If the coach feels that the athlete is inappropriately placed, the coach might become very frustrated with the voluntary task of coaching.
Recommendations

The Profile needs to be administered to athletes in the 1991 season and the scores of the Profiles should be compared to coaches' opinions regarding the athlete's success following the Unified Sport Softball Program. If, in fact, the Profile score and coaches' opinion of the athlete correlate highly, this would extend the predictive validity feature of the Profile and would solidify the preliminary findings of this dissertation.

It is also recommended that information from this study be applied to other Unified Team Sports Profiles. Two Subsections of the Profile (Sportsmanship/etiquette and Adaptive Behavior Subsections) could be utilized with minor changes in other Unified Sport Programs. These sections are easily transferable to other team sport settings. The Knowledge of Rules Subsection could be modified for the other sports, but it is suggested that studies similar to this one be conducted to validate and determine reliability for the Sport Skills and Knowledge of Rules Subsections for other sports.

The Profile could also be utilized to determine if Unified Sport Softball Team members progress within the season, during the season, or from year to year. Quantitative information such as this could help the coach and assist Special Olympics Inc. in promoting the Unified Sport Program concept around the world.

Further, as a follow-up study it would be interesting to use the Profile with the entire team, athletes who are mentally retarded and nonmentally retarded, to determine the degree of variance between the two groups in terms of their skills in the four areas. The closer the skill level for the two groups increases the chances of reaching one of the ultimate goals for the Unified Sport Program, that is, appropriate integration into society for individuals who are mentally retarded via the Unified Sport Program. Along the same line, it would be interesting to study the female athletes to determine likenesses and differences.
The tool could be modified to add individual game statistics. This would provide the coach with additional information and it may indicate whether there are similarities between game statistics and the Profile score.

Both qualitative and quantitative information from the raters could be studied to provide descriptive research material. Most coaches offered comments after rating the athlete on specific questions as well as at the end of the Questionnaire.

In conclusion, the intent of this study was to develop an assessment tool which could be of value to league directors and coaches in the Unified Sport Softball Program of Special Olympics Inc. with respect to a more systematic and empirically-based process for entry into and exit out of the Unified Sport Softball Program. It is the hope of this researcher that this tool will be successful in determining participation of Special Olympians in the least restrictive environment.
END NOTES


LIST OF REFERENCES


Decker, J. (1986). A comparison of the effects and efficiency of behavior chaining techniques in the acquisition of selected motor fitness skills by individuals with severe mental retardation. Unpublished doctoral dissertation, The Ohio State University, Columbus, OH.


APPENDIX A

SUBJECT INFORMED CONSENT FORM
THE OHIO STATE UNIVERSITY

Protocol No. 82B0122

CONSENT FOR PARTICIPATION
SOCIAL AND BEHAVIORAL RESEARCH

I consent to participating in research entitled: "The Construction and Validation of two Profiles to Predict Success in the Special Olympics Unified Sport Softball Program".

Dr. Paul Jansma or his authorized representative, Gina Johnson-Freeman or Nancy Swain, has explained the purpose of the study, the procedures to be followed, and the expected duration of my participation. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date:____________________  Signed:____________________

Signed:____________________  Signed:____________________
(Principal Investigator or his Authorized Representative)  (Person Authorized to Consent for Participant- If Required)

Witness:____________________

HS-027 (Rev. 3/87) --(To be used only in connection with social and behavioral research.)
APPENDIX B

SOFTBALL PARTICIPATION PROFILE
UNIFIED SPORTS PROGRAM SOFTBALL PROFILE

Testing Areas:

1) SOFTBALL SPORT SKILLS
2) SPORTSMANSHIP/ETIQUETTE
3) ADAPTIVE BEHAVIOR
4) SOCIALIZATION
5) ACTIVITY INTERESTS
6) KNOWLEDGE OF RULES

Test Administrator's Protocol for Softball Sport Skills Subsection #1:

NOTE - ALL testing should be done on a regulation Softball Field, i.e. 65' between bases and 46' to the pitcher's plate from home plate.

Athlete's should be allowed to warm up at least 10 minutes (stretches, slow jog and throwing).

#1 - FIELDING GROUND BALLS - The rater will stand at home plate, overhand throw the ball forcefully toward the ground making it hit the ground even with the pitcher's mound with medium force. The fielder will stand between second and third base and should not have to move more than two steps in either direction to retrieve the ball. A successful retrieval is one that is scooped up into the glove and does not touch the ground again. If the subjects takes more than two steps and successfully retrieves the ball, that retrieval can be counted.

Video recorder's instructions: stand behind the test administrator at home plate to key in on the throw and then the fielder, you might want to zoom in on the fielder and the ball once they be viewed simultaneously.

#2 - CATCHING FLY BALLS - The rater will stand at home plate and throw the ball approximately 30 feet up into the air. The subject will stand between second and third base and will move no more than three steps to retrieve the ball. If he/she takes more steps than three, and catches the ball, that catch can be counted.

Video recorder's instruction: stand at home plate again following the ball and zooming in on the catcher once both the ball and the catcher are in view.
#3 - OVERHAND THROW FOR ACCURACY - The rater will stand at first base. The subject will throw the ball from second base with enough force and accuracy for the rater to catch the ball without taking more than two steps in any direction; forward, backward, or sideways.

Video recorder's instruction: stand at the pitcher's plate, and follow the ball from the subject's hand to the test administrator.

#4 - BASE RUNNING - The rater will instruct the subject to stand on home plate and on the command "Ready" then "Go", the subject will run around all bases (first, second, third then home) as fast as possible. The rater should time the athlete with a second hand and round the time off to nearest seconds.

Video recorder's instruction: stand on the pitcher's plate and follow the subject around the bases.

#5 - BATTING - The rater will pitch legal pitches in the strike zone to the subject. The subject will hit the ball so that it lands in fair territory with enough force to go beyond the baseline in any direction. The subject does not have to hit the ball even if it is a strike, he/she may select the pitches he/she would like to hit.

Video recorder's instructions: stand in the first base or third base coaches box (in foul territory by the respective base), follow the ball from the pitch to the batter then after it is hit until it stops completely (unless it is already beyond the base line in fair territory. If the ball is foul the test administrator will call foul ball and you may discontinue filming.

Rater's (Coaches') Protocol for Subsections #2-6:

The coach should rate the athlete on the specific areas addressed, selecting the answer that is the closest to his/her actual opinion. For example in Subsection #2, question #1, circle the response that fits your idea of the athlete's competitive effort during the softball game.
**SOFTBALL SPORT SKILLS**

**Subsection #1:**

1) Athlete performs skill of **fielding ground balls** (how many out of 10?).

<table>
<thead>
<tr>
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<th>8-10</th>
<th>6-7</th>
<th>4-5</th>
<th>2-3</th>
<th>0-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

2) Athlete performs skill of **catching fly balls** (how many out of 10?).

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<thead>
<tr>
<th></th>
<th>8-10</th>
<th>6-7</th>
<th>4-5</th>
<th>2-3</th>
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<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>

3) Athlete performs skill of **overhand throw for accuracy** (how many hit target area out of 10?).

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<thead>
<tr>
<th></th>
<th>8-10</th>
<th>6-7</th>
<th>4-5</th>
<th>2-3</th>
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<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

4) Athlete performs skill of **base running**, runs around the bases within how many seconds?

- below 12 secs
- 13-15 secs
- 16-18 secs
- 19-21 secs
- above 22 secs

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<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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</thead>
</table>

5) Athlete performs skill of **batting** by hitting ten pitched balls (how many good contacts out of ten when the ball is in the strike zone).

<table>
<thead>
<tr>
<th></th>
<th>4 or more</th>
<th>3 out of 10</th>
<th>2 out of 10</th>
<th>1 out of 10</th>
<th>0 out of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
UNIFIED SPORTS PROGRAM SOFTBALL PROFILE

Testing Areas:
1) SOFTBALL SPORT SKILLS
2) SPORTSMANSHIP/ETIQUETTE
3) ADAPTIVE BEHAVIOR
4) KNOWLEDGE OF RULES

Athlete's Name: _______________________________________
Team Name: ___________________________________________
Rater's Name: _________________________________________

Number of Games your team has played thus far in the season:____
Today's Date: _________________________________________

Rater's (Coaches') Protocol for Subsections #2-4:

This questionnaire asks you to rate sub-items as they relate to your impression of the athlete's skills. The coach should rate the athlete on the specific areas addressed, selecting the answer that is the closest to his/her actual opinion. For example in Subsection #2, question #1 (see below), circle the response that best fits your judgement or opinion of the athlete's competitive effort during the softball game.

SAMPLE QUESTION
Subsection #2:
Sportsmanship/Etiquette

1) Athlete exhibits a competitive effort throughout the softball game (refer to definition of "competitive effort" below).

always almost always usually sometimes never
5 4 3 2 1

Competitive Effort = A spirit within an individual which is demonstrated by his willingness to try as hard as possible within their ability level and to do his best in all situations related to the game and practice.
II. BEHAVIOR RATING OF SOFTBALL ATHLETE

SPORTSMANSHIP/ETIQUETTE

Subsection #2:

2.1) Athlete exhibits a competitive effort throughout the softball game (refer to definition of "competitive effort" below).

always almost always usually sometimes never
5 4 3 2 1

Competitive Effort = A spirit within an individual which is demonstrated by his willingness to try as hard as possible within their ability level and to do his best in all situations related to the game and practice.

2.2) Athlete exhibits teamwork during the Unified Sports Softball Program (USSP) games (refer to definition for "teamwork" below).

always almost always usually sometimes never
5 4 3 2 1

Teamwork = The willingness to work with team members in an effort to accomplish team goals.

2.3) Athlete maintains attention throughout the entire game (i.e. athlete is on task when play is about to begin).

always almost always usually sometimes never
5 4 3 2 1

2.4) The athlete controls his temper in game situations.

always almost always usually sometimes never
5 4 3 2 1

2.5) The athlete appropriately uses the "on deck" circle without prompting.

always almost always usually sometimes never
5 4 3 2 1

2.6) Athlete congratulates his teammates after a successful play or hit (e.g. after the teammate comes into home plate after a hit).

always almost always usually sometimes never
5 4 3 2 1
ADAPTIVE BEHAVIOR

Subsection #3:

3.1) The athlete is able to follow instructions, requests or orders from coaches.

always almost always usually sometimes never
5 4 3 2 1

3.2) The athlete demonstrates the ability to control his frustration (e.g. after striking out, athlete does not throw the bat).

always almost always usually sometimes never
5 4 3 2 1

3.3) The athlete behaves in a withdrawn fashion (e.g. athlete must be prompted to get off the bench and be involved in activity).

always almost always usually sometimes never
1 2 3 4 5

3.4) The athlete demonstrates strange or unacceptable habits such as self-stimulating behaviors.

always almost always usually sometimes never
1 2 3 4 5

3.5) The athlete demonstrates independence with regard to his overall behavior while playing in the softball game.

always almost always usually sometimes never
5 4 3 2 1
KNOWLEDGE OF RULES

Subsection #4:

4.1) The athlete demonstrates an understanding of the rules and their application to softball.
   always almost always usually sometimes never
   5  4  3  2  1

4.2) The athlete demonstrates an understanding of softball terminology (e.g. if the athlete is up to bat and he hits the ball after which the umpire calls "foul ball", the athlete returns to the batter's box without prompting.
   always almost always usually sometimes never
   5  4  3  2  1

4.3) The athlete comprehends the function of each player's position.
   always almost always usually sometimes never
   5  4  3  2  1

4.4) The athlete demonstrates an understanding of the strategy of play when he is up at bat (e.g. when the count is 3 balls and 2 strikes, he realizes that if the next pitch is close to the strike zone, he should hit it).
   always almost always usually sometimes never
   5  4  3  2  1

4.5) The athlete demonstrates and understands that three outs are allowed for a team in one half of an inning (e.g. the athlete automatically knows when his team has made a third out, that it is time to "take the field").
   always almost always usually sometimes never
   5  4  3  2  1

THANK YOU VERY MUCH FOR COMPLETING THIS PROFILE!!
APPENDIX C

COACHES' OPINION OF ATHLETE SUCCESS QUESTIONNAIRE
COACHES' OPINION OF ATHLETE SUCCESS QUESTIONNAIRE

Athlete's Name: _______________________________________

Athlete's Team: _______________________________________

Today's Date: ________________

Athlete Statistics (If available)

   Batting Average for Season ______
   Number of Innings your Team played ______
   Number of Innings this athlete played ______

The following questionnaire has been developed to assist the researcher in determining the degree of success of some athletes in the Unified Sport Softball Program (USSP) during the summer of 1990. This tool assesses your judgement of the athlete's performance in the USSP and, based on your opinion, whether or not the skills that the athlete displayed during the season were sufficient to be placed in the USSP. The word "athlete", when it stands alone, refers to a participant who is mentally retarded.

When rating the questions posed, think in terms of the athlete's performance during the Unified Sport Softball Game.

Please circle the one answer which best represents your response to each question.

Example:

The athlete displays sufficient batting skills to compete in the Unified Sport Softball League successfully.

always  almost always usually sometimes never
5       4       3       2       1

Number 4 was circled because as the athlete's coach, I feel that he displayed sufficient batting skills almost all of the time.
1) While playing in a softball game, the athlete displays sufficient skills in catching fly balls (e.g. catches fly balls most of the time).

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________

2) The athlete displays sufficient skills in fielding ground balls (e.g. fields ground balls most of the time).

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________

3) The athlete displays sufficient batting skills (e.g. batting average is over 250 most of the time).

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________

4) The athlete demonstrates sufficient base running skills.

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________

5) The athlete demonstrates sufficient throwing skills including knowledge about where to throw the ball.

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________

6) The athlete's nonmentally retarded teammates demonstrate comparable softball sport skills to the athletes who are mentally retarded (catching, fielding, batting, base running and throwing).

always almost always usually sometimes never
5 4 3 2 1

Comments:__________________________
7) The athlete's demonstration of *sportsmanship/etiquette* is appropriate (refer to definition of "sportsmanship/etiquette" below).

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**Sportsmanship/Etiquette** = The act of behaving in such a way during softball practice and the game that demonstrates a willingness to demonstrate logical and sensible judgement and behavior in all situations. Refusing to demonstrate behaviors that send the message of "win at all costs".

Comments: ______________________________________________________________

8) The athlete's nonmentally retarded teammates' demonstration of *sportsmanship/etiquette* is appropriate (refer to definition of "sportsmanship/etiquette" above).

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Comments: ______________________________________________________________

9) The athlete displays sufficient *adaptive behavior* (refer to the definition of "adaptive behavioral skills" below).

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<th>usually</th>
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</table>

Comments: ______________________________________________________________

**Adaptive Behavioral Skills** = The effectiveness or degree with which an individual meets standards of personal independence and social responsibility expected for his age (Grossman, 1977).

10) The athlete's nonmentally retarded teammates' display sufficient *adaptive behavior* (refer to the definition of "adaptive behavioral skills" above).

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Comments: ______________________________________________________________

11) The athlete's knowledge of rules during game play is sufficient.

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</table>

Comments: ______________________________________________________________

3
12) The athlete’s nonmentally retarded teammates' knowledge of rules during game play is sufficient.

always  5  almost always  4  usually  3  sometimes  2  never  1

Comments:__________________________________________________________________

------------------------------------------------------------------------------------------------------------------------

Based on your responses from the previous questions, did the athlete participate on the most appropriate softball level (check only one):

___ YES, he should play at the Unified Sports Softball Level
___ NO, he should have played on a Special Olympics Softball Level.
___ NO, he should have played on a regular community softball level.

Comments:__________________________________________________________________

------------------------------------------------------------------------------------------------------------------------

Please supply the following information

Your Name: __________________________

Your address: __________________________

Your Telephone # __________________________

If different from above:

Coach’s Name: __________________________

Coach’s Address: __________________________

Coach’s Telephone #: __________________________

THANK YOU FOR FILLING OUT THIS SURVEY
APPENDIX D

INSTRUCTIONS AND TOOLS SENT TO EXPERT PANEL
INSTRUCTIONS FOR PANEL OF EXPERTS

Name: ________________________

Please read the test administrator's instructions. After reading each question, rate that question (on a scale from 1-10) according to its content validity (does it measure what the question purports to measure).

After rating each question in a Subsection, rate the overall Subsection's weighted value (on a scale from 1 - 10) that it should have regarding predicting success in softball, compared to the other Subsections' weighted values of the tool as a whole. Also, add any comments about the Subsection, discussing those questions you would delete or add (providing an example if you think a question should be added to that Subsection) or any other comment you wish to express regarding the overall Subsection.

Both rating scales will utilize the following descriptors to illustrate their numerical value: 1 = unacceptable and 10 = very acceptable. After each question you will see the following box in which you will rate that specific question.

<table>
<thead>
<tr>
<th>Question’s rating from panel expert:</th>
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<tr>
<td>1 2 3 4 5 6 7 8 9 10</td>
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<tr>
<td>unacceptable</td>
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<tr>
<td>very acceptable</td>
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</tbody>
</table>

After each Subsection you will see the following box where you will rate each Subsection as a whole with regard to its importance in comparison to the other Subsections.

<table>
<thead>
<tr>
<th>Expert panel’s Overall Rating of Subsection #1 with regard to its importance when compared to the other Subsections.</th>
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<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10</td>
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<tr>
<td>unimportant</td>
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<td>very important</td>
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</tbody>
</table>

Comments, deletions or additions: ____________________________________________
UNIFIED SPORTS PROGRAM SOFTBALL PROFILE

Testing Areas:

1) SOFTBALL SPORT SKILLS
2) SPORTSMANSHIP/ETIQUETTE
3) ADAPTIVE BEHAVIOR
4) SOCIALIZATION
5) KNOWLEDGE OF RULES

Test Administrator’s Protocol for Softball Sport Skills Subsection #1:
NOTE - ALL testing should be conducted on a regulation Softball Field, ie. 65’ between bases and 46’ to the pitcher’s plate from home plate. And, the athlete should be instructed to warm up at least 10 minutes prior to taking this test (stretches, throwing and slow jogging).

Equipment- regulation field with bases, two extra bases, selection of bats, selection of glove, 15 softballs, 2 stop watches, rating sheets, and 2 clipboards.

#1 - FIELDING GROUND BALLS - The test administrator will stand at home plate, overhand throw the ball toward the ground making it hit the ground even with the pitcher’s mound with medium force. The fielder will stand between second and third base (mark an X in the dirt) and should not have to move more than two steps in either direction to retrieve the ball. A successful retrieval is one that is scooped up into the glove and does not touch the ground again. If the subject takes more than two steps and successfully retrieves the ball, that retrieval can be counted, if he does not retrieve the ball do not rate the skill.

Video recorder’s instructions: stand behind the test administrator at home plate to key in on the throw and then the fielder, you might want to zoom in on the fielder and the ball once they can be viewed simultaneously.

Rater’s Commands to the Subject:
"The skill that I would like you to do is fielding ground balls. I would like for you to start on the X each time before the ball is thrown to you. After the ball is thrown move to scoop up the ball into your glove as you would in the game. Throw the ball back to the test administrator (name here) at home plate and return to the X. We will do this 10 times."

#2 - CATCHING FLY BALLS - The test administrator will stand at a makeshift base in the outfield and throw the ball approximately 30 feet up into the air. The subject will stand on another base thirty feet away and facing the test administrator’s base. The subject will move no more than five steps to retrieve the ball. If he takes more than five steps, and catches the ball, that catch can be counted. If more than five steps are required and the ball is missed, do not rate that attempt.

Video recorder’s instruction: stand behind and to the side of the test administrator and follow the ball form the test administrator to the subject.

Rater’s Command to the Subject:
"This skill is catching fly balls. I would like for you to stand with one foot on your base starting out. When the test administrator (name here) throws the ball up into the air to you, I would like for you to move to the ball and try to catch it on a fly."
#3 - OVERHAND THROW FOR ACCURACY - The test administrator will stand with one foot on a base facing the subject. The subject will throw the ball from another base, which is 30 feet away, with enough force and accuracy for the test administrator to catch the ball without taking his/her foot off the base.

Video recorder's instruction: stand behind and to the side of the test administrator and follow the ball from the subject's hand to the test administrator.

Rater's Command to the Subject:
"Now we are going to throw the ball to the test administrator (name here). I would like for you to put one foot on the base and throw the ball to the test administrator (name here) so that he/she can catch the ball without moving his/her foot off the base. Try to throw it with enough force and right to his/her glove."

#4 - BASE RUNNING - The subject will stand with one foot on home plate and when he is ready he will run around all bases (first, second, third then home) stepping on each base, as fast as possible. The rater should time the athlete with a second hand and round the time off to nearest seconds. The rater will start the clock when the subject's foot leaves home plate and stop the clock when the subject touches home plate after rounding the bases.

Video recorder's instruction: stand in the third base on deck circle and follow the subject around the bases.

Rater's Command to the Subject:
"This skill is running! I would like for you to put one foot on home plate. Then, I would like for you to run around the bases, from first to second to third and then back to home plate as fast as you can. You may go whenever you are ready."

#5 - BATTING - The rater will pitch legal pitches in the strike zone to the subject. The subject will hit the ball so that it lands in fair territory with enough force to go beyond the baseline (in the air or on the ground) in any direction; this constitutes a "good contact". The subject does not have to hit the ball even if it is a strike, he may select the pitches he would like to hit. The subject will attempt to hit 10 balls. Swinging strikes are counted as a miss; not considered a "good contact". The number of "good contacts" out 10 will be recorded.

Video recorder's instructions: stand in the first base or third base coaches box (in foul territory by the respective base), follow the ball from the pitch to the batter then after it is hit until it stops completely (unless it is already beyond the base line in fair territory). If the ball is foul the test administrator will call foul ball and you may discontinue filming.

Rater's Command to the Subject:
"Next you are going to hit the balls as far as you can and try to keep them in "fair territory" (between the white lines). I would like for you to hit 10 balls but you do not have to swing at all the pitches, just swing at the balls that you want to hit."

Athlete's Name:________________________
Team Name:________________________
Rater's Name:________________________
Number of Games your Team has played thus far in the season:_______
Today's Date:________________________
Rater's (Coaches') Protocol for Subsections #2-6:

The coach should rate the athlete on the specific areas addressed, selecting the answer that is the closest to his/her actual opinion. For example in Subsection #2, question #1 (see below), circle the response that best fits your judgement or opinion of the athlete's competitive effort during the softball game.

Subsection #2: Sportsmanship

1) Athlete exhibits a competitive effort during the softball game (refer to definition of "competitive effort" on the last page).

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<tr>
<th>always</th>
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SOFTBALL SPORT SKILLS

Subsection 1:

1.1) Athlete performs skill of **fielding ground balls**
    (how many out of 10?).

<table>
<thead>
<tr>
<th>8-10</th>
<th>6-7</th>
<th>4-5</th>
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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

1.2) Athlete performs skill of **catching fly balls**
    (how many out of 10?).

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<thead>
<tr>
<th>8-10</th>
<th>6-7</th>
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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

1.3) Athlete performs skill of **overhand throw for accuracy**
    (how many out of 10 does the test administrator catch without lifting his/her foot
    from the base?).

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<th>6-7</th>
<th>4-5</th>
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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

1.4) Athlete performs skill of **base running**, runs around the bases
    within how many seconds?

below 14 secs 14.1-17 secs 17.1-20 secs 20.1-23 secs 23.1 secs or above

| 5    | 4   | 3   | 2   | 1   |

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable
1.5) Athlete performs skill of **batting** by hitting ten pitched balls (how many good contacts out of ten when the ball is pitched).

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<tr>
<th>4 or more</th>
<th>3 out of 10</th>
<th>2 out of 10</th>
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**Expert panel's Overall Rating of Subsection #1 with regard to its importance when compared to the other Subsections.**

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Comments, deletions or additions:

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**SPORTSMANSHIP/ETIQUETTE**

**Subsection #2:**

**Sportsmanship**

2.1) Athlete exhibits a **competitive effort** throughout the softball game (refer to definition of "competitive effort" on last page).

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<th>almost always</th>
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**Question's rating from panel expert:**

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2.2) Athlete exhibits **teamwork** during the Unified Sports Softball Program (USSP) game (refer to definition of "teamwork" on last page).

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**Question's rating from panel expert:**

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</table>
2.3) Athlete pays attention throughout the game (i.e. keeps eye on the ball while playing defense).

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

2.4) The athlete controls his/her temper in game situations.

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

Etiquette

2.5) The athlete demonstrates responsibility for his equipment during the USSF Softball game (i.e. "keeps track" of his glove during the game).

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

2.6) The athlete congratulates opponents after all games, win or lose.

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

2.7) Athlete's emphasis on winning and loosing is appropriate (i.e. keeps winning in perspective).

always almost always usually sometimes never
5 4 3 2 1
2.8) The athlete demonstrates the ability to be in the "on deck" circle when appropriate without prompting.

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

2.9) Athlete congratulates his teammates after a successful play or hit (ie. after the teammate comes into home plate after a hit).

always almost always usually sometimes never
5 4 3 2 1

Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

Expert panel's Overall Rating of Subsection #2 with regard to its importance when compared to the other Subsections.

1 2 3 4 5 6 7 8 9 10
unimportant very important

Comments, deletions or additions:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

ADAPTIVE BEHAVIOR

Subsection #3:

3.1) The athlete uses abusive language (i.e. expressions such as "stupid", "jerk" or profanity).

always almost always usually sometimes never
1 2 3 4 5

3.2) The athlete resists or disregards instructions, requests or orders from coaches.

always almost always usually sometimes never

1 2 3 4 5

unacceptable very acceptable

3.3) The athlete demonstrates the ability to control his frustration. For example, after striking out at the end of the game, does not blame himself for the loss.

always almost always usually sometimes never

5 4 3 2 1

unacceptable very acceptable

3.4) The athlete behaves in a withdrawn fashion. For example, must be prompted to get off the bench and be involved in activity.

always almost always usually sometimes never

1 2 3 4 5

unacceptable very acceptable

3.5) The athlete has inappropriate interpersonal manners such as touching or hugging teammates at inappropriate times.

always almost always usually sometimes never

1 2 3 4 5

unacceptable very acceptable
3.6) The athlete demonstrates strange or unacceptable habits such as self-stimulating behaviors.

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</table>

Question's rating from panel expert:

unacceptable 2 3 4 5 6 7 8 9 10 very acceptable

3.7) The athlete demonstrates independence with regard to his overall behavior while playing in the softball game.

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Question's rating from panel expert:

unacceptable 1 2 3 4 5 6 7 8 9 10 very acceptable

Expert panel's Overall Rating of Subsection #3 with regard to its importance when compared to the other Subsections.

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<td>1 2 3 4 5 6 7 8 9 10</td>
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Comments, deletions or additions: ____________________________

SOCIALIZATION

Subsection #4

4.1) The athlete cooperates with peers in a group setting (i.e. does not disrupt others).

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Question's rating from panel expert:

unacceptable 1 2 3 4 5 6 7 8 9 10 very acceptable
4.2) The athlete demonstrates consideration for other's feelings and needs (i.e., provides verbal encouragement for teammates when they miss a fly ball and understands his teammates disappointment).

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

4.3) The athlete interacts appropriately with others in games or team activities.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

4.4) The athlete is willing to "take turns" during USSP practice.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

Expert panel's Overall Rating of Subsection #4 with regard to its importance when compared to the other Subsections.

1 2 3 4 5 6 7 8 9 10
unimportant very important

Comments, deletions or additions:
KNOWLEDGE OF RULES

Subsection §5:

5.1) The athlete demonstrates an understanding of the basic rules of softball.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

5.2) The athlete demonstrates an understanding of basic softball terminology. For example, if the athlete is up to bat and hits the ball after which the umpire calls "foul ball", the athlete returns to the batter's box without prompting.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

5.3) The athlete demonstrates the understanding of the function of each player's position on the field.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

5.4) The athlete demonstrates an understanding of the strategy of play when he is up at bat. For example, when the count is 3 balls and 2 strikes, he realizes that if the next pitch is close to the strike zone, he should hit it.

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Question's rating from panel expert:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable
5.5) The athlete demonstrates an understanding of the rule that three outs are allowed for a team in one half of an inning. For example, the athlete automatically knows when his team is up to bat and has made their third out, that it is time to "take the field".

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Question's rating from panel expert:

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Expert panel's Overall Rating of Subsection #6 with regard to its importance when compared to the other Subsections.

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Comments, deletions or additions: ________________________________

Applied Definitions:

Question 2.1) Competitive Effort = A spirit within an individual which is demonstrated by his willingness to try as hard as possible within their ability level and to do his best in all situations related to the game.

Question 2.2) Teamwork = The willingness to work with team members in an effort to accomplish team goals.

THANK YOU VERY MUCH FOR COMPLETING THIS PROFILE!!
COACHES' OPINION OF ATHLETE SUCCESS QUESTIONNAIRE

Athlete's Name: ____________________________

Athlete's Team: _____________________________

Today's Date: _____________________________

Athlete Statistics (If available)

Batting Average for Season ______

Number of Innings that your Team played ______

Number of Innings that this athlete played ______

The following questionnaire has been developed to assist the researcher in determining the degree of success of some athletes in the Unified Sport Softball Program (USSP) during the summer of 1990. This tool assesses your judgement of the athlete's performance in the USSP and, based on your opinion, whether or not the skills that the athlete displayed during the season were sufficient to be placed in the USSP. The word "athlete", when it stands alone, refers to a participant who is mentally retarded.

When rating the questions posed, think in terms of the athlete’s performance during the Unified Sport Softball Game.

Please circle the one answer which best represents your response to each question.

Example:

The athlete displays sufficient batting skills to compete in the Unified Sport Softball League successfully.

always  almost always  usually  sometimes  never
5       4           3          2        1

Number 4 was circled because as the athlete's coach, I feel that he displayed sufficient batting skills almost all of the time.
1) While playing in a softball game, the athlete displays sufficient skills in catching fly balls.

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Comments: _____________________________________________________

Expert panel’s rating of question:

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<tbody>
<tr>
<td>unacceptable</td>
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2) The athlete displays sufficient skills in fielding ground balls.

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Comments: _____________________________________________________

Expert panel’s rating of question:

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<tr>
<td>unacceptable</td>
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3) The athlete displays sufficient batting skills (e.g. batting average equals 250 in a game).

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Comments: _____________________________________________________

Expert panel’s rating of question:

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4) The athlete demonstrates sufficient base running skills.

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2
5) The athlete demonstrates sufficient throwing skills including knowledge about where to throw the ball.

always almost always usually sometimes never
5 4 3 2 1

Comments:

Expert panel’s rating of question:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

6) The athlete’s nonmentally retarded teammates demonstrate sufficient softball sport skills (catching, fielding, batting, base running and throwing).

always almost always usually sometimes never
5 4 3 2 1

Comments:

Expert panel’s rating of question:

1 2 3 4 5 6 7 8 9 10
unacceptable very acceptable

7) The athlete’s demonstration of sportsmanship/etiquette is appropriate (refer to definition of "sportsmanship/etiquette" below).

always almost always usually sometimes never
5 4 3 2 1

Sportsmanship/Etiquette = The act of behaving in such a way during softball practice and the game that demonstrates a willingness to demonstrate logical and sensible judgement and behavior in all situations. Refusing to demonstrate behaviors that send the message of "win at all costs".

Comments:__________________________________________________________________
8) The athlete's nonmentally retarded teammates' demonstration of sportsmanship/etiquette is appropriate (refer to definition of "sportsmanship/etiquette" above).

always  almost always  usually  sometimes  never
5            4             3            2            1

Comments: __________________________________________________

9) The athlete displays sufficient adaptive behavior (refer to the definition of "adaptive behavioral skills" below).

always  almost always  usually  sometimes  never
5            4             3            2            1

Comments: 
Adaptive Behavioral Skills = The effectiveness or degree with which an individual meets standards of personal independence and social responsibility expected for his age (Grossman, 1977).

10) The athlete's nonmentally retarded teammates' display sufficient adaptive behavior (refer to the definition of "adaptive behavioral skills" above).

always  almost always  usually  sometimes  never
5            4             3            2            1

Comments: __________________________________________________
11) The athlete's knowledge of rules during game play is sufficient.

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Comments: __________________________________________________________

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12) The athlete's nonmentally retarded teammates' knowledge of rules during game play is sufficient.

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Comments: _________________________________________________________________

Expert panel's rating of question:

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Based on your responses from the previous questions, was the athlete placed on the most appropriate softball team (check only one):

_____ YES

_____ NO, he should have played on a Special Olympics Softball Team.

_____ NO, he should have played on a regular community softball team.

Comments: ____________________________________________________________________
Please supply the following information:

Your Name: ________________________

Your address: ________________________

Your Telephone #: ________________________

If different from above:

Coach's Name: ________________________

Coach's Address: ________________________

Coach's Telephone #: ________________________

Expert panel's Overall Rating of questionnaire with regard to its importance in determining the success of athletes in the Unified Sport Softball Program based on coaches' opinion.

1 2 3 4 5 6 7 8 9 10
unacceptable    very acceptable

Comments, deletions or additions: ____________________________

THANK YOU FOR FILLING OUT THIS SURVEY
APPENDIX E

SUGGESTED TOOL = SOFTBALL PARTICIPATION PROFILE
(QUESTIONS 3.2 AND 2.4 FROM THE ORIGINAL TOOL ARE DELETED)
UNIFIED SPORTS PROGRAM SOFTBALL PROFILE

Testing Areas:

1) SOFTBALL SPORT SKILLS
2) SPORTSMANSHIP/ETIQUETTE
3) ADAPTIVE BEHAVIOR
4) KNOWLEDGE OF RULES

Test Administrator's Protocol for Softball Sport Skills Subsection #1:
NOTE - ALL testing should be conducted on a regulation Softball Field, (i.e. 65' between bases and 46' to the pitcher's plate from home plate). And, the athlete should be instructed to warm up at least 10 minutes prior to taking the test (stretches, throwing and slow jogging).

Space and Equipment - A regulation field with bases, two extra bases, selection of bats, selection of gloves, 15 softballs, 2 stop watches, rating sheets, and 2 clip boards will be required.

#1 - FIELDING GROUND BALLS - The test administrator will stand at home plate, overhand throw the ball toward the ground making it hit the ground even with the pitcher's mound with medium force. The fielder will stand between second and third base (mark an X in the dirt) and should not have to move more than two steps in either direction to retrieve the ball. A successful retrieval is one that is scooped up into the glove or retrieved by his bare hand and does not touch the ground again. If the subject takes more than two steps and successfully retrieves the ball, that retrieval can be counted, if he does not retrieve the ball after moving more than two steps, do not rate the skill.

Rater's Commands to the Subject:
"The skill that I would like you to do is fielding ground balls. I would like for you to start on the X each time before the ball is thrown to you. After the ball is thrown move to scoop up the ball into your glove as you would in the game. Throw the ball back to the test administrator (name here) at home plate and return to the X. We will do this 10 times."

#2 - CATCHING FLY BALLS - The test administrator will stand at a makeshift base in the outfield and throw the ball approximately 30 feet up into the air. The subject will stand on another base, thirty feet away and facing the test administrator's base. The subject will have to move no more than five steps to retrieve the ball. If he takes more than five steps, and catches the ball, that catch can be counted. If more than five steps are required and the ball is missed, do not rate that attempt.

Rater's Command to the Subject:
"This skill is catching fly balls. I would like for you to stand with one foot on your base starting out. When the test administrator (name here) throws the ball up into the air to you, I would like for you to move to the ball and try to catch it on a fly."
#3 - OVERHAND THROW FOR ACCURACY - The test administrator will stand with one foot on a makeshift base facing the subject. The subject will throw the ball from another base, which is 30 feet away, with enough force and accuracy for the test administrator to catch the ball without taking his/her foot off the base.

Rater’s Commands to the Subject:

"Now, we are going to throw the ball to the test administrator (name here). I would like for you to put one foot on your base and throw the ball to the test administrator (name here) so that he can catch the ball without moving his foot off the base. Try to throw it with enough force and right to his glove."

#4 - BASE RUNNING - The subject will stand with one foot on home plate and when he is ready he will run around all bases (first, second, third and then home) stepping on each base, as fast as possible. The rater should time the athlete with a second hand and round the time off to nearest seconds. The rater will start the stop watch when the subject’s foot leaves home plate and stop the clock when the subject’s foot touches home plate after rounding the bases.

Rater’s Commands to the Subject:

"This skill is base running! I would like for you to put one foot on home plate. Then, I would like for you to run around the bases, from first to second to third and then back to home plate stepping on each base and going as fast as you can. You may go whenever you are ready."

#5 - BATTING - The test administrator will pitch legal pitches in the strike zone to the subject. The subject will hit the ball so that it lands in fair territory with enough force to go beyond the baseline (in the air or on the ground) in any direction; this constitutes a "good contact". The subject does not have to hit the ball even if it is a strike, he may select the pitches he would like to hit. The subject will attempt to hit 10 balls. Swinging strikes are counted as a miss; not considered a "good contact". The number of "good contacts" out of 10 will be recorded.

Rater’s Commands to the Subject:

"Next you are going to hit the balls as far as you can and try to keep them in fair territory (between the white lines). I would like for you to hit 10 balls but you do not have to swing at all the pitches, just swing at the balls that you want to hit."

Athlete's Name: ______________________________________

Team Name: ______________________________________

Rater’s Name: ______________________________________

Number of Games your team has played thus far in the season:____

Today’s Date:_____________________________________
I. PERFORMANCE TEST OF SOFTBALL ATHLETE

SOFTBALL SPORT SKILLS

Subsection 1.1:

1.1) Athlete performs skill of fielding ground balls coming straight at him (how many out of 10?).

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1.2) Athlete performs skill of catching fly balls coming straight at him (how many out of 10?).

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1.3) Athlete performs skill of overhand throw for accuracy (how many out of 10 does the test administrator catch without lifting his/her foot from the base).

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1.4) Athlete performs skill of base running, runs around the bases within how many seconds?

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<th>below 14 secs</th>
<th>14.1-17 secs</th>
<th>17.1-20 secs</th>
<th>20.1-23 secs</th>
<th>23.1 or above</th>
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</table>

1.5) Athlete performs skill of batting by hitting ten pitched balls (how many good contacts out of ten).

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<th>4 or more</th>
<th>3 out of 10</th>
<th>2 out of 10</th>
<th>1 out of 10</th>
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Rater’s (Coaches’) Protocol for Subsections #2-4:

This questionnaire asks you to rate sub-items as they relate to your impression of the athlete’s skills. The coach should rate the athlete on the specific areas addressed, selecting the answer that is the closest to his/her actual opinion. For example in Subsection #2, question #1 (see below), circle the response that best fits your judgement or opinion of the athlete’s competitive effort during the softball game.

SAMPLE QUESTION
Subsection #2: Sportsmanship/Etiquette

1) Athlete exhibits a competitive effort throughout the softball game (refer to definition of "competitive effort" below).

always almost always usually sometimes never
5 4 3 2 1

Competitive Effort = A spirit within an individual which is demonstrated by his willingness to try as hard as possible within their ability level and to do his best in all situations related to the game and practice.

II. BEHAVIOR RATING OF SOFTBALL ATHLETE

SPORTSMANSHIP/ETIQUETTE

Subsection #2:

2.1) Athlete exhibits a competitive effort throughout the softball game (refer to definition of "competitive effort" below).

always almost always usually sometimes never
5 4 3 2 1

Competitive Effort = A spirit within an individual which is demonstrated by his willingness to try as hard as possible within their ability level and to do his best in all situations related to the game and practice.

2.2) Athlete exhibits teamwork during the Unified Sports Softball Program (USSP) games (refer to definition for "teamwork" below).

always almost always usually sometimes never
5 4 3 2 1

Teamwork = The willingness to work with team members in an effort to accomplish team goals.

2.3) Athlete maintains attention throughout the entire game (i.e. athlete is on task when play is about to begin).

always almost always usually sometimes never
5 4 3 2 1
2.4) The athlete appropriately uses the "on deck" circle without prompting.

 always almost always usually sometimes never
 5  4  3  2  1

2.5) Athlete congratulates his teammates after a successful play or hit (e.g. after the teammate comes into home plate after a hit).

 always almost always usually sometimes never
 5  4  3  2  1

ADAPTIVE BEHAVIOR

Subsection 3:

3.1) The athlete is able to follow instructions, requests or orders from coaches.

 always almost always usually sometimes never
 5  4  3  2  1

3.2) The athlete behaves in a withdrawn fashion (e.g. athlete must be prompted to get off the bench and be involved in activity).

 always almost always usually sometimes never
 1  2  3  4  5

3.3) The athlete demonstrates strange or unacceptable habits such as self-stimulating behaviors.

 always almost always usually sometimes never
 1  2  3  4  5

3.4) The athlete demonstrates independence with regard to his overall behavior while playing in the softball game.

 always almost always usually sometimes never
 5  4  3  2  1
Subsection #4:

4.1) The athlete demonstrates an understanding of the rules and their application to softball.

always almost always usually sometimes never
5 4 3 2 1

4.2) The athlete demonstrates an understanding of softball terminology (e.g. if the athlete is up to bat and he hits the ball after which the umpire calls "foul ball", the athlete returns to the batter's box without prompting).

always almost always usually sometimes never
5 4 3 2 1

4.3) The athlete comprehends the function of each player's position.

always almost always usually sometimes never
5 4 3 2 1

4.4) The athlete demonstrates an understanding of the strategy of play when he is up at bat (e.g. when the count is 3 balls and 2 strikes, he realizes that if the next pitch is close to the strike zone, he should hit it).

always almost always usually sometimes never
5 4 3 2 1

4.5) The athlete demonstrates and understands that three outs are allowed for a team in one half of an inning (e.g. the athlete automatically knows when his team and has made a third out, that it is time to "take the field").

always almost always usually sometimes never
5 4 3 2 1

THANK YOU VERY MUCH FOR COMPLETING THIS PROFILE!!