

A STUDY OF ADAPTED PHYSICAL EDUCATION PROGRAMS  
IN PUBLIC SCHOOLS IN THE  
STATE OF KANSAS

by

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**For the Department**

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## Chapter 1

### INTRODUCTION

The very nature of American society today inevitably seeks to provide adequately for the education of all children. The acceptance of physical education as an integral part of general education is an established fact.

Physical education is education by means of physical activities which meet the needs of the individuals involved. Properly planned and taught, it is a method whereby the entire physical, mental, and emotional well-being of an individual is enhanced through participation in activities which place emphasis on the development of skill, speed, strength, and endurance. (5)

During an interview with Greve (35) he stated that school systems, in order to meet the needs of the handicapped, must adapt their existing physical education programs. In his opinion the existing programs do not need radical modifications, just adaptations to be integrated in with the existing programs.

Most authors agree that adapted physical education is a modification of physical activities according to the limitations of atypical individuals or groups. (6, 16, 17, 19, 35) Because it is an effort to meet the physical needs of all individuals, adapted physical education is an important part of the handicapped child's education. Very often the handicapped are shuffled off or asked to drop from the regular physical education program or are even excused from the very beginning because they could not "get" with the program. A nationwide survey of physical education for mentally retarded children in the United States

was completed by Brace (23, 24) in 1966. It was learned that only with the aid of federal funding could a greater number of mentally retarded and other handicapped children benefit from physical education in the public schools. Public Law 94-142 has mandated that physical education be provided for every handicapped child between the ages of three and 18 years. It remains to be seen whether, due to the enactment of laws and legislation, the handicapped will become citizens with unalienable rights.

#### Purpose of Study

The purpose of this investigation was to determine the number and types of adapted physical education programs for handicapped students in elementary and secondary public schools throughout the state of Kansas. Specifically referring to adapted physical education programs, information about the makeup of the class(es), the adequacy of facilities available, and the specific activities offered was studied. Also, the types and numbers of handicapped students, the kinds and names of tests used, and the type of final evaluation procedures were investigated. Finally, information regarding the number of part and/or full-time professionals implementing the program, the quality of equipment, and the respondent's background was surveyed.

#### Scope of Study

The scope of this study was limited to the number and types of adapted physical education programs in elementary and secondary public schools throughout the state of Kansas, the types of programs being offered and the activities in which the physically, socially, and mentally handicapped participate. The names of 86 elementary and 74

secondary schools were randomly drawn from the 1976-77 Kansas Educational Directory (45), obtained from the State Department of Education, Topeka, Kansas. The selected schools received questionnaires investigating the measurable, quantitative and qualitative aspects of adapted physical education programs in Kansas public schools.

#### Assumptions and Limitations

It was assumed that the respondents from the randomly-selected schools were familiar with the vital components necessary in a physical education program adapted for the handicapped, the questionnaires were not misinterpreted by the responding physical educators, and those responding did so with accuracy and reliability, thereby conveying in written form a clear representation of the particular aspects of the school's physical education program dealing especially with the students of each local area. The reliability of the respondents' answers to the questionnaire was accepted, assuming that any respondent from the same school would have answered the questions in a similar manner. This study was limited to the scope of the mail questionnaires to provide meaningful data, so that the author could empirically demonstrate the types of physical education opportunities for the handicapped in the state of Kansas.

The validity for the mail questionnaire was established through sampling the opinions of six physical educators in the Shawnee Mission School District. Their professional responses to the questions were used to formulate consistent opinions as the adapted physical education programs for handicapped children in their district were surveyed. The fact that the physical educators responded with similar ideas, thoughts



and comments lead the investigator to assume validity for the revised mail questionnaire as the surveying instrument.

### Significance of Study

The significance of this study was also indicated by a similar study conducted by Brace in 1966. Brace (24) found that physical education was not being provided for the majority of the educable mentally retarded children at the elementary level. Gross (36) found that the attitudes of educable mentally retarded children toward physical education were positive, but that these children did not have opportunities to participate in school intramurals or in regularly-scheduled recreational activities. As a result of his study, Gross recommended that "continued research in the area of physical education programming for the educable mentally retarded children in the public schools should be encouraged." (36)

Another very significant reason for this study was the federal provision that by 1979 handicapped students must be provided services according to the Rehabilitation Act of 1973, section 504 (Public Law 94-142). (31) The government is now mandating what many people have thought important for a long time. An analysis of laws and provisions for physical education in public schools for students with handicapping conditions indicated that physical education is a part of education that has been and should be required for all students. (42) Federal and state legislation has recently acted upon court rulings by calling for adequate educational opportunities for all handicapped children by 1980. (34)

### Definitions and Abbreviations

1. AAHPER. AAHPER is the abbreviation for the American Alliance of Health, Physical Education and Recreation.
2. Adapted Physical Education. Adapted physical education is a "modification of physical activities according to the physical limitations of an atypical individual or group." (17)
3. Atypical. In this study, atypical pertains to students with limited physical and/or mental abilities, causing them to be treated differently than the regular school child in the aspect of their participation in the school's physical education program.
4. Corrective Physical Education. Corrective physical education is "a program of specific exercises and activities designed to improve body mechanics when standing, sitting or moving through space." (17)
5. Educable Mentally Retarded (EMR). "An educable mentally retarded child is one who because of slow mental development, cannot profit from the work offered in regular classroom activity, but is capable of learning some skills. The majority of these children are able to participate in the same motor activities as children of normal intelligence." (6)
6. Handicapped Children. The term handicapped "describes persons with degrees of physical, mental, psychological and/or social impairments, and relates to a disadvantage in performing a given task as a result of the disability, society attitudes, environment, or self-imposed restrictions." (16)
7. Mainstreaming. "Mainstreaming is both a process and a goal - the process of selecting methods of integrating people and programs and the goal of enabling handicapped people to live and appear in ways

which distinguish them as little as possible from the rest of the society." (37)

8. Mental Retardation or Mentally Retarded (MR). "Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior." (10)

9. Schools with Programs (SWP). Schools with adapted physical education programs.

## Chapter 2

### REVIEW OF LITERATURE

#### Introduction

"If physical education is to achieve its avowed purpose of contributing to the fullest development of all pupils, then more adequate provision must be made for those with disabilities." (4) It is generally recognized that physical education programs for the handicapped have developed and expanded during the 1960s and early 1970s. The growth and development of programs for the handicapped is undoubtedly the result of a joint effort by professional organizations, private institutions, and agencies of the federal and state governments.(29)

"The meaning of physical education in the elementary schools and its role. . . is to present its fundamental objectives which are physical, social-emotional and intellectual contributions to the total education of the child." (11) A study conducted by Brace in 1966 (23) revealed that: (a) mentally retarded pupils received little or no special attention with respect to instruction in physical education and recreation; (b) in primary schools 35 percent of the retarded pupils received no physical education; (c) facilities were meager; (d) more physical education teachers with special preparation in teaching the handicapped were needed.

A similar study was conducted also by Brace (24) in which he surveyed administrators and teachers in the nation's public school to determine the status of instruction in physical education for the

mentally retarded pupils. The study revealed that (a) three fourths of the elementary and secondary schools taught some sort of varied activities in physical education, (b) about three fourths of the schools lacked proper facilities for conducting the physical education program, and (c) one third of the elementary schools lacked even the basic playground apparatus.

In a 1973 study Gross (36) found that attitudes of educable mentally retarded (EMR) children toward physical education were positive, but that EMR children did not have opportunities to participate in school intramurals or in regularly-scheduled recreational activities in their communities; in many instances there was no use of evaluation; most respondents felt that their professional preparation was inadequate especially in physical education; and the majority of educators felt that they needed more training in the area of adapted physical education.

A study by Kidder (47) demonstrated the value of a special physical education program in Meridian, Mississippi public schools. The formulated findings indicated that the younger special education students especially EMR children, improved in levels of physical fitness after taking part in the special program.

A recent census taken in Kansas by the Kansas State Parks and Resources Authority during 1975 revealed that there were approximately 250,000 handicapped people living in Kansas. (60) Provisions must be made in the on-going physical education programs to adapt to meet the needs of the handicapped individuals through the use of physical education and recreation. There is a growing awareness that physical education and recreation are answers to help the handicapped person. The basic need is to get the handicapped children back into the mainstream

of regular physical education and let them play and work with normal children.

In an interview (35) with the Committee Chairman for the Employment of the Handicapped, Mr. Joe Greve pointed out that school systems in Kansas need to adapt their physical education programs now to meet the needs of the handicapped. In order to adapt a physical education program, nothing needs to be drastically changed, only adapted to that which is available within the present program. The handicapped students need to be integrated into the existing physical education programs. He also stated that by the year 1979, all school districts must provide services for the handicapped according to the Rehabilitation Act of 1973 section 504 (Public Law 93-112) which says:

'No otherwise qualified handicapped individual in the United States . . . shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.' In the same statute, Congress defined the term "handicapped individual". . . of the 1973 Act as 'any individual who (A) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (B) has a record of such an impairment, or (C) is regarded as having such an impairment.' (31)

#### Historical Background

Adapted physical education came about through paralleling the use of physical education to improve body condition and health. The early Greek and Roman cultures associated physical activities with the values of mental effectiveness, aesthetics, entertainment and state purposes. European philosophers expressed and practiced formal physical education for the total development of the individual during the sixteenth and seventeenth centuries. Therapeutic exercises originated in ancient China, but the modern context had its beginning in ancient

Greece. Gymnastics became prominent during the humanistic movement that stressed the total individual. (15, 19) During the nineteenth century, there were only a few attempts to educate physically handicapped children. The private institutions that educated these children received money only from endowments. Some of the best schools were termed "Sunshine Rooms" because they did not emphasize education but simply cared for the child with minor emphasis on training, i.e., "manual training, nature study, and gardening as aids in improving the physical condition of the children." (7)

Early physical education programs in the United States modeled the German and Swedish gymnastic programs. Following World War I, physical education blossomed mainly because the doctors and nurses were interested in physical fitness for therapeutic exercise for the development of the complete individual. (19) A burst of optimism came in 1933 during the Second White House Conference on Child Health and Protection. A committee estimated the number of physically handicapped children in the United States and then recommended legislation to insure that one third of the estimated number would receive special physical education. At this time it was estimated that less than 25 percent of the known physically handicapped children were receiving any education. (10) Increased interest in the needs of all students led to the appointment of a national committee in 1946 to consider alternative ways of serving the handicapped in the public schools. In 1947 a survey was conducted by the Committee on Adapted Physical Education to find an acceptable terminology to describe the type of physical education to be offered to special students. A careful sampling of highly qualified professional opinions indicated the term "adapted physical education" as the

term most acceptable. In 1954 Arthur S. Daniels published the first textbook which incorporated the term "adapted physical education" into its title. (4)

Kansas instituted its program services during the 1951-52 school year. (50) Senator Robert Dole contributed much current information concerning the federal government's participation in educating physically handicapped children. Public Law 89-313 states that in the fiscal year 1971, the total number of physically handicapped children in attendance of special programs equalled 121,568 in state-operated or state-affiliated schools. With the large population growth in recent years the number of physically handicapped school age children has also increased.(20)

#### Characteristics of Adapted Physical Education Programs

According to the Council for Exceptional Children, an estimated 46 million or more Americans are handicapped. There are an estimated seven million handicapped children in the United States. (30) It has been stated by the Office of Education that 10 percent of the school age population, ages 5 to 19, are handicapped. This primarily includes children who are mentally retarded, emotionally disturbed, or visual, hearing or speech impaired.

Since the beginning of the 1960s there has been a great deal of study on the topic of handicapped children. The United States census of 1970 estimated that over 30 percent of the population was under 21 years of age. Of those, most were school age children between the ages of 5 and 17, constituting over 46 million individuals, or an increase of over 20 percent since the 1960 census. (1) An annual report of the fiscal year 1969 on Better Education for Handicapped Children pointed out that of the six million handicapped children in the United States



requiring special physical education, only about 38 percent were currently receiving appropriate assistance. Although there were no complete figures available, it was estimated in 1969 that about 12 percent of all school age children had an exceptionality requiring some form of special physical education. A report by the American Health Association stated, "the size of the problem is not so much related to total numbers as to its continually changing pattern, as certain potentially handicapping conditions are brought under control, other assume priority." It was indicated that school systems and communities should rise to the occasion and meet these needs. (27)

#### Adapted Physical Education Programs

According to many professionals adapted programs can be valuable for pupils with such characteristics as faulty body mechanics, nutritional disturbances (overweight and underweight), heart and lung disturbances, postoperative and convalescent problems, hernias, weak and flat feet, nervous instability, low physical fitness and crippling conditions. Provisions for restricted and/or remedial physical activity are made for such pupils in both regular and special classes utilizing special conditioning exercises, aquatics, and recreational sports.

Much has happened in the twentieth century to change perceptions of the handicapped and bring them into the mainstream of our society.

Adapted physical education is concerned with students who have conditions such as hearing impairments (deaf and hard of hearing); illness and infirmity; low physical fitness, specific motor deficiencies, and physical underdevelopment; mental retardation (mild, moderate, severe, and profound); neurological impairments and brain damage; physical and orthopedic handicaps. . .; special health problems (cardiac disorders, multiple sclerosis, muscular dystrophy, obesity, malnutrition, diabetes, asthma; serious maladjustments, emotional disturbances and social maladjustments; and visual handicaps; or those who are culturally, socially or economically deprived. (21)

Comprehensive physical education programs geared to meet the needs of the handicapped in the United States are presently inadequate. In an article Pollack (59) maintained that physically and mentally handicapped children are overprotected and are often excluded from participating in physical education. To remedy the situation, Pollack recommended the hiring of more full-time physical educators to teach the handicapped, for although many school districts do conduct some facets of a program for the handicapped, few provide a total program to meet the needs of all handicapped children.

For example, a survey of the status of programs for the handicapped conducted by the New Jersey Youth Division (18) revealed that less than 2 percent of the responding public and private school districts provided physical activity programs to meet the specific needs of their handicapped. According to Moss (55) only 40 percent of the children who require special educational services are receiving them at the present time. Moss also pointed out that it had been estimated that a minimum of 10 percent of all children in the public schools require permanent special educational services and that 25 percent or more require special services at some time or another during their developmental years.

Bucher and Reade (2) defined the adapted program as a special phase of the regular physical education program designed to meet the needs of atypical students who are either temporarily or permanently unable to participate in regular physical education activities. The adapted program aids them to improve physical coordination through exercises adapted to particular deficiencies.

Adapted physical education is defined by the Committee on

Adapted Physical Education of the AAHPER (21) as a diverse program of developmental activities, games, sports and rhythms adapted to the interests, capabilities and limitations of students with disabilities who may not otherwise safely or successfully engage in activities of the general physical education program.

In the May 1974 Journal of Health, Physical Education and Recreation (40) several factors were listed that physical educators must consider when planning and implementing adapted physical education programs to satisfy the word and intent of the definition.

1. Adapted physical education is for every student who cannot safely or successfully participate in the regular program. It should not be limited to students with more severe handicaps. Provisions must be made to include in the adapted physical education program those with any and all impairments who attend school.
2. Adapted physical education is for all levels. The adapted physical education program should include children from primary, elementary, secondary and through the college and university levels.
3. Adapted physical education is not an end in itself but a means by which students learn sensible and realistic limitations. The adapted physical education program should be a very comprehensive program that includes activities adapted to each individual's needs, interests, capabilities and limitations.
4. Adapted physical education is flexible whereby individual students participate in activities within the regular physical education program where they can participate safely and successfully with their classmates. The program should be flexible enough so that students can be moved from the regular class to the adapted class and back again in order to best meet their needs.

5. Adapted physical education includes a greater number of students than is generally realized. Seven to 8 percent of school age children have physical, mental, and emotional conditions to such degree that some special programming including physical education is necessary.

6. Adapted physical education is an integral part of the total educational program. The need for well-developed, meaningful, and individualized adapted physical education programs is on the increase, and will continue to increase since population growth generally means more handicapped children.

The adapted physical education program in the Shawnee Mission School District was adapted in order to remain consistent with the programs outlined by the AAHPER. It was recommended by the teachers on the Committee on Modified Physical Education that the name of the modified courses being taught be changed to "Adapted Physical Education." The term "modified" means taking separate well-known physical education activities and adjusting them to the child's needs, whereas "adapted" indicates a more comprehensive approach to physical education for the handicapped. The adapted physical education program at New Trier in Winnetka, Illinois, was developed in September 1966. It is a special program which creates an atmosphere in which a child of limited strength and skill may participate and derive benefits which they would not receive in a regular program of physical education. This program at New Trier was designed primarily for two types of students: (a) the permanently or temporarily physically handicapped individual who would benefit from a program of corrective exercises and/or activities recommended by their physician and (b) the student who through observation or testing

is found to be lacking in strength and/or coordination which may be improved through a special program of activity. (21)

For the physically handicapped student the program provides an opportunity to develop strength and power in the weakened and affected muscles and possibly to improve muscular and joint function in the disabled parts. For the underdeveloped student the program attempts to restore the weak and under-exercised individual to the point where they can participate in the various recreational activities in the gymnasium and on the athletic field. (21)

Initially for some children, the least restrictive type of program is found in a type of special day school that provides programs and facilities to children with common problems. (58) These types of schools provide comprehensive services for specific types of handicaps. Some may serve only a particular disability while others may take in many different types of handicapped children. The Marvin E. Beckman Center for Trainable Children is a special center for retarded children who live in and around Lansing, Michigan. The Ingham Intermediate School District constructed a center in 1968 for 350 students. A similar type of program was started in the Orange Grove Center for the Trainable Mentally Retarded in 1970 by a private, nonprofit corporation operated by the parents of the retarded children in Chattanooga, Tennessee. (18) "New York City has recently opened a new school for its new speciality, called the Center for Multiple Handicapped." (58) Also housed in the same building is Hunter's College Institute of Health Sciences. College students are sent to the Center for in-service training and in turn, the multiple handicapped students avail themselves of diagnostic, physical therapy and rehabilitation services. The Cherry Hill program

in the Cherry Hill School District in New Jersey has, for the past decade, been one of the outstanding physical education programs for handicapped children in that state. (18)

In 1973 the Information and Research Utilization Center conducted a survey of states in the nation regarding adapted physical education programs for the handicapped. Data revealed a total of 27 states which made provisions for providing adapted physical education activities to children with various handicapping conditions and that an additional two states recommended such activities. These provisions did not always cover all aspects of adapted physical education nor were all handicapping conditions included. (50)

An analysis of laws and provisions (42) for physical education in public schools applicable to students with handicapping conditions indicated that physical education is a part of education that has been and should be required for all students. Additional support and evidence of the need for physical education as a part of education that is required for all handicapped children and youth are contained in recommendations by the Bureau of Education for the Handicapped Advisory Committee on Physical, Education and Recreation for handicapped children: (31)

The Committee recommends that all programming for the handicapped define educational opportunities to include physical education and recreational experiences and that these experiences not be limited to those available within the scope of a formal traditional school program. Within this context we further recommend that physical education is an integral part of total school program experiences for all handicapped children.

Individualizing the adapted physical education program is an aid to a child in maximizing their functions within their limitations and providing them with a broad background so that they can attain

success in activities that are not precluded by their limitations. The handicapped child then must be provided with individualized learning experiences that will help them to function within their limitations and develop their capabilities. The handicapped youth must be taught that they can function, within their limitations, successfully in life. According to Greve, it is not what we are that counts, but rather what we think we are. (35)

Individualized learning experiences through adapted physical education can help the handicapped child develop their skill potential so that they can function more efficiently and effectively. "A direct result of increased skill development will be an increased potential for economic efficiency and qualitative use of leisure time - two important goals of education." (18) Eunice Kennedy Shriver stated:

It is sad that the children who benefit most from sports and games are the children who have the least opportunity to play - the mentally retarded and the physically handicapped. Teaching handicapped children to play is one of the greatest experiences available to teachers and parents." (46)

Although many of the disabled have the most spare time, they are receiving the least attention in the way of recreational services. The Director of Rehabilitation of Education Services at the University of Illinois (1969) felt:

If there is justification for physical education and recreation in the life of anyone then it is even more justified in the life of the individual who has lost a portion of his physical well-being and who, because of apathy, attitudinal barriers, and physical barriers, has been prone to inactivity or has had inactivity imposed upon him. (57)

Furthermore, physical activities help an individual to self identify, to overcome self-consciousness, to develop self-confidence, to express oneself, to have the chance to face failures and successes, and to

develop self concept. It was also felt that the physically handicapped should be more involved in recreational programs and that the professionals should gain more experience in recognizing limitations and abilities of the handicapped. There should be more emphasis on what the person can do and an examination of the programs already in existence to determine how they emphasize those abilities.

### Mainstreaming

Handicapped children need to be included in the group of regular children so that the concept that they are "different" is minimized. They need to be urged to become more self-directive with limitations rather than constantly having prescribed activity. Goals for them must be adjusted and are not the same goals as for the rest of the children. (5)

In the physical fitness elements, the physically handicapped child should develop an optimum degree of physical fitness for his condition. This means a selection of individual activities which the child can do on his own or with the aid of another student. It is important that the child live with and within his physical condition. There is a great need to have the handicapped child gain status. If some accomplishment or knowledge can be achieved, this will be an important factor in creating a better self-image. (6)

Once we recognize the need for programs of physical education for the handicapped we can begin to formulate and adapt our programs to meet those needs. The basis for the adaptation of existing physical education programs is of utmost importance. One article (46) pointed out that the intermingling of the handicapped and the normal children is very important for normalizing and integrating them into today's society. As children come to know them as friends and schoolmates, they will recognize that the similarities outweigh the differences between them.



The concept of mainstreaming has a number of important implications. Mainstreaming children who are slow or who have learning or developmental handicaps implies the need for individualized programs capable of serving a wider variety of academic levels. Lack of facilities can no longer be used as an excuse for denying handicapped children's attendance at a public school. Mainstreaming also means the development of a classroom environment which will not inhibit handicapped children, and will enhance the learning of every child. (54)

One of the most successful ways of bringing the handicapped into the mainstream of the classroom is through sports and recreation. Physical fitness is often the surest and most direct road to physical, emotional and even intellectual growth for the handicapped. Russo (62) stated in his article that in order to facilitate a program for the handicapped, a school must have facilities suitable for their needs. The settings for educational programs must be as close to normal as possible. The concern is to maintain the child in as normal as possible type of setting in which they can learn most effectively. Legislation and courts have ruled that inadequate funding is no excuse for inadequate facilities. No longer can a school district that has handicapped children not provide them services because of inadequate facilities. To find out what the actual needs of handicapped students are in terms of facilities, the American School and University (62) surveyed schools, colleges, architects, consultants and organizations for handicapped persons. Here is what was discovered:

Non-handicapped children and those with cerebral palsy, polio, birth defects, and accident-caused limb losses are learning and playing together in the Urbain Plavan School, Fountain Valley, California. The school was planned and built to integrate orthopedically handicapped and typical children.

In the James Madison School in Sheboygan, Wisconsin, an innovative school playground was designed for use by handicapped as well as regular children. It is a multi-level play structure that has ramps, platforms, railings, steps and slides and various other types of equipment.

At the University of Illinois the entire campus has been planned or modified to be equally accessible by physically handicapped students.

At the Brooklyn (New York) Center of Long Island University, a special telephone intercom system is available to connect a home- or hospital-bound student with the classroom. All building entrances on campus are accessible at ground level or by ramp.

The University of Baltimore in downtown Baltimore, Maryland, made a number of "curb-cuts" at street intersections to permit convenient parking areas for disabled persons only.

At Portland Oregon Community College ramps have replaced stairs at entrances to classroom buildings. Restrooms have been widened and modified to accommodate the handicapped.

All over the nation there is a trend for change. The need for all buildings to be accessible to handicapped students is paramount. Smittkamp (63) also mentioned the architectural barriers that have inhibited the handicapped from exercising their rights. He defined these rights as "freedom from any barrier. . . . that stands between any person and his access to a legitimate pursuit of whatever pleases him without disturbing the same rights of other persons." Architectural barriers were built because the architects and the community's citizens were not aware of the obstacles they created. Changing attitudes toward the handicapped have made it possible for better communication.

Barriers in schools prevent attendance by disabled persons who need more education for a better job, who want to be a teacher, or who simply want to learn how to read. Merlo (52) commented, "making buildings accessible to them would allow us to draw from this rich, largely untapped and often under-employed source of personnel."

A federal law (Public Law 90-480) was passed in 1968 which required that buildings built or leased with federal funds be built

architecturally barrier free. (48) The Rehabilitation Act of 1973 formed an Architectural and Transportation Barriers Compliance Board to insure that the federal construction projects complied with the law. Kansas also passed two bills pertaining to the accessibility needs of the handicapped. (48) Kansas Law 58-1301 adopted the American Standard specifications for public buildings and facilities. Kansas Law 39-1101 declared the rights of the blind, visually handicapped, and physically handicapped. The legislature stated that the disabled have the same rights as the non-disabled, which included access to hotels, air transportation, walkways, recreational facilities, busses, trains, boats, etc. (48) According to Gunn: (37)

Mainstreaming is both a process and a goal - the process of selecting methods of integrating people and programs and the goal of enabling handicapped people to live and appear in ways which distinguish them as little as possible from the rest of society.

The principle by which mainstreaming functions is that the handicapped are to be given every opportunity to fit into society and that society will accept them.

Greve (35) pointed out that the handicapped need to be in with the regular children and treated like regulars as much as possible. Manipulation by a handicapped child or youth is the name of the game for them. If one allows them to manipulate the situation, the handicapped have the program by its throat. In a recent survey, almost 90 percent of the people interviewed were unsure about how to approach a handicapped person. They were unsure of whether the person might want help and if so what kind of help. (35) Greve, being a handicapped man himself, knows the answer to that dilemma and expressed the need for people to treat the handicapped just like anyone else.

Mainstreaming (37) is a growing trend in many areas of life. County and state governments are becoming markedly less inclined to incarcerate handicapped people in institutions. Federal and state legislatures and courts are insisting that handicapped individuals be integrated into regular classrooms, physical education and community programs. As more and more people come in contact with handicapped people, there must be a massive effort to inform the general public about their needs.

There may be as many as 250,000 (60) handicapped people in the state of Kansas, as reported in a handicapped census taken in 1975. They are suffering from physical handicapping conditions and could benefit from special considerations in the planning of facilities, adapted physical education, recreational, community and leisure programs. Malloy stated (54) that "perhaps in the end, planning for the handicapped will improve educational facilities for all children."

#### Funding and Legislation

Less than 40 percent of the nation's 7 million handicapped preschool and school age children are presently receiving special educational services. In order to correct this deficiency, the Office of Education awards grants to states to help them initiate, improve, and expand services for the handicapped children. Funds are authorized under Title VI part B of the Education of the Handicapped Act (Public Law 91-230). (34) Federal and state legislation has recently acted upon court rulings which state that (a) federal goals call for adequate educational opportunities for all handicapped children by 1980; (b) the percentage of school age handicapped served by special educational

programs has been on an increase from one third in 1967 to 55 percent.

(32) During the 1977-78 school term, the handicapped children will benefit from federal funding. The funding will begin with 387 million appropriated dollars with the use of 3.1 billion dollars by 1982. The new law promises the nation's handicapped children an adequate public school education. (56)

Experts at the Department of Health, Education and Welfare said that all federal funds for the program will be channeled through the states. As a first step under the legislation, public school systems will be required to develop individualized education programs for every handicapped youngster eligible for training. (56)

#### Federal Legislation

The first basic federal legislation for the education of the handicapped (Public Law 83-531) was enacted in 1957. It was not until 1967 that a specific federal legislative authority existed to support research, demonstration, and training in physical education and recreation for handicapped children (Title V, Public Law 90-170, Training of Physical Educators and Recreation Personnel for Mentally Retarded and Other Handicapped Children). (49) In 1970 Public Law 91-230 was passed with the inclusion of the research and demonstration authority under part E, section 642 (Research and Demonstration Projects in Physical Education and Recreation for Handicapped Children). (49)

The Assistant Secretary for Education (31) recently listed two more of the nation's top educational priorities as follows: (a) the development of a national goal to provide full educational opportunities for every handicapped child by 1980; (b) the provision of career education to all who can benefit, assuring every person, regardless

of handicap, the right to a good education. The Elementary and Secondary Education Act Amendments of 1969 (Title VI, Public Law 91-230) provided very specifically in section 602 for special education and related services for all handicapped children who are defined as "mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired children." (49) A bureau for the education and training of the handicapped is established in the United States Office of Education "which shall be the principal agency in the Office of Education for administering and carrying out programs and projects related to the education and training of the handicapped" (section 603). (49)

#### State Legislation

A survey of state laws and regulations revealed that of 46 responding states and the District of Columbia, 27 states make some provision for providing adapted physical activities to children with various handicapping conditions. Provisions vary greatly from state to state and do not always cover all aspects of adapted physical education or children with all handicapping conditions. According to the report, many of these handicapping conditions require special knowledge and techniques if a child is to benefit from physical activity. Recommendations based on the findings include: (a) provisions to be made in every state to provide physical education to all children; (b) certification requirements in each state be increased to include needed competencies for providing physical education to children with handicapping conditions; (c) a structure at the national level within the AAHPER be designed to provide coordination and guidance in these endeavors at the state and local levels. (41)

In an interview with Mr. Joe Greve (35) he stated that because of the Rehabilitation Act of 1973 the handicapped children gained ground on having the right for an education just like normals. In the state of Kansas the constitution states:

The legislature shall encourage the promotion of intellectual, moral, scientific, and agricultural improvement by establishing the uniform system of common schools and schools of a higher grade . . ." (Article VI, Section 2, Kansas Constitution). (49)

The planning phase of the Kansas Law states that a coordinating council for handicapped children will be established to coordinate programs for all handicapped children under the age of 21. Section 1 (49) states:

(a) on and after July 1, 1978, the State Board of Education shall not issue a certificate to an applicant to teach as provided in K.S.A. 72-1381, unless such applicant has satisfactorily completed a course of two or more semester hours in the psychology and education of the exceptional child at a college, university or educational institution of like standing which is on the accredited list of the State Board of Education." (39)

### Summary

The literature of adapted physical education programs, characteristics of adapted physical education programs, legislature and funding, and the historical background of adapted physical education was reviewed. The pervading thought throughout the literature was that existing physical education programs do not meet the needs of the handicapped, facilities are found inadequate, and professional preparation and background are insufficient. Various viewpoints were discussed on how the needs of the handicapped should be met, the facilities required for mainstreaming our society, and the professional backgrounds that are sorely in need of updating.

Since the trend in physical education is to integrate the handicapped child into the mainstream of the society, the literature reviewed

pointed that the best way is through physical and recreational activities. Studies throughout the United States viewed this integration as being a very much needed aspect in order for the handicapped to succeed. A survey of the status of programs for the handicapped, conducted by the New Jersey Youth Division revealed that less than 2 percent of the responding public and private school districts provided activity programs to meet the specific needs of their handicapped. (18) According to Moss (55), only 40 percent of the children who require special educational services are receiving them at the present time. There are as many as 250,000 handicapped people in the state of Kansas, as reported in a handicapped census taken in 1975. (60) A study by Brace (23) revealed that mentally retarded pupils received little or no attention with respect to instruction in physical education and recreation. In a similar study Gross (36) found that educable mentally retarded children did not have opportunities to participate in school intramurals or in regularly-scheduled recreational activities.

The effects of state and federal legislation dealing with the physically handicapped children have added to the ever-changing picture of adapted physical education. (13) The interview with Greve (35) pointed out that because of the federal law - The Rehabilitation Act of 1973 - states throughout the nation will have to provide services for the handicapped in their school districts by 1979. (31) A survey of state laws and regulations revealed that of 46 responding states, 27 states make some provisions for providing adapted physical activities to children with various handicapping conditions. (41) A portion of the Kansas Constitution states: "The legislature shall encourage the promotion of intellectual, moral, scientific, and agricultural improvement



by establishing the uniform system of common schools of a higher grade. . . ." (49)

The Assistant Secretary of Education (33) recently listed the nation's top educational priorities. They include the development of a national goal to provide full educational opportunities for every handicapped child by 1980 and the provision of career education to all who can benefit, assuring every person, regardless of handicap, the right to a good education.

The final product of all the education and planning is a contributing part of our highly technical society. To integrate the child into the regular physical education program is the first step on the path to total integration into the regular world of non-handicapped individuals. One of the most successful ways of integrating the handicapped into the mainstream is through sports and recreation. (62)

Handicapped children need to be included in the group of regular children so that the concept that they are "different" is minimized. (35)

The intermingling of the handicapped and the normal children is very important for normalizing and integrating the handicapped into today's society. (46) "Students with special problems should be included in schools where they can learn from normal kids, and normal kids can learn from them. Our main concern is removing the stigma attached to having mental or physical problems." (32)

## Chapter 3

### PROCEDURE

#### Research Design

The purpose of this study was to survey adapted physical education programs for handicapped children in Kansas public elementary and secondary schools and determine the number and types of adapted physical education programs for handicapped students in grades 1 through 12. The investigation of the current status of a representative sample of adapted physical education programs for the handicapped was conducted using a mail questionnaire. Public elementary and secondary schools throughout Kansas were randomly selected from the Kansas Educational Directory by choosing every tenth school listed alphabetically. A questionnaire was developed based on the modification of questions used by Gross (36) and Brace (26). After final formulation of the questionnaire, 6 Shawnee Mission physical educators were asked to validate the questionnaire, make recommendations for the omission or inclusion of individual items, and give any pertinent suggestions or criticisms that would aid in securing or obtaining valid data.

One hundred sixty mail questionnaires (Appendix A) with an accompanying cover letter to the principals of the randomly-selected schools were mailed on March 1, 1978. The cover letter (Appendix B) explained the purpose and importance of such a survey and included directions regarding the completion of the questionnaire. A return date of March 10, 1978, allowed sufficient time for the respondents to reply.

A tally sheet was designed to record the information from the returned questionnaire (Appendix C). a) The information obtained from the returned questionnaires, i.e., types of programs, types of activities, number and types of handicapped students being served, types and time of year tests were administered, and the physical educator's background was used to draw conclusions concerning a representative sample of on-going adapted physical education programs in public schools in Kansas. b) For tally purposes the schools were separated into groups according to the size of the geographical area served and elementary (grades 1-6) or secondary (grades 7-12) school status. c) The totals from the tally sheets were used to obtain categorical totals and percentages. The data collected from the questionnaires returned (68%) were interpreted as descriptive of the various aspects of programs being conducted throughout the state of Kansas in adapted physical education.

#### Selection of Sample

The list of schools used in this study was randomly selected from the Kansas Public School Directory of 1976-77, obtained from the State Department of Education, Topeka, Kansas. In the directory, 307 school districts were listed alphabetically with the individual schools listed by level, i.e., secondary high school, junior high or middle school, and elementary schools. The school classification of size was not considered a factor in the selection process. The random selection method chosen was that of picking every tenth school from the alphabetical listings of elementary and secondary schools, representing 128 school districts in the state of Kansas.

### Development of Instrument Used

The mail questionnaire used in this study was modified from a questionnaire used by Gross (36). Several authors, however, discussed the method of using a questionnaire as a valuable instrument in gathering meaningful data (8, 12, 13). Arrangements were made through the Shawnee Mission School District #512 Coordinator of Physical Education for six physical education professionals in the field to examine and/or complete the questionnaire, and give constructive criticism and recommendations that would make the instrument a more accurate and useful one for state-wide data collection. The professionals returned their questionnaires to the Coordinator within a two-week period. The questionnaire was revised extensively and a much shorter and more concise version of the original questionnaire was then mailed to the 160 schools chosen.

Minimal introductory information was required so that the respondents could feel that anonymity of their individual responses would be maintained. The name of the school and the size of the geographical area served by the school were requested so that the author would have a basis from which to tally and keep accurate records. The questionnaire itself was divided into five sections to provide a systematic design for the respondents and ease of recording for the author. The first section served as general information about the physical education program for students without handicaps, in order to identify the average number of total students involved, structure of the class, days taught and average length of the class period. The second section dealt with the physical education programs for students with handicaps, i.e., type of class structure, person responsible for teaching the class, total number of full and/or part-time assistants

involved, opportunity for the handicapped to lead class activities, specific types of activities, physical fitness tests administered, (if any), the time of year the testing was done, and the types of handicaps in each school.

The third section requested information regarding factors affecting the physical education program for the handicapped, i.e., what the educator thought of the adequacy of the facilities and equipment available to the students in the program, whether or not the school had an intramural program and the general attitude of the handicapped toward the physical education program. The fourth section dealt with grading, i.e., types of evaluation techniques used, evaluating instruments used, and who/how the handicapped were screened for placement. The final section investigated the educational background of the educator involved and/or the person completing the questionnaire data.

#### Personnel Used

The investigator initiated all correspondence and was responsible for all letters, the questionnaire, and collection and tally of data. A group of professionals was used to check the validity of the original questionnaire and provide recommendations in order that the final questionnaire be most useful for the purpose intended by the author. This group consisted of 6 special education professionals from the Shawnee Mission School District #512. These six persons were chosen by that district's Physical Education Coordinator because of their familiarity and expertise in the field of special and physical education.

### Measurement Procedures

The questionnaire served as the survey instrument and was mailed to the 160 randomly-selected elementary and secondary schools throughout the state of Kansas. The principals receiving the questionnaire were introduced to the study through a form cover letter explaining the intent of the questionnaire and the confidential handling of responses. The principals were informed that the questionnaire should be completed by the person in the school having the greatest involvement in this area and returned in the self-addressed, stamped envelope within ten days from the date of postmark.

### Collection of Data

The questionnaires, when returned, were divided into the sizes of the geographical population: 1,000 and below, 1,001 to 5,000, 5,001 to 10,000 and 10,000 and above. The questionnaires were also categorized according to elementary, junior high and senior high schools. A tally sheet (Appendix C) was designed to collect the data from the questionnaire easily. The sample tally sheet indicates the abbreviations that were used to aid in classifying and recording the data. A map of Kansas (Appendix D) was color coded to signify where the questionnaires were sent and the areas from which the questionnaires were returned. This was used to determine the regions in Kansas whose programs for the handicapped were being represented in this study.

### Validity

The validity and usefulness of the questionnaire as the survey instrument was determined by presenting the sample questionnaire to 6 physical educators in the field of physical education in the Shawnee

Mission School District and three physical educators from the University of Kansas Physical Education department. Their professional opinions enabled the investigator to make changes in the questionnaire so that the information requested of the physical educators throughout the state would be more easily understood.

### Analysis of Data

The questionnaires sent to randomly-selected physical educators throughout Kansas resulted in the data return of a descriptive investigation. The information taken from the returned questionnaires was recorded by a) size of the geographical area covered by the school system and b) the kind of school, i.e. elementary or secondary. The percentages of schools (by category and overall) reporting were calculated. From a careful perusal of the information the following was determined: 1) the number and percentage of schools providing any physical education program for its handicapped, 2) the numbers of permanent physical disability, emotionally disturbed, multiple handicaps and intellectual dysfunction students that are being dealt with in the sampling, 3) the number of persons responsible for their physical activity program, 4) the educational level and experience with the handicapped of those responsible for the program, 5) the kind of testing being done, if any, 6) the adequacy of the facilities available and 7) a general idea of the diversity and availability of specific kinds of activities for the handicapped in the physical education program.

Based on the information obtained from the questionnaires, statements regarding the quality of physical education programs for the

handicapped in the sample with regard to kind of activities, the frequency and type of testing, the background of the educators, the screening process and the facilities available were offered at the conclusion of the study. Based on the data collected from the representative sample of schools in Kansas, some statements regarding the trend in physical education for the children of this state and some suggestions and guidelines are offered for the greater implementation of physical education for the handicapped.



## Chapter 4

### RESULTS AND DISCUSSION

#### Number and Distribution of Questionnaires Returned

Some consideration was given here to results reported by three groups of educational levels; elementary, junior high and senior high schools. Many secondary schools in Kansas make a further breakdown of the secondary grades 7-12 into a junior high and a senior high school and both were included separately among the listings of public schools in Kansas from which the schools were chosen. Results from randomly-chosen middle schools were treated with the junior high returns when tallying data. The investigator further classified the data into the broader elementary and secondary classifications when drawing his final conclusions.

From those schools reporting, a relatively even distribution was obtained across the variously-populated geographical areas of Kansas (Table 1). These data, however, are only as accurate as the person reporting was knowledgeable about the population of their many times unified and widespread school districts.

Table 1

## Population Served by Schools that Returned Questionnaires

Population	Elementary	Jr. High	Sr. High	Total No.	Percent
Under 1,000	9	3	14	26	24
1,001-5,000	22	3	13	38	35
5,001-10,000	11	2	4	17	16
Over 10,000	14	6	8	28	26
Totals	<u>56</u>	<u>14</u>	<u>39</u>	<u>109</u>	<u>99</u>

Of the 160 questionnaires mailed to public high schools, junior highs and elementary schools throughout Kansas a total of 109 or 68% were returned. By educational level, the number of schools reporting was 39 of 57 or 68% from high schools; 14 of 17 or 82% from junior high schools, with a total secondary of 53 of 74 or 72% reporting. Fifty six of 86 or 65% of the randomly-chosen elementary schools reported data.

The red dots on the map (APPENDIX A) demonstrate how the questionnaires were distributed to elementary schools by county and general geographical areas throughout Kansas. The green dots on the same map show those secondary schools that received questionnaires. The circled dots indicate the schools at both levels that returned the questionnaire to the investigator. As can be seen from a perusal of the map the selection of schools seems to follow the general distribution of the population with more schools being selected from the metropolitan areas than from the rural ones.

Class Structures

The questionnaire requested information about the structure of the class when dealing with students with handicaps. The table below (Table 2) indicates how the 109 schools structure their physical education classes with regard to those with handicaps.

Table 2

Types of Adapted Physical Education Programs

	MAIN	M&S	SEP	NOPR	SENT	EXC
Elementary	27	8	8	10	3	0
Junior High	9	3	0	2	0	0
Senior High	19	3	1	10	5	1
Totals	<u>55</u>	<u>14</u>	<u>9</u>	<u>22</u>	<u>8</u>	<u>1</u>

MAIN = Mainstreamed Program  
 M&S = Mainstreamed and Separate Programs  
 SEP = Separate Program  
 NOPR = No Program available and/or necessary  
 SENT = Students sent to another attendance center  
 EXC = Students excused from activity by permission of doctor

Twenty two schools (20%) indicated that an ongoing program for the handicapped was unavailable or that there were no students who were recognized as handicapped in their school. This phenomenon was evident throughout grade levels 1-12 but occurred 95% (21 of 22 schools) of the time in schools serving an area of less than 10,000 population. In addition to the 20% not providing programs to any degree, 7% of the school respondents indicated that their method of dealing with their handicapped in general, was to send them to another attendance center. Those centers mentioned were Osawatomie, Paola,

Shawnee Mission, Beloit, Glade, Olathe and Augusta. Again, the transportation of students away from their homes occurred almost exclusively in areas serving a population of 5,000 or less.

### Existing Adapted Programs

Further consideration will be given here to the schools in which programs are being provided for the handicapped student in the student's home school. Using the data from Table 3 it can be seen that in 79% of the 109 schools surveyed some effort to deal with special problems of the handicapped has been exerted. Of these 109 schools, 78 (72%) provide an in-school physical education program for the handicapped. It was the information drawn from these physical educators that is discussed further since no specific data were collected from those schools who sent their students elsewhere nor from those not providing a program.

Table 3

Schools With and Without Adapted Physical Education Programs

	Number of Schools		
	With Programs	Students Sent	No Program
Elementary	43	3	10
Junior High	12	0	2
Senior High	23	5	11
Total Numbers	<u>78</u>	<u>8</u>	<u>23</u>
Total Percentages	72%	7%	21%

In 67 of 78 (85%) of schools with in-school programs (SWP), the person responsible for the physical activity program of the handicapped students was the physical education teacher (Table 4). At the

secondary level 100% of the SWP indicated that the physical education instructor was the person solely responsible for the physical education program of all students. In the elementary setting other school personnel were given some responsibility in the physical education program of the school. Three schools named the classroom teacher as carrying the main responsibility. Four schools had the combination of physical education teacher and school nurse. One school had an adapted physical education instructor to handle the program and one used the music therapist. Two schools did not respond to the question.

Table 4

## Adapted Physical Education Program Responsibility

Person Responsible	No. of Sr. High	No. of Jr. High	No. of El.
Physical Education Teacher	23	12	31
Classroom Teacher	0	0	3
Physical Education & Classroom Teacher	0	0	4
Physical Education Teacher & Nurse	0	0	1
Adapted Physical Education Teacher	0	0	1
Music Therapist	0	0	1
No Response	0	0	2

Among the 23 high schools, eight hired professionals on either a full or part-time basis to assist the instructor in charge of the physical education program. Sixteen additional personnel were available in the 12 junior high schools with 19 assistants in 43 elementary schools. Five of the elementary schools utilized the services of more

than one assistant. The data above did not consider the 30 schools that either had no program, sent their students elsewhere or excused the handicapped from physical education by a doctor's permission.

Adapted Physical Education Program Activities

It appears (Table 5) that the activities implemented by the 78 SWP into the physical education program for the handicapped are numerous and varied at each of the educational levels.

Table 5

Physical Education Activities Included for Handicapped Students

Type of Activity	No. of Schools Implementing the Activity		
	Elementary	Jr. High	Sr. High
Aquatics	3	2	3
Ball-handling	41	11	19
Individual & Dual Sports	30	10	16
Games & Relays	42	11	18
Kicking Skills	40	11	19
Gymnastics & Tumbling	39	10	17
Fundamental Movement Skills	37	10	14
Movement Exploration	31	3	8
Team Sports	36	9	14
Low Organizational Games	34	6	10
Rhythms & Dance	25	6	7
Track & Field	33	10	12
Recreational Activities	34	8	15
Other	3	1	1

Ball-handling is the skill most frequently emphasized at all three levels, with games and relays and kicking skills implemented as preferred activities too. The elementary school programs seemed to offer the widest range of activities consistently with only aquatics and weight lifting being less emphasized. In addition to aquatics and weight lifting receiving little attention, at the secondary level movement exploration, low organizational games and rhythms and dance

were also not used as frequently in the physical education program as the other skill areas (Table 5).

As a leader of these various activities, the handicapped student took their turn in 55% of the SWP or was the leader "sometimes" and in 21% was "often" the leader. In only two schools was the handicapped student "never" chosen to lead the activity. In 34 of 43 elementary, 8 of 12 junior high and 15 of 23 high SWP the respondents indicated that recreational activities were available to the handicapped. Of the SWP then, 57 of 78 or 73% make recreational activities a part of the school or community activity program. When considering all schools returning surveys this percentage drops to 52%, however even this would indicate that approximately one half of the handicapped school population is able to participate in recreational programs within their community or school.

The data indicate that the handicapped student's participation in intramurals is quite low (Table 6).

Table 6

Participation in Intramurals

Handicapped Students who	Number of Schools		
	Elementary	Jr. High	Sr. High
do participate	19	3	7
do not participate	22	8	16
No Response	2	0	0

As can be seen, 29 of 78 or 37% of the SWP indicated that the handicapped students participate in intramurals. Forty six responded that they did not. When considering all 109 schools responding only

27% of the schools offer an intramural program for the handicapped or one allowing for the mainstreaming of the handicapped. As the question was stated, the respondents were only able to indicate whether or not the handicapped participated in the school intramural program. It is possible that some schools had no intramural program due to size, lack of funds and personnel to run the program effectively.

In Table 7 responses to the question concerning attitudes of the handicapped students toward physical education are reported.

Table 7

Attitudes of the Handicapped toward Physical Education

Attitude	Number of Schools		
	Elementary	Jr. High	Sr. High
Positive	35	8	15
Neutral	7	2	6
Negative	0	2	1
No Response	1	0	1

In 83% of the elementary, 67% of the junior high and 65% of the senior high schools, the respondents indicated that the attitude of the handicapped student toward physical education was positive. The total percentage in SWP was 74%. Fifteen schools said the handicapped's attitude was neutral and in only three schools was the attitude of the handicapped students toward physical education said to be negative.



Facilities Available In Adapted Programs

The questionnaire also surveyed the respondents' feelings about the equipment and general facilities available to them for the adapted physical education program (Table 8).

Table 8

Factors Affecting the Adapted Physical Education Program

Equipment Rating	Number of Schools		
	Elementary	Jr. High	Sr. High
Excellent	7	0	5
Good	19	7	8
Adequate	12	3	4
Fair	2	0	4
Poor	2	1	2
No Response	1	1	0
<hr/>			
General Physical Education Facilities			
Excellent	6	0	7
Good	15	4	6
Adequate	13	3	5
Fair	4	3	2
Poor	3	1	3
None	1	0	0
No Response	1	1	0

Twenty four percent of the 78 schools thought the equipment adequate and 17% regarded the equipment as fair, poor or had no response. Thirty eight or 48% of the SWP indicated that the general

facilities were good or excellent. The facilities were adequate in 24% of all 78 schools. Nineteen schools or 24% indicated that the facilities were only fair or poor or had no response. Few educators rated the equipment as excellent, however 59% reported it was good to excellent.

Screening, Physical Fitness Testing and Evaluation

It was found that in most schools where screening was done more than one school person was involved in the process of placement.

Table 9

Personnel Responsible for Screening Students  
For Adapted Physical Education Programs

Person Responsible	Number of Schools		
	Elementary	Jr. High	Sr. High
Physical Education Teacher	17	8	4
Counselor	7	6	12
Nurse	6	1	3
Principal	11	6	4
Other	14	5	12
None	8	0	7

In 30% of the elementary schools physical education instructors assisted in screening; whereas the principal was involved in 20% of the schools (Table 9). Other school personnel were used in 25% of the schools. Those cited were the special education cooperative, special education teacher, classroom teacher and school psychologist. In 8 of the 43 schools the handicapped were not screened. The school counselor and/or school nurse were involved in 30% of the schools.

In the 12 junior high SWP the physical education instructor, school counselor and principal were involved most frequently in the screening process. The others involved were the classroom teacher, tri-county cooperative, parents and vice principal. In all 12 of these schools screening of the handicapped was done by someone. The senior high school level presented a different pattern. The role of the physical education teacher in the screening process has been taken over by the school counselor and "other" persons, such as the school psychologist, EMR instructor and specialist. This raised an interesting issue because all 35 of the secondary SWP indicated that the person solely responsible for the physical education for the handicapped in the school was the physical education instructor. There exists here some discrepancy due to error or oversight in reporting by the person completing the questionnaire or else the physical education instructors at the secondary level have little to say about who enters the program and must only deal with them once they have arrived. It is also possible that the respondents did not understand the question as the author intended it to be and interpreted it as asking who determines that the student is handicapped. At the secondary level it was more likely than at the other two that no screening was done, possibly as it was uncertain as to whose responsibility the screening process was and therefore like so many other undelegated tasks, it went undone. In fact, in 7 of the 23 senior high schools (30%) no screening took place.

A large majority (83%) of the 78 schools providing an in-school program used objective and/or subjective procedures and techniques for

screening, placement and assessing the physical abilities of the handicapped (Table 10).

Table 10

## Types of Techniques Used to Evaluate Handicapped Students

Type of Evaluation	Number of Schools			Totals	
	Elem.	Jr. High	Sr. High	Number	Percent
Subjective	14	6	11	31	40
Objective	19	6	8	33	42
None	9	0	4	13	17
Other	5	0	1	6	8

The specific kinds of instruments used to measure the handicapped's physical level of attainment included physical fitness testing, skills testing, written examination and other individual school criteria. Objective techniques were used for evaluation in 44% of the elementary schools, however subjective means were used as often or more often than objective techniques at both the junior and senior high levels. Thirteen of the 78 schools (17%) did not use any type of evaluation technique and of course many schools used more than one type of technique in grade assessment.

Table 11

## Evaluation Instruments Used With Handicapped Students

Types of Tests	Number of Schools Reporting		
	Elementary	Jr. High	Sr. High
Physical Fitness Testing	18	7	6
Skills Testing	19	7	13
Written Examination	5	2	11
None	12	1	5
Other	5	3	4

At the elementary and junior high levels physical fitness and skills testing were used most frequently with written examination playing a decisive role in the area of high school education, just as it seems to also pervade the other areas of high school academia. In 18 of the schools, twelve of them elementary, no instruments were used in the evaluation process. Twelve of the programs used criteria such as individual goals, instructor observation of judgment, student attitude and participation, student desire, student effort, student cooperation and times "dressed out" in the assignment of grades.

Evaluation is a continual process that not always has a direct result such as the placement or grading of an individual student. It is important to monitor the rate and manner of change in terms of the handicapped student's real physical abilities. There are numerous well-known and widely-used physical fitness tests available for such purposes, such as the Presidential Physical Fitness Test, Kraus-Weber Test of Muscular Fitness, Hayden Test of Physical Fitness and the AAHPER Kennedy Foundation Fitness Test.

Table 12  
Types of Physical Fitness Tests Used To  
Evaluate Handicapped Students

Fitness Tests	Number of Schools		
	Elementary	Jr. High	Sr. High
Presidential Physical Fitness Test	24	6	10
Kraus-Weber Test of Muscular Fitness	2	2	0
Hayden Test of Physical Fitness	1	0	0
AAHPER Kennedy Foundation Fitness Test	6	2	2
Other	8	1	1
None	3	1	9
No Response	1	2	1

Fifty six percent of the elementary schools reported use of the Presidential Physical Fitness Test. Twenty six percent do not administer this type of instrument at all. Some of the other devices mentioned were the Lawrence Perceptual Motor Test, the Purdue Perceptual Motor Test and the North Carolina State Fitness Test and non-standardized skills tests. Once again, the Presidential Physical Test was in use in one half of the junior high SWP. None of the above-mentioned "other" tests were used in these 12 schools. At the senior high level, the results were split almost equally between the Presidential Physical Fitness Test and no testing at all (Table 12).

When considering the screening, grade assessment and physical fitness techniques being used in the 109 schools, first one must

recognize that in 22 schools (20%) without programs for the handicapped, none of these techniques are being accomplished. In 7% we do not know what is being done, but it is likely that the students were sent to another attendance center where something more than nothing could be done for and with the handicapped student.

Table 13

School Screening, Grading and Physical Fitness  
Testing of Handicapped Students

	Screening	Grading	Phys. Fit. Testing
Schools with no program	0	0	0
Schools sending students	?	?	?
Schools with programs			
Elementary	35	31	40
Junior High	12	12	9
Senior High	14	19	13
Total Number	61/109	62/109	62/109
Total Percentages	56%	57%	57%

Number of Handicapped Students

This survey dealt with aspects of public school adapted physical education programs in Kansas and not the numbers of handicapped involved in the various aspects of the surveyed programs. In retrospect, the investigator considers this survey to have been more a descriptive measure of how the handicapped are being taught in schools throughout Kansas than if pupil numbers would have been the primary consideration. In many schools the respondent indicated that the numbers given were extremely tentative. Fourteen schools simply placed a large question mark beside the choices of the question asking

for the general types of handicapped students participating in the school program. Such behavior indicated to the investigator that the respondents did not understand the question as intended or they did not know the types of handicapped involved. The lack of this information may have been due to absence of adequate screening and placement facilities, equipment and testing materials, lack of enough personnel to accomplish the task and/or lack of qualified personnel to screen and place handicapped students.

Table 14  
Number and Types of Handicapped Students

Type of Handicap	Number of Students			Totals
	Elem.	Jr. High	Sr. High	
Physical Disability	37	14	39	90
Emotionally Disturbed	117	47	53	217
Intellectual Dysfunction	263	61	151	82
Multiple Handicaps	58	14	10	475
Totals	475	136	253	864

NOTE: 14 additional schools responded with a ? beside the choices.  
3 schools did not respond to the question.

On the otherhand, schools that indicated there was no screening, placement or evaluation wrote definite numbers for each category. The investigator is not certain what significance to attribute to the numbers presented here because many respondents reporting seemed to be rather haphazard and inconsistent on this part of the questionnaire. The numbers at best give a general indication of the types and numbers of handicapped students found in the SWP. More handicapped were



categorized as having intellectual dysfunction at all three educational levels with the second greatest distribution occurring as emotionally disturbed. This was consistent and should lend some credibility to the numbers presented by the respondents. Eleven of the 43 elementary schools either did not know the numbers and types of handicaps or had no response, which indicates that at this level a greater percentage of the total number of handicapped students are not being counted and that this type of information was not readily available for various reasons.

The general categories were permanent physical disability, emotionally disturbed, multiple handicaps and intellectual dysfunction. At the elementary level 475 handicapped students or 11.04 per school were reported. In the 12 junior high schools 136 handicapped were reported (11.33 per school). In 23 senior high schools, 253 handicapped participated in physical education with 11.00 per school. The distribution of handicapped per school was consistent across all educational levels. In addition to the 14 respondents indicating some uncertainty about the number and types of handicapped students, 3 schools did not respond in any way to the question.

#### Educator's Background

The investigator indicated in the cover letter to each school principal that the person most familiar with the physical education program for the handicapped should complete the questionnaire. In most cases the respondent appeared to be the physical education teacher, however judging from the educational background of some of the respondents, some questionnaires were returned by other school

personnel, who presumably felt or were deemed competent to complete the questionnaire with accuracy (Table 15).

Table 15  
Educator's Background - Educational Level

Degree	Number of Respondents		
	Elementary	Jr. High	Sr. High
Bachelor's	27	7	9
Master's	13	5	12
Beyond Master's	3	0	2

At the elementary level the majority or 63% of the respondents from the SWP had a Bachelor's degree and 30% had a Master's degree. Three others indicated education beyond the Master's level. For 33 respondents or 77% the major field of study had been physical education. Six professionals indicated an area of special education or elementary education had been the major emphasis in college training. All of the 12 respondents in the junior high SWP had either a Bachelor's or Master's degree in physical education. The ratio of Master's degrees to Bachelor's degrees increased however from 13 to 27 at the elementary level to 5 to 7 at the junior high level. This ratio increased even more at the senior high school level to 12 to 9. Twenty teachers or 87% of the respondents from the senior high level reported their major area of study as physical education (Table 16).

Table 16

## Educator's Background - Area of Major Emphasis

Area of Major Emphasis	Number of Respondents		
	Elementary	Jr. High	Sr. High
Physical Education	33	12	20
Special Education	1	0	1
Elementary Education	5	0	0
Administration	2	0	1
Other	2	0	1

These data seemed to indicate that respondents from the 78 SWP are, for the most part, working in their specific areas of formal training, physical education. It was assumed that when the school employed a physical education teacher, they would complete the questionnaire. At some schools such was either impossible or inconvenient hence the listing of administration, elementary education, special education, industrial arts and physical science as major fields of study. One must keep in mind that the information came from schools indicating an active, on-going program in adapted physical education.

The following areas were cited more than once by the respondents at the elementary level as areas of secondary training and emphasis: physical education, social science, math, health, art, history, driver's education, elementary education and biology. English and social science were named more than once by the respondents of the 12 junior highs. The respondents at the high school level indicated

that science, industrial arts, history, driver's education and social science were areas of secondary interest and formal training.

Although it theoretically seems to be regarded as of great social, psychological and physical importance (6, 46, 54, 62, 5) that students with handicaps be placed in the least restrictive environment, only 50% or 55 of the 109 schools surveyed indicated that such might be occurring. An additional 13% allowed for separate activities as well as some adapted activities with regular children. Only 8% of the schools had a totally separate program for those with handicaps, with such occurring almost exclusively at the elementary level.

### Discussion

The literature (60) indicated that there was a growing awareness that placing children in their least restrictive environment is an important means of letting normal children and those with handicaps socialize in a relatively natural setting of playing together. More intermingling of all children is thereby possible and enhances the integration of both the handicapped and non-handicapped into today's society. Similarities and likenesses discovered through adapted physical education activities go far in forming friendships that will reach beyond any handicap (46). Mainstreaming as encouraged by county, state and federal legislation insists that physical education, community and leisure programs with the provision of adequate facilities and adapted programs of instruction be made available to handicapped persons. (37, 60)

Many leaders in areas of physical education for the handicapped believe that individualized learning experiences help handicapped children develop skill potentials so that they can function more efficiently and effectively in work situations and leisure time (35, 18, 46, 57). A study by Brace (24) revealed that three fourths of the elementary and secondary schools taught some sort of varied activities in physical education for mentally retarded pupils. This study, too, indicated that the majority of SWP offer varied activities in the program. In a nationwide survey Gross (36) found that children did not have opportunities to participate in school intramurals or in regularly-scheduled recreational activities in the school or community. The survey of Kansas schools does not indicate the same occurrences.

From the review of literature the investigator noted that Brace (23) revealed more physical education teachers with special preparation in teaching the handicapped were needed. The results of another survey (36) indicated that most respondents felt that their professional preparation was inadequate, especially in physical education and the majority of educators felt they needed more training in the area of adapted physical education. Pollack (59) recommended the hiring of more full-time physical educators to teach the handicapped, for few schools provided a total physical education program to meet the needs of all handicapped children.

In 1969 it was estimated that 12% of all school age children had an exceptionality requiring some form of special physical education (1). Moss estimated (55) that a minimum of 10% of all children in public schools require permanent special education services and that 25% or more require special services at some time or another during

their development. Although this survey does not provide percentage figures in those terms, one can safely consider 11 per school to be a fairly conservative and possibly underestimated number of handicapped students in the schools surveyed and more generally throughout Kansas.

The attitude of the handicapped students toward physical education was overwhelmingly positive (Table 7). Gross (36) also found that the attitudes of educable mentally retarded children toward physical education was positive.

The lack of adequate facilities often seems to be one of the problems cited by many professionals in the field of education in all areas of curriculum. Brace (24) indicated that three fourths of the schools surveyed lacked proper facilities for conducting the physical education program and one third of the elementary schools lacked basic playground apparatus. Russo (62) emphasized the importance of a school having facilities suitable for a program for the handicapped.

It is possible, however, that the lack of physical education programs in their adapted form may be attributed to a) a long-engrained public ignorance of those with handicaps, whereby they are left to get along as best they can with the support of family and friends, b) state and federal legislation not seeming as real, applicable and enforceable to those away from metropolitan areas and c) the need for trained personnel in adapted physical education in each school system to set up a viable program, identifying and placing the handicapped and initially and periodically assessing the physical abilities of each student.

Fortunately, physical education is on the way to becoming an accepted and integral part of general education for everyone (5). The data from this survey indicate that it is not the usual course of

events for a handicapped student to be shuffled off, asked to drop from the physical education program or excused from the beginning as some of the previous literature indicated (23, 24). It is, however, difficult to ascertain the true situation existing in the 20% of schools reporting no program, but in 80% of the schools "something" is going on for the handicapped student in the way of physical education. Legislation already on the books will be more prominent as the 1979 activation date draws nearer to reality. In one local hometown paper two articles have appeared recently in as many weeks about the legislation already enacted and about the attempts being made in a local elementary school in the area of mainstreaming. Some guidelines were set forth in the May 1969 Journal of Health, Physical Education and Recreation (40) regarding the necessary elements of assessment, screening and placement of the handicapped. Greve mentioned (35) also that programs for the handicapped need not be radically different from those of normal children. They simply must be adapted to special individual abilities.

## Chapter 5

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this investigation was to describe the number and types of adapted physical education programs for the handicapped students in randomly-selected elementary and secondary public schools throughout the state of Kansas. The survey instrument was an adaptation of similar instruments used by Brace and Gross. At the suggestions of professionals in the field significant alterations were made. The questionnaire was then used to obtain data presented in this paper. The questionnaire was mailed to 86 randomly-selected elementary schools and 74 secondary schools throughout the state. Information about the student makeup of the physical education class, adequacy of facilities, specific activities offered, types and numbers of handicapped students, types and names of tests used for evaluation, physical fitness testing and placement, types of evaluation and screening procedures, number of part-time and/or full-time personnel and the educational background of the respondents was requested, collected, tallied and evaluated by the investigator. The questionnaire dealt specifically with the characteristics of the adapted programs themselves and did not attempt to measure with accuracy the number of handicapped children in or served by these schools in Kansas.

#### Summary

1. A total of 109 or 68% of the questionnaires were returned from schools evenly distributed throughout the state.



2. Fifty percent of the 109 schools indicated that integrated classes was the procedure used to teach physical education to the handicapped.
3. In 21% of the schools no program for the handicapped was available; 72% of the schools had an adapted in-school program; 7% of the schools send students to another attendance center.
4. In the schools with programs the physical education teacher was the primary person responsible for the physical activity program with some sharing of that responsibility at the elementary level.
5. A total of 43 full or part-time assistants were available in the 78 SWP.
6. There was a wide variety of activities implemented at all levels with ball handling, games and relays and kicking skills used by most schools.
7. In the various activities the handicapped students in the SWP were allowed to be the leader "sometimes" in 55% of the schools and in 21% they were "often" the leader.
8. Of the SWP 73% indicated that recreational activities were a part of the school or community activity program for the handicapped.
9. In 37% of the SWP handicapped students participated in intramurals.
10. In 74% of the SWP the attitude of the handicapped students toward physical education was said to be positive.
11. Fifty nine percent of the respondents rated the equipment available to them as good or excellent.
12. In 30% of the high schools with programs, no screening occurred.
13. Seventeen percent of the SWP did not use any type of evaluation technique.
14. In 20% of the SWP screening, grade assessment and physical fitness techniques were not used at any time during the school year.
15. Fifty six percent of the SWP used some type of screening, grading assessment and physical fitness testing.
16. The most frequent student handicap reported was intellectual dysfunction.
17. At the elementary level 30% of the respondents had a Master's degree; at the secondary level 66% of the respondents had a Master's degree or advanced study.
18. For 77% of the respondents from the SWP, physical education was the major field of study.

### Conclusions

Within the assumptions and limitations of this study the following conclusions about adapted physical education programs in Kansas were drawn:

1. Screening and placement of the handicapped students is done sparingly and by individuals with a wide variety of training.
2. The majority of elementary and secondary schools in Kansas have an ongoing adapted physical education program for the handicapped students, and there is a wide variety of physical activities included in these programs.
3. The person responsible for the physical education activity program in Kansas public schools is the physical education teacher.
4. Intramural programs are not readily available to handicapped students.
5. Handicapped students in Kansas public schools have a positive attitude toward physical education.
6. Screening, grade assessment and physical fitness techniques are used with handicapped students at least one time during the school year in the majority of Kansas elementary and secondary schools.
7. The majority of physical educators have emphasized physical education as their major field of academic study.

### Recommendations

1. Further study should be directed to each of the educational levels for further in-depth investigation of the on-going adapted physical education programs for the handicapped in Kansas public schools.
2. An investigation should deal only with carefully surveying the types and numbers of school age handicapped students, discovering why the number and kind of handicap of many handicapped students are unknown or not reported and then developing an instrument to more accurately reflect the variety of handicaps that need to be dealt with in a total physical education program.
3. A study could be devoted to how the state of Kansas ranks with other state public schools in mainstreaming the handicapped into adapted physical education programs.

4. A larger random sample of schools could provide data from which more reliable conclusions could be drawn.
5. Further studies could be more extensive, requiring the reporting of district-wide data on services for the handicapped.

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## APPENDICES

Appendix A  
The Mail Questionnaire

UNIVERSITY OF KANSAS  
DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION

School Name \_\_\_\_\_  
Population of geographical area covered by school system:  
Under 1,000 \_\_\_ 1,001 to 5,000 \_\_\_ 5,001 to 10,000 \_\_\_ Over 10,000 \_\_\_

Physical Education For Students Without Handicaps

1. Average number of students involved per physical education class:  
Boys \_\_\_ Girls \_\_\_
2. The structure of your physical education classes is:  
Boys only \_\_\_ Girls only \_\_\_ Coed \_\_\_
3. Average number of days per week physical education is taught per student: \_\_\_\_\_
4. Average length (in minutes) of physical education class period: \_\_\_\_\_

Physical Education For Students With Handicaps

1. Type of physical education class structure used for your handicapped students: Mainstreamed \_\_\_ Separate classes \_\_\_ Both \_\_\_
2. If separate classes--time of day classes for the handicapped students are usually scheduled: \_\_\_\_\_
3. Person primarily responsible for teaching physical education to the handicapped students: Classroom teacher \_\_\_ Physical education teacher \_\_\_ Other (describe) \_\_\_\_\_
4. Total number of full and/or part-time personnel who assist the person responsible for the teaching: \_\_\_\_\_
5. Handicapped children are given the opportunity to lead the group in activities:  
Always \_\_\_ Often \_\_\_ Sometimes \_\_\_ Rarely \_\_\_ Never \_\_\_
6. The following activities are included in physical education for the handicapped sometime during the school year:  
Aquatics \_\_\_ Movement exploration \_\_\_  
Ball-handling \_\_\_ Team sports \_\_\_  
Individual & dual sports \_\_\_ Low organizational games \_\_\_  
Games & relays \_\_\_ Rhythms & dance \_\_\_  
Kicking skills \_\_\_ Track & field \_\_\_  
Gymnastics & tumbling \_\_\_ Recreational activities \_\_\_  
Fundamental movement skills \_\_\_  
Other (describe) \_\_\_\_\_

7. If physical fitness tests are administered to the handicapped students, which of the following are used:  
 Presidential Physical Fitness Test \_\_\_  
 Kraus-Weber Test of Muscular Fitness \_\_\_  
 Hayden Test of Physical Fitness \_\_\_  
 AAHPER Kennedy Foundation Fitness Test \_\_\_  
 Other (describe) \_\_\_\_\_  
 None \_\_\_\_\_
8. Time during the school year when physical fitness tests are administered: \_\_\_\_\_
9. Number of children with each of the following handicaps in your school:  
 Permanent physical disability \_\_\_  
 Emotionally disturbed \_\_\_  
 Multiple handicaps \_\_\_  
 Intellectual dysfunctions \_\_\_

#### Factors Affecting The Program Of Physical Education For The Handicapped

1. I consider the physical education equipment available to me as:  
 Excellent \_\_\_ Good \_\_\_ Adequate \_\_\_ Fair \_\_\_ Poor \_\_\_
2. I consider the adequacy of the physical education facilities available to me as: Excellent \_\_\_ Good \_\_\_ Adequate \_\_\_ Fair \_\_\_ Poor \_\_\_
3. The handicapped in our school participate in intramurals.  
 Yes \_\_\_ No \_\_\_
4. The general attitude of the handicapped in the physical education classes toward physical education is: Positive \_\_\_ Neutral \_\_\_  
 Negative \_\_\_

#### Grading Handicapped Children In Physical Education

1. The types of evaluation techniques used with handicapped students are: Subjective \_\_\_ Objective \_\_\_ None \_\_\_ Other \_\_\_\_\_
2. Evaluating instruments used to measure the handicapped's physical level of attainment are: Physical fitness testing \_\_\_  
 Skill testing \_\_\_ Written exams \_\_\_ None \_\_\_ Other \_\_\_\_\_
3. The handicapped students in your physical education program are screened for placement by: Physical education teacher \_\_\_  
 School counselor \_\_\_ School nurse \_\_\_ Principal \_\_\_ Other \_\_\_\_\_

#### Educator's Educational Background

1. Please indicate degrees received:  
 Bachelor's \_\_\_ Master's \_\_\_ Specialist \_\_\_ Doctorate \_\_\_ Other \_\_\_\_\_
2. My major field of emphasis in college was: Physical education \_\_\_  
 Special education \_\_\_ Other (describe) \_\_\_\_\_
3. My minor field in college was: Special education \_\_\_  
 Physical education \_\_\_ Other (describe) \_\_\_\_\_

Please return this questionnaire by March 10, 1978 in the enclosed self-addressed envelope or mail to Wm. Michael DeNoon

10613 West 89th Terrace  
 Overland Park, Kansas 66214

Appendix B  
Form Cover Letter of the Mail Questionnaire

February 25, 1978

Dear Principal,

I am a graduate student at the University of Kansas in the area of health, physical education and recreation. My thesis deals specifically with the adapted physical education programs as they presently exist in public schools throughout the state of Kansas. The attached questionnaire, when completed and returned, will be used to determine the number, types and degree of ongoing adapted physical education programs throughout the state.

I am personally requesting your professional assistance in my endeavors. Upon choosing to participate in this study, please request the appropriate person in your school to respond to the items on the two-page questionnaire. The respondent will remain absolutely anonymous to me for the purpose of this study. I would appreciate that a response be made to each item; if one should be inapplicable, please indicate so. The most complete and accurate information will help render this state-wide survey valid and useful to me and others in the assessment of the facilities and programs available to the handicapped in our state. Please complete the questionnaire without consultation with any other professional who may also have received this questionnaire which is being sent to randomly-selected schools in the state.

Your timely action and return of the questionnaire by March 10, 1978, will be greatly appreciated. A self-addressed envelope is also enclosed for ease of return.

Thank you again for your cooperation.

Sincerely,

Wm. Michael DeNoon  
Principal Investigator

Appendix C  
Sample Tally Sheet



Population of Area Served	School #1	School #2
Educational Level		
Average # per class; coed or sep.	15/15 c	
Time & length of classes	2da./30min.	
Mainstreamed or separate	M	
If separate, when	-	
Who teaches	P.E.	
Number of Assistants	2	
Opportunity to lead	often	
Activities	b-m	
Physical Fitness Tests used	a	
When tests are administered	Mar.Apr.	
Number of students with various handicaps	0-10-10-5	
P.E. equipment	Ad	
P.E. facilities	G	
Intramural participation	Y	
General Attitude	Neu	
Types of evaluation techniques	--	
Evaluating instruments	b,e	
Screening by whom	b,e	
Degrees received	M+	
Major Field	P.E.	
Minor Field	--	

NOTE: The letters recorded correspond to choices on the questionnaire if they were labeled a,b,c,d, etc.

Appendix D  
Distribution of Questionnaires

# KANSAS COUNTIES

