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AN ANALYSIS OF THE SPECIAL EDUCATION PROGRAM IN OKLAHOMA CITY AND A FOLLOW-UP STUDY OF A SPECIAL CLASS

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APPROVED BY

DISSERTATION COMMITTEE

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CHAPTER I

INTRODUCTION

Adequate educational opportunity is the best insurance any locality can provide against an undertain future. It has been widely held that the best educational programs recognize individual differences and that the most productive educational programs take account of and provide for these differences. Through special programs for handicapped children, under the supervision of specially trained teachers, the most satisfactory goals in achievement for both the handicapped individual and the community may be gained. It is not only sound social but good economic practice to provide developmental and corrective training for the special student. In its broadest implications, education is responsible for promoting individual worth for the common good.

The amount of money spent to help the handicapped individual make a healthy adjustment and become a responsible citizen is small when compared with the amount spent to care

for the neglected, the helpless, and the incapacitated.

Educational trends place emphasis on the needs of the individual, and on an extensive training program for the utilization of all available manpower. This interest has resulted in special legislation in most states. As of 1948, when the first such legislation was enacted in Oklahoma, forty-one states had written laws authorizing or requiring the local school districts to provide educational services for one or more types of handicapped children. Thirty-four of these states made provisions in their laws to give financial aid to the local school districts providing such services.

Purpose of the Study

A program for handicapped children has been in existence in Oklahoma City, Oklahoma, for twelve years. It has grown both in the numbers of children and teachers included, and in types of handicapped children for which it provides. However, a pattern of growth in itself is no indication of the adequacy of a program. Its growth must always be considered in relation to the growth of the public school program as a whole and in relation to its adequacy in meeting the needs for which it was designed. It is the purpose of this study to analyze the program of special education in Oklahoma City in these ways: (1) to determine the strength and weaknesses of the overall opportunities in special education in relation to the national practices; (2) to compare the growth

of the special education program in terms of numbers of pupils served and types of services offered with the growth of the general program; (3) to assess the educational benefits to the individual pupil that may have been derived from the program of special education.

In order to accomplish these purposes, this study will first describe the special education programs developed elsewhere and those developed in Oklahoma City. Second, this study will compare the growth and present status of the special education program to that of the general program in Oklahoma City. Third, in order to determine, at least in part, the advantages of the special education program to the individual child, this study further proposes to assess the effects of the special education program by a follow-up study, covering a five-year period, of two matched groups of children, one group having had at least two years in a special class, and one group having had no special class training.

Definition of Terms

Special education. In this study special education is defined as training by specially trained teachers in special classes set aside for handicapped children.

Handicapped or exceptional children. Handicapped or exceptional children in this study are those who fall into one or more of these classifications: deaf, hard of hearing, speech defective, educable mental defective, or slow learner.

The qualifications of the child which make him eligible for training in the first five special areas listed above will be defined later in this study.

Mental defective. The mental defective is usually defined as an individual whose I.Q. is below 70 and who, in general, is not capable of much academic learning. If he has sufficient mentality to profit from training, he is further defined as a trainable or educable mental defective.

Trainable mental defective. The trainable mental defective is defined as an individual with an I.Q. below 50 who can be trained in the care of his person and in some social habits.

Educable mental defective. The educable mental defective is defined as an individual with an I.Q. between 50 and 70 who may become a self-supporting member of society.

The slow learner. Most writers classify in this group those individuals with I.Q.'s from 70 to 85 capable of some simple academic learning at a slower than normal rate and capable of becoming self-supporting members of society.

General education. In this study general education means all training and services offered by the public school system.

Data

Factual information relative to the establishment and development of special educational services in the Oklahoma City public schools was obtained from the State Department of Education and the Board of Education of the Oklahoma

City Public School System by interviews and from records.

Statistics and other information were contributed by administrators, teachers, and counselors in other school systems as well as in the Oklahoma City schools. Information was also contributed by officials and administrators of coordinating agencies: Variety Club, Kiwanis Club, Optimists Club, Lions Club, and Rotary Club. The State Division of Vocational Rehabilitation also contributed data to this study.

Data for the follow-up study were gathered from public school records, school administrators, teachers, court and police records, and employers.

Design of the Study

After a survey of the literature concerning special education programs in other parts of the United States, a complete description of the special education program in Oklahoma City will be given. Then, by organizing data relating to the development of the programs of general and special education and tabulating the results in parallel series, the growth and present status of the special education program in terms of numbers of children served will be compared with the growth and present status of the general education program. Third, the present program in special education will be analyzed in terms of its adequacy in relation to the expected numbers of handicapped children in a population the size of that of Oklahoma City.

In the second part of the study another aspect of the program will be considered. An analysis of the effects of being in a special class will be made by comparing two groups of equated pupils in a follow-up procedure using school records, interviews, and other data. These two groups of pupils will be equated as to sex, age, socio-economic status, grades in school (fifth and sixth grades), intelligence, and years of reading retardation. The independent variable will be at least two years of training in a special class; members of the control group will be selected from regular classes.

Limitations of the Follow-up Study

First, since classes for slow learners in Oklahoma City were few until 1950, a follow-up study of more than five or six years beyond grade 6 was impracticable. A longer follow-up period would be more desirable, especially in assaying the effects of special class training on stability in employment.

Second, this study of the equated groups is limited to the white race. When the special class group was selected, there were no integrated schools in Oklahoma. Since the study calls for matched pairs, only the majority race is included.

CHAPTER II

SURVEY OF THE LITERATURE

Much has been written by leaders in almost every field about special education. For the purposes of this study, pertinent material may be classified as (1) surveys of other special education programs for the mentally handicapped, (2) descriptions of programs in other areas for other types of handicapped children, and (3) literature pertaining to the effects of being in a special education class.

In general, the literature in the area of special education involving this investigation and evaluation of the special education program reflects two patterns of thinking about the problem of the exceptional child. Some investigators believe that while all children have special needs and abilities, exceptional children have such highly individual needs as to require unusual educational opportunities in order to make the best possible adjustment. Others believe that the exceptional child can best adjust by remaining with the normal group and by receiving remedial attention from special instructors at various periods in his program or by receiving individual attention from his classroom teacher.

This paper is not concerned with the second view, since the program in Oklahoma City primarily follows the first point of view.

Literature Pertaining to Programs for Mentally Handicapped in Other Cities

Most of the large school systems have numerous special classes while the smaller systems often provide for exceptional children on a co-operative basis. That is, handicapped children from several small schools are placed in a centrally located special class. Outstanding examples of the special class program are found in Indianapolis, Indiana; Newark, New Jersey; and Jacksonville, Illinois.[1] Schools in the state of Wisconsin[2] and Wilmington, Delaware,[3] have a similar plan. In the continuous development of the program from the elementary through the junior and senior high schools in these cities and many others, integration and contact with normal children is maintained in many of the elective and vocational classes. This practice permits a varied social environment for both the normal and the handicapped child.

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[1]Letty M. Wickliffe, "The Education of Handicapped and Gifted Children in the Secondary Schools," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1955), pp. 29-55.

[2]Care and Education of Crippled Children (Madison: Wisconsin State Department of Public Instruction, 1933).

[3]Delaware's Program for the Education of Exceptional Children, Bulletin No. 225-30 (Wilmington: Department of Public Instruction, n. d.).

Wilmington, Delaware

While school systems provide special classes with similar labels, there is much variation in emphasis and areas of particular interest. In Wilmington, the emphasis in the special education program has been centered in the junior high school, where activities in the fields of vocational and occupational experiences offer many opportunities for different fields of interest. The elementary schools use a similar but primary approach; training is begun at the second grade level of the regular curriculum and is carried throughout the first six grades. The basic program includes definite objectives in writing, punctuation, spelling, numberwork, and reading, to permit each pupil to reach his own level. The teacher has time available for individual counseling and assistance. Instead of hearing lessons and conducting recitations, she checks, supervises, and encourages. The pupil progresses from one goal to another and from one unit to another in each subject matter field. The socialized and self-expressive group activities include discussions, dramatizations, etc.[1]

Indianapolis, Indiana

Crispus Attucks High School, Indianapolis, a large urban school of about one thousand pupils, places its emphasis

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[1] Ibid.

on a program for the slow learner. The program is not maintained to satisfy the compulsory school attendance law, but to retain these pupils until they develop sufficient competency to cope with life situations. A special effort is made to help pupils recognize their limitations without embarrassment. A number of special class teachers, each working in subject matter areas, strive through actual practice in the classroom to develop qualities for social acceptance and democratic living.

In practice the special classes are placed on the general school schedule with the same subject names and departmental headings as the classes for regular students. Language development is greatly emphasized in order to get pupils to express themselves more adequately. While special pupils receive the same credits per subject as the regular students, their training is centered mainly on their social and emotional growth and development, with as much mastery of the tool subjects, reading, writing, and arithmetic, as each individual is capable of acquiring. The fact that these children can be graduated from high school and can take part in some school activities encourages them to do their best. In many cases the school has helped them to find employment.[1]

Newark, New Jersey

In the secondary schools of Newark, New Jersey, there

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[1]Wickliffe, op. cit., pp. 29-55.

are four training programs. All except the fourth are under the immediate supervision of the Director of Special Education of Newark city schools.

The first program is designed for boys and girls from twelve to fourteen years of age who have previously been assigned to elementary special classes. Exploratory experiences in shop work are provided and a special curriculum is offered in language arts, arithmetic, and social studies. Careful attention is given to the development of good personal relationships and to the acquisition of acceptable attitudes and social competence through a variety of learning situations.

The second program is advanced pre-vocational and trade training in two separate trade schools. At this age level, fourteen to seventeen years, primary emphasis is placed upon teaching skills that will enable students to secure and hold jobs. In the Girls' Trade School, courses are offered in junior business training, dressmaking, power machine operation, food preparation and handling, and nurses' aide work. Academic work is related to the trade training offerings. In the Boys' Trade School program, parallel trade training offerings are available. Shop training is offered in upholstery work, cabinet making, furniture refinishing and repair, and tailoring.

The third special class program in the regular junior high school provides for training a selected group of boys and girls who have demonstrated that they have potentialities

for further academic training. These pupils are carefully screened from the pre-vocational and trade school groups. Though they are classified as mentally retarded, many of these boys and girls are indistinguishable from pupils in the dull normal groupings in the junior high schools.

Training programs in the county vocational schools make up the fourth classification. In the county vocational schools and technical high schools, a few boys and girls are accepted who have demonstrated that they have the potentialities for advanced vocational training. Such pupils are carefully screened for placement, and their program is followed by the Department of Special Education.[1]

Jacksonville, Illinois

Jacksonville enrolls the mentally handicapped in a special class which operates as a more or less self-contained classroom unit. This room includes a complete kitchen, a complete work shop, and a study area. Instruction in this program is carried out by teachers who hold special education certificates.

The program provides the student with experiences at the level which will prepare him to live and work in a normal society when he leaves the school situation. Because there is no assurance that pupils will stay to be graduated, the program is set up to best meet the needs of the handicapped

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[1] Ibid., pp. 45-53.

child through the age of compulsory school attendance. For those students who do remain in school longer, the teacher can add supplementary work designed to assist the subnormal child in making satisfactory social and economic adjustment in the community.

The program, beginning at the elementary level, is organized in experience areas and resembles both the activity program and the core curriculum. Experience areas are: (a) home building, (b) occupational education, (c) social relations, and (d) physical and mental health. Each area has been designated to correspond with subject matter divisions in a normal school situation. However, the program is so flexible that there are no specific time periods allotted to each area; neither is any one area completely isolated from another. A continuous process that is part of each experience area provides for the fundamentals.

Within the area of occupational education, provision is made for actual work experience outside of school. The teacher, the pupil, and the employer come to an understanding with respect to the pupil's earning and working hours. The employer rates progress by means of a check list each six weeks and contacts the teacher when a pupil is in need of special help that will enable him to do his job better.[1]

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[1] Ibid., pp. 25-58.

San Diego, California

San Diego gives special attention to the pupils whose educational achievements and apparent mental abilities are below normal for their years. The plan thus far developed in that city's schools is presented by Louis Stein,[1] a teacher of slow learners for sixteen years. He states that the curriculum of experiences emphasizes a training program that attempts to help the non-academics achieve eventual social and occupational competence up to their own limited levels. Resource units are set up on the seventh, eighth, and ninth grade levels emphasizing community resources and human relations. While the San Diego schools recognize that many of these inferior pupils will never reach the sixth grade level of attainment, it is possible that they can attain at least a third grade level of academic achievement. An attempt is made to reach that level of academic competence with those children who are able to achieve it.

Table 1 gives the potential academic achievement of exceptional children with I.Q.'s ranging from 50 to 80. From this table it can be seen that most children, by the time they reach the upper limits of compulsory school age, even with I.Q.'s as low as 50 or 60, have the potential for third grade achievement on the basis of intelligence.

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[1]Louis Stein, "The Junior High Special Classes in San Diego," California Journal of Secondary Education, XXVI (January, 1957), pp. 20-25.

TABLE 1

POTENTIAL ACADEMIC ACHIEVEMENT OF EXCEPTIONAL CHILDREN[a]

Chronological Age	Grade Level Range				
	I.Q. 50	I.Q. 60	I.Q. 70	I.Q. 75	I.Q. 80
6	Pre-K	Pre-K	K	K	K
7	Pre-K	K	K	K	K
8	K	K	K	K-1	K-1
9	K	K	K-1	1	1-2
10	K	K-1	1-2	2	2-3
11	K	1	2	2-3	3
12	K-1	1-2	2-3	3-4	4
13	1	2	3-4	4	4-5
14	1-2	2-3	4	5	5-6
15	2	3-4	5	5-6	6-7
16	3	4	6	7	7
17	3	4	6	7	7

[a]Amy A. Allen, Let Us Teach Slow Learning Children (Columbus, Ohio: State Department of Education, 1955), p. 53.

New York, New York

A report prepared by Louis Eisman[1] discusses in detail the plan of the special education program for the slow

[1]Louis Eisman, "The Slow Learner in the High School," High Points, XXXVI (April, 1955), pp. 11-31.

learner in New York City. All the city high schools have slow learners. Some schools may have as few as six per cent, some as many as sixty per cent, but all are faced with the problem of adjusting curriculum and methods to the slow learner.

Eisman reports that in New York City an intelligence quotient of under 90 and a retardation of two years or more in the basic skills of reading and arithmetic are generally established as significant objective criteria in classifying the slow learner.

Throughout the city all high schools offer a variety of programs for this slow learner. The nature of the particular school's population, the facilities and size of the school itself, and the special talents of the teaching staff, often are variables in planning a course of study modified for slow learners. These programs are based on two principles: (1) a special program is desirable and necessary for the mass instruction of a large group of slow learners; (2) the program must be flexible enough to provide for the individual differences that occur in any group, regardless of how homogeneous the grouping may be. Most of the city high schools "block" the programs of the entering classes in the ninth year. The group lowest in I.Q. is classified as mentally retarded (from 50 to 75 I.Q.). Admission to this class is made on the recommendation of the Bureau of Child Guidance after an individual intelligence test has been

administered by a psychologist. These classes are taught by specially trained teachers. The next group is identified as the core group. The criteria for the selection of this group vary greatly, but a number of these schools place into these classes those who have I.Q.'s between 75 and 85, and who are retarded three or more years in reading. These students are usually given a core program integrating English and social studies and involving less academic and more experiential learning than is usual in normal classes.

In the "block" program, the classes remain together throughout the day, following a specified program of required subjects. This practice is consistent with the observation of many educators that slower children perform better and gain more in emotional security when they remain with the same group of classmates throughout the day.

Another type of program followed in all neighborhood high schools in New York City consists of courses, called second track subjects, designed specifically to meet the needs of the slow learner. Second track subjects sometimes take the youngsters along the same route as the regular courses but at a slower pace; more often even the route is different. Besides these, there are a number of new subjects designed especially for the slow learner. A student who is likely to fail in fulfilling the requirements of the academic or commercial course, either because of lack of interest or lack of aptitude, can take these non-academic courses which

lead to graduation with a general diploma.

In addition, remedial classes have been set up in all high schools. All schools maintain speech clinics for individual correction. "Vestibule Classes" for pupils speaking English as a second language have been set up to acclimate immigrants to the language and the school.[1]

Surveys of Programs for Other Types of Handicapped Children

The Visually Handicapped

Most of the literature relating to the education of the visually handicapped concerns itself with the problem of teaching such children to acquire realistic attitudes and goals for themselves. According to Lawrence,[2] the loss of visual acuity brings many such problems not only to the child but to his parents and teachers as well. Lawrence suggests that the planning of the child's education should include evaluating the child as an individual, not merely as a blind child; assessing the child's general health in relation to his other aptitudes; estimating the visual deficiency and the child's own ability to adjust to it; determining the nature and extent of the handicap and its effect upon choice of occupation.[3]

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[1] Ibid.

[2] G. Allen Lawrence, "Life Planning for the Partially Seeing," Journal of Exceptional Children, XXIII (February, 1957), pp. 202-207.

[3] Ibid.

According to Cruikshank,[1] services to blind children should be made available to them until the time when they can assume their places with sighted children and with sighted adults. Pre-school services should have this as their goal, for experience has demonstrated that some pre-school blind children can have a special nursery school program and then satisfactorily take their places with sighted children.

Rickman[2] states that in setting up the program for the blind student, the counselor, teacher, and parents must work together. Such planning is especially necessary when the secondary level of training is reached; at this time fear of vocational or social failure concerns the blind child greatly. In most places, at the age of sixteen, the student may apply to the state vocational rehabilitation services. Rehabilitation personnel will then help make plans for his education and training beyond high school or assist him in finding a job.

Speech Defective

Speech correction is needed when deviations from the normal production of speech are present because of malforma-

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[1]William M. Cruikshank, "Observations on the 1956 Statement of Policy by the American Association of Instructors of the Blind," Journal of Exceptional Children, XXIII (April, 1957), pp. 320-328.

[2]Lillie M. Rickman, "Secondary Education for Visually Handicapped Students," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1953), pp. 101-103.

tion or incorrect usage of the speech organs. Borden and Busse[1] have defined a speech defect as an accoustic variation of the accepted speech standard so extreme as to be conspicuous, confusing, and unpleasant. A national survey in 1931[2] revealed how widespread is defect in speech. According to its findings, not less than four per cent of the population of the United States is so defective in speech as to require specialized remedial training.

Ordinarily speech problems may be said to fall into three major categories: problems of articulation, voice, and rhythm. The most frequently encountered difficulty is that of articulation, which is characterized by substitutions, omissions, distortions, or additions of sound. In addition there are disorders resulting from a cleft palate or cleft lip, cerebral palsy, aphasia, acoustical handicaps, or the influence of a foreign language.

The curriculum for the speech defective is the same as that for other children of his grade. The corrective speech program is not a program in itself but is a part of the whole educational process. While it is a special service to those in need of such training, it must be considered as a supplement to the classroom instruction. In most school

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[1]Richard C. Borden and Alvin C. Busse, Speech Correction (New York: F. S. Crofts and Co., 1925), p. 126.

[2]Ruth B. Irwin, Speech and Hearing Therapy (New York: Prentice-Hall, Inc., 1953), p. 4.

systems individual case study records are kept for each child receiving corrective speech training. Speech therapy begun in the school needs to be continued in the home, so parents must be trained to co-operate as far as possible in the program set up for the training of their children.

Vocational guidance is often an important matter for secondary school pupils with serious speech problems; and the speech therapist, counselors, and teachers need to work together to help these pupils prepare for a suitable type of job.

In most elementary schools the program for the speech handicapped does not require much adjustment in the child's curriculum. Speech therapy, at least twice a week, is provided on an individual basis, or individuals with a common difficulty may work together in small groups. Other cases may be handled individually.

In some communities across the country, special services are available to pupils with speech handicaps, but in other communities, and even in some schools in communities where other schools have access to speech therapists, the problem of special instruction for the speech handicapped remains unsolved.

The Deaf and Hard of Hearing

One of the major criticisms of the programs for children with hearing impairment is that too many people, even

educators, do not recognize the difference in the educational problems involved between the deaf and the hard of hearing. The Conference of Executives of American Schools for the Deaf[1] has defined the deaf as those in whom the sense of hearing is non-functional for the ordinary purposes of life. The Competencies Committee of the United States Office of Education[2] states that the deaf child must be defined in terms of the extent to which his impaired ability to communicate by speech and hearing affects his psychological and educational potential. The child who has not developed expressive and receptive skills of communication prior to the onset of deafness cannot imitate language through speech. There is a problem also with the child who has acquired some of the skills of communication prior to the onset of deafness, but who is at a level of competence in language that requires special technique to develop it. The hard of hearing individual is one in whom the sense of hearing, although defective, is functional with or without a hearing aid.[3]

In establishing a program for educating the deaf child, properly qualified teachers are especially necessary. A teacher of the deaf must first of all have the technical

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[1]Richard C. Brill, "Education for the Deaf and the Hard of Hearing," Journal of Exceptional Children, XXIII (February, 1957), p. 194.

[2]Ibid.

[3]Ibid.

knowledge of how to teach language to a child who has no conception that there is such a thing as language. It is a matter of teaching speech to a child by other methods than through hearing it. A teacher of the deaf must be able also to teach lip reading.

A criticism frequently made of schools which bring deaf children together is that such a method segregates the deaf child. Hickey[2] contends that inadequate programs for the pupils who are deaf can do irreparable damage to them by taking years out of their lives when they should be gaining knowledge and skill from an adequate program. When the child is able to speak intelligibly and to read lips well enough to understand what is said to him, he should then no longer be segregated.

The hard of hearing child presents an entirely different problem, and his program, therefore, must be individualized in its approach. He has an understanding of language, although imperfect in varying degree, depending upon the deficiency of hearing. As a result of his inability to hear he will probably have social, emotional, and educational problems. He will probably be retarded, and will experience difficulty in his speech.

Generally the programs for the hard of hearing child provide for keeping him as a regular member of the school

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[1]John M. Hickey, "Educating the Exceptional Child," School Executive, XV (September, 1955), pp. 58-59.

class and for supplying supplementary training for his individual needs. He should never be placed in the class with the deaf pupil, because this practice puts both at a disadvantage. In practice deaf children are taught in a class or school for deaf children, and the hard of hearing are kept in the regular school program and are provided with special services.

The Physically Handicapped

One of the largest and most modern schools for crippled children is the one just opened in Chicago, Illinois--the Neil School. According to Mullen,[1] this is an integrated school enrolling 195 non-handicapped pupils in addition to the 160 handicapped. By providing separate classrooms for the two types of students and by planning for joint use of the auditorium, gymnasium, and lunchroom, the school gives the pupils the opportunity to work and play together in a variety of activities. This type of provision for the handicapped child is gradually beginning to be the goal toward which many communities are striving. Unless segregation of any type of child is unavoidable, the present trend is toward integration into the normal school program.

Many times schools reject boys and girls who are crippled. Often very slight adjustments in the buildings for purposes of mobility would permit these young people to

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[1]Frances A. Mullen, "Chicago Opens a New School for the Physically Handicapped," Journal of Exceptional Children, XXIII (April, 1957), pp. 296-332.

enjoy the same educational opportunities as the non-handicapped youth.

However, Bruner[1] points out that young people in need of specialized treatment, the orthopedically handicapped, require the services available in a special school: occupational, physical, and speech therapy; special bus transportation; adjusted building facilities; special orthopedic equipment; an adjusted recreational program; and close co-operation with the medical, clinical, and volunteer services of the community.

In general many differing types of school organizations have been planned to meet the varying needs of crippled children. These are the media most commonly provided: regular day-school classes in special schools, special instruction in hospitals and sanatoriums, special classes in regular high schools, special schools for the orthopedically handicapped, and home instruction. But many of these services are available only in the large cities. The majority of crippled children are served by the general program of the public school.

Literature on the Effects of Being in a Special Class

Descriptions and evaluations of special education programs proceed on the assumption that it is desirable to

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[1]Olive P. Bruner, "Adolescents with Orthopedic Handicaps," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1955), pp. 61-83.

give special training for the handicapped child, and, in the reports of the schools surveyed in this study, that the best way to provide such training is in the special class. It seems pertinent, then, to examine the second premise.

The fundamental problem is: What is the effect of having training in a special class? Does this training help the pupil to achieve a better life adjustment? For the purposes of this study, only projects relating to the effects of being in a mentally handicapped or slow learner class will be reviewed.

One such project is the Rosenberg Foundation survey[1] set up in San Francisco State College in March, 1950, and completed in 1952. The findings include a descriptive analysis of pupil adjustment effected under a special training program; recommendations are made for programs appropriate to the needs of mentally retarded students in secondary schools. Indications from this study are that special class students remain in school longer than slow learning children in regular classes, and the assumption is made that having had the advantage of special education in a longer training period enables them to find more satisfactory employment. How effective an adjustment they actually make once they enter the world of work offers an opportunity for many follow-up studies which up to the present have not been attempted.

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[1] Elsie H. Martens, "Toward Life Adjustment through Opportunity--Special Education," School Life, XXXIII (January, 1951), pp. 52-54.

Another study giving indications of the effects of special training for the slow child was conducted by McIntosh[1] at the Jarvin School for Boys in Toronto, Canada. The non-academic boys were unselected beyond the fact that they were the first 1000 located who had spent six months or more at the school. Ages ranged from 16 to 30 years, and I.Q.'s from 40 to 101 or more. A percentage of 65.2 of the 1000 graduates had mental ages of 11 and 12 years, or educational ages equal to grades 5, 6, and 7.

Of these graduates, 2.2 per cent were unemployed; 1.1 per cent were in penal institutions; 44.2 per cent had been in the armed service; 37.8 per cent were earning as much as or more than the average industrial worker in that area.

The men with I.Q.'s under 60 had a higher percentage of unemployment than the group as a whole, but many of them were steady at their work, were self-supporting, and were succeeding. Of the 56 men earning over $45 a week, 77 per cent had I.Q.'s under 80. In the wage comparison of the 71 to 75 I.Q. group with the 76 to 80 I.Q. group, it was found that a difference of 10 points in the I.Q. scale made little or no difference in the amount of money earned. Other factors, such as emotional stability and personal drive, were as important as even 20 points in the I.Q. scale within the

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[1]W. J. McIntosh, "Follow-up Study of 1000 Non-academic Boys," Journal of Exceptional Children, XV (March, 1949), pp. 166-170.

range of 65 to 95.

In this study, however, no attempt was made to compare the adjustments of the 1,000 selected graduates with adjustments of individuals with similar I.Q.'s but no special training.

CHAPTER III

BACKGROUND AND DESCRIPTION OF THE SPECIAL EDUCATION PROGRAM IN OKLAHOMA CITY

Legal History of Special Education in Oklahoma

Section 4 of House Bill No. 151, passed by the Twentieth Oklahoma Legislature in 1945, appropriated $20,000 to assist the local districts in educating the mentally and physically handicapped children of the state. The bill required individuals taking the school census to report the name, age, address, and nature of the handicap of each handicapped child, and the name and address of the parents or custodians of the child. This census was so unsatisfactory that in 1949 the Oklahoma School Code repealed the law.

In 1950 the local school districts were directed by the Division of Research and Census of the State Department of Education to take a census of the handicapped children. This approach, too, was vague and unrealistic. In 1951 the Division of Special Education[1] prepared a census form which included these categories: blind, near blind, crippled, deaf,

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[1]Oklahoma, Session Laws (1949), Article XIII, Section 182.

epileptic, hard of hearing, mentally deficient, speech deficient, heart trouble, or other disabilities.

Identification and discovery of the handicapped children were the first steps in securing legislation for the financing of a program. The legislative status of the educational program of today for exceptional children is broad in its scope. At present, school districts are authorized to organize special classes for educable physically or mentally handicapped children when five or more such children reside within or are transferred to the district for special education purposes. Authorization is given to school districts to employ speech and hearing teachers.

Types of Programs for the Handicapped in Oklahoma City

Program for Crippled Children

The William Jennings Bryan School for Crippled Children, established in 1922, was the first attempt wholly financed by a public school district west of the Mississippi River to offer such services. The present building was erected in 1926 and has a maximum capacity of eighty-five children. The average enrollment during the school year ranges from seventy-five to one hundred. The average daily attendance is estimated at sixty pupils. This school, a combination elementary-junior high school, functions for children so severely crippled, temporarily or permanently, that their

individual needs cannot be met adequately in a regular school.

During the year 1955-1956, the handicaps of the children attending were classified thus:

Cerebral Palsy	22
Post Polio	17
Congenital Heart Disease	8
Muscular Dystrophy	5
Congenitalis Amyotonia	4
Congenital Malformation	4
Motor Aphasia	2
Hydrocephaly	2
Spina Bifida	3
Rheumatic Fever	1
Pott's Disease	1
Post-traumatic Paralysis	1
Undiagnosed Muscular Disease	1

Any child of public school age may attend the William Jennings Bryan School if he is found eligible under the following conditions: (1) he must have an annual physical examination and be recommended by a qualified physician; (2) he must have a psychological assessment either by the school district's Department of Public Services or by a private, qualified psychologist or psychiatrist. Any problems arising in respect to enrollment are subject to the final decision of a Board.

A physically handicapped child from another school district may be enrolled at the William Jennings Bryan School if he has been properly processed and has obtained a legal transfer, and if facilities are available at the school. The first responsibility of the school is to serve those severely crippled children whose legal residence is in the Oklahoma City public school district.

In addition to the principal and six regular teachers, the staff at the school includes: a speech therapist, a physical therapist, an occupational therapist, an art teacher, a music teacher, a school nurse, a school custodian, a cafeteria manager and her assistant, and three bus drivers. Through their services, in addition to the regular elementary and junior high school courses, physical therapy, speech therapy, occupational therapy, swimming, and Scouting are provided for all pupils. Through the Federal School Lunch Program, cafeteria services are provided.

Children who are capable may go on to either a senior high school offering college preparatory courses or a school offering vocational training. College or additional vocational training beyond high school is made possible through facilities provided by the State Vocational Rehabilitation Program. Children for whom senior high school or vocational training schools are not feasible may continue at the William Jennings Bryan School until they are sixteen years of age or older at which time they are eligible for the State Vocational Rehabilitation Program.

Program for the Hard of Hearing

A training program for the hard of hearing child was initiated in the Oklahoma City Public Schools in 1953. Eight children, considered the most severe cases in the schools, were enrolled in a special class in Culbertson School. These

children, ranging in age from six to ten years and in grade from the first through the third, came from all parts of the city.

The program was expanded at the beginning of the school year 1955-1956 to provide facilities for eighteen children, varying in age from six to twelve years and in grade from one to six. An additional teacher was added to the staff.

The walls and ceiling of the classroom are of acoustical material to cut down on outside noises. The group hearing aid used provides binaural hearing which enables the child to receive auditory stimulation for both ears. The Junior and Senior Hospitality Clubs of Oklahoma City have provided all of the special equipment and furnishings.

The purpose of the program is to provide additional educational facilities required by children who have serious hearing losses, but who can make satisfactory progress in regular classes, provided they can have special training. They receive daily work in lip reading, speech, language, auditory training, and tutoring in all classroom subjects.

Referrals may come from the following sources: the school doctor; the school nurses or visiting counselors; the Oklahoma City Public School Speech and Hearing Clinic; the University of Oklahoma Speech and Hearing Clinic; otologists or practicing physicians; teachers and principals.

To enroll in this program the child must meet the following requirements: (1) On the basis of the results of two or more audiometric tests, he must have an average loss of more than 30 decibels on frequencies 156, 512, 1024; (2) on the basis of results of psychological tests given by the school psychologist, he must be considered educable; (3) he must be recommended by an otologist or a physician; (4) his parents must contact the director of special education. If there is room in the class, he will be admitted. If not, his name will be placed on a waiting list on which precedence is according to decibel loss.

The curriculum offers the regular course of study for each grade level with tutoring in reading, arithmetic, and social studies to familiarize the child with the work of a regular classroom. In addition, lip reading, vocabulary building, speech, auditory training, and use and care of the hearing aid are included daily.

Program for the Partially Seeing

Description. A training program of educational facilities for children with serious visual difficulties was initiated in the Oklahoma City Public Schools in 1949. Sixteen children were enrolled in this class, which included kindergarten, primary, and intermediate levels of learning. By 1950 facilities were provided for thirty-two pupils and the curriculum was extended to include the first year of junior high school.

An additional teacher was added to the staff.

Physical equipment and textbooks are provided by the Board of Education. The Oklahoma City Alumnae Chapter of the Delta Gamma Sorority sponsors the educational program for the partially seeing by providing scholarships for the training of the teachers, special equipment for the classrooms, and supplies. The Rotary Anns sponsor three ophthalmologists who give free visual examinations at the Variety Club Health Center for indigent children.

In order to facilitate transportation of the pupils from various parts of the city, the program was set up at Culbertson, a centrally located elementary school. The room provided for this special group has the most modern facilities. Eye-ease green walls and light ceilings are used in the interior decoration to afford sufficiently high reflective factors in the lighting. Bland colors are used for the physical equipment to have reflective value without glare.

Since the purpose of this program is to provide the educational opportunities required by children who have serious visual handicaps, the curriculum is adapted to their visual abilities. As each child progresses, he is allowed to attend classes with the normal seeing group and to return to the sight-saving teacher for special instruction. Only pupils who have attained grade level participate with the normal seeing group.

Classification of the Partially Sighted. Included in the classification of the partially sighted are three groups: children having a visual acuity of 20/70 or less in the better eye after all medical and optical help have been provided; children with progressive eye difficulties; and children suffering from diseases of the eye or diseases of the body that seriously affect vision.

The referrals of pupils may come from: classroom teachers, school principal, school nurse, school doctor, visiting counselors, trained technicians, ophthalmologists and optometrists, physicians, director of special education, and pupil services department. To be admitted, the child must: be educable; fall within the classification of the partially seeing; have a recommendation of a consulting ophthalmologist; have been given a psychological assessment; have permission to enroll; secure the recommendation of the director of special education.

Curriculum. The regular school curriculum, including language arts, social studies, mathematics, music, art, and creative crafts is offered. Typing with large 18-point type is taught, and piano and violin lessons are included. Suitable educational media have been made available and important instruction is given in the care of the eyes. Since eye difficulties usually limit the length of time for close eye work, much oral and individual instruction is necessary. Use of the tape recorder is included, and additional hand work--clay

modeling, jigsaw puzzles, etc.--is given.

Program for the Homebound

The purpose of homebound instruction, which was initiated in Oklahoma City in 1949, is to provide adequate teaching to the educable school age child who for some physical reason is unable to attend classes in his regular school. It is the duty of the teacher to determine what academic progress the child has made, and at what level he is capable of working; and to assist him in carrying on his work from that point. Every effort is made to keep the child abreast of his own school group so that there will be no difficulty when he rejoins his own class. As far as possible, he is instructed in each subject he has been taking in school.

A maximum of five hours per week is the time a teacher is permitted to receive pay for services rendered. The teacher best suited to instruct the homebound child is his regular classroom teacher or, if she is unavailable, another teacher, preferably from the same school.

Program for the Severely Mentally Retarded

A training program for severely mentally retarded children was initiated in the Oklahoma City public schools during the 1948-1949 school year. Twenty children were enrolled in a half-day program. Ten primary age children attended morning sessions, and ten intermediate age children attended afternoon sessions.

The Oklahoma City school board employed a teacher, provided two rooms in the Riverside elementary school building at 421 Southwest Eleventh Street, and furnished bus transportation for the children, who came from all sections of the school district. The Junior and Senior Hospitality Clubs of Oklahoma City provided all the special equipment and furnishings. These clubs have continued their sponsorship of the school furnishings through the years.

In 1950-1951 the program was expanded to provide facilities for forty more children, and an additional teacher was employed. Further expansion in 1955-1956 required the addition of a third teacher to the staff.

With the addition of the third teacher, services were made available for mentally retarded children of legal school age, from six to twenty-one years of age. Facilities were expanded to provide a full day program for some of these children. The present program includes the services of a fourth teacher on a half-day basis and a music therapist for one-half day every other week. In addition, the children are given instruction by the school shop teacher once a week.

Through the help of the Goodwill Industries in Oklahoma City, an "On-the-Job Training Program" is now functioning for these children. Capable pupils from the senior group are permitted to receive training two hours daily at the Goodwill Industries. They receive the minimum base pay of forty cents an hour during a twelve weeks' training program.

This entire program was established in an effort to provide public school experiences to meet the individual needs of these severely mentally retarded children. These experiences offer training for them which may enable them to make useful contributions--social and economic--to their families and the community. These experiences also provide additional criteria to enable parents and the school district to determine whether an individual child would profit more from such a program or whether his interests would be met better in a private or state institution.

To be eligible to attend these classes, a pupil must meet six requirements. He must be of school age, ambulatory, able to hear and see well enough to engage in class activity, able to communicate his wants and understand simple directions, and emotionally stable enough to participate in group activity.

To enroll a child, the parent or guardian must contact the director of special education or the principal of the school serving that residential area in which the child would normally be enrolled; then the principal must refer the case to his visiting counselor. The visiting counselor must schedule an appointment for the parents with the pupil services department, which recommends placement or non-placement of the child to the director of special education. He recommends to the principal and teachers at Riverside School, if placement has been recommended, that the child be enrolled

in these classes when facilities are available.

Enrollment is made on a probationary basis. Exclusion may be recommended by the principal and the teacher, if in their opinion the child is unable to profit or if he prevents others in the group from making reasonable progress. All children are initially enrolled on a half-day basis for at least nine weeks before they are considered for a full-day program.

Program for the Slow Learner

The term "slow learner" in Oklahoma City is defined as a child with an I.Q. below 80 and above 60. In most areas, the slow learner includes children from 70 to 85 in I.Q. In the discussion following, the term will be used as operationally defined.

The aims of the special class for the slow learners are: to provide specially trained teachers to help them; to offer a curriculum and program of activities designed for more limited capabilities to make success experiences possible; to provide relief from competitive academic pressures and to establish an atmosphere of acceptance, an atmosphere in which personal, social, and academic adjustment may take place.

By the time a child is old enough to enroll in school, indications of subnormality can be noted by teachers, parents, and administrators. Referrals of slow learners may be made

by parents, physicians, teachers, or others who have been in contact with them.

Results of educational tests, in some cases psychological examinations, and previous school and family history are evaluated. If the I.Q. is from 60 to 80, the child is eligible for admission to the slow learner class.

The aim of the curriculum for the slow learner is to be so flexible that it can be adjusted to the needs of children at varying levels of ability and with different potentialities. A typical daily program for a special class of slow learners in Oklahoma City might divide its time as follows: opening exercises, 9 per cent; intermissions, 8 per cent; physical training, 10 per cent; academic work, 35 per cent; and sensory motor, speech, handicraft, and occupational work, 38 per cent. About one-half the time is devoted to socializing group activities and the other half to developing the speech and manual skills needed in the experience units. Within this group, the more subnormal children are given more training in sensory motor and manual work and as much opportunity as possible to acquire useful personal and social habits. The children with more ability are given more academic training.

Program for Speech Defectives

In Oklahoma City, the corrective speech program is not handled in a special class but is a part or supplement

of the regular program of class instruction.

There was no city-wide organized program of speech correction in the school system until 1940. Speech therapy had been limited to assigning the most extreme cases of speech difficulty to teachers with little or no training in speech correction. Consequently their instruction often consisted of a type of trial and error method which often resulted only in greater difficulties for the pupil involved.

In 1940, two speech correction teachers were assigned to cover all cases in the elementary schools in Oklahoma City. Three years later, two more speech therapists were hired; up to the present time there has been a consistent growth in number of classes and teachers in the speech correction program.

To be eligible for speech therapy the child is tested by the speech correctionist who determines the type of problem presented and the necessary therapy. In coordination with the classroom teacher and principal she assigns a period for speech therapy, with individual or group practice.

The speech therapist is able to serve the pupils in many schools. An average case load for the speech correctionist is considered to be fifty children. Class groups range from five to ten pupils each, with instruction given twice a week for a period of thirty minutes.

CHAPTER IV

THE GROWTH AND PRESENT STATUS OF THE SPECIAL EDUCATION PROGRAM AS COMPARED TO THE GENERAL PROGRAM IN OKLAHOMA CITY

Schools in the Oklahoma City Program of General Education

According to statistics from the Division of Research from the Board of Education, Oklahoma City, Oklahoma, at the close of the school year 1955-1956, there were ninety-three schools in operation in the district. Their classification and the grades included were as follows:

Elementary (Kindergarten through 3rd grade) . . .	4
Elementary (Kindergarten through 4th grade) . . .	1
Elementary (Kindergarten through 6th grade) . . .	71
Elementary (1st through 6th grade)	1
Junior High (7th through 9th)	6
Junior-Senior High (7th through 10th)	1
Junior-Senior High (7th through 12th)	5
Senior High (10th through 12th)	3

Comparison of Growth of Special Education and General Education Programs in Oklahoma City

Growth in Number of Pupils Served

Table 2 indicates the growth of special education in Oklahoma City from the time of its origin to the present in terms of numbers of pupils served. From 1945 to 1957, the number of pupils has grown from 47 to 754. In 1945, one-tenth of one per cent of all pupils enrolled in Oklahoma City were in special classes while in 1957, 1.4 per cent were so enrolled.

Not only has the program grown to include more pupils, but it has grown even in proportion to the rapid increase, 51 per cent, in the number of pupils in the school system as a whole. That is, the increase in the number of children in special classes has more than kept pace with the general increase in school population. It must be noted, however, that during the past four years, the growth of the special education program has merely kept pace with the growth of the regular education program.

Certain classifications have grown more than others in number of pupils served. In the special classes, in the twelve years covered by this survey, the numbers of partially sighted and hard of hearing children have doubled; the crippled and homebound, tripled; the trainable mentally defective, quadrupled; but by 1957, the original number of children in the slow learning group is multiplied by twenty-two.

TABLE 2

NUMBER OF PUPILS IN SPECIAL EDUCATION A
CLASSES IN OKLAHOMA CITY, 1

Classification	1945	1946	1947	1948	1949	1950
Number of Pupils in Special Education*						
Homebound					48	50
Hard of Hearing					11	12
Partially Blind					16	32
Crippled	15	20	30	40	46	50
Trainable Mental Defective	12	15	18	20	24	23
Slow Learner	20	31	45	56	60	162
Total	47	66	93	116	205	329
Number of Pupils in Regular Education (in thousands)						
Kindergarten	2.8	2.7	2.9	3.3	3.4	3.5
Primary (1-3)	10.4	10.7	10.5	10.5	10.8	11.3
Elementary (4-6)	8.4	8.5	8.2	8.2	8.5	8.9
Junior High	8.0	8.3	8.0	7.9	7.6	7.7
Senior High	5.2	5.5	5.9	6.0	6.0	6.0
Total	35.0	35.7	35.7	36.0	36.5	37.8
Percentage of Pupils in Each Classification						
Special Class	0.1	0.2	0.3	0.3	0.6	0.9
Kindergarten	8.0	8.0	8.0	9.0	9.0	9.0
Primary (1-3)	30.0	30.0	29.0	29.0	30.0	30.0
Elementary (4-6)	24.0	24.0	23.0	23.0	23.0	24.0
Junior High	23.0	23.0	22.0	22.0	21.0	20.0
Senior High	15.0	15.0	17.0	17.0	16.0	16.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

*Speech pupils in the special education program are included in
therapy is given only twice a week, and pupils receiving it are include
classified.

TABLE 2

PUPILS IN SPECIAL EDUCATION AND REGULAR EDUCATION CLASSES IN OKLAHOMA CITY, 1945-1957

	Year										
6	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
			48	50	60	80	110	120	128	130	144
			11	12	10	15	15	18	18	20	23
			16	32	30	30	28	28	30	31	32
	30	40	46	50	43	45	40	43	42	44	47
	18	20	24	23	30	43	44	46	48	52	49
	45	56	60	162	227	331	340	380	417	438	459
	93	116	205	329	400	544	577	635	683	715	754
'	2.9	3.3	3.4	3.5	2.6	4.1	5.2	4.9	5.1	5.1	5.6
'	10.5	10.5	10.8	11.3	11.8	12.5	12.0	12.4	12.7	14.6	15.6
)	8.2	8.2	8.5	8.9	9.1	9.9	10.2	10.9	10.9	11.0	11.2
3	8.0	7.9	7.6	7.7	8.6	9.1	9.5	10.0	10.6	11.0	11.9
)	5.9	6.0	6.0	6.0	6.8	6.9	6.9	7.0	7.5	7.9	8.2
'	35.7	36.0	36.5	37.8	39.0	43.0	44.5	46.0	47.5	50.0	53.2
	0.3	0.3	0.6	0.9	1.2	1.5	1.3	1.4	1.4	1.4	1.4
	8.0	9.0	9.0	9.0	7.0	10.0	12.0	10.5	11.0	10.0	11.0
	29.0	29.0	30.0	30.0	30.0	29.0	27.0	27.0	27.0	29.0	29.0
	23.0	23.0	23.0	24.0	23.0	23.0	23.0	24.0	23.0	22.0	21.0
	22.0	22.0	21.0	20.0	22.0	21.0	21.0	22.0	22.0	22.0	22.0
	17.0	17.0	16.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	15.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

ation program are included in other classifications on this table. Speech
oils receiving it are included in the totals in which they are otherwise

Growth in Number of Teachers Included in the Special Education Program

Table 3 indicates that from 1945 to 1957 the number of teachers in the special education program has increased from ten to sixty-three. In 1945, one and one-tenth per cent of all teachers in Oklahoma City were included in the special education program, and in 1957, three per cent of all the teachers were in this program. In numbers of teachers as well as numbers of pupils, the program has grown in the twelve year period.

From Table 2 it can be seen that while children are listed in the "homebound" classification since 1949, in Table 3 no teachers are listed for this classification. Teachers of the homebound are often the child's regular homeroom teacher or a teacher from the same school building and are therefore included in other classifications on Table 3.

Speech Correction Program

No accurate data was available on the numbers of children served by the speech correction teachers. Each speech teacher has had a maximum number of fifty pupils (seventy-five in 1957) to serve at one time; but since children are entered in special speech therapy classes for varying periods of time, often for so short a time as two weeks, the actual number of different children served during a year or a semester is larger than the number of fifty for each teacher. There has been, in Oklahoma City, no record kept

TABLE 3

NUMBER OF TEACHERS IN SPECIAL EDUCATION PROGRAMS IN OKLAHOMA CITY,

Classification	1945	1946	1947	1948	1949	195
Number of Teachers in Special Education						
Hard of Hearing						2
Speech				1	1	2
Partially Sighted					2	1
Crippled	4	5	5	6	6	6
Trainable Mental Defective	2	3	3	3	3	4
Slow Learner	4	5	5	4	4	6
Total	10	13	13	14	14	21
Number of Teachers in Regular Education						
Kindergarten	90	101	118	120	128	128
Primary	178	180	220	240	254	260
Elementary	287	301	306	316	328	340
Junior High	162	180	186	200	217	221
Senior High	169	174	183	185	192	201
Total	896	949	1026	1075	1133	1171
Percentage of Teachers in Each Classification						
Special Education	1.1	1.4	1.3	1.3	1.2	1.8
Kindergarten	11.0	12.0	11.0	11.0	11.0	11.0
Primary	19.0	19.0	21.0	22.0	22.0	22.0
Elementary	33.0	32.0	30.0	30.0	29.0	29.0
Junior High	18.0	18.0	18.0	18.0	19.0	19.0
Senior High	18.0	17.0	18.0	17.0	17.0	17.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3

:RS IN SPECIAL EDUCATION AND REGULAR EDUCATION
;RAMS IN OKLAHOMA CITY, 1945-1957

Year										
947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
			2	2	2	2	2	2	2	2
	1	1	2	3	3	3	4	4	6	8
		2	1	2	3	4	4	4	6	6
5	6	6	6	6	6	7	8	8	8	8
3	3	3	4	4	4	4	4	4	4	4
5	4	4	6	13	15	16	25	33	35	35
13	14	14	21	30	33	36	47	55	61	63
18	120	128	128	132	140	148	153	160	183	185
20	240	254	260	280	390	396	401	420	460	528
)6	316	328	340	356	354	376	389	432	510	540
36	200	217	221	228	240	263	274	383	384	396
33	185	192	201	203	220	220	226	247	296	312
26	1075	1133	1171	1229	1377	1439	1490	1697	1894	2024
3	1.3	1.2	1.8	2.4	2.4	2.5	3.2	3.2	3.2	3.0
0	11.0	11.0	11.0	10.0	11.0	10.0	12.0	9.0	9.0	9.0
0	22.0	22.0	22.0	22.0	28.0	28.0	26.0	24.0	24.0	26.0
0	30.0	29.0	29.0	29.0	25.0	26.0	25.0	26.0	27.0	26.0
0	18.0	19.0	19.0	19.0	18.0	17.0	18.0	23.0	20.0	19.0
0	17.0	17.0	17.0	17.0	15.0	16.0	15.0	15.0	16.0	16.0
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

of the actual number of children by the speech therapy program. An estimate of fifty pupils for each teacher, which would be 400 pupils for 1957, would probably fall short of the actual number served.

Summary of Growth of the Special Education Program

Table 4 shows the growth of the special education program in relation to number of schools served, number of teachers, increase in grade range served, and statistics concerning the average class size for the twelve year period. The number of schools having special classes has increased during this time from two to forty-eight; in grades served, from eight grades in 1945 to the full twelve grades in 1957.

The number in the average special class at present is thirteen. The number in the slow learner class is limited to twenty by Oklahoma state law; most classes of this classification in Oklahoma City are that size or very close to it. The smaller average class size is influenced by smaller numbers in hard of hearing, crippled, and sight saving classes.

Overall in Oklahoma City the pupil-teacher ratio is 26. The size of the average special class seems to be in keeping with this figure. Because of the individual nature of special class instruction, special classes are recommended to be about one-half the size of normal classes.

TABLE 4

GROWTH OF THE SPECIAL EDUCATION PROGRAM
IN OKLAHOMA CITY, 1945-1957

Year	Number of Schools Included	Number of Teachers	Number of Pupils	Number of Grades Included	Average Number in Class
1945	2	10	47	8	5
1946	3	13	66	8	5
1947	7	13	99	8	8
1948	9	14	116	8	8
1949	12	14	229	8	16
1950	16	21	355	9	18
1951	17	30	426	9	12
1952	18	33	572	9	14
1953	20	36	607	10	15
1954	30	47	675	12	13
1955	38	55	723	12	13
1956	46	61	770	12	13
1957	48	63	814	12	14

Present Status of Program in Relation to Adequacy

It is easy to be misled by figures indicating apparently large gains in numbers or even gains in percentages. It must be borne in mind that the sizes of the first special classes were very small, and very few children were included.

TABLE 5

COMPARISON OF ESTIMATED NUMBERS OF HANDICAPPED CHILDREN[a] WITH NUMBER OF HANDICAPPED CHILDREN ACTUALLY IN SCHOOL IN OKLAHOMA CITY, 1957

Classification	National	Oklahoma City			
	Estimated Per Cent School Age Children	Estimated Number School Age Children[b]	Actual Number Children in School	Actual Per Cent Children in School	Per Cent Handicapped Children in School
Blind and partially sighted	0.2	106	32	.06	30.0
Deaf and hard of hearing	1.5	798	23	.04	2.6
Crippled	1.0	532	47	.09	9.0
Delicate--of lowered vitality	1.5	798			
Mentally retarded	2.0	1064	49[c]	.09	
Epileptic	0.2	106			
Slow learner[d]	10.0	5320	459	.86	8.6

[a]Estimated percentages based on Martens, op. cit., p. 26.

[b]Total school population, 1957, was 53,200.

[c]The Oklahoma City figure includes only the trainable mental defective.

[d]Slow learner estimate is based on I.Q. range from 60 to 80.

Therefore, data indicating large percentage gains do not in themselves demonstrate that the present program is adequate.

Table 5 indicates the present status of the special education program in Oklahoma City in relation to the numbers of handicapped children of school age that might be expected to exist in Oklahoma City. This table, giving estimates of percentages of school children of various types of handicaps, is based on national averages.

According to Table 5, Oklahoma City provides, in relation to the number of children estimated to exist, for about 30.0 per cent of the blind and partially blind, 2.6 per cent of the deaf and hard of hearing, 9.0 per cent of the crippled, and 8.6 per cent of the slow learners. Since the estimated 2.0 per cent figure for the mentally retarded in Table 5 includes some children who are not trainable, it is difficult to make any estimate as to the adequacy of the Oklahoma City program in this area. However, in relation to the estimated number of all handicapped children needing its services in Oklahoma City, the present special education program is inadequate.

Not included in Table 5 were the homebound. In Table 2 for 1957 there were 144 such children; among these might be some who would fall into other classifications shown on Table 5--of lowered vitality, epileptic, crippled, etc.

Another factor must be kept in mind in interpreting Table 5. Many classifications of this type do not take into

account the fact that many children have more than one handicap; a single child might fall into several classifications. For example, if he were both crippled and speech-defective, he would appear in both classifications.

Summary of Adequacy

The growth of the special education program in Oklahoma City during the past twelve years has been steady. The number and types of services rendered have increased. The coverage of the program has grown from 0.1 per cent of the total school population in 1945 to 1.4 per cent in 1957. Had the special education program merely grown in numbers at the same rate as the general education program, it would still remain at 0.1 per cent of the total school population in 1957. That it has grown even in ratio to the overall growth of the school population is evidenced by the fact that in 1957 its enrollment was 1.4 per cent of the total enrollment.

The teacher-pupil ratio of the special classes seems to be in the recommended proportion in relation to the school-wide ratio. The special classes are about one-half the size of the regular classes.

At the present time, it appears that, in terms of the predicted number for Oklahoma and the number actually in special classes for them, the present program is inadequate in terms of providing special class services for all handicapped children.

CHAPTER V

A FOLLOW-UP STUDY TO SHOW THE EFFECTS OF TRAINING IN A SPECIAL CLASS

In order to assay the effects of a special education program in elementary school on the adjustment of the slow learner, a follow-up study was made of two groups of white children, equated in pairs as to I.Q., age, socio-economic status, grade in school, sex, and reading level. The members of one group had been in a special class for slow learners for two years, during fifth and sixth grades, and the members of the other group were selected from regular classes in Oklahoma City from schools that had no special classes for slow learners. The independent variable, then, was the two years, at least, spent in a special class in elementary school.

The special class group was selected from the special class at Shideler school. This class, as is usual in Oklahoma City in the elementary schools, was made up in 1950-1951 and in 1951-1952 of children from third to sixth grade. It was necessary to take all the fifth and the sixth graders of 1950-1951 to obtain a large enough number of children on which to compile data. The fifth graders of 1950-1951, then,

became the sixth graders of 1951-1952. The study covers a follow-up period of at least five years for all the children included.

This class was selected from the six classes in Oklahoma City which had been in existence in 1950-1951 for a period of two years. The reasons for choosing it were: (1) It had fifth and sixth graders in sufficient numbers for the purposes of this study; (2) in the surrounding area there were schools having no special classes for slow learners from which children could be selected to match the experimental group.

Purpose of the Follow-up Study

The purpose of this study was to determine whether or not there are benefits in terms of better adjustment for the slow learner in a special class program. The following hypotheses were tested in relation to a five-year period following sixth grade status of the members of the group.

1. Members of the special class group will spend more years in school beyond sixth grade than will slow learners of the regular class group.

2. Members of the special class group will have fewer members delinquent and fewer incidents of delinquency than will slow learners of the regular class group.

3. Members of the special class will have more incidents of responsible and outstanding participation in

school activities than will slow learners of the regular class group.

The Subjects

The forty-four subjects included in this study ranged in age from eleven to thirteen years and were in grade five, when this study began. All had been identified as below normal in intelligence, with an I.Q. range from 67 to 79, as reported on their school records. These I.Q. test scores were reported by school testers on the California Test of Mental Maturity, the Stanford-Binet, or the Wechsler-Bellevue Scales. These children, on the basis of type of work of the parents, residential area in which they lived, and judgments of school principals and teachers, were from the low socio-economic group.

Group 1, the special class group, consisted of twelve white boys and ten white girls enrolled in special education classes in an elementary school (Shideler) in Oklahoma City in the fifth and sixth grades in 1950-1951 and 1951-1952. This group is referred to in this study as the special education group.

Group 2, the control group, consisted also of 12 boys and 10 girls, paired and equated with the children in the special education group in chronological age, sex, I.Q., grade in school, race, reading level, and socio-economic status. These children were selected from three other elementary

schools (Lee, Heronville, and Stand Watie) in Oklahoma City that did not, in 1950 or 1951, have special classes for slow learners. Selection was made from these three schools rather than from Shideler to avoid any possible bias that might result from taking students for pairing where a certain type of selection (that is, those referred and those not referred to a special class) might have operated. These three schools are also in neighborhoods adjoining Shideler. Group 2 will be referred to in this study as the control group.

The two groups consisted of equated pairs. The independent variable for the purposes of this study is that members of the special education group had had at least two years in a special class for slow learners. None of the members of the control group had had any training in a special class as such.

Procedure

Each of the forty-four children selected for this study was traced through the five or six year interim from the school year ending in 1951 or 1952 to the present. School records, police and court records, information gathered from teachers, principals, neighbors, employers, and parents form the data from which the results of this study were determined.

Results

Examination of Table 6 shows the present status of the forty-four children of this study. For purposes of the

TABLE 6

WHEREABOUTS OR STATUS OF THE CHILDREN IN SPECIAL CLASS AND CONTROL GROUPS IN 1957

Whereabouts or Status	Special Class Group		Control Group		Total
	No.	Per Cent	No.	Per Cent	No.
Enrolled in school	17	85	8	42	25
Full-time work	1	5	5	26	6
Married	1	5	2	10.6	3
Armed forces	0	0	2	10.6	2
Juvenile detention	1	5	2	10.6	3
Children remaining in follow-up study	20	100	19	100.0	39
Moved away or not accounted for	2		3		5
Total	22		22		44

follow-up, data relating to the twenty remaining subjects in the special class group and the nineteen remaining in the control group will be reported.

Hypothesis 1

Of the special class group, seventeen out of twenty children, or 85 per cent, are still enrolled in school. Of the control group, eight out of nineteen children, or 42 per cent, are still in school. The first hypothesis that members

of the special class group would spend more years in school beyond the sixth grade than slow learners from a regular class was sustained.

Hypothesis 2

In respect to the second hypothesis concerning incidence of delinquency in the special class and control groups, for the purposes of this study, delinquency is defined as actual violation of the law involving the recording of a child's name and offense on police or court records.

TABLE 7

INCIDENCE OF DELINQUENCY AS DEFINED IN SPECIAL CLASS AND CONTROL GROUPS

Delinquency	Special Class Group (N=20)	Control Group (N=19)	Total
Number of Students Involved	2	7	9
Incidents of Violation	2	33	35
Number of Types of Violation*	4	12	16

*In booking a child for violations, often the charge lists more than one misdemeanor or offense on a single charge.

Table 7 gives data on incidence of delinquency in both groups. Two of the twenty special class group, or 10 per cent, were involved in delinquent behavior as defined.

Seven of the nineteen children in the control group, or 37 per cent, were involved. In number of violations, the data reveal two violations for special class children and thirty-three for members of the control group, or over sixteen times as many. The hypothesis that members of the special class group would have fewer incidents of delinquency than would slow learners from a regular class was sustained.

Hypothesis 3

For the third hypothesis, relating to participation in school activities, only those children in both groups who are still in school are included.

The classifications of activities that appear on Table 8 are: teacher's aides, office aides, counselor's aides; outstanding participation in music athletics, or art; outstanding participation in vocational or agricultural club work. The first three classifications, those of aides, require participation by dependable and pleasant students. In the rest of the classifications, because so often children enroll in clubs and drop out or do not attend or contribute, only those children were included in the tabulation who had either held positions of leadership or had won honors or awards.

According to Table 8, of the special class group, eight students had participated in ten activities, out of seventeen children still in school, or 47 per cent. Of the

TABLE 8

OUTSTANDING SCHOOL ACTIVITY PARTICIPATION OF MEMBERS OF SPECIAL CLASS AND CONTROL GROUPS

Activities	Number of Participants	
	Special Class Group (N=17)	Control Group (N=8)
Teacher's aides	2	0
Office aides	1	0
Counselor's aides	1	0
Music	2	1
Athletics	1	1
Art	1	0
Vocational work Occupational	1	0
Agricultural Club work	1	1
Total	10[a]	3[b]

[a]This total represents 10 incidents of outstanding participation by 8 students.

[b]This total represents 3 incidents of outstanding participation by 3 students.

control group, three children out of eight still in school had participated in three activities, or 38 per cent.

The percentage differences here are not large; but it must be kept in mind that out of twenty of the special

class group, seventeen are still in school, while of the control group only eight are still in school. It is reasonable to suppose that those children dropping out of school would be less likely to have capacities for achieving status in a school than those remaining. On the basis of the original numbers in the two groups, eight out of twenty children, or 40 per cent of the special class group and three out of nineteen, or 16 per cent of the control group, had participated in a responsible and outstanding manner in school activities. On this basis, the third hypothesis that members of the special class will have more incidents of responsible and outstanding participation in school activities than slow learners from a regular class is sustained.

Summary

Seventeen of the twenty children in the special class group were still in school at the end of the five year period while only eight of the nineteen in the control group were enrolled. Both groups had originally been equated as to reading level, so the conditions for high school survival on the basis of the reading factor would be the same for both groups. Since both groups were equated for I.Q., socio-economic status, reading level, age and sex, it would appear that the special class training had been a factor in increased school tenure for the special class group.

The lower incidence of delinquency as defined was

less than one-third as great for the special class group. Incidence of participation in responsible and status-gaining school activities was 47 per cent for the special class group and 38 per cent for the control group.

On all three factors investigated--longer school tenure, less incidence of delinquency, and more participation in school activities--the special class group exceeded the control group.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Analysis of Special Class Program in Oklahoma City

Summary

The program for the handicapped in Oklahoma City compares favorably with programs in other cities. There is provision in the school set-up for the education of all types of handicapping. In terms of curriculum, aims, and equipment for the handicapped child, Oklahoma City's program is operating on a comparable basis. Interest of the community in the education of the handicapped is evidenced in the sponsorship by various community organizations who contribute equipment, supplies, and funds for teacher-training scholarships to augment the tax-supported program.

The special class program in Oklahoma City, consisting of special classes for the partially sighted, the hard of hearing, the crippled, the speech defective, the trainable mental defective, and the slow learner, has grown both in numbers and in ratio to the growth of the general program. In numbers it has increased from 47 pupils in 1945 to 754 in 1957. During this same period the enrollment in the general

education program increased 51 per cent. However, during this period of rapid growth over the entire system, percentage of the total school population in special education classes increased from 0.1 per cent in 1945 to 1.4 per cent in 1957.

The types of services offered in special education have expanded to include widely different areas. Initially the program included training of the handicapped only through the eighth grade. Now it includes four years of high school training. The program has expanded also in types of services offered--from the original three, for the crippled, trainable mental defective, and the slow learner, to include six types of services offered since 1949. At this time training for the hard of hearing, the partially sighted, and the speech defective were added.

According to figures based on Martens' study, Oklahoma City's program of special education is not adequate in terms of providing services for the numbers of handicapped children that might be estimated to live in the city and to need special training. If Martens' national averages prevail in Oklahoma City, special classes for the blind and partially blind provide for only 30 per cent of the children estimated to need such services, for 2.6 per cent of the deaf and hard of hearing, and for 9 per cent of the crippled, and 8.6 per cent of the slow learners. Since no reliable figures for the numbers of speech defective children given special

training in Oklahoma City are available, the adequacy of the speech therapy program cannot be ascertained. If the special class is assumed to be the best means of educating the handicapped child, then the program provided by the Oklahoma City system may be said to be inadequate in terms of numbers of children for whom it provides.

In determining the educational benefits derived from a special education program, a five-year follow-up study was undertaken. The pupils in the study consisted of twenty-two equated pairs of children, the independent variable being two years in a slow-learner special class for members of one group. Results indicated that 85 per cent of the special class children were still in school while only 42 per cent of the control group, the slow learners who had not had special class training, were still in school. Two children, or 10 per cent, of the special class were delinquent as defined in this study; while seven children, or 37 per cent, of the control group were delinquent. Eight children, or 40 per cent, of the special class group participated on a leadership basis in high school activities; while only 16 per cent of the control group still in school had such participation.

Conclusions

1. In opportunities provided for the various types of handicapping, Oklahoma City seems to offer a sufficiently wide range of services, and compares favorably with the types

of opportunities offered elsewhere.

2. However, in relation to the estimated number of handicapped children living in Oklahoma City, the program does not provide special class training for enough children. In spite of the increase in ratio from 0.1 per cent of the total school population in 1945 to 1.4 per cent in 1957, the program in Oklahoma City is still far from adequate in terms of providing for all handicapped children.

3. The results of the follow-up study of two slow-learner groups tend to justify the special class program in terms of these benefits to the individual child:

a. Students who had two years in special education classes remained in school longer than the students with whom they were paired, that is, those who had no special class training.

b. Special education classes lowered the rate of delinquency as shown in a comparison of the two groups.

c. Of the students remaining in school at the end of the five-year period, students who had had two years in special education classes developed more leadership qualities, as shown by participation in school activities, than did the paired students who had not received special class training.

Recommendations for Further Study

1. In order to gather data in relation to stability in the community and in job or work activities, this study should be continued for another five years. Too many of the children in this study were still in school to make possible the gathering of such data.

2. A similar follow-up study including a larger number of slow learner, special class children selected from more than one school and equated in the same fashion, might provide data from which more definite conclusions could be drawn.

BIBLIOGRAPHY

BIBLIOGRAPHY

Public Documents

Oklahoma. Session Laws. Article XIII, Section 182 (1949).

Books and Pamphlets

Allen, Amy A. Let Us Teach Slow Learning Children. Columbus, Ohio: State Department of Education, 1955.

Berry, Gordon. How the Teacher May Help the Exceptional Child. Columbus, Ohio: Ohio State University Press, 1943.

Borden, Richard C., and Busse, Alvin C. Speech Correction. New York: F. S. Crofts and Co., 1925.

Care and Education of Crippled Children. Madison: Wisconsin State Department of Public Instruction, 1933.

Delaware's Program for the Education of Exceptional Children. Bulletin No. 225-30. Wilmington: Department of Public Instruction, n.d.

Developing a Program for the Education of Exceptional Children in Florida. Bulletin No. 55. Tallahassee: State Department of Education, 1948.

Gifted Children and Slow-learners in the Junior High Schools. New York: Board of Education, 1953.

Heck, Arch O. The Education of Exceptional Children. New York: McGraw-Hill Book Co., 1940.

Irwin, Ruth B. Speech and Hearing Therapy. New York: Prentice-Hall, Inc., 1953.

Jacob, Walter. New Hope for the Retarded Child. Pamphlet No. 210. New York: Public Affairs Committee, 1954.

Kuhlen, Raymond G., and Thompson, George G. Psychological Studies of Human Development. New York: Appleton-Century-Crofts, Inc., 1952.

Leser, A. Emotional Problems Associated with Handicapping Conditions in Children. Children's Bureau Publication No. 336. Washington, D. C.: United States Government Printing Office, 1952.

Martens, Elsie H. Needs of Exceptional Children. U.S. Office of Education Leaflet No. 74. Washington: United States Government Printing Office, 1948.

Mentally Retarded Students in California Secondary Schools. Bulletin of the California State Department of Education, Vol. XXII, No. 7. Sacramento: California Department of Education, 1955.

National Society for the Study of Education. Forty-ninth Yearbook, Part II: The Education of Exceptional Children. Chicago: University of Chicago Press, 1950.

School Adjustment of Mentally Retarded Children Compared with Normal Children. Baton Rouge and New Orleans: Louisiana Youth Commission, 1954.

Slow-learning Children in the Public Schools of Ohio. Columbus, Ohio: State Department of Education, Division of Special Education, 1951.

Special Education for Exceptional Children in Texas. Austin: State Department of Education, 1948.

State Legislation for Education of Exceptional Children. U.S. Office of Education Bulletin No. 2. Washington: United States Government Printing Office, 1949.

Articles and Periodicals

Baller, W. R. "A Study of the Present School Status of a Group of Adults, Who When They Were in Elementary Schools, Were Classified as Mentally Deficient," Journal of Genetic Psychology, XVIII (December, 1936), pp. 60-72.

Barbe, Walter B. "Evaluation of Special Classes for Gifted Children," Journal of Exceptional Children, XXII (November, 1955), pp. 60-63.

Bernart, E. H., and Ypsilantis, J. N. "Measurement of Relative Progression of School Population of the United States," Journal of Educational Research, XLIX (December, 1955), pp. 257-262.

Brill, Richard G. "Education for the Deaf and the Hard of Hearing," Journal of Exceptional Children, XXIII (February, 1957), pp. 194-196.

Brownell, Samuel Miller. "Needs for Services to Exceptional Children," Journal of Exceptional Children, XXI (January, 1953), pp. 138-152.

Bruner, Olive P. "Adolescents with Orthopedic Handicaps," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1955), pp. 61-83.

Cruickshank, William M. "Observations on the 1956 Statement of Policy by the American Association of Instructors of the Blind," Journal of Exceptional Children, XXIII (April, 1957), pp. 320-328.

Eisman, Louis. "The Slow Learner in the High School," High Points, XXXVI (April, 1955), pp. 11-31.

Featherstone, William B. "The Handicapped and the Gifted," Metropolitan School Study Council Exchange, VIII (December, 1949), pp. 17-23.

Hickey, John M. "Educating the Exceptional Child," School Executive, XV (September, 1955), pp. 58-60.

Hornbostel, Victor O. "Co-operation in Preventing Problem Behavior," Journal of the National Education Association, XLII (November, 1953), pp. 505-507.

Lawrence, G. Allen. "Life Planning for the Partially Seeing," Journal of Exceptional Children, XXIII (February, 1957), pp. 202-208.

Lynch, Katherine D., and Scharf, Louis. "More Help for the Less Able," Journal of the National Education Association, XLVI (May, 1957), pp. 336-340.

Martens, Elsie H. "Toward Life Adjustment through Opportunity--Special Education," School Life, XXXIII (January, 1951), pp. 52-54.

McIntosh, W. J. "Follow-up Study of 1000 Non-academic Boys," Journal of Exceptional Children, XV (March, 1949), pp. 166-170.

Mullen, Frances A. "Chicago Opens a New School for the Physically Handicapped," Journal of Exceptional Children, XXIII (April, 1957), pp. 296-332.

Phelps, H. R. "Postschool Adjustment of Mentally Retarded Children in Selected Ohio Cities," Journal of Exceptional Children, XXIII (November, 1956), pp. 53-62.

Rickman, Lillie Mae. "Secondary Education for Visually Handicapped Students," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1953), pp. 101-103.

Schonell, Fred J. "Development of Educational Research in Great Britain; Handicapped Children," British Journal of Educational Psychology, XIX (June, 1949), pp. 82-99.

Sears, Pauline S. "Levels of Aspiration in Academically Successful and Unsuccessful Children," Journal of Abnormal and Social Psychology, XXXV (June, 1940), pp. 498-536.

Seeley, Robert M. "A Junior High School Core Program for Slow Learners," School Executive, XIV (October, 1953), pp. 17-40.

Stein, Louis. "The Junior High Special Classes in San Diego," California Journal of Secondary Education, XXVI (January, 1957), pp. 20-25.

Wickliffe, Letty M. "The Education of Handicapped and Gifted Children in the Secondary Schools," Bulletin of the National Association of Secondary School Principals, XXXIX (January, 1955), pp. 29-55.

Reports

Benmon, Adam S., et al. Report of the White House Conference on Education, 1956. Washington: United States Government Printing Office, 1957.