Occupational Experiences For Handicapped Adolescents in Day Schools

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· Foreword ·

SPECIAL schools and classes for handicapped children are an accepted part of the public-school system. Their greatest development in the day schools has taken place during the past 20 years. Established in the beginning exclusively in the elementary grades, they have now found their way into junior and even senior high schools. It is conceded that handicapped adolescents are as much a responsibility of the school as are physically and mentally normal adolescents. Hence the conception of their education in the secondary years is coming to include all the elements which characterize secondary education in general. One of the important items to be considered is their vocational preparation. This bulletin is a report of what is being done in a selected group of cities for the provision of occupational experiences for handicapped adolescents in preparation for a more satisfactory vocational adjustment in later years. It is hoped that the analysis of present practices may prove a basis for the improvement and further development of the program.

To all who have cooperated in this study through the contribution of data concerning their own city programs the Office of Education expresses its grateful acknowledgment. Also the photographs which have been sent to us in connection with the project are deeply appreciated. For those which are used in this bulletin we owe our thanks to the following cities: Los Angeles, Detroit, and Milwaukee.

BESS GOODYKOONTZ,
Assistant Commissioner of Education.

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I

INTRODUCTION

THE occupational adjustment of handicapped adults is a matter that vitally concerns the schools in which handicapped children are taught. It is not a problem that can be ignored until the child becomes of employable age or until he is ready to leave school to go to work. The years which he spends in the classroom must at least furnish the foundation upon which he can build a specific occupational training. They must bring to him an intelligent guidance for making a wise occupational choice. They must give to him a basis for making that choice through self-analysis. They must teach him to compensate for his limitations through service well rendered in a field from which his handicap does not exclude him. And in some cases they should furnish the actual vocational preparation which shall equip him for wage-earning responsibilities.

The first step in encouraging the further development of any type of program is to find out what is being done about it. Accordingly, the present study represents an investigation of what day schools are doing in the occupational preparation of mentally and physically handicapped adolescents. It is not an exhaustive survey of all school systems, but a preliminary study of a group of representative cities in which progressive practices are under way in the education of one or more groups of handicapped children. The cities included in the study and the number responding to the inquiry for each type of handicap under consideration are given in table 1.

TABLE 1.—*Cities reporting on occupational preparation for handicapped adolescents* [1]

City	Population (1930)	Data reported for — Mentally handicapped	Blind and partially seeing	Crippled	Deaf and hard of hearing
1	2	3	4	5	6
Alabama:					
Birmingham	259,678	×			×
California:					
Los Angeles	1,257,680	×	×	×	×
Pasadena	76,086		×		×
Sacramento	93,750	×		×	×
San Francisco	634,394	×	×	×	×
Delaware:					
Wilmington	106,597	×			
Illinois:					
Rockford	85,864		×	×	×
Indiana:					
Indianapolis	364,161	×	×	×	
Iowa:					
Des Moines	142,559	×	×	×	×
Maryland:					
Baltimore	804,874	×	×	×	×
Massachusetts:					
Boston	781,188	×	×		×
Newton	65,276	×			×
Worcester	195,311	×	×	×	×
Michigan:					
Battle Creek	43,573	×	×	×	×
Bay City	47,355	×			×
Detroit	1,568,662	×	×	×	×
Grand Rapids	168,592			×	×
Jackson	55,187	×	×	×	×
Kalamazoo	54,786	×		×	×
Minnesota:					
Duluth	101,463	×	×	×	×
Minneapolis	464,356	×	×	×	×
Missouri:					
St. Joseph	80,935			×	
St. Louis	821,960	×		×	×
New Jersey:					
Hoboken	59,261			×	
Jersey City	316,715	×	×	×	×
Newark	442,337	×	×	×	×
Paterson	138,513	×	×	×	
Plainfield	34,422	×			
New York:					
Binghamton	76,662		×	×	
New York	6,930,446	×		×	×
Schenectady	95,692	×	×	×	×
Ohio:					
Cincinnati	451,160	×	×	×	×
Cleveland	900,429	×	×	×	×
Youngstown	170,002	×	×	×	×
Oklahoma:					
Oklahoma City	185,389	×		×	
Tulsa	141,258	×			

[1] It should be remembered that this list represents only a small percentage of the total number of cities making some provision for handicapped children. No attempt was made to secure information from all of them. The purpose was rather to discover progressive trends from a study of a fair sampling.

TABLE 1.—*Cities reporting on occupational preparation for handicapped adolescents*—Continued

City	Population (1930)	Data reported for— Mentally handicapped	Blind and partially seeing	Crippled	Deaf and hard of hearing
1	2	3	4	5	6
Oregon:					
Portland	301,815	×			×
Pennsylvania:					
Erie	115,967	×	×	×	×
Harrisburg	80,339	×		×	
Lancaster	59,949	×			
Philadelphia	1,950,961	×		×	×
Pittsburgh	669,817	×			
Texas:					
Houston	292,352	×			
Washington:					
Everett	30,567	×			×
Seattle	365,583	×	×	×	×
Spokane	115,514	×	×		×
Wisconsin:					
Kenosha	50,262			×	×
La Crosse	39,614	×		×	×
Madison	57,899	×		×	×
Milwaukee	578,249	×	×	×	×
Total		43	28	36	37

The term "mentally handicapped," as defined in the questionnaire used, refers to pupils who are or have been members of special classes for the mentally deficient or subnormal. For these, data are available from 43 cities. The "physically handicapped" studied include the blind and the partially seeing, the crippled, and the deaf and the hard-of-hearing. For these groups 28, 36, and 37 cities, respectively, furnished information. In most cases the questionnaires were filled in by the director, supervisor, or principal directly in charge of the educational program developed in the city for the group in question. All quotations given, unless otherwise indicated, are from the comments made by these persons, who by preparation and experience are well qualified to make evaluations and suggestions.

It would, of course, be folly to suppose that the schools alone can solve the problem of vocational adjustment of handicapped persons. The situation is complicated by

factors of economic conditions, industrial compensation laws, employers' attitudes, and the personality of the handicapped person himself. Moreover, there are guidance and placement agencies which must share the responsibility with the school or must take it up when the school lays it down. A coordinated program in which, through planned cooperation, each person and agency involved will contribute to the desired result is the only means of accomplishing what is needed. The school, the rehabilitation service, the employment agency, and the employer can together bring about an adjustment that without such combined effort is an impossibility.

What some schools are doing about the problem is portrayed in the following pages. What all schools should be doing about it is suggested, directly or indirectly, in connection with the presentation of facts. It is hoped that, in the light of these facts, many school systems will find it possible to make further studies of the local situations, determine what additional responsibility should and can be accepted, and take steps toward the realization of their ideals for a program of occupational experiences for handicapped adolescents.

II

THE MENTALLY HANDICAPPED

DURING recent years the problem of the occupational adjustment of mentally handicapped young people has become increasingly acute. Always a difficult matter to handle, it has been forced conspicuously to the foreground of attention through the general unemployment situation. When high-school graduates are available for some types of service formerly given by persons coming from special classes for retarded children, obviously the latter have little chance for consideration. Moreover, industrial conditions have undergone a marked change which has closed the door to some of the occupations in which special class "graduates" were formerly able to succeed fairly well. Plant,[1] a psychiatrist well known for his clinical service to maladjusted children, has called attention to the difference between "maintenance" and "production" workers in industry, to the fact "that industry is increasingly replacing production by maintenance workers," and to the difficulties of "maintenance" work which place it out of the reach of mentally deficient persons.

David Cushman Coyle, an economist of note, considers industrial developments as they affect the population at large. He says: [2]

> Millions of men who used to work in factories will never have a factory job again; millions of farmers and farm laborers will never

[1] Plant, James S. The importance of new developments in machine operations. American Journal of Psychiatry, 93:879–87, January 1937.

[2] Coyle, David Cushman. Brass Tacks. Washington, D. C., National Home Library Foundation, 1936. 150 p.

again be able to make a living on the farm. Some people believe the surplus factory workers ought to go back to the land; other people think the surplus farm workers ought to be given jobs in industry. There is little hope in transferring the crews of two sinking ships from one to the other.

Coyle sees the solution of the problem of unemployment in another direction. He believes that "the workers who can no longer be employed on farms or in factories will have to be employed in occupations that are not primarily concerned with making material things of any kind," namely, in what he calls "service" jobs. He defines a "service" as "any sort of job that does not use up an important amount of raw materials or electric power, but that is made up mainly of the use of personal energy and skill. Dentists and prize fighters, school teachers, and movie actors, hotel clerks and nurses, all are employed in services." He concludes that "the place for surplus workers is in occupations that provide health and recreation, art and education—in making parks and playgrounds, hospitals, and schools, country clubs and good roads, clean rivers and beautiful cities. Looked at from the national point of view, that is the real function of technological progress."

In spite of conditions which on the surface appear to be so unfavorable to the occupational adjustment of the mentally handicapped, the day schools still carry a definite responsibility for sending out into the work-a-day world young people who have been trained to do something of occupational value and to do it well enough to make them fairly acceptable members of a working society. Doubtless not all children enrolled in special classes can become self-supporting—or even partially self-supporting—citizens. Intelligence levels of low moron or high imbecile grade are not infrequent in day school classes, and difficulties of occupational preparation increase perceptibly as intelligence decreases until they become insurmountable. But with most cases of borderline or moron intelligence comprising the majority of special class members there are definite—even though limited—possibilities for wage earning. The day

school which such children attend and which for them will be a "finishing school" should certainly be responsible for giving certain types of experiences that are preparatory to occupational activity.

Of 60 cities to which an inquiry was sent in the effort to find out in what way this responsibility was being met in city school systems, responses were received from 43, in which 29,811 pupils 13 years of age or older were reported as enrolled in special schools or classes for retarded children. These constitute the basis for the report here given. The cities contributing data, with the population (1930) of each one, are listed on pages 2 and 3.

Distribution in Various Types of Schools

The 29,811 adolescents comprising the subjects of study were distributed among various types of schools and classes, as shown in table 2. One of the significant developments indicated by the figures of this table is the organization of special classes in junior and even in senior or 4-year high schools, more than 16 percent of the total number of pupils under consideration being enrolled in such units. Among the cities reporting substantial progress in this direction are Birmingham, Ala.; Los Angeles, Calif.; Des Moines, Iowa; Battle Creek, Detroit, and Jackson, Mich.; Minneapolis, Minn.; New York, N. Y.; Erie, Pa.; and Houston, Tex.[3] Each of these reports more than 50 children enrolled in special classes that have been established in one or more of the high schools of the city, and in some cases the number reaches several hundred (or, in the case of New York City, several thousand). This development is no doubt the outgrowth of two convictions that appear to be gaining strength: (1) That, with the exception of extreme cases, pupils of adolescent age in the day schools are a responsibility of the secondary school, regardless of their level of academic intelligence; and (2) that adolescents of retarded intellectual development should have

[3] Other cities of the group studied in which this movement has begun are: Newton and Worcester, Mass.; Cincinnati, Ohio; Oklahoma City, Okla.; Lancaster, Pa.; LaCrosse, Wis.

contacts with adolescents of approximately normal intelligence insofar as such arrangements can be made without harm to the educational or social development of either group. There remains, of course, the question of the relative advantages and disadvantages of the segregated school, a medium through which much excellent work is being done for retarded children; but to discuss this point in detail is not within the province of this report.

TABLE 2.—*Types of schools in which 29,811 mentally handicapped adolescents were enrolled*

[Fall, 1936]

[*Read the table as follows:* In 29 cities, 14,272 pupils, or 47.9 percent of the total number of children included in this study, were enrolled in special classes organized in the regular elementary school; in 11 cities, 3,848 pupils, or 12.9 percent, were enrolled in special classes organized in the regular junior high school; etc.]

Type of school	Number of cities	Number of pupils	Percent
Special class in regular elementary school	29	14,272	47.9
Special class in regular junior high school	11	3,848	12.9
Special class in regular high school	8	1,030	3.5
Special school for pupils of high-school age only	11	3,085	10.3
Special school for pupils of both elementary and high-school age	17	5,840	19.6
Unclassified	1	1,736	5.8
Total	[1] 43	**29,811**	**100.0**

[1] This total does not equal the sum of the figures in the column since some cities make provision for mentally handicapped adolescents through several different types of schools. Only cities reporting enrollments are included in this table.

Time Given to Occupational Experiences

Of the 29,811 pupils enrolled in all these various units, 25,323, or 84.9 percent, were reported as receiving occupational training of some kind. The amount of time given to such preparation ranges all the way from 10 to 55 percent of the weekly program. Of the 41 cities reporting this item, 5 indicate that less than 20 percent of school time is so used; 4 report from 20 to 29 percent (amounting to about 1 period per day); 14 report from 30 to 39 percent; 12 from 40 to 49 percent; and 6 from 50 to 59 percent. The median for the group is 35 percent, or approximately 8 to 10

periods per week. Obviously there is little uniformity of practice in the day schools of the country with reference to the time given to preparation of mentally handicapped adolescents for earning a livelihood through practical concrete experiences that might be called "occupational" in nature.

Types of Occupational Experiences

Upon inquiry into the types of occupational activities carried on in the schools, one finds an equally wide variation,

Learning to sew for the little people.

as there probably should be. The many studies that have been made in the general field of the curriculum for all children have repeatedly emphasized the principles that, in the first place, experiences should be brought into the schoolroom from the world of experiences met in the community outside the school; and that, in the second place, the value of school experiences to the child depends upon the degree to

which they will help him to make the out-of-school experiences more meaningful and satisfying. Occupational activities for retarded adolescents present no exception to these principles, for such children must learn to fill their niche somewhere in the community life. Consequently the occupational opportunities of the community must determine the types of occupational preparation which the school should offer.

It is also generally agreed that, from the standpoint of vocational guidance, exploration of and participation in a variety of occupational activities is a wholesome experience for the adolescent. Particularly for mentally handicapped pupils, who will in the majority of cases never become skilled artisans, a variety of elementary experiences in a number of directions has been considered preferable to an intensive and prolonged period of training in one specific occupation. Thus in the course of 2 or 3 years a boy may be introduced into some of the secrets of the general repair shop, of household mechanics, of shoe repair, of painting and papering, of cafeteria service, and even of cooking and home management. The girl might have experiences in some of these same fields, with the addition or substitution of home nursing, table service, laundry, sewing, and child care. Each of these fields carries vocational value and any one of them may be pursued as far as the pupil can do so with profit and satisfaction. At the same time even the most elementary work in any one of them may be so planned that, even if it is not used for wage earning purposes, it will help in the establishment and maintenance of a home.

In table 3 are listed the school activities which are considered occupational in nature by the persons reporting for this study, with data concerning the number of pupils enrolled in each one and the number of school periods devoted to each. It is not to be expected that every school will assign the same amount of time to a given activity, nor even that every pupil in the same school will devote the same amount of time to it. Some pupils, for example, may spend 5 periods per week in cafeteria service, others may

spend 10 periods or even more, depending upon their interest in and occupational fitness for the work. Obviously any course to which only one or two periods per week are devoted can be considered occupational in character only in a very general way as part of an entire course of training designed to instill desirable habits and attitudes. Some such experiences are included in the data reported in table 3, but in the majority of cases the median time given to a particular activity reaches at least four or five periods per week and in many activities the maximum time used goes considerably beyond this.

TABLE 3.—*Types of occupational instruction given, with enrollment in each and with range and median of time alloted to each*

[43 cities]

Type of experience	Boys			Girls		
	Number enrolled	Number of periods per week		Number enrolled	Number of periods per week	
		Range	Median		Range	Median
1	2	3	4	5	6	7
Cafeteria service	541	1 -14	5	1,081	2 -15	5
Child care				502	1½-16	3
Cooking (household service)	399	1½-10	2	5,441	1¼-10	5
Fancy sewing	44	5	5	2,032	1 -15	5
Garment making	80	10	10	4,577	1½-20	5
Home nursing				15		
Laundry	50	3 - 4	4	1,869	½- 7	2½
Table service				47	½	½
Auto repair	188	5 -10	5			
Barbershop, beauty parlor work	3	4	4	104	1 - 2	1½
Brush making	100	5	5			
Commercial work	16	5	5	14	5	5
Diversified shop	1,525	1½-15	9	29		
Electricity	49	1½- 5	3			
Farming	440			54		
General arts and crafts	510	3 -10	5	231	5 -10	7½
General repair	1,143	1 - 9	2½	100	3 - 7	5
Industrial training	398	3 -10½	6¾	157	2½- 6	5
Leather tooling	265	2 -15	5	16	2½- 3	3
Metalwork	1,848	1 -15	5			
Pressing	45	3 -15	9			
Printing	614	1½-20	5	12		
Sheet metal	2	5				
Shoe repair	53	3 -15	9			
Watchmaking	1	2				
Weaving	308	3½-15	5	293	2½-15	4½
Woodwork	15,620	1¼-23	7	96	3 - 7	5

Woodwork easily occupies the first position in number of pupils enrolled. Enrollments in sewing, cooking, laundry, and cafeteria service (for the girls), and in metal work, diversified shop, and general repair (for the boys) all exceed the thousand mark. However, the importance and the possibilities of some of the experiences not so generally used should not be overlooked. Four hundred and forty boys and 54 girls are engaged in farming activities (with amount of time not specified), 188 boys are in the auto repair shop for 5 or 10 periods per week, 53 boys are learning to repair shoes, and 104 girls are becoming acquainted with some of the techniques of the beauty parlor. Perhaps one of the most significant facts revealed by the table is the relatively insignificant place occupied by instruction in weaving. This time-honored activity no doubt still has its value for mentally retarded children, but for adolescents who are getting ready to go out into the occupational world other experiences have been introduced which offer much more practical benefit.

Organization Plans

The details of organization of occupational activities differ widely in various cities as well as among the respective units within the same city. Some of these details will be discussed briefly.

Teachers.—The most important single element in any special class situation is the teacher. The characteristics and needs of mentally handicapped children call for a teacher who is sincerely interested in helping them, adapted by personality to cope with the problems presented, acquainted with the educational and psychological factors involved, and well prepared in both knowledge of subject-matter and teaching skill. The teacher of occupational work should meet these conditions no less than any other.

From seven cities it is reported that the only occupational or prevocational work open to mentally handicapped adolescents in special classes is given by the special class teachers who also teach academic subjects. While this arrangement

has certain advantages for younger children in that the teacher thus has greater opportunity for coordinating academic and manual activities of the class it seems quite inadequate for the older, socially more mature pupils. Persons who are well prepared to teach in the general elementary or junior high school field cannot be expected to be versed in either the content or the method of teaching occupational skills. The best they can ordinarily do is to orient the child

Exploring the secrets of radio electricity.

in the simple elements of sewing, cooking, woodwork, and possibly a few other fundamental manual processes. In one large city a well-prepared and successful teacher of 20 adolescent boys ranging in age up to 17 years deplores the fact that there are no means of giving them occupational experiences except through her own efforts, which are limited to taking them into the woodworking shop two or three times each week. Here they work largely upon their own initiative, frequently using the trial and error method, with whatever assistance she can give them on the basis of courses in woodworking which she herself has taken. The benefits the boys

derive from the work are restricted to a general familiarity with the use of tools, a development of interest in the projects undertaken, and a certain avocational value that may find a place in later life. These are important in themselves, but they cannot take the place of other experiences which would have a direct bearing upon occupational activity and lead to a more satisfactory occupational placement. In fact, incorrect habits acquired in the use of tools and fundamental processes often constitute a definite vocational handicap.

In contrast with the situation in the 7 cities noted above, there are 29 cities in which occupational instruction is given, at least in part, by vocational teachers specially employed for mentally handicapped children. Moreover, in 23 cities some of the regular vocational teachers, who also teach normal pupils, carry responsibility for the instruction of subnormal pupils, either as individuals admitted into the regular vocational classes or as a group of pupils for whom adjustment is made in a special school or class. Thus it appears that the large majority of cities included in this study recognize the importance of providing for mentally handicapped adolescents occupational instruction given under the direction of trained vocational teachers. It is hoped that equal emphasis is placed upon other qualifications of the vocational teacher which are necessary if he (or she) is to be successful in teaching the mentally handicapped.

Location of occupational centers.—The variation that exists in the types of organization for mentally handicapped adolescents is reflected in the location of occupational centers for them, since these would logically be found in the schools in which the children are enrolled. Thirty-three cities report such centers in the elementary schools, 13 in the junior high school, 5 in the high school, and 18 cities report special occupational schools.

Obviously the mere organization of special units in the junior or senior high school will not meet the problem unless the educational program is adjusted in keeping with the needs of the children. Of the 13 persons reporting occu-

pational centers in the junior high schools of the city, only 4 believe that the instruction given there is satisfactorily adapted in content and methods to the needs and abilities of mentally handicapped adolescents. Apparently we still have a long way to go before we can claim to be making suitable provision for such pupils in the secondary schools, even in those cities in which a conscious effort is being made in this direction. It is a comparatively simple matter to send all 13-year-olds from the special classes of the elementary schools to the junior high schools as a matter of administrative policy, and this is actually being done in an increasing number of cities. But, having sent them there, one faces the much more difficult task of so reorganizing the program of the junior high school that such pupils will have a recognized place in its plans and its accomplishments. Otherwise their latter state will be worse than the former.

Shop or laboratory facilities.—Whether or not shop facilities for subnormal adolescents are separate from those used by pupils in general depends to a large extent upon the type of school in which shop centers are found. Special schools ordinarily established for subnormal children have shop facilities used exclusively by them, while children enrolled in special classes within a regular elementary or high school are much more likely to have an opportunity to make use of the regular shops which serve also the needs of normal children. For 9 of the 43 cities reporting it is stated that there are no special shops for the mentally handicapped; whatever shop work is done by them is carried on in the regular shops of the school system. In 23 cities, on the other hand, there are only segregated shops, while in 11 cities both special and regular shops are used by handicapped groups, depending upon the location of the class or unit.

In this matter the important item is, of course, not whether special or regular shops are used, but to what extent they are available and adapted to the needs of intellectually subnormal young people. A relatively large number of the persons reporting (25) believe that separate shops are more advantageous since they can be equipped especially with

the needs of the pupils in mind. They are equally insistent, however, that certain of the regular high school and junior high school shops should be open for the use of handicapped pupils if no other suitable facilities are available. In that case the equipment should be supplemented in such a way that satisfactory experiences can be planned for those unable to profit by the standard occupational courses. This would

"Cosmetology," or personal hygiene, for a group of retarded girls in high school.

be particularly true in the case of special classes established in junior and senior high schools.

Admission to regular vocational classes.—Special occupational centers or classes care for groups of pupils who cannot profit from the work given in standard vocational courses. There remains to be considered the problem of the individual pupil who, while academically seriously retarded, possesses a mechanical aptitude which places him above the average of the special class in this respect. It is conceded that the statistical correlation between academic intelligence and mechanical ability is relatively low. Not infrequently does

one find among special class children pupils who can successfully work with so-called normal children in a regular vocational class. Often, however, their academic limitations stand in the way of admission to such classes.

The report comes from 21 cities that "some mentally handicapped adolescents from special classes are admitted to the regular vocational classes of the high school (junior or senior) to work with normal pupils." In most instances these "vocational" classes are quite elementary in character, particularly those in the junior high school, in which orientation and exploratory courses usually constitute the occupational offerings given. From a city in the far West, however, comes the word that "probably 50 students have gone to strictly vocational training in the past 3 years." A city in the Northwest reports that about 24 pupils of borderline mentality have gone into regular vocational classes—9 for tailoring, 5 for upholstering, 8 for general metal work, and 2 for auto mechanics. From a New England town it is reported that admission to the vocational school operating under Smith-Hughes funds is granted, upon the urgent request of the school psychologist (who is the special class advisor), to boys with mechanical aptitudes and emotional stability who wish to enter the school. Another eastern city reports that "approximately 20 have been admitted to the regular vocational classes during the past 3 years. A few of the most promising boys are chosen from the advanced orthogenic classes."

A supervisor in a north central city known for its progressive program of special education believes that "if children were selected on the basis of vocational tests, many special class boys would do as well as the child who progresses faster in academic work." Others believe that academic requirements are too high in the regular vocational classes as they are organized at present, and that for most of the children coming from special classes a reorganized course is needed which will be given just as much recognition as the work of higher grade. An overwhelming majority advocate the use of a Federal subsidy for such modified courses in

order to encourage school districts to maintain classes of this type for intellectually retarded adolescents in preparation for the level of occupations which they can successfully fill and which constitute a very vital part of the world's work. It is repeatedly emphasized that these young people are a part of the community which the high school should serve; that they should have the satisfaction of belonging to the neighborhood and social group; and that they should have equal opportunity with the normal in developing their wage-earning capacities. With proper vocational guidance, selection, and training many of those now roaming the streets as idlers, law evaders, and lawbreakers, could have been saved for a life of occupational efficiency. To quote one respondent, "Trained workers in humble occupations are better than occupants of houses of prostitution and penal institutions." The time is ripe to do something for those who are in our schools today and, in doing something for them, to do something for society as well.

Placement and follow-up.—Two other important elements in a vocational guidance program are the services of placement and of follow-up until the individual appears to be satisfactorily adjusted on the job. Little is being done in these directions for handicapped young people by the school systems from which they come. In only 10 of the 43 cities studied is any systematic effort made to place them and in only 5 are follow-up services given, this despite the fact that retarded children need even more help in adjustment than do the intellectually normal. That is probably the reason why so little is being done about it. The task seems so difficult and facilities for doing it are so meager. Hence the easiest way out is to do nothing at all. Yet when asked what the schools should be doing to help these children take their places as adult citizens who can support themselves in whole or in part, those contributing to the study showed marked agreement in stressing the importance of occupational preparation, placement, and follow-up as a trinity of responsibilities from which there can be no ultimate escape. The neglect of any one of them endangers the results achieved by the other two.

One concrete means of working toward the coordination of these three functions is the cooperative plan, which has been tried out to a considerable extent in some colleges and high schools. It is now being discussed as having possibilities for mentally handicapped adolescents who are capable of industrial employment. Part time would be spent on the job under natural working conditions, and part time at school for academic, social, and health activities, and for

Preparing to serve the noon lunch.

assistance in any difficult situations encountered on the job. The teacher would spend much time on the job with the pupil, familiarizing himself with its requirements and, with the consent of the employer, assuming some supervision of the work done. The success of the plan is, of course, dependent upon the willingness of both employer and school to cooperate, and upon the care with which pupils are chosen for particular jobs. A comprehensive analysis of pupil abilities and vocational aptitudes is here, as elsewhere, valuable for, if not essential to, wise placement.

Types of Jobs Filled

The crucial gage by which the entire school program must measure its success with mentally handicapped children is the degree of adjustment attained by them after they leave the special classes. In the present study we are specifically concerned with the types of jobs to which they go and in which they can succeed. While information on this item cannot point conclusively to the kinds of preparation which should be offered in school, it should certainly be suggestive in this direction. Numerous investigations were made in the predepression days, all of which pointed to the same general conclusion—namely, that boys and girls from special classes found employment for the most part in unskilled or semiskilled types of work. In a study made by the Children's Bureau on the basis of data gathered in 1923, 1924, and 1925, it is reported:[4]

> The many simple hand and machine operations of the modern factory provide opportunities for work that mentally deficient persons are capable of doing. . . . About three-fifths of the occupations in which boys and girls were employed after leaving school were in the manufacturing and mechanical industries, most of the girls being factory operatives, the boys both factory operatives and laborers. . . . Only a few boys had been successful in learning a skilled trade; a few others had attempted or were still trying at the time of the study to learn a trade. The work of the boys who were not in manufacturing and mechanical industries were varied and included such occupations as truck drivers or teamsters, helpers to drivers, farm laborers, general helpers in stores or markets, and privates in the Army or Navy. Most of the girls who were not in factories were in personal and domestic service. Only a relatively small number of either sex had attempted office work or sales work . . . ; but they had done errand and messenger work and bundle and cash work in stores and had helped in the stock and shipping rooms of factories and stores.

The foregoing description of occupational activities of former special class children might almost have been written

[4] Channing, Alice. Employment of mentally deficient boys and girls. U. S. Department of Labor, Children's Bureau Publication No. 210, p. 67.

as a result of the present study, with one very important reservation. Factory operatives have materially decreased in relative numbers, while the "service" jobs in which economists like David Cushman Coyle find a hope for the solution of the unemployment problem have loomed correspondingly larger in the picture. From Detroit, for example, where one might expect large opportunities for industrial employment, now comes the report that 57.7 percent of employed girls who were formerly special class members are in some type of housework, and only 17.7 percent are in factories. Most of the remainder have found jobs as waitresses, seamstresses, laundresses, beauty parlor helpers, and store clerks. For the boys in Detroit the distribution is reported as follows: 47.7 percent in factory work; 29.7 percent in jobs as cook, cobbler, baker, or farm hand; 9 percent as store helper; 9 percent as truck driver; and 4.7 percent as garage helper.

No figures were available for the study as a whole, showing the actual number of former special class members employed in the different types of work. However, the persons reporting were asked to list the five classes of occupations in which boys and girls, respectively, have most frequently found employment during the past 5 years. Table 4 gives the frequency of mention for the various occupational activities. While this can be considered only a crude measure of conditions as they really are, the results are so strikingly similar to those already given for Detroit in terms of actual percentages that one is tempted to believe that they give a fair index of the situation. The preponderance of "service" jobs, as David Cushman Coyle defines them, is self-evident. Obviously there is an infinite variety in the possible types and complexity of service jobs. Doctors and school teachers are employed in services; so also are bus boys and caddies, shoe shiners and porters. Somewhere in the range of these services, from the simplest to the most complex, there is room for boys and girls who go out of special classes, and, if David Cushman Coyle's analysis is correct, there should be increasing room for them.

TABLE 4.—*Frequency of mention given to occupations followed by former special class pupils*

[43 cities]

Occupation	Number of times mentioned	
	Boys	Girls
Agriculture: Farm, dairy, garden helper	12	
Extraction of minerals: Miner	1	
Manufacturing and mechanical industries:		
Building trades helper	15	
Cabinet shop worker	1	
Electrician	1	
Factory operative	25	31
Garage helper	16	
Mechanic's assistant	8	
Metal handcrafter	1	
Unskilled laborer	17	
Transportation:		
Helper to driver	8	
Longshoreman	1	
Oil station attendant	2	
Teamster, truck, taxi driver	12	
Telegraph and special-delivery messenger	11	
Tourist-camp worker	1	
Trade:		
Delivery boy	13	
Errand boy or girl	5	3
Newsboy	11	
Peddler	2	
Sales boy, sales girl, clerk	19	13
Stock girl		2
Domestic and personal service:		
Baker, cook, cook's helper	7	2
Barber, beauty parlor attendant	1	4
Bell hop, bus boy, porter	4	1
Cafeteria worker	1	4
Elevator operator	1	1
Housemaid		39
Janitor, janitor's assistant	6	
Kitchen, cleaning, or hotel worker		5
Laundry operator, laundress	1	14
Nursemaid		16
Seamstress		11
Shoe repairer	5	
Shoe shiner	3	
Waitress		9
Clerical service: Card filer		1
Recreation:		
Bowling alley attendant	2	
Caddie	1	
Radio singer	1	
Tap dancer	1	
Usher in movies	1	1
Total frequency of mention	**217**	**157**

There are three questions that face every administrator, supervisor, and teacher of a special class: (1) For what type of service job or jobs is the boy or the girl fitted? (2) How can we best prepare each boy or girl to enter upon such a job? (3) How can we give to that job a dignity that will be appreciated by both the boy or girl who fills it and by the person or persons for whom the service is rendered? In other words, we must not only prepare the pupil for the job, but we must also prepare the job—or the employer—for the pupil.

It has been repeatedly said that little academic or specific industrial training is necessary for the types of jobs which are open to special-class boys and girls; that employers prefer to take on a person who has been trained in habits of industry and desirable conduct, and then proceed to give the necessary training for the specific job himself. This is the basis upon which some schools justify the lack of occupational preparation in their programs. Such a statement, however, applies to the multiplicity of jobs in the manufacturing and mechanical industries more than to the service field. Who would say that a girl well trained in cafeteria service or in maid's work would not be better qualified to take a position in one of these fields than one without such preparation? Or what cobbler would not find a boy who had had daily practice in shoe repairing, other things being equal, a better helper than one not so qualified? Important as the inculcation of proper habits and attitudes is, if it is accompanied by varied occupational experiences, the boy or the girl will be so much the better equipped for meeting the practical problems of the wage earner. Fortunately it need not be a question of doing one or the other, but rather a matter of including both in the educational program.

Acting upon this principle, several cities have instituted programs of training in janitorial service, maid service, laun-

dry work, shoe repair, gardening, and other activities of similar grade. One school announces its maid training unit as follows:

> This unit gives the student a general and practical knowledge of the work required of a girl who plans to do general housework or nursemaid work. Caring for personal appearance, making applications for positions, table service, laundering, telephone courtesy, and room care are a few of the diversified subjects taught in this course.

There seems to be no reason why such a unit as this might not become in many cities a recognized offering, appreciated by homemakers and maids alike, and lending dignity to an occupation that is all too often belittled and scorned.

Furthermore, the boy or the girl who, despite a low intellectual rating, has a special fitness for some type of work that is ranked higher in the occupational scale than most of those listed in table 4, should likewise be discovered and given a chance to do his best. There can be no sweeping generalizations made which will put all in the same class. The only way in which classification can be made and guidance given is through the same guidance techniques that are used with so-called normal children. Exploratory courses, aptitude tests, probationary periods of work, and all the other means that are employed in an adequate program of vocational guidance have their place with special class pupils as they have elsewhere. Cooperative relationships between the school and the employer, part-time programs of school and work, supervision of placement, and follow-up on the job are in the initial stages of development in our general educational program. They are all but unknown in relation to the mentally handicapped, though their need is imperative. A few exploratory efforts have been made, some of them with gratifying results, and these may well be the forerunners of better occupational adjustment for special-class pupils.

Some Examples of School Programs

It is always illuminating, in the study of a particular problem in education, to know how individual city school systems have organized their programs with reference to its

solution. Brief descriptions follow of the work being done in a few cities for which specific data are available concerning the plan of occupational preparation for mentally handicapped adolescents. No evaluation is made of the respective programs. Each one has its unique features and reflects to a greater or less degree recently developed policies in the education of mentally handicapped children. Moreover, they vary considerably in the extent of the provisions made. Generally speaking, a large school system can provide more

Erecting a farm building on the school grounds.

satisfactory facilities to meet widely divergent needs among its pupils than a small system can furnish. However, if in the small city or town each pupil is studied and handled on an individual basis, much can be accomplished in bringing about a desirable adjustment in his educational program.

Los Angeles, Calif.—Subnormal pupils, 13 years of age or older, are distributed in special classes of various school units as follows: In regular elementary schools, 73; in regular junior high schools, 95; in regular senior high schools, 189; in special school for pupils of high-school age only, 398; in

special schools for pupils of both elementary and high-school age, 1,042.

It is reported that, in general, 40 percent of the school day is given by these pupils to industrial, occupational, or prevocational training; 40 percent to academic skills; 15 percent to socialized activities; and 5 percent to physical education, health, story telling, and music. The types of occupational activities in which instruction is offered include the following: Cafeteria service, child care, cobbling, commercial work, cooking, crafts, diversified shop, farming and gardening, garment making, general repair shop, home nursing, laundry, leather tooling, mechanical drawing, metal work, pottery, power-machine sewing, printing, weaving, and woodwork. The enrollments, of course, vary materially in the different fields. In the fall of the school year 1936–37, 821 boys and 29 girls were enrolled for woodwork, 414 boys and 17 girls for farming and gardening, 185 boys and 109 girls for pottery, and 15 boys and 13 girls for elementary commercial activities.

In the regular elementary schools special class teachers give instruction in both academic and occupational fields. In the special schools enrolling only retarded children special vocational teachers are employed. In the junior and senior high schools prevocational or occupational work for the mentally handicapped is taught by regular vocational teachers who also teach normal pupils.

Two high schools give well-defined special courses for mentally handicapped adolescents. One of these is a junior-senior high school, in which 154 such pupils were enrolled in January 1937. The other is a senior high school, with 130 subnormal students given the opportunity of special programs of work. In both these high-school occupational units it is reported that—

> . . . the pupils are frequently programmed in the regular vocational classes of the high school and work with the normal pupils. Some of our pupils work so successfully with the normal pupils that the vocational teachers do not recognize the fact that the pupils are from the occupational unit. Generally speaking, we segregate the occupational

pupils in special classes for social studies, mathematics, and personal hygiene, and program them with the regular pupils in the vocational classes. However, where we have a sufficient number of pupils for a class (for example, in woodshop) we make up a special class of boys from the occupational unit.

The report continues:

The mentally handicapped adolescents in the other junior and senior high schools of the city are programmed along with the regular students in the school. In certain schools the counselors attempt to give the mentally handicapped pupils a program which will suit their needs, but this effort on the part of the counselors is often rendered futile because of the crowded condition of the shop classes and the fact that the teachers must handle such large numbers of children in each class.

In our two occupational centers (in high school) the norm is 22 children per teacher. The pupils accepted in these units vary in intelligence quotients from 70 to 85 (plus or minus 5). In the junior-senior high school the age range is from 14 to 18 years. In the senior high school the age range is from 16 to 18 years. The teachers employed in this work are especially trained and especially interested in work with subnormal children. Five or six additional junior and senior high schools have requested the establishment of occupational units in their schools.

In addition to the two occupational units mentioned, we have the Coronel Vocational School for low-grade boys. There are 200 boys enrolled in this school ranging in age from 14 to 18 years. The intelligence quotient level in this school is low. Pupils are admitted with intelligence quotients ranging from 50 to 65 (plus or minus 5). At one time low-grade girls were also enrolled at the Coronel Vocational School, but the girls were transferred to a neighboring junior high school.

Des Moines, Iowa.—In Des Moines, retarded pupils reaching the age of 12 are transferred from the elementary schools either to a special school or to a prejunior group in a junior high school. The special school receives those who cannot do better than third-grade academic work. The intelligence quotients of this group range approximately from 55 to 70. The prejunior groups in selected junior high schools are designed for those who are able to do fourth-grade work or better and whose mental tests indicate an intelligence quotient of about 70 to 80. For these pupils a special course of study is provided. They meet with special class teachers

for academic work but go to regular grade teachers for non-academic activities. Advancement into regular junior high school grades is contingent upon the adjustment made in the prejunior groups.

In the fall of 1936, the enrollment of the special school was 150, while in the prejunior groups of junior high schools there were 262 pupils. In general, the school day for all these groups is divided as follows: 33 percent to industrial, occupational, or prevocational training; 50 percent to academic skills; and 17 percent to socialized activities. Diversified shop work, cafeteria service, cooking, and sewing are the major occupational experiences. In addition, the pupils do their own laundry for industrial arts, cooking, and other activities in which laundry service is needed.

Baltimore, Md.—Shop center classes are maintained in selected elementary schools for girls and boys 13 years old or older who can profit from the work given. Intelligence quotients range from 50 to 85. In the girls' shop center classes, plain cooking, sewing, and cleaning are taught, the aim being to develop thorough, dependable workers. Practice is also given in the basic elements of child care. General repair, metal work, and woodwork are the major activities carried on in the boys' shop centers. Half of the day is devoted to shop experiences, 40 percent to academic skills, and 10 percent to other socialized activities. Pupils in these centers ordinarily attain a fourth- or fifth-grade level in their academic work by the age of 16, at which time they usually leave school to go to work. A few, however, (about 1 in 100), are promoted to so-called "occupational classes," also located in an elementary school building, in which more advanced industrial work is done. A general vocational school in a separate building has recently been established on an experimental basis for retarded adolescents, but attendance at this is limited to those who have reached sixth-grade level of attainment in academic work. None of these schools or classes receive Federal aid under the Smith-Hughes Act, this being reserved for the high schools which require eighth-grade achievement as a standard of admission.

In the fall of 1936, it was reported that 474 pupils were enrolled in the shop center classes in the elementary schools, 375 in the occupational classes, and 175 in the general vocational school. The two latter types of organization serve many children of dull-normal or borderline intelligence, coming not from the special shop centers but from the regular elementary grades, who because of some accompanying maladjustment have had difficulty in making progress and for whom the occupational work seems desirable.

Detroit, Mich.—"Special A" classes in the elementary schools of Detroit enroll seriously retarded children under 13 years of age. "Special B" classes, in elementary schools or in special buildings, enroll pupils 13 years old or older. In 1936–37, 1,052 mentally handicapped adolescents were enrolled in "Special B" classes in the elementary schools, and 862 were in 6 special schools for children of high-school age only. In addition, 264 were placed in special classes organized in the intermediate high schools of the city.

In general, 40 percent of the school day is given to industrial, occupational, or prevocational training; 40 percent to academic skills; 10 percent to socialized activities; and 10 percent to health education. Among the occupational experiences offered are cafeteria service, child care, cooking, general shop (including among other activities metal work and shoe repair), general arts and crafts, laundry, printing, sewing, and woodwork. Special vocational teachers are employed for the mentally handicapped except in the intermediate high schools.

Concerning the special classes in these intermediate schools, it is reported that—

> . . . for the past 3 years we have had nine classes of 15- to 17-year-olds in special classes in the intermediate high schools. Our special teachers are responsible for the academic training, but the pupils are taught woodwork, metal work, printing, art, and health education by the regular intermediate high-school teacher. Approximately 250 children per year receive this training.

Boys and girls are admitted by special permission to the regular trade schools of the city if they have seventh-grade

academic ability. Vocational tests are used to a considerable extent in the attempt to guide all these children into suitable occupations.

Milwaukee, Wis.—In Milwaukee, provision for retarded children of pre-adolescent age is made through two types of special classes, designated as B and C, respectively. In the C classes are enrolled pupils whose intelligence rating is below an approximate limit of 70, while children ranking above this are placed in the B classes. All of these classes are organized as integral parts of the regular elementary schools distributed among the various districts of the city.

Pupils belonging in the C groups generally remain so classified until they reach the age of 16. At that time all for whom the prognosis justifies such an arrangement enter the Milwaukee Vocational School, which operates under the Smith-Hughes Act and in which more than 80 different trades are taught. It serves more than 15,000 adolescents and adults of varying degrees of intelligence, some of whom attend for full time and others on a part-time basis. An attempt is made here to discover the capacities of each pupil and to find some occupational niche in which he may prove useful. For example, Peter, with an intelligence quotient of 60, has been working in the automobile shop, learning to wash and to polish cars. Genevieve, with an intelligence quotient not much higher, is being trained for maid service. Other girls become skillful in sewing and earn a fair wage after they leave school. It is only after all possibilities have been exhausted and the pupil still appears unable to profit by any type of occupational instruction that he is dropped from the rolls.

Pupils who as pre-adolescents have been enrolled in the B classes (and some of the more promising ones in the C classes) are transferred at the age of 13½ to one of the "junior trade" schools of the city, of which there are two for boys and two for girls. These schools are designed for all pupils who have the desire or the need for something more immediately occupational in nature than the regular elementary or junior high school gives them. Two parallel

curricula are offered, one of junior high school level for those who have completed the sixth grade, the other an industrial course for those who are below sixth grade in achievement. Many of the pupils coming from the special B classes and all those coming from the special C classes are found in the latter classification. During the 3 years which they spend in the school they are given a variety of occupational experiences, designed to explore their abilities and to prepare them for self-supporting citizenship. To the girls are offered courses in cafeteria service, child care, clothing, cooking, domestic service, and laundry work. The boys find opportunities in carpentry, electrical repair, general shop work, metal work, painting, printing, and sign painting.

At the end of his 3-year course in one of these schools a pupil may transfer to the Milwaukee Vocational School, or if he has the requisite ability he may go on to one of the senior trade schools of the city for more advanced work. Frequently, however, he goes directly upon graduation into occupational service.

· III ·

THE PHYSICALLY HANDICAPPED

THE occupational preparation of physically handicapped children presents certain problems which are very different from those of the mentally handicapped. Representing a range of intelligence which is just as wide as that of the physically normal population, they have in their number both intellectually gifted and feeble-minded, with all the degrees of intelligence intervening between these two extremes.[1] The chief differentiating factor is the physical handicap, with whatever limitations this imposes upon vocational activities. The groups to which consideration is given in this bulletin are: (1) the crippled; (2) the visually defective; and (3) the auditorially defective. Each of these must again be considered on the basis of the type and the degree of the handicap. The totally blind, for example, present a different problem occupationally from that of the partially seeing. So also the profoundly deaf are more limited in vocational outlook than the hard-of-hearing. There are so many types and degrees of crippled conditions that every individual must be studied in the light of his own particular physical disability. Such individual study is, of course, no less important in the guidance of other handicapped groups.

A very important contribution to the vocational training and placement of physically handicapped persons comes from the vocational rehabilitation service, which is carried on with the aid of a Federal subsidy and under the guidance

[1] Some research studies seem to indicate that the intelligence of certain groups of the physically handicapped is skewed toward the lower end of the scale. This, however, does not affect the range of distribution.

of Federal and State education offices. This service, limited by law to persons of employable age (in most States 16 years), conducts its training program on the case-work basis, for the most part with persons who have completed their school course or who have dropped out of school. Handicapped children who are attending school are not its responsibility, since the educational needs of this group constitute a much larger problem than mere vocational training. However, a cooperative relationship can well be established—and in some localities has been established—whereby the values of vocational rehabilitation service are made available to physically handicapped children as soon as they are ready for it. Moreover, the experience of vocational rehabilitation workers in placing handicapped adults should be helpful to school administrators in determining which types of occupational experiences can best be provided for handicapped children during their school days.

Distribution Among Segments of the School System

In table 5 is given the distribution of physically handicapped adolescents (of the three major groups referred to above) in the various segments of the school systems from which data were reported. It is evident that special schools are used much more commonly for crippled and for deaf children than for the blind and the partially seeing. From the beginning of sight-saving classes in the public schools it has been emphasized that the children enrolled should have as much association as possible with children in the regular grades. The policy of segregation has never been favored by leaders of the movement. Moreover, the percentage of blind and partially seeing children is much smaller than those of the other two groups, too small to justify consideration of a separate school building, even were such an organization desirable. Hence, the distribution of blind and partially seeing children in table 5 is about what one would expect, with the largest number in the elementary schools and an approximately equal number in the junior

and the senior high schools, respectively. The special schools, in which 50 children are reported as enrolled, are schools established for physically handicapped children of several types, such as the William S. Baer School in Baltimore and the David Smouse School in Des Moines.

TABLE 5.—*Distribution of physically handicapped adolescents in segments of school systems*

Group	Number of cities	Number 13 years old or over— In regular elementary schools		In regular junior high schools		In regular senior high schools		In special schools		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12
Blind and partially seeing	28	432	39.4	309	28.2	305	27.8	50	4.6	1,096	100
Crippled	36	430	20.3	44	2.1	181	8.6	1,459	69.0	[1] 2,114	100
Deaf and hard-of-hearing	37	354	24.6	72	5.0	54	3.7	960	66.7	1,440	100

[1] 630 additional crippled children were included in the study, but were not classified by segment of the school system in which they were working.

Opinions differ as to the relative advantages of educating crippled and deaf groups in regular or in special schools. Some cities use both types of organization, sending into regular junior or senior high school those who can make satisfactory adjustment there and reserving the special school for those who need the protective measures it furnishes. As indicated in table 5, approximately 9 percent of the deaf and 10 percent of the crippled are working in the regular high school (junior or senior), where they can associate with physically normal adolescents of approximately their own age and social maturity.

Place of Occupational Preparation in the School Program

It was reported in chapter II that 84.9 percent of the 29,811 mentally handicapped adolescents under consideration were being given some type of occupational or pre-

vocational experience. How different the situation is for the physically handicapped can be seen from the fact that 45.5 percent of the blind and partially seeing, 49.1 percent of the crippled, and 58.4 percent of the deaf and hard-of-hearing were receiving occupational preparation at the time of the report.

The reason for the differences in these percentages is not difficult to find. With mentally handicapped pupils the problem is one of seriously limited intellect and of the need for learning to work with their hands. Most of them leave school as soon as the law releases them from attendance, although recent industrial conditions have tended to keep more of them in school beyond the minimum age of employment. The physically handicapped may go on to advanced high-school work or college; some may be working toward a professional career requiring long years of academic study. Specific occupational preparation during the early adolescent period need be no more frequent with them than with the physically normal, but much careful exploration of their vocational abilities and interests should certainly occupy an important place in the guidance program of the school.

This general sentiment has been expressed repeatedly in the comments made by the supervisors of the respective groups of physically handicapped reporting for the study. Because of their wide experience in the education and vocational guidance of the children in their care, the statements of these supervisors are of particular significance. A few of them are quoted below:

> The purpose of high-school education for these people, as I see it, is to furnish them with the richest possible foundation or background before they go on to specialized education and vocational rehabilitation.—Los Angeles, Calif.

> It seems to me that the job of the public school is to provide a good social educational background. Discovering aptitudes, without too much stress on occupations, and developing right attitudes toward competition are very important at the school age level.—Des Moines, Iowa.

> The job of the oral deaf school is first good speech, which will do more toward a social adjustment for the child than anything we can do,

it seems to me. Next, a good educational basis. Occupations can be left until the child has a sense of security in the world in which he lives. Then, as with the crippled child, help him to see that he must be better than the average physically normal person to compete with the average.—DES MOINES, IOWA.

The school should give a well-rounded, thorough academic and prevocational elementary education to every (deaf) child, as far as possible keeping him in a normal hearing environment out of school hours. After he has reached eighth grade, or his academic limit, he should be sent on to "hearing" high or vocational school with provision for tutoring by special teachers or to a special vocational school.—NEWARK, N. J.

The education of crippled children in elementary and high school should not differ from that for physically normal boys and girls, without narrowing it to vocational training.—NEWARK, N. J.

Give them a liberal education—ability to meet various situations cheerfully—ability to make friends and to keep them—a wise use of leisure time and a willingness to help others at all times—a wholesome personality with no feeling of inferiority or sensitiveness, and not expecting favoritism.—MILWAUKEE, WIS.

Emphasize early guidance, vocational information in the elementary school, testing for aptitudes, vocational counseling, cooperation with vocational school, and transfer to the vocational school at a given age, if the vocational school offers what the child wants and needs.—KENOSHA, WIS.

Definite vocational guidance should begin very early so that these children may know what jobs would be available for them. Then they could train toward this end.—CINCINNATI, OHIO.

The need is for identification of the vocationally capable through orienting types of prevocational and industrial arts courses in the junior and senior high school, followed by vocational education begun in the vocational school and completed under rehabilitation training on the job.—BALTIMORE, MD.

The above comments should, of course, not be interpreted as leaving no room in school for the vocational preparation of physically handicapped adolescents. Many of them must for financial reasons find their places in the occupational world at an early age. Others are more fitted for manual service than for continued study in school or college. To these the school should offer something of definite vocational value just as it does to the physically normal.

Asked whether physically handicapped adolescents who are ready for vocational training should "work in the same vocational classes with physically normal pupils," an overwhelming majority of those responding answered in the affirmative, with the reservation that special consideration and help should be given to the pupil in the light of his

Power machine operating offers possibilities for some types of handicapped.

handicap. A cooperative arrangement between the special school or class and the vocational school is advocated by some. A few, however, believe that the large classes and rigid standards of the regular vocational courses make it difficult for the average handicapped child to work successfully with normal pupils. This might be particularly true with cases of extreme crippling condition or of profound deafness without the requisite lip-reading, speech, and language ability. Again, one is forced to the conclusion that no uniform rule can be applied to the treatment of all

cases, but that individual conditions necessitate individual arrangements.

In some States the practice is followed of sending blind and deaf day-school students to the State residential schools for their vocational training when they become old enough to undertake this. This plan has its advantages, particularly if the day schools do not offer the type of work desired by the student; but it also has the disadvantage of taking the pupil out of the normal environment to which he has become accustomed during his earlier years of schooling. However, since in such cases the time spent at the residential school will be comparatively short, it might well take the form of an "interneship," in which the pupil specializes in the technique of his chosen occupation but without losing altogether his contact with the outside world.

The comments quoted below are illustrative of the typical opinions expressed with regard to this problem of placing handicapped adolescents in the same prevocational or vocational classes with normal pupils:

> The competition is wholesome. High standards are good; the practice makes for self-confidence, normal assimilation, and a wholesome point of view. It increases the possible choice of vocations . . . Careful supervision by the sight-saving or Braille teacher is essential for necessary supplementary work and adaptation of certain phases of instruction.—MINNEAPOLIS, MINN.

> They (the visually defective) must learn how, with special provisions, to work and compete with physically normal persons.—BINGHAMTON, N. Y.

> In our community numbers are not large enough to organize special facilities. The individual must work with normal people later on. Why not start adjusting early?—JACKSON, MICH.

> Training for social adjustment (of the visually defective) is of most importance; so education in a day school with sighted pupils seems to be the most efficient means of bringing this about. Competition with the sighted is highly essential to establish good standards and a sense of responsibility. Mingling with sighted pupils in daily recitations, clubs, and other forms of entertainment keep these handicapped pupils alert and responsive. Otherwise many become introvertive, never quite able to adjust to the seeing world.—MILWAUKEE, WIS.

When the handicap (of crippling) permits earning a livelihood in competition with people who are not handicapped, the training should be given in the same classes with physically normal children. If the person must work at home or in a secluded place, his training should be specialized, equipment modified, etc. Here competition plays no part. For some the training will be purely avocational. All training should be planned only after an individual case study has been made.—MINNEAPOLIS, MINN.

The educational and vocational placement of crippled children depends upon the type of handicap and personality of the individual, and whenever possible they should be placed with physically normal pupils.—INDIANAPOLIS, IND.

These people (the crippled) should be prepared for life in a normal world. When trained they will have to do the same work under the same working conditions as their physically normal brothers. This necessary adjustment may be made more readily by an approximation of normal working conditions during the period of vocational training.—LOS ANGELES, CALIF.

They (the deaf) will in all probability have to work with normal people later. They should begin to learn at once to compete with and take their places among normal people. A specially trained teacher should be on hand to interpret or help in any way possible. This teacher should have classes in shop language or any work necessary for the success of the group.—LOS ANGELES, CALIF.

If capable of making a successful vocational and academic adjustment, by all means "yes." Thus prepared, the deaf are better able to adjust in industry.—BALTIMORE, MD.

Through normal school experiences they (the deaf) must learn how to work with hearing people as they will later in industry. Contacts should be made by a staff member of the school for the deaf and students encouraged to return to them for counsel at stated intervals.—DETROIT, MICH.

Psychologically they (the deaf) should not learn to consider themselves different.—BATTLE CREEK, MICH.

Types of Occupational Experiences Offered

Because of the different problems presented by the various types of handicaps, the respective groups must be considered separately in relation to the occupational experiences offered them in school. Moreover, it is again emphasized that, even within the same group, individual guidance is an essen-

tial element of any satisfactory program of vocational preparation.

The visually defective.—Within this group there are further distinctions to be made between the blind, who have no sight at all, and the partially seeing, who have a usable amount of vision. Obviously the former are more limited in their vocational possibilities and the school offerings are correspondingly limited. One of the city school supervisors [2]

Blind children learning bookbinding; leather lacing; weaving.

furnishing data for the study has expressed the situation well when she says:

> The field of the blind person is limited to those occupations in which eyesight is not essential, but in the vocations in which he can compete he may excel. After recognizing the limitations controlling a wise choice the success in the chosen field is wholly a question of the individual personality.
>
> The problem of the sight-saving child is entirely different. As the limitations are a matter of the particular eye difficulty involved, each individual should understand his limitations on the basis of the oculist's

[2] In Los Angeles, Calif.

advice. Aside from that he may follow his natural bent, with guidance and advice from the person familiar with the professions, industries, and background of the individual.

It is suggested [3] for the partially seeing that—

In the junior and senior high school, courses in beauty treatments, care of children, practical nursing, cafeteria and tea-room work, advanced courses in cooking and housekeeping could be given and would aid greatly in preparing the girls to support themselves when older. These occupations could be followed by the pupils without further detriment to their eyesight.

The boys could take up courses in farm work and chicken raising. However, we have not found this very practical for city boys. They are averse to leaving home. Courses in carpentry and sheet-metal work, certain phases of electrical work, radio, and auto mechanics could be followed by these pupils. Each case must be considered individually as to eye defect and the amount of vision involved, before considering what occupation is to be followed.

From Detroit comes a similar suggestion that—

. . . more attention might be paid to gardening, florist work, and farming, including stock tending and chicken raising as possible vocations for the partially seeing. Such courses are difficult to include in city classrooms. Perhaps some vocational aptitude tests could be developed which would select the candidates for these vocations and provision be made at State agricultural college or farms for their training.

From the same source comes the plea for "more understanding on the part of rehabilitation workers of the partially sighted child and the various lines of work which individual types can perform without injury to the eyes." It is urged that surveys be conducted in industry and all lines of business to determine the types of industrial or business work in which blind and partially seeing people might engage. In addition, sheltered workshops for the blind are considered an essential feature of economic provision.

What the schools are actually doing in occupational preparation reflects the opinions quoted above. The comparatively few blind children enrolled in the day schools represented are for the most part taking courses in woodwork and

[3] By the supervisor in Boston, Mass.

general shop, weaving, sewing, knitting and crocheting, basketry, handicraft of other kinds, and foods. A few are enrolled in auto shop, metal shop, and typing. Music, while used frequently as an instructional field, is a vocational activity only in the case of the talented few. In fact, most of the occupational work offered to the blind in day schools is exploratory in nature, in keeping with the principle that physically handicapped children should be given as liberal an education and as intelligent guidance as possible in the elementary and secondary schools, and, if unable or unfitted to continue their education in college, should then have the opportunity for specific vocational preparation under the vocational rehabilitation service.

The partially seeing were at the time of the report enrolled in a large variety of occupational activities. Listed in the order of frequency, these are: General shop, homemaking, woodwork, auto shop, foods, music, electrical shop, typing, tearoom service, office training, art, machine shop, metal shop, horticulture, merchandising, journalism, agriculture, nursing, beauty culture, child care, sign painting. The absence of occupations demanding fine degrees of visual application is significant.

The crippled.—Again, the type and the degree of disability have an important bearing upon the occupational preparation suited to crippled children. The wide variety of courses for which they are enrolled in school indicates how many different kinds of services they may be able to render. Sewing, cooking, woodwork, and crafts show by far the largest numbers. Some school systems have gone beyond these common activities, however, and have guided individual students or groups of students into numerous other fields. The number enrolled was not reported for many of these, but the list below will indicate the types of occupational courses in which crippled children are working:

Arts and crafts:
- Block printing.
- Embroidery.
- Flower making.

Arts and crafts—Contd.
- General crafts.
- Gold leaf work.
- Knitting and crocheting.

Arts and crafts—Contd.
- Leather work.
- Lettering.
- Millinery.
- Modeling.
- Rug making.
- Weaving.

Commercial work:
- Bookkeeping.
- Business training.
- Shorthand.
- Typing.

Household arts and sciences:
- Catering.
- Child care.
- Cooking.
- Home management.
- Sewing.

Shop work:
- Aero shop.
- Auto shop.

Shop work—Contd.
- Electrical shop.
- Metal shop.
- Woodworking.

Miscellaneous:
- Baking.
- Beauty culture.
- Brush making.
- Drafting.
- Glass beveling.
- Jewelry making.
- Knee-control machine operation.
- Mechanical dentistry.
- Printing.
- Shoe repairing.
- Sign painting.
- Tailoring.
- Upholstery.
- Watchmaking.

Many of these activities are used in the junior high school as tryout courses, while in the senior high school a more definite attempt is made to fit each child into an academic or vocational course compatible with his ability and his physical handicap. In every case provision is urged for close orthopedic supervision with relation to the physical requirements of the work and the possibilities for success in using it as a vocational outlet.

The deaf and the hard-of-hearing.—Just as there are distinct differences in occupational needs arising from varied degrees of visual defects, so also the degree of hearing defect affects the occupational outlook and, therefore, the program of occupational preparation. Moderately hard-of-hearing children in the day schools are not generally considered subjects for segregation in class work, but are in progressive school systems given the advantages of special instruction in lip reading and in the preservation of the purity of speech for a stated number of periods each week. Their progress through elementary school, high school, and college may at times be made somewhat more difficult but should certainly not be

seriously affected by the hearing defect. So, also, they have considerable freedom in choosing their occupational field, only needing to observe caution in not exposing themselves through an unwise choice to needless embarrassing situations. The degree of the handicap and the individual's success in compensating for it through the use of hearing aids and lipreading technique will determine to a large extent the limitations he must impose upon himself in his selection of a vocation.

Shop activities for the physically handicapped.

For the profoundly deaf the situation becomes more complicated, owing to the difficulty of communication. If the handicap has existed since birth or an early age the development of natural speech is a serious problem and if it has come on later in life the preservation of natural speech likewise presents difficulties. These facts have an inevitable influence upon the types of occupational service in which satisfactory adjustment can be made by the deaf and hence upon the types of occupational courses which should be offered for them in school.

The majority of deaf students reported as enrolled for vocational work are found in the automobile and wood

shops, in printing, poster and sign painting, industrial design, drafting, sewing, home management, and cooking. Other fields represented by comparatively small numbers of students are: Accounting, typing; electrical shop, metal shop, and general shop; upholstering; tailoring; shoe repair; cement work; agriculture; laundry, maid service, nursing; beauty culture; art, arts and crafts, dress design, home arts; journalism and stagecraft. A closer examination of this list will reveal the preponderance of occupations in which communication with others could under special arrangements be minimized.

Types of Positions Filled

An effort was made in the present study not to secure statistical data as to the number of persons going into the respective occupational fields, but merely to get a statement from each local supervisor of the most common types of vocational activities filled locally by the pupils going out from the schools. Again the three groups of handicapped need to be differentiated, since the kinds of positions in which they are found vary materially.

The visually defective.—Blind students are reported as having gone into office work as dictaphone operators and typists; into selling, principally as operators of concession stands; into chicken farming and animal husbandry; into broom making, chair caning, rug making, needlework, and weaving; into factories for certain types of finishing jobs; into social service and teaching (for the blind); into piano tuning and music; and into law.

It is to be expected that the partially seeing would represent a much wider range of occupational possibilities, depending upon the individual capacities and interest and upon the degree of visual defect. Prominent in frequency among the occupations mentioned are personal service, selling, and factory work. The complete list reported, given by major groups in order of frequency of mention, is as follows:

1. *Personal service.*—Beauty culture, cafeteria service, child care, cooking, maid service, service as a companion, waiting on table.

2. *Selling.*—All types of sales work.
3. *Factory work.*—In miscellaneous factories.
4. *Professional or semi-professional work.*—Music, optometry, photography, teaching.
5. *Agriculture and allied fields.*—Dairying, farming, floriculture, gardening, stock raising, truck farming.
6. *Trades and industries.*—Baking, carpentering, garage work, modeling, shoe repairing, undertaking, upholstering.
7. *Office work.*—Clerical service, typing.
8. *Miscellaneous activities.*—Gas station attendance, janitorial service, telephone operating, messenger or errand boy's work.

The crippled.—In order of frequency the fields of service into which crippled children go were reported as (1) office work, (2) personal service, (3) trades and industries, (4) professional and semiprofessional service, (5) selling, (6) factory work, (7) miscellaneous activities; and (8) agriculture. Further classification of these general fields yields the following data:

1. *Office work* includes bookkeeping, comptometer operating, filing, general clerical service, stenography, and typing.
2. *Personal service* includes art needle work, beauty culture, child care, domestic service, dress designing, millinery, practical nursing, sewing, tailoring.
3. In the *industries* the following types of work are represented: Armature winding, auto mechanics, baking, cabinetmaking, carpentering, chair caning, floor finishing, jewelry making, metal art work, pipe polishing, printing, shoemaking, sheet-metal work, sign painting, upholstering, watchmaking.
4. Among the *professional and semiprofessional* occupations listed are art, chemistry, drafting, law, library work, music, occupational therapy, photography, social work, teaching, and writing.
5. *Selling* includes magazine agencies, store clerking, shopkeeping and petty selling.
6. *Factory* work is limited and largely unspecified as to type.
7. Among the *miscellaneous* activities mentioned are elevator operating, filling station attendance, radio broadcasting, switchboard operating, and wireless operating.
8. *Agricultural* occupations reported are chicken raising and farming.

Obviously the above list of occupations can be considered only in relation to the type of crippling condition with which the boy or the girl is handicapped. A severe spastic condition will eliminate the possibility of most of them; yet

some spastics have achieved what was apparently the impossible in vocational adjustment. In general, the more disabling the handicap the more limited will be the occupational outlook. That fact, however, does not make any less the obligation of the school and cooperating agencies to work out the best possible solution for each case.

The deaf.—The fields which have been reported as providing openings for the deaf students coming from the day schools are, in the order of their frequency of mention, as follows:

1. *Trades and industries.*—Auto repair, baking, bookbinding, cabinetmaking, carpentering, electrical work, lettering, metal work, painting and paperhanging, pattern making, plumbing, printing, shoemaking, sign painting, tailoring, tinning, tool making, upholstering, watchmaking, weaving, welding.
2. *Factory work,* of miscellaneous type.
3. *Personal service.*—Barbering, beauty culture, child care, cooking, dressmaking, housework, laundering, millinery.
4. *Office work.*—Bookkeeping, cataloging, comptometer operation, filing, proofreading, statistical work, typing.
5. *Agriculture and allied fields.*—Farming, fishing, forestry, fruit raising, gardening.
6. *Professional or semiprofessional service.*—Advertising, commercial art, designing, drafting, landscape gardening, optometry, pharmacy, photography.
7. *Selling.*—Store clerking, paper routes.
8. *Miscellaneous activities.*—Dishwashing, fuel and ice plant work, truck driving.

Significant differences.—A comparison of the three groups as to the types of positions filled reflects the characteristics and the effects of their varying disabilities. For the partially seeing, for example, office work occupies a low position, since most types of office work are likely to make too great demands upon the eyesight; while for the crippled, many of whom must have sedentary occupations, it holds a high place. On the other hand, selling offers much greater possibilities to the visually defective than to the crippled or to the deaf, the former not having the ease of transportation or the latter the ease of communication usually required by it. The deaf are found most frequently in the trades and

industries and in factory work, in which numerous occupations occur not demanding extensive communication.[1]

Such comparisons, however, can be made only in general terms. The greatest importance must be attached to the characteristics of the individual, with his individual abilities and disabilities. Satisfactory preparation and placement for a given pupil are dependent upon the care with which his case has been diagnosed from the standpoint of vocational possibilities and upon the intelligence with which he as an individual has been guided into a wise choice of occupational work.

Moreover, too much reliability should not be placed upon present occupational placements as an index of desirable goals for handicapped students in the schools today. Sheltered work shops, for example, have been in the past and still are an important provision for the vocational activity of the blind, and some similar protective facilities are available for the seriously crippled, but they should by no means be considered the only or even the most essential item in the program. A number of blind and crippled persons are finding occupational outlets of a much more independent character and it may well be that the possibilities have scarcely been tapped. So also for the deaf much remains to be done in exploring the occupational fields in which satisfactory individual adjustments can be made. The present situation furnishes a valuable basis for action, but it should not be considered as expressive of final conclusions. It can only be suggestive for guidance, pending more extensive investigation.

Some Examples of School Provisions

No attempt is here made to describe completely any school program for physically handicapped adolescents, but rather to report some of the elements which seem significant for a particular group in relation to the present study. The

[1] Compare findings reported in Office of Education Bulletin 1936, No. 13, The Deaf and the Hard-of-Hearing in the Occupational World.

following statements should, therefore, be considered as being only fragmentary and not representing all that might be said regarding the city in question.

Los Angeles, Calif.—There are 129 *crippled* children of adolescent age enrolled in special classes in the regular elementary schools and there are 234 enrolled in a special school for physically handicapped students of high-school age only. Of the latter, 35 are receiving training in bookkeeping and typing. The purpose of high-school education

A high-school group in typing.

for crippled children is conceived as an enrichment of their educational background previous to vocational education.

Concerning the training given after high school is completed or after the age of employability is reached, the principal of the high school for the crippled reports:

> In Los Angeles (crippled) boys and girls have been fitted into all occupational fields, depending entirely upon disability, except with concerns in which the employment of all applicants is premised upon a 100 percent physical examination. . . . A supervisor of vocational training for physically handicapped is employed who works on a local-State set-up in behalf of guidance, training, placement, and coordination of employment possibilities for the physically handicapped. He is paid partly by the city schools and partly by the State. He utilizes

the vocational training facilities of the city schools first (as the Frank Wiggins Trade School), but will also place applicants in outside schools with tuition paid by the State, or furnish training while working as apprentices.

Deaf students in Los Angeles do all their vocational work with physically normal pupils, with whatever supplementary help the classroom teacher can give them. In the junior high school deaf pupils were at the time of the report enrolled in art, auto shop, wood shop, agriculture, drafting, electricity, sewing, and cooking. In the senior high school they were in classes in foods, clothing, nursing, woodshop, machine shop, printing, and industrial electricity.

Boston, Mass.—Regarding *partially seeing* students, it is reported that there are 5 over 13 years of age in the elementary school, 46 in the junior high school, and 30 in the senior or 4-year high schools. These high-school students "have been advised as to the courses best suited to their handicap before leaving the junior high schools. After entering the senior high school no special provision is made for them. They follow the courses selected, working with the normally sighted pupils." A list of partially seeing children leaving special classes is sent each year to the Director of the Division of the Blind, State Department of Education, who follows them up until they are 18 years old.

Detroit, Mich.—Of the *crippled* children 13 years of age or older, 273 were in the special schools for crippled children which extend through the junior high school grades, while 36 were enrolled in the regular senior high school and working beside normal students. In the special schools, work is offered in crafts, printing, mechanical drawing, woodwork, cooking, sewing, and homemaking. In the senior high school crippled students were at the time of the report enrolled in aero shop work, auto mechanics, electrical shop, mechanic arts, mechanical drawing, printing, cooking, crafts, and sewing.

Fifteen *blind* children were reported by Detroit, 14 of whom were in the intermediate and 1 in the senior high school. Of these, 9 were working in general shop, 4 in general

woodwork, 2 in general metal work, and 1 in auto mechanics. They work in the same classes with the physically normal, with special provisions made for needed assistance.

Students for whom definite vocational planning is desired are sent to the State School for the Blind at Lansing, if under 17. If over 17, they go to the Industrial Institute at Saginaw.

The work of the seventh grade is broad and general, while that of the eighth grade is exploratory in nature. When the pupil reaches the eighth or ninth grade, he is offered further opportunity for pursuing activities which most nearly satisfy his inclinations, and he may develop his particular aptitudes through a choice of curriculum. These alternatives are the language, commercial, or the practical arts curricula. The language curriculum is recommended to pupils who intend to enter high school and there fulfill college requirements. The commercial is, of course, planned for the pupil who wishes to prepare for the various business occupations which include clerical or commercial work.

The practical arts curriculum is designed for those pupils who will early find their way to schools established to provide definite vocational training or perhaps may be forced to find vocational placement at the close of their intermediate career. This curriculum devotes much time to cooking, sewing, and shop, but pupils who select this course devote the same amount of time as other students to English, social science, and mathematics.

Each intermediate school provides for the normal children counselors whose duties are to advise students concerning curricula, make program adjustments, assist with social adjustments and in many other ways serve in meeting the aims as defined by the intermediate school. For Braille students the special teacher is naturally the counselor. Provided with detailed information concerning each pupil accumulated throughout his elementary school experience which includes results of psychological examinations and their interpretation, this special counselor for blind children stands in a position to use the facilities of the intermediate school program in guiding and directing the child vocationally. If necessary, she may even cut across the lines of the curricula defined, guiding these children in the selection of various courses which will best answer the needs of the individual child.[5]

Of the *partially seeing* adolescents in Detroit, 74 were in the intermediate schools, 34 in the senior high schools, and 20 in the vocational school.

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[5] Chase, Maude. Prevocational guidance for the blind in the intermediate day school. The Teachers Forum for Instructors of Blind Children, 9:56-58, January 1937.

While no formal prevocational or vocational training is given in the elementary school, a great deal of guidance is afforded the children. Eye hygiene is taught with particular regard to the individual's difficulties and few opportunities are lost to point out to children activities in which they cannot engage, at the same time emphasizing and directing any aptitude which the teacher may have discovered in the individual.

Minneapolis, Minn.—For the *Braille and partially seeing* pupils the following courses are offered for whatever prevocational value they may have:

1. A special manual training class, meeting on Saturday mornings, which a child may enter as soon as he can handle tools and in which he may continue as many years as he is interested and can profit from it.
2. Differentiated hand work as a part of sight-saving and Braille class work in the elementary schools for its hand-training value.
3. Regular junior and senior high school courses, such as electricity, sheet metal, and woodworking, in which any Braille or sight-saving child may enroll if he is capable of profiting from it.
4. Vocational advisement through conferences with teachers, vocational adviser, and supervisor in and beyond the junior high school.
5. A battery of vocational and psychological tests in the eleventh grade in preparation for applied industry.
6. Applied industry for all willing to participate in it, and who are not continuing through the university.

In September 1936, a plan was initiated whereby five partially seeing high-school seniors who did not plan to go to college were employed 3 hours daily, each with a different employer, in an occupation carefully chosen after analysis of the student's abilities and conferences with the persons concerned. This work is supervised by the sight-saving teacher and the Division of Vocational Rehabilitation. The student receives credit for the work done and is paid a nominal sum to defray extra expense.

According to the plan the student will continue in the work chosen or be shifted from field to field, as requirements dictate, for the space of 1 year just prior to graduation, and it is hoped he will continue in the field in which he is successful. . . . This plan promises to bring together to the best advantage of the sight-saving pupil the employment objective of the rehabilitation service and the educational and eye conservation service centered in the sight-saving classes.

Somehow in the past few of our cases have received any advantages from the service and we hope the situation will completely change under the new plan.[6]

Madison, Wis.—"The *deaf and hard-of-hearing* children in our school begin to do a certain amount of academic work with the physically and mentally normal classes as early as the third year in school. This is continued throughout the grades and in high school and vocational school. They are used to adjusting to normal groups. . . . Specialization for a vocation is given in the vocational school either after they have finished elementary and high school or, if the pupil does not plan to attend high school, on part time while still attending the special classes for the deaf."

The *crippled* children in Madison attend a special school until they are ready for high-school work. If at that time they are physically and mentally capable of meeting academic high-school standards, they go to the regular high school. Those who wish to and can take specific trade training may go to the vocational school. Courses are selected to meet each child's need and he works in the same classes with the physically normal.

A Desirable School Program for the Physically Handicapped

If, on the basis of the findings and expressed opinions made available through this study, one were to attempt to summarize briefly the essential elements characterizing a desirable program of vocational guidance and education for physically handicapped children, they would in all probability include the following items:

1. Broad and enriching educational experiences, with progressive vocational guidance but without specific vocational preparation, at least through the elementary grades and through 1 or more years of the high school, depending upon the student's aptitudes and interests.
2. Continuous study of the individual child by a teacher trained in guidance methods, in cooperation with a specialist in school counseling: Diagnosis of his abilities and interests, and explora-

[6] From report given in the Sight-Saving Class Exchange.

tion in early adolescence of his vocational capacities through interviews, aptitude tests, try-out courses, and other guidance techniques.

3. Analysis of local occupational opportunities that are open to the pupil in the light of his handicap; contacts with employers to secure their interest and cooperation.
4. Specialization in a vocational field after graduation from high school; or, in cases of manifest need or desire, during the high-school years.
5. Such specialized preparation to be given in the regular school with physically and mentally normal students; transfer to a special school to be made only when facilities required by the chosen occupation are unavailable in the regular school or when there is obvious need of protective measures due to extreme disability and accompanying factors.
6. Cooperation and supplementary assistance to be given by the Vocational Rehabilitation Service, as a State agency responsible for the training and placement of physically handicapped persons of employable age.
7. Coordinated activities on the part of all local placement agencies, looking toward the satisfactory placement of the physically handicapped youth.
8. Follow-up services until a happy adjustment on the job is achieved.

A broad educational background for every pupil, intelligent guidance toward a vocational choice, the opportunity to work with normal students, cooperation of school and industry, and of the school and other interested agencies—these, in essence, are the elements of a program for the vocational preparation of physically handicapped adolescents in day schools. These young people are asking only that they be given an opportunity to show what they can do despite a handicap. The school which has served them in childhood must continue to serve them in adolescence in a way that will mean a profitable investment both for the individual and for society.

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B. The Physically Handicapped

THE BLIND AND THE PARTIALLY SEEING

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giving information concerning employment status of former sight-saving class students. Lists of occupations are given in which former pupils were engaged. Occupations considered satisfactory for myopes and for those having low vision from the ocular point of view are indicated in the list.

LATIMER, H. RANDOLPH *and* ALLEN, MURRAY B. The blind in professional and executive work: Report of the Commission on superior professions for the blind, World congress for the blind. Outlook for the blind, 28: 230–33, February 1934.

This report is an outgrowth of an investigation conducted by a committee appointed at the International Pre-Congress of the Blind held in Vienna in July 1929. It summarizes information with respect to opportunities for the blind in professional work in the United States and is based upon 210 questionnaire replies. Eleven types of professions are given special attention: Administration, business, divinity, home teaching, law, literature, music, music teaching, osteopathy, physiotherapy, and school teaching.

LESOWITZ, MEYER. The blind student in the high school. High points, 17: 11–15, March 1935.

The author believes education of the blind in a residential school for the blind to be objectionable. Thinks they should be trained in the regular public schools along with seeing children, making use of special aids and special adaptations of material in their training. Describes special procedures followed in the Evander Childs High School, New York, N. Y.

MERRILL, ELEANOR B. Occupational adjustment of the visually handicapped. Sight-saving review, 6: 192–97, September 1936.

Address presented at the National Council on the Physically Handicapped, Atlantic City, N. J., May 28, 1936. Cites several individual instances of occupational adjustments which illustrate methods and sources of obtaining help in such cases. Emphasizes the need of coordination of services among all agencies involved.

O'TOOLE, CHARLES E. Vocational opportunities for sight-saving class students. Sight-saving review, 6: 131–35, June 1936.

Describes vocational guidance program for the partially seeing pupils in New York City sight-conservation classes. The author says: "I prefer to think that an occupation should be considered nonsuitable for the partially sighted only after it has been determined so from all the factors involved in occupational analysis as related to each degree of sight disability."

WILBER, LOUISE. Vocations for the visually handicapped. New York, American foundation for the blind, 1937. 224 p.

The author, herself a blind person, pleads for a vocational guidance program for the blind, with particular reference to residential schools. Sketches the careers of successful blind persons of the twentieth century, and holds that the blind compare favorably in performance with people of normal vision. Outlines the elements of a vocational guidance program as she thinks it should be developed.

THE CRIPPLED

HACKETT, VIVIAN M. Cooperation leads the way. The crippled child, 10: 131–32, April 1933.

How city welfare agencies in Cleveland work together to care for, educate, and train the handicapped. The department of special classes in the public schools and the bureau of vocational rehabilitation keep closely in touch with each other in order to bring the maximum good to the crippled child.

KEEFER, MARY W. Preparing the crippled child for his future. Public health nursing, 29: 225–28, April 1937.

Outlines a comprehensive program for the care of the crippled child which would involve not only physical treatment and rehabilitation, but education, vocational training, and social adjustment.

MCAULIFFE, THOMAS P. Prejudices against the handicapped. The crippled child, 12: 116–19, 138, February 1935.

Analyzes some of the prejudices too often found in society, in industry, in politics, against the physically handicapped as a group. Suggests remedies; believes the handicapped should not be considered as a group but as individuals in the matter of prejudice or discrimination.

MILLAR, SEVILLE *and* ODENCRANTZ, LOUISE C. Vocations for the handicapped. Occupations, 12: 18–28, October 1933.

Written from the standpoint of the vocational guidance counselor who is often confronted with the problem of advising in the occupational placement of a physically handicapped boy or girl. Various types of handicaps are analyzed, special difficulties met with in attempting to secure work are shown, and the jobs for which the different types of handicapped are best fitted to fill are described.

ODENCRANTZ, LOUISE C. The man and his handicap. The crippled child, 10: 89–92, February 1933.

The author, director of the Employment Center for the Handicapped, New York City, points out certain things which should be considered in assisting in the rehabilitation of the handicapped person, particularly the person recently handicapped through accident or illness.

STRAUSS, MARIAN. A plan for individual instruction in high school classes for crippled children. The crippled child, 8: 182–83, 185, April 1931.

An account of the methods used in a high school of St. Louis, Mo., to meet the needs of crippled students. The work is carried on on the basis of individual assignments and individual progress. Elements of the Dalton plan are incorporated into the procedure followed.

THOMPSON, R. T. Janeil shop. Hygeia, 11: 820–22, September 1933.

The story of a shop which is run in connection with the Spalding School for Crippled Children in Chicago, to enable these handicapped children to realize in an economic and practical way upon their vocational training.

THE DEAF AND THE HARD-OF-HEARING

ANDERSON, TOM L. Vocational needs of today. American annals of the deaf, 80:105–15, March 1935.

Considers readjustments which schools for the deaf should make to prepare their pupils for placement in the jobs which, today, are open to the deaf. Stresses the need for more training in the humbler tasks of life and for better adjustment to home and community living.

BLUETT, C. G. Counseling the hard of hearing. Occupations; 15:412–16, February 1937.

Suggestions to school counselors in guiding the vocational choices of hard-of-hearing children. Lists the occupational choices made by 233 hard-of-hearing clients of the San Francisco district of the California State Bureau of Vocational Rehabilitation, and shows the vocational advantage of the guided over the unguided hard-of-hearing individual.

HILL, ADA M. Vocational problems of the hard-of-hearing. Vocational guidance magazine, 10:360–65, May 1932.

Points out the imperative need of early detection of the slightest defect in hearing and the proper remedial attention and special educational training. Vocational guidance plays an important part in this special training, for the vocational problems of the hard-of-hearing are legion and the deafened child needs to be trained to meet these problems. The importance of the vocational counselor as a guide in aiding the individual in selecting the proper vocation is emphasized. Points to be considered in selecting a vocation are given.

MARTENS, ELISE H., *et al.* The deaf and the hard-of-hearing in the occupational world. Washington, D. C., Government printing office, 1936. 95 p. (U. S. Department of the Interior, Office of Education, Bulletin 1936, no. 13).

A survey was carried on under the CWA to determine the types of occupations for which deaf and hard-of-hearing young people can most successfully be prepared. Findings are based upon a study of various factors connected with the employment status of 19,589 deaf and hard-of-hearing adults.

MONTAGUE, HARRIET. What can a hard-of-hearing person do? Volta review, 37:743–46, December 1935.

Many helpful suggestions are given as to types of work for which deaf and hard-of-hearing people can fit themselves, psychological adjustments which must be made, and other pertinent items.

ODENCRANTZ, LOUISE C. A study of the work histories of 749 deaf men and women. In Proceedings of the International Congress on the Education of the Deaf, 1933, pp. 364–82. West Trenton, The New Jersey School for the Deaf, 1933.

The director of the Employment Center for the Handicapped in New York City presents data regarding occupational activities of deaf persons who had registered at the center. Discusses education, vocational training, occupations in which employed, earnings, reasons for leaving jobs, and other items related to vocational adjustment.