TECHNIQUES USED AT THE OREGON STATE SCHOOL FOR THE BLIND IN THE ADJUSTMENT OF VISUALLY HANDICAPPED CHILDREN

by

IDA SWIFT THOMAS

A THESIS submitted to the OREGON STATE COLLEGE

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

June 1942
ACKNOWLEDGMENTS

The writer wishes to express special appreciation to Assistant Dean Carl W. Salser for his counsel and guidance. Appreciation is also offered superintendent Walter R. Dry of the Oregon State School for the Blind, the supervisor, Mrs. E. N. Fortner and the faculty for the cooperation which has made this study possible. Mrs. Jeanne Chapman of the Washington State School for the Blind made valuable suggestions. The American Foundation for the Blind and the Society for the Prevention of Blindness, both of New York City, were most generous in their assistance. Dr. Eugene H. Kelley, M. D. and Dr. A. W. Marker, Optometrist, both of Corvallis, also gave assistance.

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CHAPTER I

INTRODUCTION

Purpose of Thesis. In many references concerning education of blind children, there is an implication that the school work is conducted in the same way as in ordinary public schools with the exception that Braille is taught. It is true that Braille reading and writing is taught in schools for the blind, but there are a number of differences in conducting the curriculum.

It is the purpose of this thesis to point out first, the basic differences between the presentation of the school curriculum to the blind child and presentation of the school curriculum to the normal child. Second, to point out the techniques used in adapting the visually handicapped child to the school curriculum.

Value of Study. Nearly all the literature available to the general public dealing with the blind, concerns the visually handicapped adult. Very little is written in regard to the blind child and his problems of adjustment. While most people know that the visually handicapped child, living in the state of Oregon, is educated in a residential school, few realize the nature or extent
of his education. It is hoped that this study will be valuable as a source of information and enlightenment on the many problems involved in the education of visually handicapped children and the various techniques required to make an adjustment to a seeing world. It is also hoped that this thesis will help to bring about a greater understanding of the blind child and his problems.

Method of the Study. A study of the actual work as conducted at the Oregon State School for the Blind at Salem, Oregon is the basis for this study. Many trips to the school were made to observe the actual work. The school at Vancouver, Washington was also visited several times.

The writer is familiar with the better known eastern schools for blind children, such as Overbrook in Pennsylvania, Perkins Institution and Massachusetts School for the Blind at Watertown, Massachusetts. For three years she was on the teaching staff of the Connecticut State School for the Blind. It was felt that with this background she was qualified to note and understand the important differences in conducting the education of blind children. Furthermore, the writer, even as a child has been accustomed to both blind children and adults, and has always been interested in the visually handicapped.

Limitations of Study. Most of the important
research problems connected with blind children have been undertaken in the larger eastern residential schools for the blind. These schools admit children of both low and normal mentality. Statistics which include the blind feeble-minded cannot be applied to the Oregon State School for the Blind as it does not admit children who are mentally inferior.

The education of the blind at the Oregon State School for the Blind is based upon individual needs. As it is impossible to know each pupil without daily contact over a period of time, the individual treatment of cases has not been given in detail except insofar as a particular case is cited to illustrate a situation. This thesis makes no attempt to describe in detail all the new ideas and applications of psychology used in individual cases. It only attempts to point out the techniques used in the general adaptation of the school curriculum to the visually handicapped.

**Historical Background of the Education of the Visually Handicapped.** The very first school for the blind was founded in Paris in 1784 by Valentin Hauy. It was this Frenchman, in an attempt to educate his pupils, who originated the use of print in raised letters. This first school was for adults, but out of kindness, Valentin Hauy took young Louis Braille, the son of a friend. It was
Louis Braille who later perfected the six point system of embossing which still bears his name. The point system made it possible for the blind to write as well as read. Various other methods and systems have been tried but in 1924 the Braille system became standard, both in this country and abroad.

Schools for the blind were established at Liverpool in England in 1791 and in the United States at Boston and also in New York in the early 1840's. All of these early so-called schools were for adults. They were taught to read and to do simple handicraft work.

The School for the Blind at Salem. There seems to be no record showing the exact nature of early proposals for the education of the blind in Oregon. Governor A. C. Gibbs, in 1862, in his message to the Legislature, recommended that provision be made for the education of the deaf and blind as soon as the state was in a position to do so. In 1892 the first year for which any definite information is available, the Legislature passed a law providing for the appropriation of $4,000 to be expended for the education of blind persons of this state. Full discretion was given the State Board of Education to rent buildings, employ teachers, purchase books and provide for boarding the scholars. This Board of Education was the same as the Board of School Land Commissioners which
was composed of the Governor, the Secretary of State and the State Treasurer.

The school opened in February 1873, fourteen years after Oregon became a State. This early school, like other schools for the education of the blind, was not primarily for young children, though the ages of the first five pupils ranged from twelve to thirty-two years.

Although provision had been made for the use of funds derived from payments by the students, parents or guardians gave no money. The school was from the very beginning a free school, and still is free to all visually handicapped children of the state of Oregon.

In 1883 the Legislature appropriated $3,250 for the purchase of a building and three lots on 12th street in Salem. At that time the age of students ranged from seventeen years to forty years. In 1894 the school moved to its present location at South Church and Mission Streets in Salem.

A compulsory school law passed in 1907 provided that all children from the ages of nine to sixteen years must attend public school unless their education was being otherwise provided. This law applied to those children eligible for entrance into the school for the blind at Salem. In 1913 further provisions were made. The Legislature established the Oregon State Board of Control,
composed of the Secretary of State and the State Treasurer, and giving this board governing power over the several state institutions, including the Oregon School for the Blind. This institution was designated as a free training school for blind persons. The length of time that any pupil might continue in school was not to exceed ten years. In special cases the board might extend the time from year to year. It was further specified that no pupil should be detained in school after it had been ascertained that such pupil had ceased to make progress or was not being benefited.

At the present time, 1941, it is usual to give a pupil a two year trial. This length of time is taken to make sure every means and facility toward adjustment has been tried.

The school grounds at Salem cover seven acres. A large wooden, three story building houses the school. On the first floor are the living quarters of the superintendent, the school office, the kindergarten room and an auditorium. This assembly hall has both a pipe organ and a piano. The second and third floors of the main building contain class rooms as well as the rooms of the resident teachers. Rooms for music practice and handicrafts are in the basement. The wooden annex contains the kitchen and dining rooms. The grade school pupils sit usually eight at a table, the boys and girls being seated separately.

Apart from the grade school dining room is an attractive
dining room for high school students where boys and girls together sit six to a table. Each table is served by one of their own group. About once a month the seating is changed so that a pupil has different table-companions during the school year. The teaching staff as well as the superintendent and his wife, each have their own dining room in the annex. On the third floor of the annex is a small gymnasium.

The two dormitories for the children are of brick. The hospital rooms are on the third floor of the boys' dormitory. A large well furnished sitting room with a splendid fireplace, a piano and a phonograph make a home-like atmosphere. Many of the boys have a talking book machine in their rooms. In the basement of the dormitory is a good sized play room used during rainy weather.

The girls dormitory contains a separate sitting room for the older girls. It is a home-like room with furnishings that include a piano. The younger girls have a sitting room used also as a play-room. Some of the sun-porches of the dormitory are used for sleeping a number of the children.

It is expected that within a few years the present wooden school building which is very much overcrowded will be replaced with a modern fireproof one. A larger school building will enable the various departments to try out
the latest methods in the education of the visually handicapped.

The enrolment during the past biennium is shown in the following table.

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present July 1, 1938</td>
<td>60</td>
<td>34</td>
<td>94</td>
</tr>
<tr>
<td>Received during biennium</td>
<td>28</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>Total cared for</td>
<td>88</td>
<td>53</td>
<td>141</td>
</tr>
<tr>
<td>Left school</td>
<td>28</td>
<td>18</td>
<td>46</td>
</tr>
<tr>
<td>Present June 30, 1940</td>
<td>60</td>
<td>35</td>
<td>95</td>
</tr>
</tbody>
</table>

Cost of Educating Pupils at Oregon State School for the Blind. To educate the visually handicapped children of the state of Oregon, the sum of $97,651.77 was appropriated for the biennium 1938-1940. This sum took care of maintenance, (food, housing, etc.), transportation, teachers salaries and salary of the superintendent. The cost per capita for each child was $453.60.

The average non-educational per capita cost in residential schools for the blind has been estimated at

1Oregon State Board of Control, Biennial Report, 1938-1940, p. 176.

2Oregon State Board of Control, Biennial Report, 1938-1940, p. 183
$252.08 for Western States. This would make the actual educational sum an estimated $201.52. While this figure for the Oregon State School for the Blind is only an approximate sum, it does bring out the fact that the state is allowing a large amount for the education of the visually handicapped.

From the 36th Biennial Report of the Superintendent of Public Instruction of the state of Oregon, we find that the per capita cost of instruction in public schools for Marion County (the Oregon State School for the Blind is located in Marion County), is $78.45. The state of Oregon is spending more than five and a half times the amount of money on the education of the visually handicapped child than Marion County does for a child in its public schools.

The average salary of a teacher at the Oregon State School for the Blind is $853.72 for a period of nine months. Since teachers are in residence an adjustment sum

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of $515.00 must be added. This brings the salary to $1,168.72 for a period of nine months. Marion County combined average salaries for teachers during 1939-1940 was $1,303.59. Teachers of the visually handicapped receive on an average $134.67 less salary than teachers in the public schools of Marion County.

The state of Oregon spends nearly $100,000 biennially to educate the visually handicapped.

The following chapters take into consideration the basic differences between the visually handicapped and children with sight, both in regard to health and mental attitudes.

From the following table it will be seen that the causes of defective vision of pupils attending the Oregon State School for the Blind during the biennial period 1938 to 1940 were 9.2 per cent due to accidents, 37.5 per cent from congenital causes, 21.9 per cent due to disease and illness and 31.2 per cent due to refractive errors.

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5 Lowenfeld, Berthold, Teachers of the Blind, p. 34.

### TABLE II

Causes of Defective Vision of Those Received at the Oregon State School for the Blind During the Biennial Period July 1, 1938 to June 30, 1940

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<thead>
<tr>
<th>Assigned Causes</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accident</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enucleated</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Optic Atrophy</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trauma</td>
<td>7</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td><strong>Congenital</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albinism</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Albinism with nystagmus</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Amblyopia</td>
<td>4</td>
<td></td>
<td>4</td>
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<tr>
<td>Amblyopia with nystagmus</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Buphthalmus</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cataract</td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Cataract with anaridia</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cataract with coloboma</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cataract with nystagmus</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Coloboma</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Coloboma with nystagmus</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dislocated lens</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Nystagmus</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Optic atrophy</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Optic atrophy with nystagmus</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Strabismus</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41</td>
<td>12</td>
<td>53</td>
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7Oregon State Board of Control, Biennial Report, 1938-1940, p. 176.
### TABLE II, Continued

**ASSIGNED CAUSES**

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<th>Female</th>
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<td><strong>Disease and Illness</strong> (As measles, trachoma, syphilis, tuberculosis, menengitis, etc., and nutritional deficiencies)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cataract</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Choroiditis</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Chorio-retinitis</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Corneal opacities with interstitial keratitis</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Iritis</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Optic atrophy</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Panophthalmitis</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Retinitis</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Retinitis pigmentosis</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Retinitis pigmentosis with nystagmus</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Retinitis pigmentosis with nystagmus and strabismus</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Trauma</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
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<td>17</td>
<td>31</td>
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**Refractive Errors**

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<th>Female</th>
<th>Total</th>
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<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Astigmatism, hyperopic</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Astigmatism, mixed</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Astigmatism, myopic</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Astigmatism with nystagmus</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Astigmatism with strabismus</td>
<td>1</td>
<td>1</td>
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<tr>
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<td>5</td>
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</tr>
<tr>
<td>Hyperopia with astigmatism</td>
<td>1</td>
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<td>2</td>
</tr>
<tr>
<td>Hyperopia, high</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Hyperopia, high with astigmatism</td>
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<td>1</td>
<td>2</td>
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<tr>
<td>Myopia, high</td>
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<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Myopia, high with astigmatism</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Myopia, high with degeneration</td>
<td>3</td>
<td>5</td>
<td>8</td>
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<tr>
<td>Myopia, high with nystagmus</td>
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<tr>
<td>Myopia with cataract</td>
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<td>1</td>
<td>2</td>
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<tr>
<td>Myopia with degeneration</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Myopia with dislocated lens</td>
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<td>2</td>
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<tr>
<td></td>
<td>26</td>
<td>18</td>
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CHAPTER II

BASIC DIFFERENCES BETWEEN THE VISUALLY HANDICAPPED AND THE SIGHTED

**Definition of Blindness.** The accepted definition of blindness is vision insufficient for use in the ordinary activities of life for which sight is essential. Visual acuity is measured by standard tests. One of the best known is the Snellen. The individual is tested by reading lines of type graduated in size at given distances. For example, if at a distance of 20 feet he can read only the large type which a person of normal vision can read at a distance of 200 feet, he is said to have 20/200 visual acuity. A person with visual acuity of 20/20 would have 100 per cent vision, whereas 20/40 would indicate 50 per cent, and 20/200 only 10 per cent.\(^1\)

Visual efficiency depends upon the field of vision and muscular control. Muscular control refers to the muscles which move the eyeballs in the fields of vision of the two eyes. Central visual acuity has relation to the ability to see clearly the size, form and color of objects which are in direct line of vision of the eye. Both the area of direct vision and the area around it are useful in giving a visual consciousness of objects not in direct line of vision. It may happen that a person has \(^1\)See Snellen's Visually Acuity Rating.
**TABLE III**

**Snellen's Visual Acuity Rating**

<table>
<thead>
<tr>
<th>Visual Acuity</th>
<th>Percentage of Sight</th>
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<tbody>
<tr>
<td>20/20</td>
<td>100</td>
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<tr>
<td>20/25</td>
<td>80</td>
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<tr>
<td>20/30</td>
<td>67</td>
</tr>
<tr>
<td>20/40</td>
<td>50</td>
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<td>20/50</td>
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<td>20/60</td>
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<td>20/70</td>
<td>29</td>
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<td>20/80</td>
<td>25</td>
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<td>20/100</td>
<td>20</td>
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<td>20/200</td>
<td>10</td>
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<tr>
<td>20/300</td>
<td>7</td>
</tr>
<tr>
<td>20/400</td>
<td>5</td>
</tr>
</tbody>
</table>
practically normal visual acuity. But the field of vision is so restricted that he can see only a very limited area at a time, and can make little practical use of his vision. Such an individual has a visual handicap which limits choice of occupation and from an economic point of view, he is blind.

**Types of Blindness Among the Visually Handicapped.**

There are three types found among the blind. First, those born blind, second, those who are blind but with visual memory, and third, those who are partially blind. It can readily be seen that each of these groups require some degree of differentiation in the handling of the curriculum.

Besides these three types of blindness there are also those having varying degrees of impaired sight who can be benefited by being placed in Sight Saving classes. In Sight Saving classes use is made of whatever limited vision is left, but under conditions favorable to the use of the eyes. The best possible lighting arrangements, adjustable seats and desks, use of very large type, mostly 24 point² on unglazed cream colored paper, use of soft pencils, all contribute to the saving of sight. Special instruction is given to help hold in check progressive eye troubles, to keep what sight is present from getting worse

²See sample of type.
Few parents realize that during the progress of these diseases the eyes of the patient may develop serious ulcers or other dangerous conditions, which, unless skilfully treated, may leave a white film over the "sight" of the eye and cause blindness. Even skilful treatment is not
and subjecting the eyes to any further strain.

The interest shown in the conservation of sight is attested by the fact there are now 627 Sight Saving classes throughout the country with an approximate enrolment of 8800 grade and junior high school pupils.

The Oregon State School for the Blind not only takes pupils with all three types of blindness but also those with impaired sight needing Sight Saving work.

TABLE IV

EXTENT OF VISION OF STUDENTS ATTENDING THE OREGON STATE SCHOOL FOR THE BLIND* (1940)

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
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<td>15</td>
</tr>
<tr>
<td>Light Perception</td>
<td>7</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Educationally blind (20/200 or less)</td>
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<td>22</td>
<td>56</td>
</tr>
<tr>
<td>Sight Saving (more than 20/200)</td>
<td>40</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>62</td>
<td>141</td>
</tr>
</tbody>
</table>

Health Problems. Before admission to the school at Salem, a detailed report on the health of the child is submitted. Every student entering school is examined thoroughly. In addition, as much as possible of the case

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3 Statistics published Sept., 1941 by the National Society for Prevention of Blindness, Inc., New York City.

4 Biennial Report 1938-40, Oregon State Board of Control, p. 177.
History is learned. Medical treatment when necessary is usually at the expense of the state. All physical defects are carefully noted as such defects have a direct bearing upon the techniques used in helping the visually handicapped adjust himself to the school curriculum.

While the general health of a large number of blind children and children having impaired vision is the same as the seeing, a number have poor physiques and lowered physical stamina. Due partly to a more confined and inactive life, they have a general lassitude and are less robust. A large proportion have other defects and ailments besides poor eyesight. These defects include heart trouble, digestive complaints and paralysis. The disease or accident which has caused loss of sight may have caused injury to other parts of the body as well. In other cases there may be an inherited weakness or particular defect of which blindness is only one symptom. In some instances poor health may be due to actual neglect or failure to understand the particular needs of the blind child. This might even contribute to physical loss.

Statistics compiled by insurance companies show that the earlier the loss of sight, the smaller is the proportion of the blind who attain to advanced life. It is evident that blindness does have a marked effect upon health. It should be kept in mind that many stimuli which
prompt seeing children to action are unnoticed by the blind. Because the blind have fewer incentives to variations in behavior their occupations tend to become stereotyped, routine, uninteresting.

Since the eye continually supplies impulses to new modes of action and new powers of muscular activity, these impulses, lacking in the blind, are less responsive and immobile. The blind have no means of understanding the world about them except by personally exploring it. This means of understanding the world is slower and more uncertain as well as more fatiguing. To know the furnishings of a room means a long series of movements and tactile explorations. The blind are unable to move in unfamiliar surroundings with complete freedom. Unless conditions about them are favorable the blind become sedentary in habit. The blind child has less incentive than the seeing to become independent, for the seeing child is encouraged by imitation of others and notices things which he can do and get for himself. Since incentives are lacking for the blind child, special opportunities are needed to promote the physical health of the visually handicapped.

Mental Attitudes. Since it is easy for the blind to become sedentary and to shun intercourse with people outside a narrow circle of relatives and friends he may
develop morbid fears of life and society. The blind can be helped and saved from this by becoming seekers of experiences, refusing to be daunted by handicaps. The value of the studies in the curriculum will only be slight if the child has but a limited store of direct experiences to which he can refer the wider generalizations of formal education.

Every individual has innate tendencies to acquire certain patterns of emotional behavior. Under guidance and control of environmental and educational influences the instinctive tendencies grow into temperaments and attitudes of mind. The blind child is said to be more susceptible to suggestion, more ready to respond to an atmosphere of elation or despondency, to encouragement or repression. Emotional states of blind persons seem to last longer than those of sighted people. Perhaps this is due to the relative scarcity of distracting stimuli. Thus experience, strongly tinged with emotion, tends to make a deeper impression on the mind. The same absence of distraction makes the blind more prone to introspection and moods and to yield to the attractions of a dream life. Carried to extreme it may make them unfit for a life of realities. Another serious danger to the temperament of the blind arises from a wrong attitude of society toward them. In turn, this induces on their part a wrong
attitude towards society. If the social circle in which they live is habitually overindulgent, then the motive for any independent effort is lacking. The seeing are apt to underestimate the genuine capacities of the blind.

While the blind child has to learn to adjust himself physically, mentally and emotionally, the greatest adjustment is emotional. One may achieve an alert mind with a wealth of background obtained through his other senses. If he has not attained an emotional adjustment to his handicap he has failed. Since this lack of emotional adjustment accounts for many failures, attention must be given to the blind child’s attitude toward his handicap. Blindness should be treated in a matter-of-fact way and means should be found for developing opportunities and a sense of usefulness in the family circle. Services rendered to other members of the family or at school make a child a participant and an accepted member rather than a spoiled receiver of attention. If there is a differentiation made in the behavior toward the handicapped child, it only accentuates his handicap. An ill-trained blind child becomes the ill-natured blind adult and nothing is more pathetic or unfortunate than those blind adults who are so disagreeable that no one is willing to give them companionship. Creating a delight in doing things prevents unwholesome feeling and the attitude that the world owes him
something. A blind child must be helped to develop a well rounded personality and an insistence on self-help. To aid in the development of emotional stability, a teacher must control his own sympathy for the plight of the blind child. In schools for the blind, it is at once taken for granted that there are certain things which the pupil must do for himself. Everything possible is done to help develop a feeling of self-reliance. If a child has advanced into the grades he should be able to dress and feed himself. If he simply cannot learn to do these things, it is felt he should be transferred to the school for the feeble-minded. Most of the students appreciate the chance to live an independent life, and are generally more active and happy at school than in their homes. Part of the charm of the school is the association with children who have similar difficulties. In public schools and even in their own homes they are too often made to feel conspicuous and out of place.

Wayne Satchell in his thesis, "The Status of the Blind in Oregon" estimates that about one-fifth of the children who are blind, come from homes in which the normal parental relationship has been broken either by separation,

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divorce or death. With the exception of the "no light perception" classification, the percentage coming from broken homes increases as the degree of vision decreases. Just why blind children seem to come from families in which the normal parental relationship has been broken is not quite clear, but it does indicate that many of these blind children not only have the handicap of poor vision, but the additional handicap of a broken home. The conditions which have brought about the disorganized home would tend to have a detrimental effect on the mental attitudes and adjustment of the blind child. Emotional conflicts due to unwise treatment in the home whether characterized by overindulgence or excessive restraint, or an unhappy home life, all have a bearing on educational retardation. It is just as necessary to find out the mental rating and degree of retardation among the visually handicapped, as it is among the visually normal.

Mental Measurements for the Blind. The first achievement test to be put into Braille was a simple reading test. Reading seemed a natural subject for the first attempts at measurement because so large a part of school work depends upon facility and accuracy in handling Braille. The attainment of reasonable proficiency in reading during school days is fundamentally important for any adult who hopes to keep in touch with the world of people
and events. The test selected was easily adapted for the blind. Besides proving the possibility of using with the blind child standard tests constructed for the seeing, it brought to light great differences in reading rate and in comprehension within grades and in groups selected according to years of school experience and mentality. Tests showed that in general blind children read about one-third as fast, and write with a stylus about one half as fast as seeing children having the same number of years' experience in school work. This fact has been of greatest importance in the adaptation of all timed tests which must be given in Braille. Other conclusions derived from this experiment were that one could not expect blind pupils below the fourth grade to be far enough advanced in reading to take group tests in Braille. Late entrance into schools for the blind and the slowness of Braille reading might be expected to cause an age-grade retardation of two or more years. Comprehension in reading is correlated positively with general intelligence.

In the Hayes-Binet tests especially adapted for the blind by Dr. Samuel P. Hayes, Terman's selections are followed as far as possible. Dr. Hayes is now working on a revised set of tests which are expected to be more accurate. The tests in use at present give teachers a general idea of their pupils' work.
The blind have a good deal of difficulty with tests requiring matching since this technique involves quite a tax on the memory or frequent rereadings.

An adaptation of the Kuhlmann-Anderson Tests has been worked out by Ethel N. Fortner, supervisor of the school curriculum at the Oregon School for the Blind. These tests are for grades six through grade twelve. Mrs. Fortner recommends that the very low score student be given an individual test. Individual tests have the advantages of greater accuracy and give opportunity for other diagnosis besides that of intelligence. The greatest drawback to individual testing is that it is so time-consuming.

In adapting a group test for use with the blind, one is confronted with difficulties whether he chooses the oral, or written method. The oral group test dictated to students using typewriters is difficult to time and standardize. It makes little allowance for individual differences, in that the pupil has no chance to go back over his work to improve it if he finishes in less than the time allowed. Because blind pupils attain a reading rate of only one-third that of seeing pupils, it has been recommended that a three for one differential be used in group tests of blind pupils. Poor Braille readers who are numerous in any school for the blind are apt to make very
low scores in a group test, if Braille is used. For those making a low score either in the oral or written group method, individual testing is used to check results.

Since the school curriculum at the Oregon School for the Blind is based upon individual differences all information about each child is valuable.
CHAPTER III

ADJUSTMENTS IN COURSES AND METHODS

Difficulty of Finding Available Text Books. At the Oregon State School for the Blind an attempt is made to approximate the Oregon State Educational Courses of study as nearly as possible with the material available. The school is not strictly a school for the blind. Since the State of Oregon is mostly a rural area, few children with poor vision have the opportunity to attend a sight-saving class with the exception of those living in Portland or vicinity. The school at Salem has undertaken the training of children having any visual difficulties of a serious nature. Because of varying degrees of visual disability and because of a small staff at the school, the sight-saving pupils are in the same classes with the blind pupils, except in the skill subjects. For classes which have mastered reading and writing, it is possible to use Clear Type as well as Braille text books in the same class. It has been possible to adapt public school materials in some cases, and the school itself has made valuable contributions as it has both a Braille press and Clear Type machines. By this means the school has been able to work out a course of study for the blind and the partially sighted. It has been able to teach them in mixed groups.
after they have mastered the fundamentals of reading and writing.

While this is true of the grade school work, the high school department has to face another difficulty caused by the great variance in the degrees of disability. Not all those who need segregated instruction are completely without sight. Eye conditions vary from those with ability to perceive light to whose whose condition gives them, at intervals, almost normal sight. This means that each class may contain some who can read only Braille, others who can read Clear Type and a few who can read ordinary print for short periods.

Clear Type texts are available for grade school and junior high school levels only. Clear Type books are high in price, from $3 to $4 a volume. As an example, the Elson Basic Reader, for fifth grade is priced at $12 for the four volumes making this set.

Braille books are expensive too. For instance, the several volumes making a complete text book of American History cost $2.50.

For these reasons, the high cost of Braille books and the entire lack of textbooks printed in Clear Type for high schools, the procedure generally employed for high school courses at the Oregon State School for the Blind has been oral presentation of the texts recommended by the
Oregon State Course of Study. In some cases, the school has been able to arrange a preparation period with a reader, with the lesson period used for discussion, project work, and the presentation of supplementary material. The Talking Book has been of immense value in such classes.

The Talking Book. The Talking Book\(^1\), invented by Frank L. Dyer, consists of the reproducer and long-playing phonograph records. Talking Books require for their reproduction a special type of phonograph not available on the market. As most blind people are not in a financial situation which permits them to meet the cost of such reproducers the Work Projects Administration set up a project for the manufacture of such machines under the supervision of the American Foundation for the Blind. This project is sponsored by the Library of Congress and the machines when produced are the property of that library. The machines are allotted to the various states in the proportion that their general population bears to the total population of the United States. The local agency for the blind in each state takes responsibility for maintaining and lending these machines to blind people free of

\(^1\)Federal Provisions of Benefit to the Blind, 1941.
Under this project over 20,000 Talking Book machines have been produced.

Congress has recently appropriated $250,000 annually for making records for the Talking Book machines. The American Foundation for the Blind made its recording studios available to the Library of Congress for the recording of Talking Books so that the cost could be kept to a minimum. Loans of records are obtained through the public libraries throughout the country having departments for the blind. The records are mailed free of charge. Since less than one quarter of the number of blind people of this country can read Braille with any degree of satisfaction, the Talking Book serves a vast group who had been forced to rely upon others for direct contact with books.

The schools for blind children soon realized that the Talking Book had a place as an educational medium. The American Printing House for the Blind set up a sound-recording department to supply the demand for such equipment, and also offered its recording facilities to the Library of Congress.

The Talking Book machine may be equipped with radio as well as phonographic combination as a means of entertainment and instruction.

Curricula as Planned for Primary Grades. In selecting and formulating the material of the curriculum
the chief consideration is its usefulness to the blind child. This does not mean that utility is the only thing considered. In the main, the curriculum at the school in Salem is devised so as to be of service to the blind child in making him independent in his ways and thoughts. It seeks to supply him with the information which he is not able to obtain for himself. The learning is informal but is planned to supply a background of useful experience.

The school room for the primary grades at the Oregon State School for the Blind is a large, sunny room with window boxes of plants and ferns. To add to the cheerful atmosphere there is a canary which the children have named "Happy". Incidentally, they derive much pleasure in taking care of it.

A new student is introduced to each class by the teacher in charge, and then one of the group who has been a pupil for some time, volunteers to introduce or show the room to the new student. This is done by taking the hand of the new arrival and helping him feel all the furnishings and equipment. In this way the new pupil learns his surroundings. Many times in the course of the next few weeks, the newcomer is given an opportunity to explore the equipment in the school room, for only in this way can he become acquainted with his surroundings.

The furniture of the room is suitable for the
requirements of the young child. The large table, in the form of a horseshoe is low and painted a light cream color. This shape is easy both for the teacher and for the pupils and gives ample room for play things or the large book rests and Braille books. The chairs are low, small and light weight. There are low cupboards and lockers for toys and other materials. Each child has a special place for his things. It is expected that all equipment will be kept in its place when not in use. By keeping equipment in order, the pupil learns one of the many lessons in neatness as well as self-reliance. It is imperative that every visually handicapped person find his materials. It saves valuable time as well as nerve strain.

In the primary grades the child is provided with abundant material of all kinds to touch and handle. Frequently the blind child is muscarily immature, but by providing tactile materials, such as clay, or India rubber articles which can be squeezed, the muscles of the hand can be strengthened. The muscles of the fingers are all too often flabby through lack of use. Constructional toys made of parts which fit into other parts for which some pressure is needed, are a help to strengthen fingers. Puzzles of a half dozen pieces or so, which, when put together form the outline of a bird, cat or dog, serve the double purpose of having to be handled, as well as giving
useful information. Threading wooden beads of various sizes, using a shoe string having a stiff tip, develops touch and finger muscles.

The primary classroom soon becomes a place where the visually handicapped child feels familiar. He is encouraged to explore the room and its contents and to inquire about the things he encounters in his exploring. He learns the correct names of the articles he handles and forms some idea of their size and shape, and so enlarges his experience and vocabulary.

All normal children develop through imitation, but the blind child is cut off from most of what the seeing child normally imitates, and his play therefore, is apt to be aimless and suffers from lack of suitable stimulation and motive. The blind child has to be taught how to play and much time is given to constructive play. The children thoroughly enjoy playing store. This is excellent constructive play, for handling empty containers gives an idea of the size of the article as well as use of coins. Real money is used in this game, for it is a part of the training necessary for life outside of school.

The schedule includes chorus. The children learn folk songs receiving the first lessons in voice. The rhythm band is of prime importance in teaching music to small children. The band is composed of the triangle,
cymbals, wood-block, jingle-clogs, bells, rhythm sticks, castinets, drum and tambourine.

To promote interest in living things, there are stories about nature subjects. The children are given a chance to handle objects in connection with the stories. In the spring, when everyone is interested in seeds and gardening, they learn the difference in the size of seeds by handling various kinds and learn of their growth by sprouting seeds on damp blotting paper. In this way they learn root and leaf formation. In every possible way during the primary grades the child is taught how to use his hands as it is one of the most important and necessary techniques in adapting the visually handicapped to the school curriculum.

Techniques Used in Teaching the Blind to Read. It is important that blind children learn to read easily. Reading will keep them from developing those habits of indolence and daydreaming which are the despair of every teacher of blind pupils. Although any standard reading method in use with seeing children may be adapted to the special problem of teaching blind children, there are fundamental differences between the blind pupil and the seeing which require special procedure.

Attitude. Among the differences encountered is that of attitudes. A blind child reads grudgingly or eagerly.
There are no pictures in his books to promote interest or curiosity. In order that the child may early desire to learn to read he must have had previous experience which is sufficiently varied to lend meaning to the words he reads. The richness of a child's past experiences has an influence on his interest in reading. With children whose experiences have been limited by some physical handicap an important part is played by everyday stimulations to healthy curiosity and thought.

Another difficulty is to energise those children who are contentedly inert. This problem is especially difficult as many of the pupils have been so pampered that they have no incentive, nor have they been given opportunity to develop initiative. A few have lost spontaneity through long or enervating illness. Habits once acquired by children of poor mentality are very difficult to break, and the insidious physical and mental habit of inertia is the most difficult of all.

Motor clumsiness is a great drawback to blind children. The ability to acquire new experiences is often dependent on skill in using the hands.

**Age at Time of Learning to Read.** Blind children tend to be older than seeing children of the same grade\(^2\).

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\(^2\)Table IV.
The content of the readers, therefore, does not always interest them. That more of them do not find these readers uninteresting is probably due to the fact that they have developed more slowly, either because of dullness, or because of lack of opportunity. Although training in the pre-reading period may have removed the most glaring deficiencies in the children's vocabulary, a child will often appear unaccountably stupid in reading when the only trouble is that he does not know what he is reading. Various tests of blind children's vocabularies point to a marked retardation. Terman's group vocabulary test was used with more than four hundred blind children and showed a definite retardation of one year for the eleven-year-olds, three years for the thirteen-year-olds and four years for the sixteen-year-olds. The individual vocabulary test of the Binet series showed a similar retardation. Restricted life experiences would seem to be the principle reason for this condition.

**Posture.** Correct posture bears a very close relation to reading efficiency and it bears an even closer relationship to the development of interest in reading. Point reading brings into play the muscles of the hands,

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3Hayes, Samuel Perkins, Contributions to a Psychology of Blindness, p. 280.


<table>
<thead>
<tr>
<th>Age</th>
<th>Boys</th>
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<tr>
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</table>

\(^4\)Oregon State Board of Control, Biennial Report 1938-1940, p. 177.
arms, shoulders, back and abdomen. Strain on these muscles is not felt for a considerable period of time provided the reader maintains a well poised position of the body as he reads. If he reads with his body and book twisted far out of alignment, within a short time his hands and arms are tired and his abdominal muscles feel stiff. As soon as muscular strain is present the child's attention begins to wander and his interest in what he is reading is lost.

Position of Book. Closely related to good posture during reading is the position of the book. The better readers keep the book nearly parallel with the edge of the table. The child's reading fingers should form an acute angle with the plane of the page which brings the pulp of the finger into sharpest contact with the top row of dots, yet allows slight pressure on the third row. Both right-handed and left-handed children can read with two hands at once, but most children can read well with either hand. Excessive up-and-down motion of the fingertips is discouraged, since it retards the reading process and is an indication of letter reading rather than of word reading. The majority of the dots in any word are likely to be in the two upper rows. All the letters of the alphabet have

\[\text{See Illustration of Braille.}\]
dots in the first two rows, whereas only the last sixteen have dots in the third or lower row. For this reason, the child is trained to observe the tops of the words with more care than he does the bottoms of them. If his finger strays to the lower half of the words, where dots are scarce and irregular in occurrence, he loses the sense of what he is reading and so is not aware when he has slipped down to the next line.

In most primary grades for the blind there are children who border on feeble-mindedness and who are incapable of sustained interest in the content of the Braille page. If these children had sight, many probably could learn to read quite satisfactorily in comparison with their level of intelligence. Carrying the finger over whole words and groups of words requires a degree of concentrated attention which is impossible for many children.

The blind child's finger must travel over every word as he comes to it, although in silent reading it can ignore many of the details. The strain of remembering a long succession of small touch impressions is much greater than most people realize. As an illustration of the added strain that is placed upon the attention of the blind child, it is interesting to consider this sentence, "Little Jack Horner sat in the corner". Three inches of
14 point type is sufficient for this in ink print, and three eye pauses would probably be enough for reading it, if the child is familiar with the individual words. The same line in Braille takes nine and a half inches. These seven words which can be covered by a sighted child with a few glances of the eyes, must be read by the blind child with continuous movement of the fingers over all seven words. Unless the blind child's fingers distinguish the difference between each word he could substitute other words without knowing that he was wrong until he met the word in some other sentence. Insensitivity of the fingertips is more common among children than has been realised. Sometimes this results from the prevalence among them of physical disabilities which produce insensitivity, such as partial paralysis, various affections of the nervous system and loss of fingers. A child who cannot interpret what his fingers feel has great difficulty in learning to read. If the insensitivity cannot be remedied the problem becomes one of finding adequate means of conveying to the child knowledge which other pupils are able to get through finger reading.

**Contractions in Braille.** By consulting the Braille sheet, it will be noticed that there are many contractions used in Braille instead of spelling out each word. Postponing the introduction of contractions until the child
has had more experience in reading and writing, necessi-
tates the relearning of many word forms which might other-
wise be fixed in his mind by uninterrupted use. Nearly all books in use at the present time for primary grades spell out each word.

Nervous Tension. Educators have long known that there is a positive correlation between ineffective speech and inefficient reading. It has been found that there is a larger percentage of blind children having speech de-
fects than among sighted children. It may be that the abnormal conditions of life which most blind children must meet are responsible for many of the shortcomings in speech which have been found among them. The excessive nervous tension usually caused by some emotional trouble has to be treated before improvement can be expected in either speech or reading. A frequent cause of emotional instability is fear. The most common type is the fear of being hurt while moving around. A few seem never to experience this fear; others seem to be in constant dread of being hurt and so live under great strain.

Teaching Reading and Writing in Sight Saving Classes. The same methods used to teach reading and writ-
ing in public schools apply to those pupils using the Clear Type print. As noted in the earlier pages of this thesis, the books used for Clear Type are printed in
large characters on unglazed cream colored paper. This kind of paper cuts down glare to a minimum.

Each child using Clear Type books is provided with an adjustable book rest and soon learns the correct adjustment to fit his special needs. For writing, a soft, heavy, black pencil is used. Any written work demonstrated on the blackboard, a light yellow free art chalk takes the place of ordinary white chalk. Each letter written on the blackboard is about four inches high. These devices help to eliminate eye strain and so are of value to those pupils suffering from impaired vision.

Techniques Used in Teaching the Blind to Write. There are many problems and difficulties in learning to write Braille. Writing by means of the slate and stylus requires much skill. In the first place, the dot positions in each cell or division of the steel frame are small, therefore it requires a high degree of muscular coordination and accuracy to find the correct position with the stylus. When using the stylus just the right degree of pressure is necessary to form the dot. Too great a pressure punches a hole in the paper and will be incapable of being read. Insufficient pressure will not make the dot stand up enough to be read.

6See Illustration of Braille Slate and Stylus.
Embossing is done by slight pressure of the stylus in the cells of the slate. Writing is done from right to left and when the paper is taken out of the slate and turned over, it can be read from left to right.
In writing with the stylus the embossing is done from right to left. When the paper is taken out of the slate and turned over, it can be read in the regular manner from left to right.

It will be noticed by consulting the Braille alphabet that several impressions of the stylus are needed to make nearly all of the letters. This makes writing by hand very slow and fatiguing as well.

Braille machines operating on the principle of the typewriter are a great timesaver. One type of American machine was invented by Dr. F. H. Hall and is often referred to as the Hall-Braille writer. These machines have six keys, three on each side of a thumb spacer. Several keys may be pressed at the same time forming the total number of points making up a letter. The advantage of these machines over the hand stylus system is that it is much quicker, less fatiguing and work may be read without being taken out of the machine. One of the disadvantages of the machine is its expense, about forty dollars, while a slate costs but a dollar and the stylus ten cents. Another disadvantage is that the machine takes up considerable space and weighs anywhere from five to ten pounds. The slate, being flat, can be carried in a purse or pocket. The Hall-Braille writer is very noisy and far more conspicuous to use than the slate. Braille machines are very
useful in the school room but few pupils have need of one outside. The Oregon State School for the Blind is well equipped with these machines and the first lessons in writing Braille are given by this method.

Techniques Used for Arithmetic. Special apparatus is necessary in teaching arithmetic. As need of arithmetic in the ordinary daily life of most blind people will be of the simplest, practical knowledge is all that is necessary. A blind person needs to know the simple processes. Addition, subtraction, the multiplication tables, simple fractions and percentages would come under necessary knowledge. A blind child is taught with tolerable accuracy practical demonstration of an inch, a foot and a yard. He learns that a walk of twenty minutes or so means a mile. He is also intimate with the tactual knowledge of pounds or quarts. The working out of simple problems which can be demonstrated by actual doing is more useful to the blind person than complicated theoretical problems.

The Taylor Slate. One apparatus used by the blind for computation is the Taylor Slate. It is a peg board made of metal, set in a frame 12" x 7½" x 5/8", and weighs about two pounds. The holes, called cells, are in the form of eight-cornered stars. The square pegs are

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7See Illustration of Taylor Slate.
The Taylor Slate Used for Computation.

It is like a peg board and made of metal. The pegs are square pieces of raised type. The numbers are formed by the position of the peg in the eight-cornered holes or cells.
pieces of type having a raised bar along the edge of one end and two raised points on one edge of the opposite end. Placing the peg in a cell with the raised-bar end up so that the bar is in a vertical or a horizontal position denotes the even numbers; the bar in the slanting positions denotes the odd numbers, i.e., the raised bar placed vertically at the left signifies figure 2; the bar placed horizontally at the top signifies figure 4; the bar vertically on the right signifies figure 6; and the bar horizontally at the bottom signifies figure 8; the bar in the slanting position, lower left, is figure 1; upper left is figure 3; upper right is figure 5; and lower right is figure 7. The opposite end of the peg with the two raised points up used in the slanting position, lower left, signifies the figure 9; used in the vertical position left side, it signifies zero. The other positions of the two raised points signify the various mathematical operations.

Each peg placed in a cell denotes one figure. For numbers with more than one figure, successive cells in the row are filled with pegs in the proper positions. The decimal point is indicated by skipping a cell or peghole.

The greatest drawback to the arithmetic slate is that one is unable to write a description or other information. As the arithmetical needs of most blind persons
are not complicated, mental arithmetic is stressed in the classroom. Few blind adults ever have occasion to use the Taylor frame, though its cost is only three dollars and the type about one cent each.

**Geography.** Another subject needing special apparatus, is geography. To obtain realistic and first-hand conception of the wide fields of knowledge which are grouped together under the name of geography is, for the blind child, a task of overwhelming difficulty. Some aspects of this knowledge seem better left unattempted. The phases of the moon, to mention but one item taken at random which would mean an expenditure of time, labor and ingenuity out of all proportion to the results. The dangers of mere verbal description are many.

The main use of a map for the blind child is to show relative positions of towns and countries. Tangible apparatus for geography is quite expensive. For instance, a dissected wooden relief map of the United States 38" x 47" costs as much as $200. An undissected map of the United States 38" x 37" outlined with tacks, large cities and capitols indicated by different kinds of nail heads, cost $178. The dissected wooden maps, no relief, to use as puzzle maps, 30" x 48", are $30. One thing much appreciated by the school at Salem has been the maps of Europe, indicating the changes taking place during the present war.
These maps, made by the WPA, are represented by raised outlines. With the aid of these maps, kept on the bulletin board, world events may be followed.

Geography is partly a social science. It is a study of people in relation to their environment, and this human aspect is one that is stressed in work with visually handicapped children. The study of environment itself gives opportunities for activity, and avoids the more passive attitude of listening to description. The vivid presentation of life that can be brought into the classroom of an ordinary school by means of slides and films is unattainable for the blind child. To understand the relations between the productions of a country and its natural regions and people is well within the powers of a blind student. The vital thing in presenting any subject to the blind is to arouse interest in the life of the seeing world.

Nature Study. This is an informal study of nature for children in the third, fourth and fifth grades. The aim is to stimulate interest in the out-of-doors. Much information and experience can be brought within the comprehension of the blind child. Collections of tangible objects are important for presentation of concrete ideas of things to blind children. Living things, such as the canary in the school room, gives an idea of what birds are
like and something of their habits. The window boxes with their variety of plants and different shaped leaves and texture, the flower with its scent and delicately thin petals, seeds, small and large, round, or oval, are all interesting. Many varieties of seed are allowed to germinate so that the root system may be understood as well as the developing leaves. All these things are informative and give experiences which blind children can comprehend. The actual experimental work in the classroom is of more value than a text book, as the aim of class work is the encouragement of the child's interest in living things. The blind child needs tangible things in instruction, otherwise his knowledge is merely verbal.

Woodwork. Woodwork is one way of training the blind in the use of tools. Taught the use of saw, hammer, chisel, gimlet and screw driver, a blind boy with a mechanical aptitude derives pleasure from his constructional hobbies. The function of training in manual occupations is to make the blind child alive in his hands. Woodwork helps to give knowledge and direction to his fingers. Any work with the hands helps to widen the circle of ideas in solid concrete fashion. Working with wood and using tools increases the power to cope more effectively with the immediate physical environment.

Piano Tuning. For this course, besides the
necessary talent, a boy must also have a pleasing personality. A good ear for music and skillful hands are not the only attributes to be considered, as a person taking up this work will have constantly to meet the public.

The course in piano tuning covers actual piano tuning and minor repairs such as restringing, key leveling, new felts, loose bridges, etc.

Piano tuning is an important course as ability acquired in this field serves as a medium for later employment.

Home Economics. The course in home economics is a most practical one. The main idea is to help the girls fit into home and family life. When the school career of a blind child begins, intimate home relations are severed. For three fourths of his time during childhood and early adolescence, the school is home. Home economics is one way a girl can be of service to others, and this is a valuable experience. Every girl is taught how to keep her clothes repaired and to do simple household tasks.

Sewing. Some girls are able to make simple articles of wearing apparel and use the sewing machine, though not all are capable of doing so.

Many partially sighted persons can see colors, but whether they can or not, it is essential that they have some knowledge and understanding of their use. Children
at the Oregon State School for the Blind are early taught color combinations as it is thought this is important for normal living. When girls take up sewing, some time is spent on the problem of colors. Each girl is helped to select proper colors to suit her individual needs along with a study of various materials and their application. Only in this way will a girl be able to dress so that she will feel socially acceptable. While many of the impressions the visually handicapped receive are influenced by the sighted, when taught by a talented teacher what color combinations are suitable, the visually handicapped person never feels inferior in this respect and so can show individuality and independence in selection.

Cooking. All girls are advised to take cooking, though it is not compulsory. In this course the girls learn about food values, planning a simple menu and its preparation. It is customary for students in the senior year to serve a dinner to several of the faculty members each week. This affords practical training in every detail, from the issuing of the invitation right through to planning table decorations, menu, preparation and serving. The girls learn how to greet guests, in short, to become good hostesses. Most girls look forward with keen anticipation to this course and thoroughly enjoy it.

The course in cooking might be said to border on
the cultural and aesthetic development of the pupil. Circumstances incident to residence at the school give a special opportunity for the cultural and aesthetic development of the visually handicapped.

**Gymnasmium.** Gymnasmium is required of both boys and girls during the entire term of residence at the school. This work is most carefully supervised, for many cannot exercise strenuously. Walks in the open air, learning to use playground equipment, rhythmic exercises, games, jumping rope, roller skating, all offer stimulation and recreation for those who are physically able. Through cooperation, the swimming tank at the Y. M. C. A. in Salem is available for limited periods. For the more strenuously inclined, wrestling is a favorite sport among the boys. Informal discussions stress healthful living, self-reliance, fellowship, leadership and fair play.

**Objectives and Program for Pupils at the Oregon State School for the Blind.**

1. To socialize the child.

2. To acquaint the child with materials which will help him to develop physically as well as mentally.

3. To develop skills in the tool subjects, or fundamentals.

4. To introduce as wide and varied a background as the child is mentally able to grasp.
5. To instruct the child in social graces which will be of use in later life.

6. To foster an appreciation of the beautiful through the tactual and auditory sense.

**Curriculum for the Grades.** Reading is developed in grades from 3 to 8 until skill is acquired. Students work toward speed and comprehension in ungraded classes, some stressing one phase, some another until individual reading rate and comprehension reach 8th grade work.

Spelling classes are ungraded but are divided on the basis of ability. An individual drops spelling when he has acquired high school spelling ability. In class these students write words and sentences. The object is to develop a spelling consciousness, pride in neat and accurate work and an ability in taking dictation. There is some study of sentence form, punctuation and word meaning.

Language in grades 3 to 6 is both oral and written creative work. Formal grammar is taken up in grades 7 and 8.

Writing is required of each pupil until proficiency is gained. The subject includes Braille writing, both beginning and advanced. Handwriting is taught those students who wish at least to learn to write their names.

History for 4th and 5th grades consists of stories of world heroes. The 6th grade historical stories are about Oregon. The 7th grade covers American colonial
period and the westward expansion. The 8th grade takes up United States history.

Curriculum for the High School. English for the high school department consists of grammar, creative writing, American literature, English literature and composition.

Social Science seeks to review and correlate work in history, geography and civics. Roughly it is a study of society.

World Geography includes American History, World History, Civics and Vocations and Socio-Economic problems.

Commercial subjects include typing, commercial law and salesmanship.

General Science covers health education and the general science.

Music Appreciation is required of all high school students.

Electives for boys may be woodwork and use of simple tools, piano tuning, chair caning, knot tying, voice study and any musical instrument. Girls may take cooking, sewing, weaving, basketry and home management.

Advanced work may be undertaken by any student whose scholarship, personality and general ability warrants further academic training beyond the courses offered at the Oregon State School for the Blind. Such a student
is given further assistance by the state.
CHAPTER IV

DEVELOPMENT OF AESTHETIC VALUES

One of the most difficult things to instill into a visually handicapped child is a sense of aesthetic values. Lacking the means to understand perspective, color, light and shadows, and to some extent form, it is evident that many of the usual methods of presenting and cultivating a sense of the beautiful are of no value. These circumstances make the field of aesthetic values restricted and greatly narrows the choice of such subjects which can be offered. In spite of this fact, by placing much emphasis on what can be comprehended, a blind child can derive much pleasure from certain forms of art.

Music. The outstanding field and one source of great pleasure and of aesthetic value is that of music. Beauty of tone and melody give immense gratification. The sense of time and rhythm can be developed from the earliest years by means of percussion bands. Delight in melody is fostered by singing nursery rhymes and folk songs. The next step beyond percussion bands is the school orchestra. The love of orchestral music is encouraged through the opportunities offered by many orchestral concerts arranged for children.

Unfortunately all blind children have not the
necessary initial equipment. It is a common fallacy to suppose that blind children are endowed from birth with special musical gifts. Some undoubtedly are gifted, but not because they are blind. It is true that where there is even moderate musical ability, the patient teaching and constant practice which is obtained in a school for blind children can raise a meager talent to surprising heights. Where music is adopted as a profession, technique is of first importance. What does matter is that the child shall be able to derive pleasure and mental satisfaction through this medium of music. Children can be taught to appreciate music intellectually as well as enjoying it as a pleasurable sense-impression. A pupil who is learning harmony, composition and something of history of music and its composers, is having much valuable mental activity.

Music is one subject in which the blind can meet the sighted on an equal footing. The object of training and care of the blind is to make the child as nearly normal in every respect as possible. A blind child naturally comes to realize that he cannot think and feel about all things which interest sighted people. Blind people find it difficult to obtain a footing in the social life of the community. Music can be shared equally by the blind and the seeing, and with the social accomplishment of music the visually handicapped can make some contribution to
society as a whole.

**Literary Clubs and Dramatics.** Literary and Dramatic Clubs are very popular. These organizations are most successful when controlled by the students who are responsible both for the organization and management. Membership is an honor and privilege. Such clubs, or societies have definite aims. Through volunteer organization or assigned outside work, a student paper is sometimes published, or some form of journalism studied. Writing poetry, short stories and sketches for enjoyment by the group are encouraged. The Literary group often combines a program and social hour.

The Dramatic club gives pleasure to the members as well as the entire school when a play is presented. Presenting a play involves cooperation, planning construction of stage setting as well as costumes. Dramatics help in the development of poise and affords opportunity for correcting disagreeable mannerisms. Debating contests have proved helpful in many instances as a means of creating interest in everyday problems.

Literary and Dramatic societies have been found helpful in ethical training in the happiness it gives members to have given pleasure to others.

**Handwork.** Handwork is a useful instrument for encouraging the love of beauty. The great variety of
material and unlimited range of pattern give a practical way of inculcating a love of the beautiful. Handicrafts take the form of the expression of the child's own ideas. Toy making, with all kinds of material and odds and ends, delights most children and calls for ingenuity. Children's interests are practical and the handwork of blind children is based on work they are able to understand, to carry out, and to enjoy. The desire to make something which can be used leads to constructive work.

The chief lines of handwork are modeling, raffia, light basketry, chair caning, knitting, crocheting, tying knots, weaving and hooking rugs. All these, with the exception of chair caning are enjoyed by both girls and boys. These handicrafts are not compulsory, though each child is expected to take up as many kinds as he is able.

All handicrafts involve the training of the finger muscles, and although in many cases the results may be crude, pride in achievement is evident when an article is completed. The need of measuring and designing, with the use of tools, such as marked rulers, or the use of scissors, develops skill in using the fingers.

**Modeling.** Clay modeling is an excellent means of expression in concrete form. Interest is maintained by the variety of the work and the actual handling of the object to be modeled. Manipulation of clay is excellent
for the muscles of the fingers. It is excellent too, for teaching of form and proportion. Clay provides a plastic material in which the child can work out his own ideas. This has a good educational effect. The freedom which clay provides is in striking contrast to such occupation as the caning of chairs, or even of knot tying for hammocks.

The great variety of experiences with different kinds of materials, tools and equipment add interest. The pupil has an opportunity for self-expression. Beauty of design, whether of furniture, pottery, sculpture or woven work may be enjoyed through the sense of touch.

Handwork is important from the fact that the majority of pupils in any school for the blind will have to earn their living by handwork of one kind or another. It is imperative that the training of the fingers and hands be developed to the greatest extent. To bring this about and at the same time make it a source of pleasure and enjoyment is one of the ideals present in all creative activities for the visually handicapped.
CHAPTER V

RECENT TRENDS

Schools for the visually handicapped have made many changes in recent years. These changes have been gradual and are the result of the slowly changing ideas in educational trends. Broadly speaking these recent trends in the education of the visually handicapped have been along three outstanding lines. Schools have become, first, less institutional; second, they have made development of the individual the chief concern; third, these schools have added high school subjects to the curriculum together with many more cultural courses.

Institutional Changes. Nearly all early schools for the blind were called institutions. Most of them were supported entirely by private funds; a few received some contributions from private funds as well as a small sum from the state. The term "institution" itself implied that such schools were philanthropic agencies. The teachers and other workers connected with such institutions, while undoubtedly earnest and sincere in their efforts, lacked adequate training. Most teachers were endowed with a missionary spirit and little else. A few teachers had served in the public schools until advanced years made such work too great a burden. After state
funds were received for the support of schools for the blind, schools were conducted along much improved educational lines. The name "institution" was no longer applied and the word "school" was used in its place. Along with state support, better prepared teachers took over the many problems to be found in the field of teaching the visually handicapped. Better trained teachers demanded changes in the previously strict regime, changes of immense importance to the pupils.

In state schools conducted along the newer educational trends, both boys and girls mingle together as in normal public schools. It is still a fact that many schools insist the boys and girls do not speak to each other though they attend the same classes. Some schools do not permit pupils to speak in the dining rooms. These restrictions, to mention only a few, are not natural for children. As the object of education for any child is to help that child grow into a normal, well poised individual, such treatment would tend to defeat this primary aim. At the Oregon State School for the Blind, it is conceded that pupils should live a normal life. Both boys and girls are allowed the same privileges as in public schools. As noted in an earlier chapter, boys and girls in the high school department sit at the same tables in their own dining room. While boys and girls are not
encouraged to play together on the school grounds, this is merely as protection against physical injuries as it is well known that boys play with more vigor than girls. Pupils play indoor games together, and have social affairs such as parties, dances, plays and musicals, just as in any other school.

A participation in community affairs has brought about a better understanding between the public and the visually handicapped. Lectures, plays, symphonies, concerts, school contests, swimming meets, any and everything which would give pleasure to the visually handicapped is now made part of the school program.

It is the aim of schools holding newer educational views to get away from the idea that the school is just a charitable institution. All pupils are expected to lead a free and normal life. Many schools solve problems in discipline by allowing pupils to select a governing group from their own number who act as a committee on disciplinary measures.

With better trained teachers employed in the schools for the visually handicapped, many new techniques have been tried. A search for newer and better methods included a study of the individual child.

Development of the Individual Child. Education in our public schools has increasingly considered the
individual child, his environment, personality, physical stamina and intelligence. The growth and adjustment of the individual child is now the primary consideration in educational work. This is true for blind pupils as well as the seeing. Mental age and general physical health are all important in planning schedules. In schools for the visually handicapped, greater specialization is possible in solving the educational problems because the schools exist purely to help each individual make adjustments toward a normal life. Each child is considered. There are no large groups, or set courses. Greater attention is paid to individual needs. Variations in temperament, intelligence, physical handicaps and degree of muscular control are considered. Each child at the Oregon State School for the Blind is allowed to progress as rapidly as circumstances permit. It is not unusual for a pupil to be taking work in two or more grades. While classes meet in small groups, several within the group may need extra help from the teacher in charge to bring work up to standard. There have been instances where a teacher has failed to get a pupil to respond. Another teacher often times can get a response, and after the pupil has made the necessary adjustment he can be returned to the original group. Not all blind pupils are capable of mastering all the subjects usually required, due either to physical handicaps, or
mental deficiency. Such pupils can often receive some benefit through substitute courses. Pupils slow to learn are likely to become discouraged. Always in the mind of the teachers is the development of each child to the utmost of his capacity. This attitude on the part of the faculty has brought about more and varied courses for the visually handicapped.

Courses at the High School Level. Within recent years the schools for the visually handicapped have offered to all pupils courses on the high school level. Many schools make very little change in the number of courses and material offered from that given in public high schools. Such courses as geometry, physics, biology and botany are given in some schools. More cultural subjects are now offered than ever before. Pottery, clay modeling, wood carving, construction of dolls' furniture, toys, cabinet work, weaving, willow trays and baskets and other handicraft work have been introduced. The pupils do their own designing and planning. Originality and skill is encouraged. Writing plays, acting, planning and construction of simple scenery, all help to lend charm to everyday living.

Instructors of the blind find that making the school life more independent, more social and less institutionalized, develops each individual to the limit of
capacity and capability. By offering more cultural courses, a child is given an opportunity to take part in a seeing world.

**School Museums.** One important aid in adjusting the visually handicapped to a seeing world is the school museum. Such a museum consists of mounted specimens of the more common forms of wild life and models of large or rare specimens. Insects, flowers, plants and trees also are built to scale. For example, there is no better way for a blind child to understand the difference between a crow and an eagle, than by tactual learning. The best description available will not give as complete an understanding of any object as the actual handling of it, for the blind have no pictures to aid in the interpretation of facts.

Included in the school museum are educational models built to scale, showing types of architecture, important historical buildings, bridges, machinery and mechanical devices. Such models can be used to enrich many subjects in the curriculum and give accurate meaning to much which would otherwise be obscure. The Ohio State School for the Blind has classified its specimens and models for use in each grade as a supplement to subjects in the curriculum.

A school museum adds meaning to everyday living and increases the meaning of words. The use of museum
materials is one way of helping the blind build a larger vocabulary which in turn gives life and literature a deeper, broader and richer meaning.

**Practice Cottage.** Many of the larger schools have a cottage or apartment set aside for the thorough training of girls in home economics. Small groups of three or four girls take complete charge of the practice cottage. From food preparation, care of apartment and social activities, girls are given thorough practice in a practical way in every phase of homemaking. After such training it is expected a girl will be able to take considerable responsibility in her home. As was noted in an earlier chapter, many students have come from homes of poverty. Given this special training in home management, these girls are able to contribute to the well-being of their own families. Blind persons are dependent to some degree on the seeing and for this reason are apt to become mere receivers instead of being ready and willing to contribute to the social well-being of the home.

Recent trends in the education of the blind help in adjusting the pupil to life and making life richer, happier and fuller.

**Vocational Guidance and Occupational Information.** Vocational Guidance is a definite part of the programs in progressive schools where pupils have normal vision.
It is just as essential that the blind receive vocational guidance and occupational information and help in securing a position. The movement for vocational guidance and occupational information for the visually handicapped is so recent few residential schools have a trained counselor. The Pennsylvania Institution for the Instruction of the Blind at Overbrook, has a "Placement Officer who interviews the pupils, and from the information gleaned from talks with them, endeavors to place them in the work for which they are most fitted".  

Perkins Institution located in Watertown, Massachusetts, serves all the New England states through its research department giving achievement tests, aptitude studies and advice from vocational guidance educational testing.

The state of Washington has a vocational guidance director who is also the head of the Department for Vending Stands. The director works in close cooperation with the superintendent of the state school as well as with the other departments in this field, namely, the Home Teaching, Home Industries, Sight Conservation and Placement. Through cooperation with the Superintendent and the Vocational Counselor the senior students at the Washington

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1Letter dated August 16, 1941 from Mr. A. G. Cowgill, Principal.
State School for the Blind plan for life careers.

There are former students of the Washington State School for the Blind in the following self-supporting occupations: piano tuning, orchestra, radio, law, insurance, orderly in a hospital, placing tags on goods to be sold, working in a ski factory, physical therapy, music teachers, and teachers in schools for the blind. For home industries, weaving material for neckties and yardage goods, making baskets, fishing creels, pottery and fiber furniture, to mention but a few, are important occupations.

The state of Oregon has no Vocational Counselor for the visually handicapped. The five members who make up the board for the Blind and Prevention of Blindness commission serve without pay. The members are appointed for four year terms by the Governor of the state. This commission is supposed to supply vocational, home and craft training for the blind and to supervise reader's aid for blind students attending state institutions of higher learning. This Commission has done little along these lines since its appointment in 1937. Without doubt all the members of the Commission are interested in the welfare of the visually handicapped but it would seem that none of them has the necessary time and qualifications to

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take the place of a trained vocational guidance director.

Guidance Director. It has been suggested that Vocational Counseling of the blind should be done by persons especially equipped for this work, as in intimate knowledge of the visually handicapped is necessary to know the limitations and capabilities. A person not familiar with the blind is apt either to underestimate or overrate their ability. With guidance carried on by teachers in the residential school, there is danger that some pupils will get considerable attention while others just as deserving might be neglected. Even in a small residential school the position might be a full time one. Each community where the student will live and work should be studied for the best possible welfare of the pupil.
CHAPTER VI

INDIVIDUAL CASE STUDIES

The following case studies are included in this thesis to illustrate the work which the Oregon State School for the Blind is doing for the visually handicapped. Each case was chosen because it shows one, or more of the outstanding problems mentioned in previous chapters. Records of these case studies were taken directly from the school files. However, the real names of the children are not used.

Case I. Jimmy, Totally Blind. This boy's history is unusual. His twin brother has normal sight. There are four other children in the family. The mother of these children seemed unable to cope with the problem of a blind child. For over three years this boy was merely washed and fed, and kept in his crib. This meant that he was untrained and had no companionship. A social worker found this family and made an effort to get the child into the Oregon State School for the Blind. The state of Oregon has never made any provision for the care of blind children of pre-school age, so lacking all facilities for Jimmy's care at the school in Salem, he had to be denied entrance. The Social Worker then found a place for the child to board. Although the woman who then took care of
Jimmy had never undertaken such a task before, she tried to carry out suggestions which were made from time to time by the superintendent of the school. Jimmy might have been admitted to the school at Salem when he was five but at that time the new boys' dormitory was not completed. Due to lack of room, he could not be admitted. He finally entered at the age of six. This was in 1936.

It was impossible to get this child's mental rating until almost the close of the school year for when questioned he either ignored the questions, or merely repeated them. A record, however, was entered every six weeks regarding his progress. The following is his complete record from his entrance at the school in the fall of 1936 to April 1941.

**First six weeks period**

Progress in understanding school routine; learning to mind; learning nursery rhymes; poems; has a sense of rhythm.

**Second six weeks period**

Improving rapidly in classroom attitude; learning to sit quietly; to play; to listen; cries less.

**Third six weeks period**

Progress in classroom adjustment; can go to boys' dorm alone; using hands more; disposition improving; getting along better with other children; talking more.
Fourth six weeks period

Improvement in classroom attitude; good memory; developing conversational ability.

Fifth six weeks period

Improvement in classroom and more independent; recommended pre-school work next year.

A summary entered on the record at the end of the year showed these comments: "needs to learn to live and play with other children; minds well; developing sense of understanding the wishes of others". At this time, May 1937 his Binet Intelligence rating was 66.

Second School Year. The record sheet for Jimmy, now seven years old shows notations such as these: "not ready for first grade work; is given three periods a day special attention; training in rhythm band; handwork; little school work; chorus".

Comments at the end of the school year 1938 were summed up by observing that the child is still slow and has yet to learn social behavior. He has good memory but poor reasoning power. He makes the best progress when alone. He is not interested at all in school, or the world outside. Binet Intelligence rating shows his mental age had remained the same as a year ago.

Third School Year. At this time Jimmy is eight years old. Notes entered on the record show he is still
difficult to handle in group situations, or when adjusting to new experiences. He daydreams and lives in a world of his own. He is continuing with the rhythm band and children's chorus. So far he has not developed mentally, and in May 1939 his I. Q. was 51.

Fourth School Year. Jimmy, now nine years old, began spelling, arithmetic and reading, besides continuing with handicraft work, chorus and rhythm band. The comments entered on his record show that he recited a poem for primary class as part of a Hallowe'en program. He finished reading first pre-primer.

At the end of the school year in May 1940, he was not sent either to his home or to a boarding place. The matron of the boy's dormitory being much interested in his case, took the child into her own home for the summer. Here she conscientiously devoted every day to trying to develop him. That she did succeed in helping him improve was shown when upon his return to school his I. Q. was found to be 77. He was at this time ten years old with a mental age of seven years, ten months.

In April 1941, notes on the record sheet point out that he needs to use more cooperation, that he shows slow academic progress, and is a poor speller. He seems to have a remarkable ear for sounds. He still has a special schedule. In an effort to help him develop curiosity
about people and events, he is told stories relating to
geography, history and nature study. He does not make much
progress in reading. He can spell second grade words
orally but cannot read them, nor can he write all the
letters on the Braille writer. He wants to be told each
move and has no independence whatever.

It will be seen that the past year has been the
only one in which this child has made any improvement at
all. On the strength of this gain, he is to be sent to
his own home this summer. Since he and the other children
in the family are now older, all may be able to make an
attempt at adjustment. The school fears that Jimmy may
lose all that he has gained. If this child is really
feeble-minded, he should not be at the school in Salem
for he is taking the time of the teachers from other
children. However, if Jimmy's slow progress has been due
to lack of proper environment and training before entering
school, he ought now to improve from year to year since he
has had so much careful attention the past five years.

It would seem this case showed extreme retardation
due at least in part to lack of intelligent handling dur-
ing pre-school years. This boy had almost no training in
use of his hands. A blind person unable to use his hands
is doubly handicapped. To strengthen his hands he was
given a lump of clay to squeeze, knead and roll. This
brought him pleasure and something to do. From observation it would seem that Jimmy's lack of cooperation with others is due to the fact that he was left alone over the period of his life when one would expect a child to be very active and ready for companionship. Perhaps for this lack of attention he disregards all the other children about him.

Case II. **Danny, Age Ten.** Danny's social history shows that his mother is dead, and that his father, a WPA laborer, is listed as "financially irresponsible".

Danny has visual acuity of 20/200 in the right eye and in the left eye, 3/200 with prognosis unfavorable for improvement. On the application blank it was noted that there was some doubt whether or not he was mentally normal. His first Binet test in the fall of 1939 showed his I. Q. to be 72.

Comments entered on the record sheet revealed that he was a good worker, but immature. He showed little comprehension and made slow progress. He was good natured. This child was given handwork, music, reading, writing, spelling and arithmetic. He did good work in handicrafts, poor in arithmetic, poor in music and average in writing.

The following year his I. Q. was 67. He still did good work in handicrafts, but poor work in arithmetic and language. His behavior was rated as excellent.
Although this child showed excellent behavior and enjoyed handicrafts, he was not progressing in school work. He has been given two years to see if improvement could be made. The fears regarding his mentality when he first entered have been proved correct. It has been decided that this child would be better off as a member of the Fairview community. The Oregon state law governing the school specifically states that the children may attend only as long as they continue to show improvement. This boy has been given a fair opportunity since he has been at the school for two years. Due to low mentality he cannot be benefited by remaining.

Case III. Lewis, age thirteen. Lewis, totally blind, entered the Oregon State School for the Blind from the Wisconsin School for the Blind which he had attended for five and a half years. At the time of entrance, tests showed he had an I. Q. of 109. He was placed in the 5th grade and took the following subjects: history, reading, arithmetic, current history, geography, spelling, language, piano and manual training. His general attitude was rated as excellent. During his first year at Oregon State School for the Blind, Lewis won third place in a map contest. During the second year of attendance, his attitude continued to rate as excellent. Improvement in self-expression was noted. The third year Lewis made
the Boy Scout troop. The fourth year found this boy doing 8th grade work with better than average scores. The achievements during the 8th grade included election as class secretary and participation in the school operetta.

It will be seen from this record that Lewis seems to be a normal child in every way though handicapped visually. He is well liked both by the teachers and classmates. His cooperation and pleasing personality are assets which are valuable.

Case IV. Dotty, Age Fifteen. Dotty's social history shows that there are two other children in the family. Her father is a logger. Dotty entered the Oregon State School for the Blind at the age of eight years. The Binet test showed she had an I. Q. of 115. From the first, she has done excellent work in her school subjects and has been particularly interested in the rhythm band and tap dancing. The second year of her attendance, she was given piano lessons, took chorus, and later became a member of the girls double quartet. At the age of thirteen years she began voice training. As a freshman at fifteen, her courses of study included typing, piano, voice, sewing, chorus, general science, American history and English. Her achievements included membership in the dramatic club and girls chorus. She was secretary of the freshman class. During her second year of high school her
studies included, English, sewing, world history, voice, typing and music.

Dotty is a very wholesome, attractive girl and has a pleasing personality. The school is helping to develop her artistic ability.

**Case V. Lloyd, Eight Years Old.** Lloyd is totally blind. On entering school his I. Q. was found to be 94. Lloyd is an active child, a willing worker and has a very fine attitude for so small a boy. He shows a fine spirit of cooperation in the matter of overcoming mannerisms. Lloyd also seems to have an excellent memory. The one criticism is that he should learn to use his hands more than he does. The first year he was given training in the rhythm band, then the xylophone. He soon became a member of the small boys orchestra. Special handwork was given as well as knot tying to help develop the muscles of his hands.

The case of Lloyd shows that special work was planned at the outset and will continue as a definite part of the school schedule for this boy. A visually handicapped person who cannot use his hands is doubly handicapped.

**Sight Saving Cases**

**Case VI. Elsie, Ten Years Old.** Elsie’s family history shows that her father is a WPA worker and her
mother is in the State Institution for the Insane. Elsie has four brothers and four sisters. One of these children is in a state tuberculosis sanitarium.

Elsie had attended the public schools in Salem for two and a half years but was doing such poor work she would have undoubtedly failed the third grade. She has vision of only 20/75 and can expect no help from glasses. Her I. Q. was 100. She can distinguish color, large and small objects and can see large print. Elsie was failing in spelling, reading and arithmetic. By using Clear Type print and receiving special attention in the subjects in which she was failing, her academic difficulties will soon be overcome. She is much interested in crafts and does excellent work in this field. Elsie has a fine opportunity to become a capable child and a good leader. Elsie might have developed into a problem case but for her timely entrance at the Oregon State School for the Blind.

Case VII. Bobbie, Age Thirteen. When Bobbie entered the Oregon State School for the Blind he was twelve. He had had two operations on his eyes at various times but no further improvement seemed possible. He has almost no vision in his right eye, the left, 20/200.

Bobbie's I. Q. was 120, and though a pleasant, mannerly boy, he had been rated as very inattentive in his classes, and getting little out of them. He was
especially poor in spelling and geography. With Clear Type texts, his reading and spelling improved. He won second place in the annual map contest. Here was a child previously getting almost nothing out of his classes being helped to overcome his difficulties. Whereas he had been failing in geography, he learned to enjoy it. Besides improving in his studies he is now conserving what sight he has, and with his pleasing personality and high intelligence he should be successful.

Case VIII. Donald, Age Fourteen. Donald was admitted at the age of twelve. His visual difficulty was progressive myopia. With glasses his vision was corrected but it was necessary that he should abstain from close vision work. He had always been an eager reader. His I. Q. was 124 by Binet tests. In spite of his obvious ability he had made no progress during the past year at public school. Part of Donald's difficulty was due to discouragement. He had always wanted to be a chemist and was most unhappy when he realized this field would be closed to him. Upon admittance to the Oregon State School for the Blind, classes and work schedule were carefully planned. After two years the eye trouble has apparently been arrested. Donald has been attending the high school at Salem during the past year.

This boy would probably have failed his grade, and
more significant, his eyes would not have shown improve-
ment if he had remained in public school. From a dis-
heartened, unhappy boy, Donald now feels greatly encouraged. When dismissed from the Oregon State School for the Blind he was able to rejoin his former class.

From these eight cases it will be seen that each child's difficulty received individual attention and study. Case I was, and still is the most difficult, but there is still hope that by persistently applying the various techniques this child will be able to overcome his handicap and his unfortunate, early environmental handicap. Case II was found to be subnormal and, therefore, would be better at some other institution. Case III, IV and V are all normal children, except for the visual handicap. These children are making progress in their work, are happy in their school association, and will no doubt eventually complete the four year high school course. The last three cases, members of the Sight Saving group, were failing their grades at the public schools, not because of poor ability, but because the lack of full vision made it impossible to keep up with children having normal sight. By conserving the impaired vision and by using techniques suitable for each case, these children no longer failed their courses. Of far more importance, the attitude of these children changed from discouragement and unhappiness
to that of normal, happy and contented children.
CHAPTER VII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It will be seen from the foregoing chapters that the first step in planning the educational activities of the visually handicapped is to find the exact degree of visual acuity. All subsequent training is based on this finding. The question of health is also important for many of the visually handicapped have other serious defects besides defective vision. Paralysis and heart ailments are among the outstanding physical defects. The degree of visual handicap and the condition of the health play an important part in mental attitude. Mental attitudes aid in adjustment toward life and society, helping the handicapped strive toward a life of independence and usefulness.

Mental measurements for the visually handicapped are as important as for those children who have normal vision. Adaptations of the Binet tests for individual testing have proved valuable and have been the means of discovering the impossibility of rapid reading of Braille. This discovery has played an important part in planning the curricula.

The school curriculum at the Oregon State School for the Blind is based upon individual differences, the
past history of the case, the condition of the eyes and personal characteristics. In selecting material for the curriculum the outstanding consideration is its usefulness to the child having a visual handicap. The courses seek to supply useful experience to aid each participant to become self-reliant and independent.

The outstanding problem in the kindergarten and primary grades is developing self-reliance. One of the first lessons in independence is learning the necessity of keeping everything in its place. This saves nervous strain when it becomes necessary to locate materials again. A visually handicapped person must be able to find everything he needs if he is to become independent.

Special attention is always given to muscular development of the hands for tactile perception largely takes the place of sight. Training to overcome poor muscular coordination of the hands is carefully planned for each child.

Not until some degree of muscular control of the hands has become established can the difficult task of reading and writing Braille be undertaken. Children of low mentality find it extremely difficult to learn to read and write Braille. The next step after learning to read and write is facility in the use of specialized equipment such as the Taylor slate for arithmetic and
tangible apparatus used in geography.

Handicrafts receive considerable attention in the curriculum both for the pleasure of accomplishment and for aesthetic value. Music, both vocal and instrumental, plays an important part in the school curricula, for music is one subject in which the visually handicapped are on an equal footing with persons having normal vision.

Recent trends in schools for the visually handicapped are along the same educational lines as those found in public schools. The outstanding development is consideration of each individual child so that he may be a happy, well-adjusted person, trained to lead a useful, self-reliant life.

Provision for additional training and education beyond the high school level is made by the states for outstanding students.

RECOMMENDATIONS

From the foregoing study there are four suggestions offered which might well add materially to the physical and mental well-being of the visually handicapped children who attend the Oregon State School for the Blind at Salem.

1. Vocational Guidance. Since leading schools throughout the country have vocational guidance programs and placement bureaus to help establish pupils in life careers, surely the blind who are physically limited in a
choice of occupations are urgently in need of all such fac-
cilities available. Under a trained vocational counselor
a study of each child and the community in which he is to
live and work would show what occupations he is capable of
doing and what is needed. A course in Occupations would
stress types of work suitable to the visually handicapped,
training necessary, cost and possibilities of success and
opportunities for promotion. Such a course would show
actual conditions to be met and any limitations which could
not be overcome. It would help students to strive for
goals rather than go through life aimlessly, leaving the
future to chance instead of wise planning.

2. A School Museum. The Oregon State School for
the Blind needs a museum containing mounted specimens of
at least the common species of wild life. In a state with
such an abundance of wild life, it seems incredible that
the Oregon State School for the Blind does not have such a
collection.

The school needs educational models. It has one
or two models of houses of no particular style or type.
While giving some idea of the meaning of a house, they
are wholly inadequate to give proper importance to the
meaning of architecture. Misconceptions of the blind are
often due directly to the fact that no way has been pro-
vided to give them the correct conception. The blind have
two ways of learning, hearing and touch. When the spoken words do not convey meaning to the blind, they use touch. For this reason they need objects for tactual exploring.

3. **Practice Cottage or Apartment.** A practice cottage or small apartment would give senior girls an opportunity to exercise responsibility in home management. Such an opportunity would help girls to become better fitted to participate helpfully in their own homes. The practice cottage or apartment would offer a more rounded training in food preparation and care of living quarters.

4. **A Swimming Tank.** At the present time and under the existing schedule, the children go to the Y. M. C. A. for a swimming period, usually not more than once or twice a week. A swimming tank on their own premises would permit more frequent swimming periods. Not only would the children derive much pleasure from a tank of their own, but it would give those who are suffering from various forms of paralysis, additional benefit in the curative effects of hot baths.

**Further Studies.** As previously mentioned, there are no textbooks in Clear Type available for pupils beyond the Junior high school level. Since statistics show approximately 8800 pupils in these classes at the present time, it is pertinent to inquire just what techniques are adopted for these children when they reach the point when
they are unable to secure books in a type which they can see. Furthermore, one wonders if these children are permanently benefited by this Sight Saving work and to what extent these children follow up conservation of sight after leaving the classes. It also would be enlightening to know how the vocational guidance program is handled for the young people who are attending these special classes. Finally, it would be informative to learn how this problem of conserving the sight of young people is met in those states which have no legislation establishing Sight Saving classes.

At the present time there is no literature dealing with careers for the average blind person. Facts regarding necessary training, income from either part or whole time work, should be made available for the average blind person. Material of this kind would be a valuable source of information for the Vocational Guidance Director.
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